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Rainforest Alliance

Validation Assessment Report for:

The Government of Madagascar and the Ministry of
Environment and Forests (MEF)
in
Madagascar, Africa

Report Finalized:	October 23, 2013
Draft Report Date:	November 21, 2012
Field Audit Dates:	September 25 - October 3, 2012
Lead Auditor:	Lawson Henderson
Audit Team Member(s):	Campbell Moore, Jervais Nkoulou, Vonifonja Herimanitra Ramanoelina
Senior Internal Reviewer	Mateo Cariño Fraise
Audit Standard:	VCS Version 3
Validation Code(s):	RA- VAL-VCS-011275
Project Latitude/Longitude:	17.66667 48.83333
PD Version:	03
Project Proponent Contact:	The Government of Madagascar, Ministry of Environment and Forests, Director General
Project Proponent Address:	B.P. 571 Ampandrianomby Antananarivo 101, Madagascar

WORLD BANK CAZ VCS VALID 13

Document Prepared By Rainforest Alliance

Project Title	<i>Carbon Emissions Reduction Project in the Corridor Ankeniheny-Zahamena (CAZ) Protected Area, Madagascar</i>
Version	03
Report ID	RA-VAL-VCS-011275

Report Title	WORLD BANK CAZ VCS VALID 13
Client	World Bank
Pages	91
Date of Issue	October 23, 2013
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Summary:

In April 2012, Rainforest Alliance was selected to conduct a combined VCS Validation/Verification audit of the Government of Madagascar's (GOM) Carbon Emissions Reduction Project in the Corridor Ankeniheny-Zahamena (CAZ) Protected Area, Madagascar. The Ankeniheny-Zahamena Corridor (CAZ) carbon project covers 370,032 hectares of Madagascar's eastern humid rainforest and provides important ecosystem services to both the surrounding area and greater region. The Project Proponent is the Government of Madagascar (GOM), through the Ministry of Environment and Forest (MEF) represented by the Direction Générale des Forêts (DGF), having overall control and responsibility for the implementation of the Project.

The project aims to reduce deforestation of primary Malagasy forest by creating a corridor to protect the remaining native forests between the Zahamena National Park and the forests collectively known as "Ankeniheny" in central eastern Madagascar. In addition to protecting forest and stocked carbon, CAZ will protect one of the planet's most important sites for biodiversity conservation and provide a protected biological corridor that links 3 existing protected areas: Zahamena national park, Manongarivo special reserve and Mantadia national park. These parks are at the core of the remaining fragments of the eastern Malagasy rainforest, are extremely rich in terms of biodiversity, and continue to be severely threatened by deforestation.

The Project falls under scope 14 of the VCS, Agriculture, Forestry, and Other Land Use (AFOLU). The AFOLU category is Reducing Emissions from Deforestation and Forest Degradation (REDD). The REDD Project activity type is Avoided Unplanned Deforestation (AUD), since the land in the project is not legally authorized and

documented to be converted to non-forest in the baseline. The Project is not a grouped project.

The implementation of the Project is expected to bring about an estimated 10,119,729 tonnes of CO₂ equivalent in emission reductions (CO₂e) over the first 10 year fixed baseline period, or an average of 1,011,973 tCO₂e emissions reductions per year. This Project is a "large" Project in terms of scale.

The evaluation began in June 2012 with a "pre-validation" to document any major gaps in the project documentation, and to determine if the project was ready for a field assessment against the preparedness to the requirements of the Verified Carbon Standard (VCS), V3. Following the pre-validation, the VCS validation & verification of the Project took place simultaneously with the field audit from September 25 - October 3, 2012. The validation/verification evaluations involved documentation review, field visits, and stakeholder interviews in order to collect the necessary evidence to determine conformance with the VCS Standard Version 3 to a reasonable level of assurance.

On November 19, 2012 the auditor team issued the draft validation report in which they identified 35 non-conformances (NCRs) and 11 Observations.

In response to the draft report, the Project Proponent updated the Project Documentation and submitted additional evidence to close the NCRs identified in the draft report. The auditors then conducted a second review of the Project beginning on December 19, 2012 to evaluate conformance with the NCRs raised in the draft report. All additional evidence provided to the auditors was received by February 21, 2013. Based on the second review the auditors determined that all but one NCR had been adequately addressed, and each was closed out with the exception of NCR 02/13.

This Project had a validation deadline with VCS of March 8, 2013, but the VCS formally granted an extension of this deadline for the Project to December 3, 2013. A preliminary copy of the draft final validation report was provided to the Project Proponent, and the audit was left "open" until NCR 02/13 was addressed.

On 4 October 2013 Conservation International provided the Rainforest Alliance audit team with the required environmental operating permit that was required to close NCR 02/13. The audit team reviewed the permit and confirmed that it demonstrated compliance with all applicable laws and regulations. The NCR is closed. This was the last NCR remaining open in the validation audit, and now that it has been closed the auditors found the project to be in full conformance with the VCS Standards.

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1 INTRODUCTION

Rainforest Alliance certification and auditing services are managed and implemented within its RA-Cert Division. All related personnel responsible for audit design, evaluation, and certification/verification/validation decisions are under the purview of the RA-Cert Division, hereafter referred to as Rainforest Alliance or RA. Rainforest Alliance is an ANSI ISO 14065:2007 accredited validation and verification body; additionally, Rainforest Alliance is a member of the Climate, Community, and Biodiversity Alliance (CCBA) standards, and an approved verification body with a number of other forest carbon project standards. For a complete list of the services provided by the Rainforest Alliance, see http://www.rainforest-alliance.org/climate.cfm?id=international_standards.

Dispute resolution: If Rainforest Alliance clients encounter organizations or individuals having concerns or comments about Rainforest Alliance and our services, these parties are strongly encouraged to contact the local Rainforest Alliance regional office or the RA-Cert Division headquarters directly. Formal complaints or concerns should be sent in writing.

1.1 Objective

The purpose of this report is to document the conformance of the Carbon Emissions Reduction Project in the Corridor Ankeniheny-Zahamena (CAZ) Protected Area, Madagascar with the requirements of the Verified Carbon Standard (VCS). The project was developed by The Government of Madagascar, Ministry of Environment and Forests, hereafter referred to as "Project Proponent". The report presents the findings of qualified Rainforest Alliance auditors who have evaluated the Project Proponent's systems and performance against the applicable standard(s).

1.2 Scope and Criteria

Scope: The scope of the audit is to assess the conformance of the Government of Madagascar and the Ministry of Environment and Forests (MEF) REDD project in Madagascar, Africa against the Verified Carbon Standard. The objectives of this audit included an assessment of the project's conformance with the standard criteria. In addition, the audit assessed the project with respect to the baseline scenarios presented in the project design document. The project covers an area of 370,032 hectares. The land is publically owned. The project has a lifetime of 30 years, and estimates it will remove and/or reduce 10,119,729 tCO₂e over the course of the first 10 years of the validated baseline. The baseline scenario and associated emission reductions will be updated after 10 years.

Standard criteria: Criteria from the following documents were used to assess this project:

- Verified Carbon Standard Program Guide Version 3.4;
- Verified Carbon Standard Version 3.3;
- Verified Carbon Standard Agriculture, Forestry and Other Land Use (AFOLU) Requirements Version 3.3;
- Verified Carbon Standard AFOLU Non-Permanence Risk Tool Version 3.2;
- Verified Carbon Standard Program Updates (please see VCS website for the latest updates); and as applicable,
- The VCS approved methodology/modules used by the project.

Materiality: All GHG sinks, sources and/or reservoirs (SSRs) and GHG emissions equal to or greater than 1% of the total GHG assertion.

1.3 Level of assurance

The assessment was conducted to provide a reasonable level of assurance of conformance against the defined audit criteria and materiality thresholds within the audit scope. Based on the audit findings, a positive evaluation statement reasonably assures that the project GHG assertion is materially correct and is a fair representation of the GHG data and information.

1.4 Summary Description of the Project

The Ankeniheny-Zahamena Corridor (CAZ) has long been regarded as one of Madagascar's top conservation priorities and numerous studies have catalogued its rich biodiversity. To date over 2,043 species of plants have been identified (85% are endemic), with representatives from five endemic families. Fifteen species of lemurs and thirty other species of mammals are known from CAZ, as well as 129 species of amphibians and 89 bird species. CAZ's flagship species include several species of threatened lemur such as *Indri indri*, *Varecia Variegata variegata*, and *Propithecus diadema*.

The CAZ carbon project covers 370,032 hectares of Madagascar's eastern humid rainforest and provides important ecosystem services to both the surrounding area and greater region. It protects the headwaters of eight large rivers that directly supply approximately 325,000 residents with water. Through dams and aquifers, they also provide water to the residents of the capital city, Antananarivo, and the provincial capital, Toamasina. Water provision and erosion control are particularly important for the agricultural plains to both the east and west of the corridor, and to the two hydroelectric plants that supply electricity to Madagascar's two largest cities. In addition, the forest band located between 600 and 1,200 m probably also plays an

important role in the regulation of the local climate. Residents rely on the forest for a range of products, including building materials, food and medicinal plants. The culture of the local people is strongly bound to the forest, which harbours sacred sites, such as tombs.

By far the greatest threat to the forest corridor in terms of forest loss is slash-and-burn agriculture and this threatens the long term existence of the corridor. If this pressure is not alleviated, CAZ will soon disappear and with it the incredible biodiversity it houses, but also the essential ecosystem services it provides to countless rural families in the area.

In order to reduce deforestation in CAZ, the Government of Madagascar and Conservation International developed the strategy of establishing an avoided deforestation carbon project that would provide direct incentives and alternative livelihood activities for communities living around the forest corridor. These discussions resulted in the Government of Madagascar applying to the World Bank BioCarbon Fund for support in 2004. As part of this strategy, CAZ has been included as a new protected area in the country's plans for an expanded protected area system (SAPM – *Système des Aires Protégées de Madagascar*).

The project aims to reduce deforestation of primary malagasy forest by creating a corridor to protect the remaining native forests between the Zahamena National Park and the forests collectively known as "Ankeniheny" in central eastern Madagascar. In addition to protecting forest and stocked carbon, CAZ will protect one of the planet's most important sites for biodiversity conservation and provide a protected biological corridor that links 3 existing protected areas: Zahamena national park, Manongarivo special reserve and Mantadia national park. These parks are at the core of the remaining fragments of the eastern Malagasy rainforest, are extremely rich in terms of biodiversity, and continue to be severely threatened by deforestation.

The carbon project is made up of the CAZ protected area and some areas of forest that are contiguous with the protected area and managed by the same communities that are involved in the protected area management.

The protected area at CAZ has been developed based on an entirely new model for Madagascar that involves a strong collaborative management (comanagement) component with local communities. The proposed protected area will be a "reserve des ressources naturelles" under the Malagasy protected areas legislation (COAP – *Code des Aires Protégées*), which is equivalent to a category VI protected area under the World Conservation Union (IUCN) classification system. Creation of this new protected area has involved an unprecedented level of stakeholder involvement and consultation for a malagasy protected area.

The CAZ partners (the Ministry of Environment and Forestry and its regional representatives, Conservation International, regional government authorities, local NGOs, community associations, and other stakeholders) are working to finalize the protected area creation process and to ensure that CAZ is conserved in perpetuity. CAZ is well on its way to becoming one of the largest protected areas in the country and first received provisional protected status on December 30, 2005. This provisional protected status was subsequently renewed in 2008 and again in 2010. Final gazettelement into the protected area system was planned by the end of December 2012, but the environmental permit required by Le Directeur Général de L'Office National Pour L'Environnement (ONE) was not granted until 4 October 2013 establishing CAZ as a protected area. In 2011, the government formally designated Conservation International as the overall manager of the site for an initial period of 3 years during which CI will reinforce the management capacity of the local community structures and other stakeholders involved at CAZ.

Ensuring that the carbon project is in place and providing a sustainable funding mechanism for protection activities is an essential part of the strategy for the protected area. Through the creation of the new CAZ protected area, the project will result in reduced emissions from deforestation. Through the Verified Carbon Standard (VCS), the project will generate Voluntary Carbon Units (VCUs). Revenues from the sale of these VCUs will be used by the GoM to finance the long term management of the protected area and to expand economic opportunities for local communities. CI Madagascar has supported CAZ, particularly in the design and implementation of the activities aimed at reducing deforestation, calculation of the emissions baseline and the design of the management plan for the protected area. The World Bank's BioCarbon Fund has given technical support to develop a Verified Carbon Standard methodology appropriate for CAZ and have signed an Emissions Reduction Purchase Agreement with the Government of Madagascar to buy the initial VCUs generated by the project.

2 VALIDATION PROCESS

2.1 Method and Criteria

2.1.1 Audit Team

Overview of roles and responsibilities:

Auditor(s)	Responsibilities							
	Lead	Desk Review	On-site visit	Climate Specialist	Biodiversity Specialist	Social Specialist	Report	Senior Internal Review
Lawson Henderson	☒	☒	☒	☒	☐	☐	☒	☐
Campbell Moore	☐	☒	☒	☒	☐	☐	☒	☐
Jervais Nkoulou	☐	☒	☒	☐	☒	☐	☒	☐
Vonifonja Herimanitra Ramanoelina	☐	☒	☒	☐	☐	☒	☒	☐
Mateo Cariño Fraisse	☐	☐	☐	☐	☐	☐	☐	☒

Auditor qualifications:

Auditor(s)	Qualifications
Lawson Henderson	Carbon Associate with Rainforest Alliance. Education: B.S.F. in forest management from University of New Hampshire, 2005. Experience, Forest Management Associate with SmartWood, US Region (2008 to 2012). Chain of Custody Associate with SmartWood, US Region (2007-2008). Forest Land Surveyor for a private forest/civil engineering firm in Western Oregon for two years. Auditor on more than 20 FSC forest management and chain of custody audits and assessments. Lead auditor or auditor on 8 forest carbon projects. Project manager on over 250 forest management and chain-of-custody projects. Completed SmartWood CoC Auditor Training in April 2008, Rainforest Alliance Carbon Verification and Validation Audit Training in March 2009, and SmartWood Lead Forest Management Auditor Training in June 2009. Attended the Climate Action Reserve Lead Verifier Training for the Forest Project, and Urban Forest Project Protocol in September 2010. Completed the ISO Quality Management Systems Lead Auditor Training Course (ISO 9001) in December 2010. Member of the Society of American Foresters.
Campbell Moore	Campbell is a tropical forestry and REDD+ expert with professional experience in Africa and Southeast Asia. This is his first carbon validation/verification with Rainforest Alliance. Campbell has experience on both the technical and policy sides of REDD+. He currently works for the Rainforest Alliance as the Carbon Technical Specialist, providing auditing and technical assistance for all of Rainforest Alliance's Regional Offices. Campbell's recent professional experience includes consulting work for GIZ Philippines performing carbon stock assessments of different forest types including agroforestry and plantation systems, as well as work centered on reforestation in Sri Lanka for the Environmental Leadership and Training Initiative. From 2009-2011 Campbell pursued his Master of Forestry from the Yale University School of Forestry and Environmental Studies. During this time period he concentrated heavily on REDD+. This period included a variety of forestry projects including developing a management plan for Connecticut forest preserve, planning timber sales in a New England hardwood forest, and designing and modelling carbon sequestration potential of agroforestry systems for the Nature Conservancy's Global Climate Team. Prior to his time at Yale, Campbell worked in The Gambia for over two years as a Peace Corps Volunteer designing and implementing a wide variety of forestry, agroforestry, and agricultural projects. In addition to his Master of Forestry degree, he holds a M.A. in Environmental Studies from St. Mary's College. Campbell is fluent in Pulaar and Wolof and has experience with Spanish and French.
Jervais Nkoulou	Rainforest Alliance representative for Cameroon. Jervais is an experienced forester with over 10 years experience in forest management gained by working with NGOs, research agencies and entities in the private sector. More recently, Jervais worked as a management specialist for a major company based in Douala where he worked with internal staff, the forest administration, and local communities to develop and implement plans and organize training sessions for workers to promote sustainable forestry. Jervais has a degree in forest engineering from the University of Dschang, Cameroon. Among other things, he has successfully completed an auditor certification training provided by a team of Rainforest Alliance experts in Kinshasa, Democratic Republic of Congo. Jervais is based in Yaoundé, Cameroon.

Vonifonja Herimanitra Ramanoelina	Vonifanja is an organic farming and ecoproducts auditor of Ecocert, based in Antananarivo, Madagascar. Vonifanja is an Engineer in Forestry from the University of Antananarivo. In addition to her forestry studies she studied environmental sciences at Aix-Marseille University, graduating with a Masters degree in 2011 specializing in Biodiversity and Ecology. Vonifanja has received training about validation and verification of GHG projects and the VCS Program with Ecocert. She has also participated in training for the analysis of carbon projects and policies in agriculture and forestry (CSA) with FAO's team. This audit with Rainforest Alliance is her first validation/verification audit of a REDD project. She has conducted a research about the governance of new protected areas in Madagascar, and is familiar with the legal and social issues Madagascar's forest and forest management. She speaks Malagasy, French and English.
Mateo Cariño Fraise	Mateo is the Forest and Climate Services Coordinator for the Mediterranean and Africa. Mateo speaks French, Spanish, English, and Portuguese, holds a master's degree in Forestry (Polytechnic University of Madrid, Spain; ENGREF, Montpellier, France), and has gained experience in forest fires (Spain), research (France), management plans (Comoros Islands), FSC and Carbon projects assessments (Costa Rica, DR Congo, Cameroon, Morocco, Guatemala, UK, Uruguay, Portugal, México, Brazil, Bolivia, Mozambique), funding projects (Fundación Biodiversidad, AECID, DFID, CBFF) and delivering trainings (Spain, Bolivia, UK, DR Congo, Cameroon, Brazil, Morocco, Kenya). Mateo has completed a lead auditor training by Rainforest Alliance, both for Forest Certification and Carbon Projects auditing.

2.1.2 Description of the Audit Process

Location/Facility	Date(s)	Length of Audit	Auditor(s)
Rainforest Alliance Offices/Home Offices	9/1/2012 – 9/21/2012	2.0 days	Henderson, Moore, Nkoulou, Ramanoelina
Conservation International Antananarivo, Madagascar Office	9/25/2012	1.0 day	Henderson, Moore, Nkoulou, Ramanoelina
CAZ Project Area (various locations and communities)	9/26/2012 – 10/1/2012	6.0 days	Henderson, Moore, Nkoulou, Ramanoelina
Conservation International Antananarivo, Madagascar office	10/2/2012	1.0 day	Henderson, Moore, Nkoulou, Ramanoelina
Rainforest Alliance Offices/Home Offices	10/3/2012 – 11/20/2012	5.0 days	Henderson, Moore, Nkoulou, Ramanoelina
Rainforest Alliance Offices/Home Offices	12/19/2012 – 02/21/13	4.0 days	Henderson, Moore
Rainforest Alliance Offices	10/4/2013 – 10/7/2013	2.0 hours	Henderson, Moore

2.2 Review of Documents

The following documents were viewed as a part of the field audit. *All final Project Documents considered in the validation decision are identified at the end of this report in section 4.1 (pg. 89):

Ref	Title, Author(s), Version, Date	Electronic Filename
1	CAZ Project - Project Design Document, CI, Version 02, October 19, 2012	CAZ_VCS_PD_19Oct2012_clean.pdf
2	CAZ Project - Project Design Document – track changes, CI, Version 02, October 19, 2012	CAZ_VCS_PD_19Oct2012_track_changes.pdf
3	CAZ Project – Non Permanence Risk Report, CI, Version 1.0, November 18, 2012	CAZ_VCS_NPRA_2007-2011_clean_19Oct2012.pdf
4	CAZ Project VM0015 Tables 1 -34, CI, October 19, 2012	CAZ_VM15_PDtables_19Oct2012.xlsx
5	CAZ Project Financial Analysis \$3 carbon, CI, October 18, 2012	CAZ Financial Analysis 20121018 PDD \$3 carbon.xlsx
6	CAZ Project Financial Analysis \$5 carbon, CI, October 18, 2012	CAZ Financial Analysis 20121018 PDD \$5 carbon.xlsx

7	CAZ Project Financial Analysis \$7 carbon, CI, October 18, 2012	CAZ Financial Analysis 20121018 PDD \$7 carbon.xlsx
8	CAZ Project Financial Analysis \$9 carbon, CI, October 18, 2012	CAZ Financial Analysis 20121018 PDD \$9 carbon.xlsx
9	CAZ Project Financial Model Assumptions, CI, 2012	CAZ financial model key assumptions.docx
10	CI Financial Report, McGladrey & Pullen, LLP, June 30, 2011	Conservation Intl Foundation 06-30-11 audited FS Final.pdf
11	CAZ Project Financial Model Summary, CI, October 18, 2012	Financial model summary CAZ 20121018 PDD Final (nos only).pdf
12	CAZ Project REDD Price Report, Thomson Reuters, Q3 2012	REDD Price Report Q3.pdf
13	CAZ Project Plot Data - all, CI, October 19, 2012	caz_all_vielledent_WD_corrected_0.61.xlsx
14	CAZ Project Plot Data – Didy all, CI, October 19, 2012	DIDY_all_vielledent_WD_corrected_0.61.xlsx
15	CAZ Project Plot Data – Fetaomby all, CI, October 19, 2012	Fetraomby_all_vielledent_WD_corrected_0.61.xlsx
16	CAZ Project Plot Data – Fierenana all, CI, October 19, 2012	FIERENANA_all_vielledent_WD_corrected_0.61.xlsx
17	CAZ Project Plot Data – Maromiza all, CI, October 19, 2012	Maromiza_all_vielledent_WD_corrected_0.61.xlsx
18	CAZ Project Plot Data – savoka plots, CI, October 19, 2012	Savoka_plots_data_bg0_4.xlsx
19	Human and environmental controls over aboveground carbon storage in Madagascar, Carbon Balance and Management – Gregory Asner, July 2012	Asner_et_al_2012_Carbon_Storage_Madagascar.pdf
20	Human and environmental controls over aboveground carbon storage in Madagascar - Appendices, Carbon Balance and Management – Gregory Asner, July 2012	Asner2012-CBM-SM.pdf
21	Madagascar's Burning – The Persistent Conflict over Fire, Christian A. Kull, April 2002	Kull 2002 fire in Madagascar.pdf
22	A universal approach to estimate biomass and carbon stock in tropical forests using generic allometric models, Ghislain Vielledent, 2011	Vielledent2011-EcologicalApplications.pdf
23	CAZ Project Co-Management Agreement – CAZ, CI, July 16, 2012	CAZ projet-de-contrat-subdélégation MBG review 160712.docx
24	CAZ Project Co-Management Agreement Fitokisana Didy, CI, 2012	Contrat de sub délégation de gestion 27 AOUT 2012 2.docx
25	CAZ Project Management Agreement, GOM, May 2, 2012	Contract CAZ.pdf
26	CAZ Project Community Consultations, GOM	Scan consultation locale CAZ.zip (266 files)
27	CAZ Project – Letters from Participating Villages, CI, 2012	Supporting letters from participating villages.zip (25 files)
28	CAZ Project – File Creation of the CAZ Protected Area	Dossier de création NAP CAZ05.pdf
29	CAZ Environmental and Social Management Plan, CI, March 2012	Environmental and Social Management Plan.docx
30	CAZ Protected Area Development and Management Plan, GOM, October 2009	PAGCAZ_oct2009 Version mail.pdf
31	CAZ Project Relevant Legislation	CAZ relevant legislation.zip (24 files)
32	CAZ Project Bibliography References	CAZ bibliography references.zip (32 files)
33	CAZ Project Area Shapefiles, CI, October 2012	CAZ KMZ files.zip (8 files)
34	Plan de Travail 2012	PTA CAZ 230712AR.xlsx
35	Réunion de Partage D'Information, De Mise en Œuvre Project RED CAZ et D'élaboration du PTA CAZ 2012	Rapport réunion 2au4 mai Mrg.docx

2.3 Interviews

The following is a list of the people interviewed as part of the audit. The interviewees included those people directly, and in some cases indirectly, involved and/or affected by the project activities.

Audit Date	Name	Title
09/25 – 10/12/2012	Stavros Papageorgiou	CI - Advisor, Carbon Fund
10/02/2012	James MacKinnon	CI – Senior Technical Director Madagascar and Indian

		Ocean Islands
09/25 – 10/02/2012	Andriambolantsoa Rasolohery	CI Madagascar – Remote Sensing Specialist
09/25/2012 & 10/02/2012	Bruno Rajaspera	CI Madagascar – Director, Projects
09/25/2012 & 10/02/2012	Jeanicq Randrianarisoa	CI Madagascar -
10/03/2012	Andrew Cooke	Ambatovy – Sustainability Manager
09/25 – 10/02/2012	Hantanirina Ravololonanahary	CI Madagascar -
09/26/2012	Andre Rodrigues Aquino	Carbon Finance Unit, World Bank
09/25 – 10/2/2012	Marko van der Linden	Carbon Finance Specialist, World Bank
10/01/2012	Kara Leavitt	Peace Corps Volunteer
09/26/2012	Members of the Ministry of Environment and Forests (MEF)	Multiple Members (3)
09/26/2012	Community Members of Mahatsara Village	Multiple members (10) including ranking officers (president, vice president) and forest police
09/30/2012	Community Members of Amparihivola VOI	Multiple members (10) including ranking officers (president, vice president) and forest police
09/30/2012	Community Members of Farihivola VOI	Multiple members (5) including ranking officers (president, vice president) and forest police
09/30/2012	Community Members of Lovasoa VOI	Multiple members (5) including ranking officers (president, vice president) and forest police
10/01/2012	Community Members of Ambohidray VOI	Multiple members (5) including ranking officers (president, vice president) and forest police
10/01/2012	Community Members of Ambohibolakely VOI	Multiple members (5) including ranking officers (president, vice president) and forest police
10/02/2012	General Secretary of the Ministry of Environment and Forests	M. Manganirina
10/02/2012	General Director of the Ministry of Environment and Forests	M. Jean Claude Rabemanantsoa
10/02/2012	Director of Protected Areas System Direction	Ms. Laurette Rasoavahiny
9/25/2012	Office Nationale pour l'Environnement contact person for PGESS Plan	M. Laurent
9/25/2012	REDD Coordinator from Ministry of Environment and Forests	M. Mamitiana Andriamanjato
9/26/2012	Regional Director of Environment and Forests (Region: Alaotra Mangoro)	M. Ramenason Rasoloniriana
9/26/2012	PLACAZ President	M. Gervais Rabdrianarison
9/26/2012	Federation 2 Vice President	M. Emile
9/26/2012	Federation 3 President	M. Ranaivo
9/26/2012	Chief cantonment of Moramanga	M. Jules
9/26/2012	Chief circumscription of Environment and Forests	M. Tsiry

2.4 Site Inspections

The evaluation began in June 2012 with a "pre-validation" to document any major gaps in the project documentation, and to determine if the project was ready for a field assessment against the preparedness to the requirements of the Verified Carbon Standard (VCS), V3. Through the pre-validation process, 30 Observations (OBS) were raised that the project proponents should understand and address prior to the onsite field audit. It was determined that the project could move forward with the field audit which was scheduled to take place from September 25 - October 3, 2012.

Approximately a month before the scheduled field audit, the Audit Team was finalized, and travel plans were made. Key project materials for the development of the audit plan were requested by the audit team (project shape files, inventory specifications PD etc.), and a draft audit plan for the field validation/verification was developed and submitted on September 10, 2012. Following the submission of the draft audit plan a call was held with the auditors and several of the project managers to discuss the draft plan, logistical considerations for the field audit, and additional document requests made. Logistical travel issues were raised by the project managers, and taken into consideration by the auditors in a revised audit plan submitted on September 18, 2012.

The opening meeting for the validation/verification audit was planned to be held at Conservation International's (CI) Office in Antananarivo, Madagascar on September 25, 2012. Two of the auditor's flights were delayed causing them to arrive in the afternoon of the 25th. The other two auditors got started with document reviews, and conducted some stakeholder interviews the morning of the 25th before the full team was present. The opening meeting was then held on the afternoon of September 25th, and the field audit initiated.

Following the first day of the field audit, the auditors traveled with the project managers toward the project area. Stakeholder interviews with representatives from the Ministry of Environment and Forests (MEF), and members of the Community Federations involved in the co-management of the Project were conducted in the town of Moramanga. While interviews continued with two of the auditors, the other two split from the group, as the project managers arranged a fly over of the project area. The flight took the auditors along the western edge of the Project Area, north of the Project Area, directly over the Project Area all the way to the southern end of the Project Area before landing. The fly over offered the auditors to observe a much greater portion of the Project Area than would otherwise been possible. Baseline activities were observed, and boundaries of the Project Area visually assessed through the use of GPS connected to a laptop computer on board the plane. The verification activities for the day were completed with a visit to a small community near the village of Andasibe where project activities (improved rice cultivation, fish farming) were observed and local community members interviewed.

The next day was spent in full verifying inventory plots including forested plots, and non-forested plots (Savoka plots) in the area of Andasibe. Crews from the hired consultant that conducted the original inventory work for the project accompanied the audit team, and demonstrated the methods for which biomass from the savoka plots were measured. A similar demonstration was given on the first forested plot visited, and the auditors observed implementation of the forest inventory procedures used. The audit team collected their own inventory data on the second plot visited, with assistance from the consultant crews as needed (e.g. species identification).

On September 28th, the audit team and project management staff accompanying them traveled to the village of Fierenana, which involved a several hour drive due to poor road conditions. Once in Fierenana the group set off on foot into the Sahanomana area of the Project Area which involved a 4-5 hour hike to the camp where they would spend the next two nights. This entire day was spent traveling, but brought the group into the Project Area, and positioned them to conduct additional forest inventory plot checks in this remote area.

September 29th was spent conducting forest inventory plots checks of a total of 4 forest plots in the Sahanomana area of the Project Area. In order to accomplish this work, the audit team split into groups to cover more ground. Another night was spent in the Project Area at the camp site, and the group began the hike back to Fierenana the morning of September 30th. Interviews with a variety of community members were held that afternoon in the community of Amparihivola. Interviews surrounded the topics of project activities, knowledge of the protected area boundaries, whether or not the sustainable use area met their needs, and enforcement of forest protection among others. The auditors were also shown implementation of project activities including poultry breeding and a small tree/seedling nursery.

After spending the night in the village of Amparihivola, on October 1st, the auditors traveled to the community of Morarano and Ambohidray where more stakeholder interviews were conducted and additional project activities observed (improved rice cultivation, poultry breeding). The group then traveled back to Antananarivo on the evening of the 1st where the remainder of the field verification work would take place.

On October 2nd, the audit team spent the morning at the CI office in Antananarivo and focused on document reviews including the non-permanence risk report, as well as an analysis of the Project's remote sensing. Two of the audit members split from the group late in the morning to meet with the Secretary of Environment for interviews. In the afternoon the audit team reconvened at the CI office for additional document reviews and assessment of the carbon calculations. The audit team then prepared for the closing meeting by compiling their notes and preparing the preliminary findings. The closing meeting was then held at 5:00 p.m. and the preliminary findings, and potential non-conformance identified by the auditors were presented to the project managers.

Before leaving Madagascar, the auditors held an additional stakeholder interview the morning of October 3rd. Once back home, the auditors scheduled a call with the project managers on October 10th to discuss and review the project's financial model which was not available during the field audit. On October 12th one of the auditor's based in Washington D.C. meet with project managers from CI at their D.C. office to review the Project's high resolution imagery.

On October 19th the auditors received the final version of the PD, non permanence risk report, monitoring report, and additional supporting evidence that would be considered in the development of the draft report. During the following weeks the auditors developed the draft validation and verification reports outlining their findings of conformance and non-conformance of the Project against the VCS Standard Version 3. The draft report was submitted to the project managers on November 21, 2012.

2.5 Resolution of Any Material Discrepancy

On November 19, 2012 the auditor team issued the draft validation report in which they identified 35 non-conformances (NCRs) and 11 Observations.

In response to the draft report, the Project Proponent updated the Project Documentation and submitted additional evidence to close the NCRs identified in the draft report. The auditors then conducted a second review of the Project beginning on December 19, 2012 to evaluate conformance with the NCRs raised in the draft report. All additional evidence provided to the auditors was received by February 21, 2013. Based on the second review the auditors determined that all but one NCR had been adequately addressed, and each was closed out with the exception of NCR 02/13.

This Project had a validation deadline with VCS of March 8, 2013, but the VCS formally granted an extension of this deadline for the Project to December 3, 2013. A preliminary copy of the draft final validation report was provided to the Project Proponent, and the audit was left "open" until NCR 02/13 was addressed.

On 4 October 2013 Conservation International provided the Rainforest Alliance audit team with the required environmental operating permit from ONE that was required to close NCR 02/13. The audit team reviewed the permit and confirmed that it demonstrated compliance with all applicable laws and regulations. The NCR is closed. This was the last NCR remaining open in the validation audit, and now that it has been closed the auditors found the project to be in full conformance with the VCS Standards.

3 VALIDATION FINDINGS

Note: Findings presented in this section are specific to the findings resulting from the field audit as presented in the Draft Audit Report. Any non-conformances or observations identified during the field audit are noted in this section, and specific NCR and OBS tables are included in section 4 of this report for each identified non-conformance and observations. All findings related to audit team review of additional evidence submitted by the Project Proponent following the issuance of the Draft Audit Report by Rainforest Alliance, is included within section 4 of this report.

3.1 Project Design

3.1.1 VCS Standard Section 3.18.1: Project description

The project shall include at a minimum all requirements outlined in section 3.18.2 of the VCS Standard. Additionally, section 3.18 of the VCS Standard notes that project and its context shall be described in the project description using the VCS Project Description template (or approved GHG program description template where the project is requesting registration under an approved GHG program).

Findings from Field Audit

3.18.2 – 1a): The final PD provided on October 19, 2012 includes the Project Title on the cover page; “Carbon Emissions Reduction Project in the Corridor Ankeniheny-Zahamena (CAZ) Protected Area, Madagascar.” A summary description of the Project is provided in section 1.1 of the PD. The CAZ carbon project covers 370,032 hectares of Madagascar’s eastern humid rainforest and provides important ecosystem services to both the surrounding area and greater region. The Project aims to reduce deforestation of primary Malagasy forest by creating a corridor to protect the remaining native forests between the Zahamena National Park and the forest collectively known as the “Ankeniheny” in central eastern Madagascar. The carbon project is made up of the CAZ protected area and some areas of forest that are contiguous with the protected area and managed by the same communities that are involved in the protected area management.

Section 1.2 of the PD details the sectoral scope and project type. The Project falls under scope 14 of the VCS, Agriculture, Forestry, and Other Land Use (AFOLU). The AFOLU category is Reducing Emissions from Deforestation and Forest Degradation (REDD). The REDD Project activity type is Avoided Unplanned Deforestation (AUD), since the land in the project is not legally authorized and documented to be converted to non-forest in the baseline. The Project is stated to not be a grouped project.

3.18.2 – 1b): The Project Proponent and Other Entities involved in the Project are identified in sections 1.3 & 1.4 of the PD respectively. The Project Proponent is the Government of Madagascar (GOM), through the Ministry of Environment and Forests (MEF) represented by the Direction Générale des Forêts (DGF), having overall control and responsibility for the implementation of the Project. The only other entity involved in the Project identified in section 1.4 of the PD is Conservation International (CI). CI has been given management responsibility of the protected area with the objective of reducing deforestation as designated by the DGF. CI will play this role of coordinating management activities until December 2014 with the possibility of an extension. CI is also identified as the main Project Developer, providing technical and financial support to project development and implementation. CI is also responsible for monitoring of carbon stocks. No other entities play a major role in project management. Many community-based organizations are involved with conservation activities at the field level. Additional details on the roles and responsibilities of each entity involved in the CAZ project are detailed in section 1.8 of the PD, and section 3.1.3 of this report.

3.18.2 – 1c): The Project Start Date and Project Crediting Period are identified in sections 1.5 & 1.6 of the PD respectively. The Project Start Date is stated to be December 30, 2007. Although the CAZ protected area was first given provisional protected area status by the GOM on December 30, 2005 following a project design and regional consultation process that started in 2004, activities to reduce deforestation started at the end of 2007. The Project Start Date represents the date that the public consultations with local communities on project boundaries and regulations related to forest use were completed, activities to improve forest management and enforce forest protection began, and activities to promote alternatives to slash and burn began.

The Project Crediting Period is stated to be 30 years in length and ends of December 29, 2037. The Project plans to renew the crediting period twice for a total project length of 90 years.

The Project scale is covered in section 1.7 of the PD and is identified as a “large” project in terms of scale. The project estimates it will reduce 15,750,840 tonnes of CO₂e over the first 10 years of the fixed baseline, or an average of 1,575,084 tCO₂e per year during this period.

3.18.2 – 1d): Section 1.8 of the PD details the description of the project activity. The strategy for this project is the creation and implementation of a protected area that encompasses the project area. The principle cause of deforestation is stated to be slash and burn cultivation (Tavy), and the combination of a co-managed, multiple use protected area with a suite of development actions is aimed to reduce Tavy and effectively address the key causes of deforestation. Goals of the CAZ protected areas are provided with the primary objective of the project being to reduce deforestation through the creation and management of a co-managed protected area financed by revenues from the sale of carbon credits. The project also aims to enhance the well being of resident communities through sustainable livelihood

development, to conserve biodiversity, to maintain ecosystem services and to enable the sustainable use of natural resources by local residents.

Section 1.9 of the PD details the Project location. The Project is constituted by the CAZ protected area and the adjacent community managed forests, located in the center of Madagascar's eastern slope rainforests in the Province of Toamasina. Zahamena National Park is to the north and Ankeniheny classified forests in the commune of Lakato to the south. The boundaries of the Project Area are defined by the limits of the protected area, and the limits of the community management forest areas. GIS and KML files of the project boundaries were made available to the auditors, and the separate parcel IDs, coordinates, areas and land tenure status are presented in Annex 3 of the PD.

A description of the conditions prior to project implementation is offered in section 1.10 of the PD, which indicates that the rural communities surrounding the CAZ corridor have a total population of approximately 325,000 inhabitants, the majority of which are rural subsistence farmers. The principle economic activity of the region surrounding the CAZ corridor is agriculture and rice is the primary crop both in terms of total area cultivated and by value. Other agricultural activities include cultivation of manioc, coffee, sweet potatoes, bananas, and small amounts of beans, maize, sugar cane and other vegetables. Animal husbandry is practiced by less than a third of the population with chickens, cattle, and pigs. Tavy is the main traditional agriculture system and is the greatest threat to the surrounding forests.

Impacts of Tavy with accompanying imagery of this practice is provided in this section of the PD. Tavy is practiced because of topographic constraints, the low labour and monetary input required relative to returns, and tradition. Immediately around the project area, farmers come back to use the same fields in cycles of less than 10 years which this leads to a slow decrease of biomass in the fallow vegetation and reduction of the soil fertility. After several Tavy cycles, the fallow vegetation is typically dominated by non native invasive plant species such as grasses and ferns. The frequent use of fire favours exotic, aggressive species over native species.

3.18.2-1e): Section 1.11 of the PD details compliance with laws, statutes and other regulatory frameworks. The project is clearly stated to be in compliance with the national and local laws applicable to the project area, and the most notable examples provided. Specifically, this section of the PD details the Madagascar Environmental Charter, MECIE (mandatory Environmental Impact Assessment for all investment projects), COAP – “*Code des Aires Protégées*,” or Protect Area Law, Forest Resource Management Transfers (enables the devolution of natural resource management to local communities), and Customary Bylaws. A complete list of relevant Malagasy legislation is presented in Annex 3 of the PD, and is discussed in further detail under section 3.1.7 of this report.

Section 1.12 of the PD details ownership and other programs. Within this section, subsection 1.12.2 details emission trading programs and other binding limits. This is stated to be non-applicable to the Project and describes how Madagascar has no national or international binding commitments to reduce GHG emissions. Subsection 1.2.3 clearly states that the project has not been registered under nor is seeking registration under any other GHG program. The Project will however be seeking registration under the Climate Community and Biodiversity (CCB) Standard in addition to VCS. Subsection 1.12.4 clearly states that the project has not created any other form of GHG related environmental credit, but that the project will be validated and verified against the VCS, as well as the CCB standard. The only GHG related environmental credit generated by the Project will be with the VCS program. Subsection 1.12.5 clearly states that the project has not been rejected by any other GHG program.

3.18.2 – 1f): Additional information relevant to the project is detailed in section 1.13 of the PD. Here summary details of the Project Area in terms of vegetation, relief (topography), climate conditions, hydrology, and geology are given. Eligibility Criteria are covered in this section and the project is clearly described as not being a grouped project. Commercially Sensitive information is addressed in this section and the PD indicates that no information has been excluded from the public version of the PD.

Leakage Management is also covered in this section of the PD. Here it describes how given the nature of the project activities and that the drivers and agents of deforestation are for subsistence farming, no market leakage, or leakage related to investment in the project area and alternative livelihood programs is foreseen. The type of leakage that is expected to occur as a result of the project activity is activity shifting or displacement leakage. Leakage is stated to be limited to the displacement of Tavy agriculture by local people to meet their needs. Leakage mitigation measures to fully mitigate displacement leakage are then detailed including the establishment of a leakage belt, leakage management areas, definition and zoning of the project boundary, and implementation of a social impact assessment.

3.18.2 – 2): The title and reference of the Methodology used by the project is detailed in section 2.1 of the PD. The title of the methodology is “Methodology for Avoided Unplanned Deforestation” with a reference given as “VM00015, Version 1.0” which was approved by VCS on July 12, 2011. Here it also states that the sequence and steps prescribed in the approved methodology were followed to establish the baseline and estimate the ex-ante GHG emission reductions. The methodological steps (“VM step X”) are presented under the relevant VCS PD section titles. The “VM Table” numbers of the PD match those of the methodology. Section 2.2 discusses how the project meets the five applicability conditions of the methodology which is covered in detail under section 3.2.2 of this report.

The project boundary is discussed in section 2.3 of the PD. Spatial boundaries of the project are provided in various maps included in the

PD, and Figure 13 specifically illustrates the spatial boundaries of the project. The project area includes all forest areas within the boundaries of the CAZ Corridor Protected Area as well as the community managed areas bordering the protected area. Temporal Boundaries of the Project are discussed and the project start date of the first fixed baseline is December 30, 2007, and the end date is December 29, 2017.

Carbon Pools included and excluded from the project boundary are presented on Page 60-61 of the PD, and sources of GHG emissions applicable to the project are presented on page 61. Above ground live biomass (excluding non-tree), Below-ground biomass, and Deadwood, are the included carbon pools, while harvested wood products, litter, and soil organic carbon are excluded. The gas, CH₄ as a result of biomass burning is the only GHG emission source included in the project boundary, while all other gases from biomass burning and livestock emissions are excluded.

Section 2.4 of the PD provides details on the baseline scenario and how the final baseline was determined in accordance with the methodology. This project defines one main agent of deforestation - the small-scale subsistence farmer. These are by far the dominant agents of deforestation in the region and are expected to be in the coming decades. Selection of the baseline scenario is covered in greater detail under section 3.2.4 of this report.

Additionality is addressed in section 2.5 of the PD. Here it clearly states that as required by the methodology, the project uses the most recent version (3.0) of the VCS Tool VT001 "Tool for the Demonstration and Assessment of Additionality in VCS AFOLU Project Activities" in order to demonstrate the additionality of the CAZ project. The project is stated to meet the applicability conditions of this the methodology since; the AFOLU project activities do not lead to the violation of any applicable law, and since the baseline methodology used for this project provides a stepwise approach justifying the determination of the most plausible baseline scenario. Details of how additionality was assessed in accordance with steps 1 – 4 are subsequently outlined and are covered in detail under section 3.2.5 of this report.

Section 2.6 of the PD discusses methodology deviations, and clearly states that a single methodology deviation is requested in response to a new spatial requirement in VM0015 V1.1 for the Minimum Mapping Unit (MMU), which has been decreased from 2 ha to 1 ha. The proponent is requesting this methodology deviation because the analysis of historical land use cover change relies partially on a national forest cover change map that used a MMU of 2 ha, and for which the intermediate steps have been erased. As a result it is unreasonable for the proponent to perform an entirely new analysis since this will not significantly impact the conservativeness of GHG emission assertions. The audit team approves this methodology deviation.

3.18.2 – 3): The data and parameters available at the time of validation are addressed in section 4.1 of the PD, while the details on the data and parameters monitored are covered in section 4.2. The project monitoring plan is detailed in section 4.3 of the PD. This section provides information on the purpose of the CAZ GHG monitoring plan, the Organizations and staff involved in the implementation of the monitoring plan, a description of the data to be collected as part of the monitoring plan, plans for storage and data management, legal and ethical issues to be considered, and data access policies and provisions. The description of the monitoring plan also details monitoring of carbon stock changes and GHG emissions for periodical verification and covers VM Tasks 1 - 2 (including all subsections) from the methodology. More detailed findings are included under sections 3.2.8.1, 3.2.8.2, & 3.2.8.3 of this report.

3.18.2 – 4): Baseline emissions are covered under section 3.1 of the PD. Project emissions are covered under section 3.2 of the PD. Leakage emissions are covered under section 3.3 of the PD. A summary of the net GHG emission reductions and removals is covered under section 3.4 of the PD.

3.18.2 – 5): Section 5 of the PD describes the assessment of environmental impacts. As a result of an environmental and social impact assessment the project is not expected to have any negative environmental impacts. The project consists of protecting natural forest and biodiversity, does not involve building any infrastructure and is therefore overwhelmingly positive in terms of its environmental impact. See additional details on the environmental impacts of the Project under section 3.3.1 of this report.

3.18.2 – 6): Section 6 of the PD focuses on stakeholder comments. The creation of the CAZ (and any other protected areas) in Madagascar requires detailed stakeholder consultation at each key step. The Project has fulfilled these requirements in compliance with the national laws and the World Bank safeguard Operational Procedures 4.12. Formal consultations with national and local stakeholders began in 2004 with the initiative to create the protected area and have been on-going since.

Local communities, local and regional authorities (traditional and administrative), representatives of the relevant government departments were all consulted in this process. From 2005 to 2007, meetings were held in every village within the communes concerned by the protected area limits to discuss, negotiate and validate the limits. The co-management structure of the protected area, together with the transfer of the management of its buffer zone to the resident communities, forms an inclusive mechanism for ongoing stakeholder communication. See additional details on stakeholder comments under section 3.3.2 of this report.

3.18.2 – 7): Section 1.12 of the PD details ownership and other programs. Within this section, subsection 1.12.2 details emission trading programs and other binding limits. This is stated to be non-applicable to the Project and describes how Madagascar has no national or international binding commitments to reduce GHG emissions. Subsection 1.2.3 clearly states that the project has not been registered under nor is seeking registration under any other GHG program. The Project will however be seeking registration under the Climate Community and Biodiversity (CCB) Standard in addition to VCS. Subsection 1.12.4 clearly states that the project has not created any other form of GHG related environmental credit, but that the project will be validated and verified against the VCS, as well as the CCB standard. The only GHG related environmental credit generated by the Project will be with the VCS program. Subsection 1.12.5 clearly states that the project has not been rejected by any other GHG program.

3.18.2 – 8): The auditors were provided with a Non-Permanence Risk Analysis that was prepared for the Project that is a separate document from the PD. Detailed findings of the Risk report provided and its conformance to the requirements of the VCS Non-Permanence Risk Tool are provided in section 3.5.2 of this report.

Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.1.2 VCS AFOLU Requirements Section 4.2: Eligible AFOLU project type

The project is an eligible AFOLU project type, as per the guidance set out in the VCS AFOLU Requirements Section 4.2. Note project types can be combined as outlined in the AFOLU Requirements.

Findings from Field Audit

Section 1.2 of the PD details the sectoral scope and project type. The Project falls under scope 14 of the VCS, Agriculture, Forestry, and Other Land Use (AFOLU). The AFOLU category is Reducing Emissions from Deforestation and Forest Degradation (REDD). The REDD Project activity type is Avoided Unplanned Deforestation (AUD), since the land in the project is not legally authorized and documented to be converted to non-forest in the baseline. The Project is stated to not be a grouped project.

The definition of “forest” as used by the Project is described in section 2.2.c of the PD. The Project Area is stated to use a conservative definition of forest, and is defined as being a minimum of 7 meters tall, having 80% canopy cover, and being at least 2 hectares in size. This definition is based on Harper et al. 2007 and MEFT, USAID & CI, 2009, and is stated to meet the DNA definition of forest and is the same definition used in the GOM’s national analysis of deforestation for 1990 – 2000 – 2005. The definition of forest used is stated in section VM1.1.5 of the PD to be more conservative than the national definition of forest as submitted to the UNFCCC (“Forest” includes those areas with; a: tree-crown cover of over 30%, b: a canopy height of over 5 meters, c: has a minimum patch size of 2 hectares, and d: is not part of an agricultural use or in a temporary state that may meet the above structural criteria.). Justification of why the forest definition selected is more conservative than the national definition of forest as submitted to the UNFCCC is provided and found to be reasonable.

Section 2.2.d of the PD describes how all land included within the project Area had in 1990 a contiguous area of 2 hectares or more with a crown cover greater than 80%, and tree height of 7 meters and above. The Project therefore only includes land that qualified as forest at least 10 years prior to the project start date according to the definition of forest selected. This determination was made based on interpretation of Landsat images from 1990 which demonstrates the Project Area met the adopted definition of forest in 1990. The project chose to use Landsat images (30m resolution) for the analysis as this is the most common and easily accessible imagery. Due to the common presence of clouds that can mask the landscape from satellites, images were selected as close to the target years (1990, 2000, 2005) for which near cloud free images were available. The PDD also clearly states (section 2.2.e) that the project area does not include forested wetlands growing on peat, and comprises forest growing on hillsides.

The PD (various sections, including 2.2.a) identifies the single significant cause of deforestation as unplanned slash-and-burn (Tavy) agriculture by subsistence farmers in lands that are not legally authorized and documented to be converted to non-forest, and that the principle baseline activity is thus unplanned deforestation of cultivation. See also section 3.2.8.3 of this report detailing auditor concerns about potentially significant sources of degradation.

The primary project activity is the establishment of the Protected Area that has two forest management zones; a strict conservation zone, and a sustainable use zone. The project is using the protected area as a framework to provide local people with improved rights over the use of the forest resources in community use areas, viable alternative livelihoods to deforestation, and will use carbon revenues to pay local people to work on the conservation of the area.

Based on auditor review of the PD, and interviews with the project managers, it was determined that the project represents an eligible VCS AFOLU Project Type, and is classified as a REDD AUD Project.

Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.1.3 VCS AFOLU Requirements Section 3.1.4: Identification of Project Proponent

Where an implementation partner is acting in partnership with the project proponent, the implementation partner shall be identified in the project description. The implementation partner shall identify its roles and responsibilities with respect to the project, including but not limited to, implementation, management and monitoring of the project, over the project crediting period.

Findings from Field Audit			
The Project Proponent and Other Entities involved in the Project are identified in sections 1.3 & 1.4 of the PD respectively. The Project Proponent is the Government of Madagascar (GOM), through the Ministry of Environment and Forests (MEF) represented by the Direction Générale des Forêts (DGF), having overall control and responsibility for the implementation of the Project. The only other entity involved in the Project identified in section 1.4 of the PD is Conservation International (CI). CI has been given management responsibility of the protected area with the objective of reducing deforestation as designated by the DGF. CI will play this role of coordinating management activities until December 2014 with the possibility of an extension. CI is also identified as the main Project Developer, providing technical and financial support to project development and implementation. CI is also responsible for monitoring of carbon stocks. The protected area is also collaboratively managed (co-managed) with village level associations and federations of these groups playing an important role in implementing activities. This co-management structure will stay in place for the entire crediting period although the organization responsible for overall management & coordination (currently CI) may change during this period. An Orientation and Monitoring Committee with members from government services and other stakeholders serves as an oversight body and a consultative organization to ensure that that project is well integrated within the regional development context. Although no other entities play a major role in project management, many community-based organizations are involved with conservation activities at the field level. Additional details on the roles and responsibilities of each entity involved in the CAZ project are detailed in section 1.8 of the PD. The CAZ manager and its staff, six sector managers at the community federation level and the community associations are directly responsible for the management of the protected area. Specific roles and responsibilities of each entity involved in the project are detailed within section 1.8 of the PD, and are illustrated in Table 1. Table 2 offers a table detailing the co-management structure for the project, and includes information on the composition of the management, the roles and responsibilities of the management entities identified, as well as the decision making process established for the co-management structure. Details on these aspects of the management entities are provided for the Ministry of Environment, the Orientation and Monitoring Committee (OMC), the Project Area Manager, Section Coordinators, and Local Management Units (LMU). Auditor review of the details provided in the PDD on the roles and responsibilities of the entities involved in the project, as well as interview with many of the management entities involved during the field audit confirmed the roles and responsibilities of those involved in the Project have been sufficiently made clear.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.1.4 VCS Standard Section 3.7.1 - 3.7.5 and VCS AFOLU Requirements Section 3.2.1: Project start date

Project shall include a project start date in conformance with section 3.7.3 – 3.7.5 of the VCS Standard, where specific requirements for AFOLU projects are outlined. As set out in the VCS Standard, the project start date of an AFOLU project shall be the date on which activities that lead to the generation of GHG emission reductions or removals are implemented. Such activities may include preparing land for seeding, planting, changing agricultural or forestry practices, or implementing management or protection plans.

Findings from Field Audit			
The Project Start Date is identified in section 1.5 of the PD. The Project Start Date is stated to be December 30, 2007. Although the CAZ protected area was first given provisional protected area status by the GOM on December 30, 2005 following a project design and regional consultation process that started in 2004, activities to reduce deforestation started at the end of 2007. The Project Start Date represents the date that the public consultations with local communities on project boundaries and regulations related to forest use were completed, activities to improve forest management and enforce forest protection began, and activities to promote alternatives to slash and burn began. The choice of this start date also allows for the 2008 calendar year to be considered the first year of the Project. Following the provisional protection status through an executive order in December 2005, a communication and public consultation process was started to determine the details of the project design and governance for the Project. The activities to reduce deforestation started at the end of this public consultation process. A chronogram of the main activities of the project is provided in a table in section 1.5 of the PD, which summarizes the timing, the activity itself, as well as how the activity addresses drivers of deforestation. For 2007, the identified activity is “public consultations at commune and village levels to define protected area boundaries, zoning and land-use planning.” The column for how this activity addresses deforestation states; “The completion of the public consultation process signals the start of the activities to reduce deforestation because it was through these village meetings that agreement was reached with communities on the need to tackle deforestation, the principles for forest use were agreed and zoning of local areas agreed.” The final consultation meeting was completed in December 2007 as evidenced through documented community consultation meeting minutes provided to the auditors.			

The auditors have determined that the identified project start date (December 30, 2007) represents an eligible start date for this Project.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.1.5 VCS Standard Section 3.8 and VCS AFOLU Requirements Section 3.3: Project crediting period

Project shall include a project crediting period in conformance with section 3.8 of the VCS Standard. In general, for all AFOLU projects (ALM projects are an exception to this requirement) a crediting period of 20-100 years shall be used. The earliest project crediting period start date for AFOLU projects shall be 1 January 2002. Renewal of project crediting period shall follow requirements outlined in section 3.8.5 of the VCS Standard.

The project crediting period rules are set out in the *VCS Standard*. Projects shall have a credible and robust plan for managing and implementing the project over the project crediting period. For ARR or IFM extension of rotation age or low-productive to high-productive projects with harvesting, the length of the project crediting period shall be set to include at least one complete harvest/cutting cycle. In the case of selectively cut IFM projects, where trees are individually selected for harvest, the harvest/cutting cycle is the allowable re-entry period into the harvest area as determined by legal and regulatory requirements, and common practice.

Findings from Field Audit			
The Project Crediting Period (PD, section 1.6) is stated to be 30 years in length and ends of December 29, 2037. The Project plans to renew the crediting period twice for a total project length of 90 years. Section 1.12.3 of the PD discusses participation under other GHG program and clearly states that; "The Project has not been registered under nor is seeking registration under any other GHG program. The project will be seeking registration under the Climate Community Biodiversity Standard in addition to VCS." The only GHG-related environmental credit generated by the Project will however, be under the VCS Program.			
The auditors have determined that the crediting period of the Project as outlined in the PDD represents an eligible crediting period for the Project.			
The PDD clearly indicates that the Project intends to renew the crediting period twice, for a total Project length of 90 years.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.1.6 VCS Standard Section 3.10 and VCS AFOLU Requirements Section 3.4: Project location

Project location shall follow requirements outlined in section 3.10 of the VCS Standard and 3.4 of the VCS AFOLU Requirements. Project location for AFOLU projects shall be specified using geodetic polygons to delineate the geographic area of each AFOLU project activity and provided in a KML file.

Findings from Field Audit			
Section 1.9 of the PD details the Project location. The Project is constituted by the CAZ protected area and the adjacent community managed forests, located in the center of Madagascar's eastern slope rainforests in the Province of Toamasina. Zahamena National Park is to the north and Ankeniheny classified forests in the commune of Lakato to the south. The boundaries of the Project Area are defined by the limits of the protected area, and the limits of the community management forest areas. GIS and KML files of the project boundaries were made available to the auditors, and the separate parcel IDs, coordinates, areas and land tenure status are presented in Annex 3 of the PD. The physical boundaries of the Project Area were also visually assessed in a fly over of CAZ during the field audit in which the auditors could visually see the delineation of the Project Area on the ground as compared to a GPS enabled lap top computer on board in the plane.			
The Project Area is 370,032 hectares which is entirely owned by the GOM. It is found within the regions of Alaotra-Mangoro and Atsinanana; and the districts of Ambatondrazaka, Moramanga, Brickaville, Toamasina II and Vatomandry. The administrative areas encompassing the project are summarised in Table 3 of the PD. Maps of the project area accompany the description of the project location and the administrative areas in which the project is located are provided in table 3.			
A single latitudinal and longitudinal coordinate for the center of the Project Area is provided ((17 degrees, 40 minutes South, 48 degrees, 50 minutes East). The administrative areas in which the Project is located are summarized in table 3, by Region, District, and Commune.			
Section 3.10.1 – 3): in the VCS standard requires that the "project location for AFOLU projects shall be specified using geodetic polygons to delineate the geographic area of each AFOLU Project Activity and provided in a KML file." A variety of "community engagement activities" were observed by the audit team in the field including; improved rice agricultural techniques, fish farming, poultry breeding, and tree nurseries. The auditors confirmed with VCS that under this section of the standard, the reference to "AFOLU Project Activities" is with respect to the high level AFOLU categories (e.g. REDD, IFM, ARR etc.), and therefore it is only required that Project's have one KML file to delineate the geographic area in which the project activity is taking place and that separate KML files for each action (e.g. community			

engagement) that make up the project as a whole are not necessary. The Project Proponent has satisfied this requirement.

As described in sections 1.8 & 2.2.b of the PD, The Project Area has two forest management regimes (zones) including the strict conservation zone, where no extraction of timber products is permitted; and a sustainable use zone, where controlled collection of fuelwood and timber products is permitted. The Project activities are therefore a combination of the eligible categories A & B from the methodology (Protection without logging, fuelwood collection or charcoal production, and Protection with controlled logging, fuelwood collection and charcoal production. VM Table 1 of the PD outlines the Scope of potential project activities, and highlights the two project activities described above that are applicable to this project.

Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.1.7 VCS AFOLU Requirements Section 3.1.3: Compliance with applicable laws and regulations

Implementation of the project activities shall not lead to the violation of any applicable law, regardless of whether or not the law is enforced.

Findings from Field Audit

Section 1.11 of the PD details compliance with laws, statutes and other regulatory frameworks. The project is clearly stated to be in compliance with the national and local laws applicable to the project area, with the most notable examples provided. Specifically, this section of the PD details the Madagascar Environmental Charter, MECIE (mandatory Environmental Impact Assessment for all investment projects), COAP – “Code des Aires Protégées,” or Protect Area Law, Forest Resource Management Transfers (enables the devolution of natural resource management to local communities), and Customary Bylaws. A complete list of relevant Malagasy legislation is presented in Annex 2 of the PD.

Madagascar Environmental Charter:

This law was adopted in 1990, and defines the “environment,” sets down fundamental principles and responsibilities and identifies the mechanisms for implementation, including establishing the 15 year National Environmental Action Plan (NEAP). The Project contributes to meeting the objectives of the Environmental Charter through the emphasis on protecting natural habitats, biodiversity, strengthening natural resource governance and contributing toward the socio-economic development of the region around CAZ.

MECIE:

The procedure for Environmental Impact Assessment (EIA) in Madagascar was first laid out in the MECIE decree of 1992, and underwent several revisions through 2004. In 1997 an inter-ministerial order defining zones to be considered as “sensitive” and thus subject to a mandatory EIA for all investment projects, was issued and included coral reefs, mangroves, small islands, tropical forests, areas subject to erosion, areas subject to desertification, wetlands, nature conservation areas, land around drinking water sources and paleontological, archaeological or historic sites (each with a specific definition). The PD states that “the Project is complying with the MECIE through the development of an Environmental and Social Impact Assessment and Management Plan. These have been submitted to the *Office National pour l’Environnement* (ONE) for review and approval. The methodology used was consistent with the ONE guidelines for EIAs for protected areas and goes further by adhering to the World Bank’s “safeguard” Operational Policy OP4.12 that covers restriction of access to natural resources. The Environmental and Social Management Plan is further being submitted to the World Bank to demonstrate compliance with World Bank Operational Policies, which is required for the disbursement of funding allocated to the project from the World Bank’s BioCarbon Fund.

Through discussions during the field audit, the auditors were given the impression that the Environmental and Social Impact Assessment and Management Plan had not yet been accepted by ONE, and the auditors have not been provided, evidence that the Environmental and Social Impact Assessment and Management Plan intended to satisfy the MECIE requirements have been accepted by ONE. See **NCR 02/13**.

COAP:

The Codes des Aires Protégées (COAP) or Protected Area Law, describes the various types of protected areas of Madagascar Protected Area Network, as well as prescribing zoning categories that each protected area manager in Madagascar must comply with in the early stages of project identification and implementation. This law also defines a set of governance principles to which the protected area manager must comply. The PD states the Project is in full conformance with the COAP, and that this has been the guiding legislation during the protected area design and creation process. Conformance is stated to be demonstrated by all of the official legal texts related to the protection of CAZ, which are based on the COAP. The Arrêté Ministeriel 20.022-2005/MINENVEF formalized CAZ’s temporary protection status and described the original protected area zoning, demonstrating compliance to the relevant Malagasy laws and regulations. The most recent version of the planned internal zoning (i.e. taking into account the whole public consultation process) is included in the management plan for the protected area and this will be used for the final gazettelement decree.

Forest Resource Management Transfers:

In 1996, the GOM passed the law, GELOSE 96-025 – legislation that enables the devolution of natural resource management to local communities and allows the delegation of limited tenure and sustainable use rights of renewable natural resources to be a legally recognized local community institution (a *Communauté de Base* (COBA)), in exchange for a contractual obligation vis-à-vis the government to conserve the transferred natural resources. Decree 2001-122 governs the implementation of devolved forest resource management to local communities (Decree 2001-122, Décret fixant les conditions de mise en oeuvre de la Gestion Contractualisée des Forêts de l'Etat (GCF)). In 2004 CI began working with the Ministry of Water and Forests and the communities surrounding the CAZ forests to implement community managed GCF sites within the community use zone of the Project Area. The CAZ Project makes use of the GELOSE legislation in some areas to transfer management rights of forest to local communities. Copies of the transfer of management contracts with some of the local communities were provided for auditor review.

Customary Bylaws (Dina):

The PD states that although not an official law, customary bylaws (known as *dina*), are also important for aspects of CAZ's management. *Dina* are customary rules agreed upon by members of the community. Many of the official rules, for those set out in GELOSE/GCF contracts, are transformed into *dina* at the local and village level.

With the exception noted under the MECIE requirements noted above, no evidence that the implementation of the CAZ Project and associated Project Activities have lead, or will lead to the violation of any applicable law were brought to the attention of the auditors.

Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	NCR 02/13		

3.1.8 VCS Standard Section 3.11.1: Right of use

Project description shall be accompanied by right of use as outlined in section 3.11.1 of the VCS Standard.

Findings from Field Audit

Right of Use is discussed under section 1.12.1 of the PD. The GOM through the Ministry responsible for forests (Ministry of Environment and Forests – MEF) is the Project Proponent and owner of the VCU's generated by the project activity. All the forest in the Project Area is owned by the GOM and the government is responsible for project activities and therefore VCU's generated remain the property of the government. The GOM has delegated the project management to CI through a management delegation contract. The delegated project manager and local community associations are all part of the management structure and will therefore share responsibility for deciding how the revenues from the sale of VCU's will be used to achieve the project objectives through the development of annual work plans and budgets that have to be approved by the whole management structure.

The boundaries of the protected area have been defined in the protected area management plan based on public consultation and will be recorded in the government cadastral services at the time of permanent gazettelement of the protected area. The Protected area (Project Area) is comprised of the strict conservation zone, and the sustainable use forest zone. The MEF is responsible for the management of the conservation zone and has delegated that responsibility to the project manager (currently CI). The MEF also remains responsible for the sustainable use forest zones and has delegated responsibility of this zone to the project manager and community management associations (COBA). This was confirmed by the auditors during interviews with the Secretary of Environment.

The PD also discusses the right of use for the community managed areas outside of the protected area. The forest outside of the proposed protected area belongs to the State, and community stakeholder may apply to manage these areas through a GCF "transfer of management" contract. The contract between the GoM and the delegated protected area manager, as well as the GCF contracts between the GoM and the community management associations, are both for fixed terms and their renewal is dependent on performance. Copies of the transfer of management contracts with some of the local communities were provided for auditor review.

The PD states, and the auditors agree that the Project Proponent (GOM) has full control of 100% of the Project Area by virtue of the following rights of use as outlined in the VCS Standard; "A right of use arising by virtue of a statutory, property or contractual right in the land, vegetation or conservational or management process that generates GHG emission reductions and/or removals (where such right includes the right of use of such reductions or removals and the project proponent has not been divested of such right of use)."

The project proponent's right of use is demonstrated by Malagasy law under which all forests other than on private land belong to the State (see section 1.11). No private land tenure exists in the project area. A benefit sharing agreement for carbon revenues will be established between the project proponent and all legitimate stakeholders in the project. The goal is to ensure an equitable and transparent division of the revenues from sale of the VCU's.

Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.1.9 VCS Standard Sections 3.11.2 – 3.11.10 and VCS AFOLU Requirements Section 3.5: Linkage to other GHG programs and trading schemes

For those projects previously or currently involved in other GHG program or emission trading schemes, the project shall document how it meets the requirements of the VCS Standard Sections 3.11.2 thru 3.11.10 and VCS AFOLU Requirements Section 3.5.

Findings from Field Audit			
Sect Section 1.12 of the PD details ownership and other programs. Within this section, subsection 1.12.2 details emission trading programs and other binding limits. This is stated to be non-applicable to the Project and describes how Madagascar has no national or international binding commitments to reduce GHG emissions. Subsection 1.2.3 clearly states that the project has not been registered under nor is seeking registration under any other GHG program. The Project will however be seeking registration under the Climate Community and Biodiversity (CCB) Standard in addition to VCS. Subsection 1.12.4 clearly states that the project has not created any other form of GHG related environmental credit, but that the project will be validated and verified against the VCS, as well as the CCB standard. The only GHG related environmental credit generated by the Project will be with the VCS program. Subsection 1.12.5 clearly states that the project has not been rejected by any other GHG program. Auditor checks of the major voluntary carbon program/standard websites, and listing of projects registered, or undergoing validation/verification with these programs/standards confirmed that the CAZ project has not been registered with any other carbon program/standards.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.1.10 VCS AFOLU Requirements Sections 3.1.11: Project activities on peatlands and Wetlands Restoration and Conservation (WRC) areas

Where ARR, ALM, IFM or REDD project activities take place on peatlands or wetlands, the project shall adhere to both the respective project category requirements and the WRC requirements, unless the expected emissions from the soil organic carbon pool or change in the soil organic carbon pool in the project scenario is deemed below *de minimis* as set out in Section 4.3.3, in which case the project shall not be subject to the WRC requirements.

Findings from Field Audit			
Section 1.13 of the PD provides additional information relevant to the Project and includes a subsection on Geology of the Project Area. Here it indicates that peatlands are not common in Madagascar. Figure 7 follows, and provides a map of the Project Area overlaying a soils map. A small portion of hydromorphe soil is shown but does not occur in any locations of the Project Area. In addition, section 2.2.e of the PD describes how the Project Area does not include forested wetlands growing on peat, and rather comprises forest growing on hillsides. The auditors did not observe any wetlands or peatlands during the field audit, and therefore determined that the Project is not subject to the WRC requirements.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.1.11 VCS Standard Section 3.2 and VCS AFOLU Requirements Section 3.1.8: Multiple project activities

Projects may include multiple project activities where the methodology applied to the project allows more than one project activity and/or where projects apply more than one methodology. Such projects shall comply with the respective project requirements of each included AFOLU category. For example, projects that combine agroforestry or enrichment planting with community forestry in a single project where farmers integrate these activities within a single landscape shall follow an ARR methodology for planting activities and an IFM methodology for community forestry activities (except where the activities have been combined in a single methodology). For each activity covered by a different methodology, the geographic extent of the area to which the methodology is applied shall be clearly delineated. Where more than one methodology has been applied to a project with multiple project activities, the requirements outlined in Section 3.2 of the VCS Standard must be met.

Findings from Field Audit			
In section 2.2.a of the PD, the principle baseline activity is described as unplanned deforestation for cultivation, and that the single significant cause of deforestation is unplanned slash-and-burn agriculture by subsistence farmers. Subsistence harvesting of timber and collection of firewood by rural communities are baseline activities that take place in the reference region. Illegal, small scale selective logging has historically also taken place throughout the accessible forests including in the reference region. However because this small scale, selective logging is illicit, and the subsistence harvesting of timber and firewood are unplanned, these activities cannot be reliability mapped. The forest is therefore described as reaching a steady state in terms of carbon stock since subsistence collection of timber and firewood is at extremely low levels and so does not cause a continued reduction of carbon stocks in the baseline. Carbon stock measurements were taken from a wide variety of locations that have experienced the baseline uses and are a stated to be an accurate representation of this steady state carbon. The project managers have therefore determined that the forest of the Project Area is old-growth natural forest. However, the field audit resulted in numerous conversations with communities which indicated that possibly significant illegal harvesting may be occurring			

for both local and national markets. As such, the proponent intends to submit to the auditors further evidence that illegal harvesting is *de minimis*. See associated findings in section 3.2.4 (VM 3.1, VM 3.2, VM 3.5) of this report and NCR 09/13.

As described in sections 1.8 & 2.2.b of the PD, The Project Area has two forest management regimes (zones) including the strict conservation zone, where no extraction of timber products is permitted; and a sustainable use zone, where controlled collection of fuelwood and timber products is permitted. The Project activities are therefore a combination of the eligible categories A & B from the methodology (Protection without logging, fuelwood collection or charcoal production, and Protection with controlled logging, fuelwood collection and charcoal production. VM Table 1 of the PD outlines the Scope of potential project activities, and highlights the two project activities described above that are applicable to this project. The proponent must demonstrate that the permitted harvesting within the Sustainable Use Zone (Category B) is *de minimis*. If the proponent cannot demonstrate this, this reduction in carbon stocks must be documented in monitoring as required by Appendix 3 of the PD. See associated findings in section 3.2.6.15 of this report and NCR 24/13.

This project involves only one activity, which is reducing emissions from unplanned deforestation. There are concerns from the audit team that the level of degradation from both planned and unplanned deforestation may be significant. If this were the case, the proponent would need to incorporate this into the baseline and with project scenario calculation of emissions. The proponent would not need to necessarily implement project activities to address degradation. See associated findings in sections 3.2.4 (VM 3.1, VM 3.2, VM 3.5), and 3.2.6.15 of this report and NCR 09/13 & NCR 24/13.

Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.1.12 VCS Standard Section 3.4 and VCS AFOLU Requirements Section 3.8: Grouped projects

Grouped projects are projects structured to allow the expansion of a project activity subsequent to project validation. Validation is based upon the initial project activity instances identified in the project description. The project description sets out the geographic areas within which new project activity instances may be developed and the eligibility criteria for their inclusion. New instances meeting these pre-established criteria may then be added to the project subsequent to project validation, as set out in the sections below. Section 3.4 of the VCS standard provides the requirements for all grouped projects, which are further expanded upon in VCS document AFOLU Requirements Section 3.8.

Findings from Field Audit			
Section 1.13 of the PD discussed additional information relevant to the Project. Within this section it is clearly stated that this is not a grouped project. Discussions with the project manager during the field audit confirmed this to be the case.			
Conformance	Yes ☐	No ☐	N/A ☒
NCR/OBS	Non-applicable		

3.1.13 VCS Standard Section 3.18.3: Commercially sensitive information

All information in the project documents shall be presumed to be available for public review, though commercially sensitive information may be protected, as set out in VCS document *Registration and Issuance Process*, where it can be demonstrated that such information is commercially sensitive. The validation/verification body shall check that any information designated by the project proponent as commercially sensitive meets the VCS Program definition of commercially sensitive information. Information in the project documents related to the determination of the baseline scenario, demonstration of additionality, and estimation and monitoring of GHG emission reductions and removals shall not be considered to be commercially sensitive and shall be provided in the public versions of the project documents.

Findings from Field Audit			
Section 1.13 of the PD, under the heading Commercially Sensitive Information clearly states that no information has been excluded from the public version of the PD. Many other documents reviewed as part of the validation/verification process are not however included with the PD.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.2 Application of Methodology

3.2.1 VCS Standard Section 3.1: Title and Use of approved methodology

Projects shall apply methodologies eligible under the VCS Program. Methodologies shall be applied in full, including the full application of any tools or modules referred to by a methodology, noting the exception set out in Section 3.14.1.

Findings from Field Audit	
Section 2.1 of the PD provides the title and reference to the methodology employed by the Project as follows:	
Title: Methodology for Avoided Unplanned Deforestation	
Reference: VM0015, Version 1.0, approved by VCS on July 12, 2011	

This methodology is however currently undergoing revisions by the VCS. As stated on the VCS website for this methodology (<http://v-c-s.org/methodologies/VM0015>), “As of September 30, 2012, VM0015 V1.0 is no longer valid. Projects that have not completed validation by September 30 can no longer apply VM0015 V1.0. VM0015 V1.0 must be revised to conform to Section 4.5.3 of AFOLU Requirements V3.2, specifically to address baseline requirements for accounting GHG emissions released from belowground biomass, soil organic carbon, dead wood, and harvested wood products. Revisions are undergoing a streamlined approval process facilitated by VCS.”

The Project is therefore not currently employing a valid VCS methodology, and must conform to the requirements of the updated version of VM0015 once it is given final approval for use by VCS. See **NCR 03/13**.

Section 2.2 of the PD covers the application of the methodology. How the project meets the five applicability conditions of the methodology is described in detail in section 3.2.2 of this report below.

Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	NCR 03/13		

3.2.2 Conformance with methodology applicability conditions

The project shall demonstrate conformance with all methodology applicability conditions. A project cannot use a methodology unless it meets all applicability conditions. Any change in applicability conditions is considered a Methodology Revision and must be submitted for double approval under the VCS Methodology Approval Process.

Findings from Field Audit	
Applicability Condition	Finding
a) Baseline activities may include planned or unplanned logging for timber, fuel-wood collection, charcoal production, agricultural and grazing activities as long as the category is unplanned deforestation according to the most recent VCS AFOLU requirements.	Section 2.2.a of the PD clearly states that the single significant cause of deforestation is unplanned slash-and-burn agriculture by subsistence farmers in lands that are not legally authorized and documented to be converted to non-forest, and that the principle baseline activity is unplanned deforestation for cultivation. Therefore the baseline activities are in conformance with the activities allowed by the methodology (clearing for agriculture). However, based on the field visit, the audit team does have concerns that unplanned illegal logging may currently be significant. If this is the case, this would need to also be included in the baseline, although it is still in conformance with this methodology applicability condition. See associated findings under section 3.2.4 (Step VM 3.1, VM 3.2, & VM 3.5) of this report and NCR 09/13.
b) Project activities may include one or a combination of the eligible categories defined in the description of the scope of the methodology (table 1 and figure 2).	The Project activities will avoid the baseline deforestation of conversion of old-growth natural forest to land in Tavy agriculture and fallow system. Field visits by the audit team, as well as information submitted by the proponent, have confirmed that the forest is in fact old-growth natural forest. There is present some very early successional forest on abandoned Tavy field, but this has been excluded from the project area. The project has two forest management regimes (detailed in section 1.8 of the PD) including a strict conservation zone where no extraction of timber products is permitted, and a sustainable-use zone where controlled collection of fuelwood and timber products is permitted. The project activities are therefore a combination of the eligible project activity categories A & B, and in conformance with this methodology applicability condition.
c) The project area can include different types of forest, such as, but not limited to, old-growth forest, degraded forest, secondary forests, planted forests and agro-forestry systems meeting the definition of “forest”.	The Project area is defined using a conservative definition of forest (7 meters tall, 80% canopy cover, 2 hectares in size) and is comprised of old-growth natural forest. However, it has been determined by the audit team that CI Madagascar cannot actually determine the difference between forest that is 80% canopy cover, and forest that is less than this. In effect, the forest definition in practice is not as

	conservative as the definition chosen by the proponent. See associated findings under section 3.2.4, Step VM 2.2 of this report and NCR 07/13. However, the definition of forest still meets the DNA definition of forest and is the same one as that used in the Government's national analysis of deforestation for 1990 – 2000 – 2005. The project area includes only old-growth natural forest.		
d) At project commencement, the project area shall include only land qualifying as "forest" for a minimum of 10 years prior to the project start date.	All land included within the Project area is stated to have met the forest definition in 1990, 17 years before the project start date. The project area therefore only includes land that qualified as forest at least 10 years prior to the project start date according to the adopted definition of forest. Interpretation of landsat images from 1990 is also stated to unequivocally demonstrate that the project area was forest in 1990. The Landsat image from 1990 used to demonstrate that all of the project area has been forest for at least 10 years, was also used in calculating the deforestation rate in the historical reference period. As such, any new land that converted from non-forest to forest in this analysis (through 2005) would be observed. None was observed. Additionally, the audit team observed only very early successional secondary forest in the field, thus confirming that Tavy agricultural areas do not usually grow back to forest, and hence there is very little or no secondary forest in or near the project area. Therefore only old-growth forest was included, which is obviously older than 10 years old at the project start date.		
e) The project area can include forested wetlands (such as bottomland forests, floodplain forests, mangrove forests) as long as they do not grow on peat. Peat shall be defined as organic soils with at least 65% organic matter and a minimum thickness of 50 cm. If the project area includes a forested wetlands growing on peat (e.g. peat swamp forests), this methodology is not applicable.	The project area is stated to not include forested wetlands growing on peat, and rather comprises forest growing on hillsides. The audit team verified this through a fly-over of the project area as well as through field visits to the forest. No forested wetlands were observed. The flat valley bottoms where forested wetlands could possibly grow have nearly all been converted to irrigated rice agriculture. Additionally, Figure 7 of the PD shows a map of soil types (CAZ VCS REDD Pedology) demonstrating no wetland or peat soils within the project area. Therefore, the project is in conformance with this methodology applicability condition.		
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.2.3 VCS Standard Section 3.12: Project boundary

The project boundary shall be described (using diagrams, as required) and GHG sources, sinks and reservoirs shall be identified and assessed in accordance with the methodology applied to the project. The project shall justify not selecting any relevant GHG source, sink and reservoirs.

Findings from Field Audit
Section 2.3 of the PD discusses the Project Boundary. Figures 12 through 15 show the forest cover benchmark map from 1990; the forest cover benchmark map 2005 and land use and land cover map 2005; the deforestation map 1990 – 2000; and the deforestation map 200 – 2005 respectively. Section 2.3 addresses VM 1.1 and the spatial boundaries of the Project including the Reference Region (1.1.1), the Project Area (1.1.2), the Leakage Belt (1.1.3), the Leakage Management Areas (1.1.4), and the Forest (1.1.5). Boundaries of Sinks, Sources, and Reservoirs VM 1.4 Sources of GHG Emissions Conversion of forest to non-forest comprises the only significant source of GHG emissions within the project boundary. There is a single forest cover type (primary Malagasy humid eastern forest) and a single non-forest type (tavy and tavy fallows). The conversion of forest to non-forest is the source of GHG emissions. This conversion produces CO₂ emissions as well as CH₄ emissions from the burning of forest areas which is the dominant means of conversion of forest to non-forest. Emissions from livestock are correctly not included and are not significant in this project. Although there is some amount of livestock in the project area, the field audit confirms that it is minimal and that project activities will not increase the prevalence of livestock in the project area. There are no sinks or reservoirs relevant to the project.

Forest areas are considered to be old growth Malagasy forest with static carbon stocks over time. Some leakage mitigation activities may include reforestation, but these carbon sinks will not be quantified.

VM 1.3 Selected Carbon Pools

The project seeks credit for three carbon pools:

- aboveground biomass
- belowground biomass
- dead wood

Accurate field measurement of these carbon pools was confirmed by the field audit. The proponent originally selected and measured other carbon pools including the litter layer but later omitted this with justification due to its insignificance.

VM 8.1 Decrease in carbon stocks and increase in GHG emissions associated with leakage prevention measures

Project activities, including leakage mitigation activities, produce no significant GHG emissions as defined by the methodology. Project activities do of course produce some fossil fuel emissions in their implementation but according to VM0015 (VM Step 8.1.2) these are always considered insignificant and shall not be quantified in the project boundary.

Physical Boundaries

VM 1.1.1 Reference Region:

There is not a sub-national or national baseline that meets the VCS or VM0015/Table 2 specific guidance on applicability of existing baselines. Neither Madagascar or the sub-national region where the project is located has been divided into spatial units for which deforestation baselines will be developed following VCS or UNFCCC rules. The PD clearly states that the GOM, the Project Proponent, has confirmed that there are no such divisions endorsed by the GOM for which baselines will be developed. The Project Proponent has therefore defined a reference region specific to the project for the determination of the baseline. The reference region that encompasses the project area and leakage belt and is approximately 22 times larger than the project area, and covers an area of 4,966,685 hectares. The deforestation patterns in the reference region are found to be representative of those within the project area.

The Project Proponent asserts that the overall deforestation patterns in the reference region are a credible proxy for potential deforestation within the project area and that the defined reference region meets the three criteria required by the methodology (Agents and drivers of deforestation, landscape configuration and ecological conditions, and socio-economic and cultural conditions). With respect to the agents and drivers of deforestation, the PD describes the agent groups, infrastructure drivers, and other spatial drivers expected to influence the project area, and adequately describes how the defined agents/drivers of deforestation are the same or similar within the project area and the much larger reference region. With respect to the landscape configuration and ecological conditions, the PD adequately describes how the conditions of the project area and the reference region are the same or similar in terms of forest/vegetation classes, elevation, slope, and amounts of rainfall. At least three of the four required conditions comparisons were found to be satisfied. Lastly, with respect to the socio-economic and cultural conditions, the PD sufficiently describes how the legal status of the land, land, tenure, land use, and enforced policies and regulations are the same or similar in the project area and reference region.

Additionally, for tracking purposes it is noted that the reference area that was evaluated during the field audit was reduced in size after the field audit and before the completion of the draft validation report. The auditors assessed the new reference region which is approximately half the size of the previous reference region and is entirely contained within the original reference region. The original reference region was found to be appropriate as is the new reference region, and likely a better reference region since the original extended very far south of the project area. See also associated findings under section 3.2.4, Step VM 2.2 of this report and NCR 06/13.

VM 1.1.2 – Project Area:

The location of the project area and its administrative regions are covered in section 1.9 of the PD (see table 3). The Project area includes all forest areas within the boundaries of the CAZ protected area including the community managed areas surrounding the protected area. GIS files (KML) showing the physical boundaries of the project area were provided to the auditors. Table 5 & figure 9 in the PD present the protected area management zones (category A – strict conservation zone, & category B – sustainable use forest areas/community managed areas) that make up both the project area and leakage management areas. Section 1.12.1 of the PD – Rights of Use provides a sufficient description of the current land-tenure and use rights of the project area. Sections 1.3 & 1.4 of the PD sufficiently detail the Project Proponent and other participants involved in the project respectively.

VM 1.1.3 – Leakage Belt:

Appropriately following the methodology, Option II – mobility analysis was used to define the boundary of the leakage belt since the single cause of deforestation throughout the reference region was found to be slash-and-burn (*Tavy*) agriculture by subsistence farmers. This

analysis was done using a Multi-Criteria Evaluation (MCE), a module of IDRISI. Several appropriate criteria were selected to evaluate the mobility of the population including:

- a) Distance to fokontany (point)
- b) Distance to communes (point)
- c) Distance from district (point)
- d) Distance from primary road
- e) Distance to secondary road
- f) Distance to rivers
- g) Altitude
- h) Slope
- i) Distance from forest edges
- j) Distance from project area

As part of the MCE process, the Project Proponent first generated “fuzzy” maps for each variable and the “fuzzy function” was applied on factor maps for each of the above identified variables (values ranged from 0 to 255, where 0 is the most suitable and 255 is the least suitable). This section of the PD contains a table showing each variable, its relationship with deforestation during the period 1990 – 2005, and the results of the “fuzzy membership variable.” In the second step of the MCE process the Project Proponent determined the relative weights for the factor maps, which were developed by providing a series of paired comparisons to the suitability of pixels for the variable being evaluated. Weighted scores for each variable are provided, with a consistency ratio ranging from 0 to 1 (the closer to 0 being better). The consistency ratio of the MCE was found to be 0.09.

As a final step of the MCE process, the Project Proponent excluded the areas inside the project area boundaries, the protected areas, and non forest areas, as appropriate since the interest is in the agent(s) moving into forest areas. An output map of the potential access to the forest was produced with values ranging from 0 to 255 (where 0 is inaccessible, and 255 has the highest probability of being accessed or for populations to move into (see Figure 10 of the PD). The leakage belt is shown as figure 11 in the PD, and is defined as the forest areas falling within the probability map containing enough forest to absorb more than 100% leakage potential displacement of baseline deforestation due to project implementation. The defined leakage belt is an area of 89,155 hectares of forest and is large enough to absorb the entire 71,673 hectares of projected deforestation in the project area and leakage belt during the initial baseline period – assuming 100% leakage.

VM 1.1.4 – Leakage Management Areas:

The PD states that the Leakage Management areas include all non-forest land within the community managed areas, and that the boundaries of the leakage management areas are defined by; the limits of the settlement enclave zones within the protected area; and a 2 km zone around the limit of the project area or forest contiguous with the project area. Examples of leakage management activities including fish farming, improved rice cultivation, and poultry breeding were observed by the auditors during the field audit within the defined boundaries.

VM 1.1.5 – Forest:

The definition of “forest” as used by the Project is described in section 2.2.c of the PD. The Project Area is stated to use a conservative definition of forest, and is defined as being a minimum of 7 meters tall, having 80% canopy cover, and being at least 2 hectares in size. This definition is based on Harper et al. 2007 and MEFT, USAID & CI, 2009, and is stated to meet the DNA definition of forest and is the same definition used in the GOM’s national analysis of deforestation for 1990 – 2000 – 2005. The definition of forest used is stated in section VM1.1.5 of the PD to be more conservative than the national definition of forest as submitted to the UNFCCC (“Forest” includes those areas with; a: tree-crown cover of over 30%, b: a canopy height of over 5 meters, c: has a minimum patch size of 2 hectares, and d: is not part of an agricultural use or in a temporary state that may meet the above structural criteria.). Justification of why the forest definition selected is more conservative than the national definition of forest as submitted to the UNFCCC is provided and found to be reasonable.

Temporal boundaries:

The temporal boundaries of the project are identified as follows in the PD, as required by the methodology.

VM 1.2.1 Starting date and end date of the historical reference period:

The historical reference period is from 1990 to 2005, totalling 15 years. Figures 12 through 15 show the forest cover benchmark map from 1990; the forest cover benchmark map 2005 and land use and land cover map 2005; the deforestation map 1990 – 2000; and the deforestation map 200 – 2005 respectively.

VM 1.2.2 Starting date of the project crediting period of the AUD project activity:

Following project preparation and development activities from 2005 – 2007, the activities to reduce deforestation were started at the end of

2007. As described in section 3.1.4 of this report the project start date is defined as December 30, 2007, and represents the timing for completion of the public consultation process to define the project boundaries and regulations related to forest, and when activities to improve forest management enforce forest protection, and activities to promote alternatives to slash and burn began. The Project start date represents the date of the first project crediting period of the AUD activity, and the end date is December 29, 2037.

VM 1.2.3 – Starting date and end date of the first fixed baseline:

As explained in this step of the PD, the start date of the first fixed baseline is December 30, 2007, and the end date is December 29, 2017.

VM 1.2.4 – Monitoring Period:

As stated in this step of the PD, the minimum duration of a monitoring period will be one year and the maximum duration will be one fixed baseline period.

Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.2.3.1 VCS AFOLU Requirements Section 4.3.1 and VCS AFOLU Requirements Sections 4.3.2 – 4.3.25 (Project type specific carbon pools): Relevant carbon pools

The relevant carbon pools for AFOLU project categories are aboveground tree biomass (or aboveground woody biomass in ARR and ALM projects), aboveground non-tree biomass (aboveground non-woody biomass in ARR and ALM projects), belowground biomass, litter, dead wood, soil (including peat) and wood products. Methodologies shall include the relevant carbon pools set out in Table 2 of Section 4.3.1 of the VCS AFOLU Requirements.

Specific carbon pools and GHG sources, including carbon pools and GHG sources that cause project and leakage emissions, may be deemed *de minimis* and do not have to be accounted for if together the omitted decrease in carbon stocks (in carbon pools) or increase in GHG emissions (from GHG sources) amounts to less than five percent of the total GHG benefit generated by the project. Additional information on *de minimis* carbon pools is available in section 4.3.3 of the AFOLU Requirements.

The VCS AFOLU Requirements contain project type specific requirements for all AFOLU project types, the following criteria shall be met for each project type:

- ARR: VCS AFOLU Requirement 4.3.7
- ALM: VCS AFOLU Requirements 4.3.8 – 4.3.11
- IFM: VCS AFOLU Requirements 4.3.12 – 4.3.15
- REDD: VCS AFOLU Requirements 4.3.16 – 4.3.17
- ACoGS: VCS AFOLU Requirements 4.3.18 – 4.3.21
- WRC: VCS AFOLU Requirements 4.3.22 – 4.3.25

Findings from Field Audit

As described in section 2.3, step VM 1.3 of the PD, of the six carbon pools eligible in the methodology (VM0015), the project is seeking credit for three:

- Above-ground live tree biomass;
- Below-ground biomass, and;
- Dead wood

VM Table 3 in the PD displays the carbon pools included or excluded within the boundary of the project, including justification and explanation of the choice to include/exclude. Auditor review of the justification and explanation provided for the inclusion/exclusion of the carbon pools was found to be sufficient and meet the VCS AFOLU Requirements regarding carbon pools for REDD AUD projects.

Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.2.3.2 VCS AFOLU Requirements Section 4.3.5 and 4.3.6: Non-CO₂ GHGs

Reductions of N₂O and/or CH₄ emissions are eligible for crediting if in the baseline scenario the project area would have been subject to livestock grazing, rice cultivation, burning and/or nitrogen fertilization. Reductions of CH₄ emissions are eligible for crediting if fire would have been used to clear the land in the baseline scenario.

Findings from Field Audit

The Project does seek credit for reductions of non-CO₂ GHGs, specifically, CH₄ from emissions from biomass burning, which is the dominant method for forest clearance in the baseline. N₂O is excluded and considered insignificant from biomass burning by VM0015 (Table 4 of the methodology). Other non-CO₂ GHG emitting activities, including livestock rearing, and rice agriculture, are present in the non-forest areas of the project area but are considered insignificant sources by the Project Proponent. Auditor observations of the Project Area during the field audit confirm this assumption.

Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.2.4 VCS AFOLU Requirements Section 4.5 and VCS Standard Section 3.13: Baseline scenario selection

The baseline scenario for the project shall be determined in accordance with the requirements set out in the methodology applied to the project, and the choice of baseline scenario shall be justified. Equivalence in type and level of activity of products or services provided by the project and the baseline scenario shall be demonstrated and, where appropriate, any significant differences between the project and the baseline scenario shall be explained. In developing the baseline scenario, assumptions, values and procedures shall be selected that help ensure that net GHG emission reductions and removals are not overestimated.

Findings from Field Audit	
Baseline Determination Step	Findings
VM 2.1 Collection of appropriate data sources	The Project Proponent selects the appropriate spatial resolution data as defined by the methodology (Landsat-30m resolution), high resolution data is also appropriately selected. The Project Proponent however fails to “describe...the sampling design” used to collect the high resolution data for validation as required by the methodology. Normally this would be included in the methodology annex for which CI is submitting the “Forest Cover Mapping and Change Detection using Moderate-Resolution Satellite Imagery” (Steininger et al. 2006) document. This document is generic and does not include specific information on the actual CAZ project, but rather generic processes. VM0015 requires that “the detailed methodological procedures used in pre-processing, classification, post classification processing, and accuracy assessment of the remotely sensed data, must be carefully documented in an Annex to the PD.” (VM 2.6). This requirement has not been fulfilled. During the field audit the auditors observed the CI team replicating this process both in the Madagascar and the US office and the high-resolution validation process was considered accurate. However, the sampling design and other details are not documented as required by VM0015. See NCR 04/13.
VM 2.2 Definition of classes of land-use and land-cover	The proponent selects four Land-use and Land-cover (LULC) classes: 1. Forest land in reference region 2. Forest land category A (strict protection zone in project area) 3. Forest land category B (sustainable use zone allowing harvesting in project area) 4. Non-forest land The proponent only stratifies the forest into strict protection (Category A), and sustainable use (Category B) forest. This stratification is simply for purposes of designating where activities may occur, and not for the purpose of obtaining accurate carbon stock measurements. The proponent does not stratify forest land. See NCR 05/13. The proponent asserts that forest land in the reference region is not further stratified for multiple reasons including the fact that carbon stock measurements across elevations, forest types, etc. showed no distinguishable carbon densities. The evidence for this statement is unclear. The auditors were provided with carbon measurements taken in the project area, but not with carbon measurements from the much larger reference region.

	Further, VM0015 does not require that an assessment of carbon stocks be used in determining the reference region. Other ecological characteristics are used by the Project (VM0015 Section 1.1.1) and found to be appropriately justified. See NCR 05/13. Additionally, for tracking purposes it is noted that the reference area that was evaluated during the field audit was reduced in size after the field audit and before the completion of the draft validation report. The auditors assessed the new reference region which is approximately half the size of the previous reference region and is entirely contained within the original reference region. The original reference region was found to be appropriate as is the new reference region, and likely a better reference region since the original extended very far south of the project area. The proponent asserts that the conservative forest definition used (80% canopy cover) will ensure that forest cover is not overestimated. This may not be fully implemented because all remote sensing specialists interviewed in Madagascar and the US confirmed that they could not differentiate between 80% canopy cover and forest with less than 80% canopy cover. They could differentiate between secondary forest, intact forest, and savoka (agricultural fallows) visually and this was demonstrated. The audit team agreed with the visual assessment of the differences between secondary forest, intact forest, and savoka and that this assessment is clear and accurate. However the assertion that the 80% canopy cover forest definition is actually utilized is difficult to determine as the remote sensing specialists cannot quantitatively differentiate between forest with less than and greater than 80% canopy cover. Only their ability to distinguish between forest and non-forest was demonstrated. See NCR 07/13.
VM 2.3 Definition of categories of land-use and land-cover change	This is complete and accurate. The project defines four land use and land cover classes: 1. Forest Land 2. Forest Land (Cat A, strict protection) 3. Forest Land (Cat B sustainable use zone) 4. Non-forest land 3.3 Tables VM 71 and VM 7b are accurately completed and describe the potential land use and land cover changes as well as the attributes of the different land uses and land cover.
VM 2.4 Analysis of historical land-use and land-cover change	See below sub-steps
VM 2.4.1 Pre-processing	Pre-processing was discussed and observed with auditors at the CI Madagascar office. a. Geometric corrections: appropriate geometric corrections were utilized including co-registration of images with the required <1 pixel location error. b. Cloud and shadow removal was not utilized. Clouds were treated in a conservative fashion. Areas covered by clouds in time 1 and recorded as deforested in time 2 were not counted as area deforested, thus ensuring a more conservative baseline. c. Radiometric correction was not necessary

	d. Haze reduction was not necessary
VM 2.4.2 Interpretation and Classification	Interpretation and classification processes were observed by auditors at the CI office in Madagascar. Good practice was observed with supervised classification utilized with ERDAS. The minimum mapping unit was consistent with the minimum area threshold in the forest definition thus conforming to the methodological guidance. The process is described in general terms in the CI Remote Sensing methodological guidance document ("Forest Cover Mapping and Change Detection using Moderate-Resolution Satellite Imagery, Steininger et al, 2006). The description is not sufficiently detailed. See NCR 04/13.
VM 2.4.3 Post-processing	The proponent does not utilize post-processing techniques to use non-spectral data to further stratify LU/LC classes based on carbon density or any other factor. This relates to NCR 05/13 concerning the need for further stratification of forest classes. The required maps are produced and displayed in the PD showing the forest cover benchmark maps for the most recent date and date prior to project start date. These same maps function as the Land-Use and Land-Cover Map which is also required. The lack of further stratification of forest and non forest into more distinct classes renders them identical. The required deforestation maps are also produced, and the latter deforestation map is identical to the Land-Use and Land-Cover Change Map required, for the same reason described above (lack of further stratification). The Land-Use and Land-Cover Change Matrix is also produced for the most recent time period analysed (2000-2005), as required. The earlier time period (1990-2000) is omitted, but is not required by the methodology. The PD states that analysis and data for the land cover change analysis have been published in two studies, yet only one is listed (Harper et al, 2007). The auditors have seen the results of this second study (for year 2000-2005) yet all sources have not been documented fully in the PD and bibliography. See OBS 02/13. Post-processing is in conformance with the methodology other than the above OBS 02/13, and NCR 05/13 (issued in 6.1.1).
VM 2.5 Map Accuracy Assessment	The map accuracy assessment is clear and complete. The audit team observed a CI remote sensing expert in Madagascar working through the steps detailed from Step VM 2.1 through Step VM 2.5. Good practice was followed and observed. This only applies to the 2005 map. The 1990 and 2000 maps come from a study by Harper et al (2007), for which we cannot directly observe the accuracy assessment, although the process is described in the PD. The resulting accuracy was 90% as outlined in section VM 2.5 of the PD, which meets the requirements of the methodology.
VM 2.6 Preparation of a methodology annex to the PD	The Project Proponent is lacking a complete methodology annex specific to this project. This methodology annex is described in detail in Step 2.6 of VM0015. The document ("Forest Cover Mapping and Change Detection using Moderate-Resolution Satellite Imagery" (Steininger et al. 2006) submitted by the Project Proponent to take the place of the methodology annex is insufficiently detailed. For further explanation see findings under Step VM 2.1 in this report and NCR 04/13 (Section 3.2.4 VM 2.1, VM 4.2.2). Other associated NCRs that have been issued may be rectified in either the PD or

	methodology annex, including NCR 10/13 (VM Step 4.2.1), & NCR 21/13 (VM Step 6.1.1).
VM 3.1 Identification of Agents of Deforestation	The Project Proponent identifies all major and minor agents of deforestation that were observed during the field audit, including subsistence farming, charcoal production, small-scale logging, small-scale illegal mining, and large-scale mining. Subsistence farmers are identified as the sole major source of deforestation in the project area, exclusively through <i>tavy</i>, or swidden agriculture. Our field audit assessed each of the agents as follows: 1. Subsistence farmers: This is undoubtedly the largest group of agents of deforestation accounting for nearly all deforestation. Visits to villages, as well as a fly-over of the project area confirmed a stark level of deforestation through <i>tavy</i>. Minor agents of deforestation (excluded by proponent from further analysis). 1. Charcoal producers The field visit confirmed that charcoal producers utilize pine and eucalyptus plantations nearly exclusively. No evidence of charcoal production from natural forest, or within the Project Area was observed or recorded in interviews with government officials and villagers. 2. Small-scale loggers Evidence of small scale logging was observed and is permitted in the Sustainable Use Area (Category B Forest) according to community level management plans created through Management Transfer Agreements. Additionally, all representatives from villages that were interviewed confirmed that illegal logging to supply markets in Moramanga and Antananarivo occurs near their villages, or occurred in recent years. During a field visit in the project area, one audit team member observed a very large (approx. 100 cm dbh) tree that had been felled by chain saw and the bole had been removed. It was confirmed by local guides that this was a precious wood. Further analysis and demonstration that both permitted small-scale logging, and illegal small-scale logging is insignificant, is needed. See NCR 09/13. This is particularly important because there is a significant risk that carbon stock losses from degradation will be unquantified. The proponent intends to submit analyses to demonstrate that this logging is insignificant but this has not yet been provided for auditor review. 3. Small-scale illegal miners Small-scale gold mining was observed during the field visit. The gold mine visited resulted in more forest degradation than deforestation, and was minor. The proponent cites past analyses that demonstrate mining has historically been minor. The potential for significant deforestation from mining would likely come from <i>tavy</i> associated with mining, rather than the mining itself. This is captured in #1, above. However, key interviews and media report searches highlighted a recent (July 2012) sapphire boom in the CAZ, near Didy in which significant numbers of people were involved (one interviewee cited up to 40,000 people). This was not mentioned to the audit team, and

	sapphire mining is not mentioned in the PD. A source, (Tilghman et al, 2007) is cited for previous mining rushes at other areas in Madagascar, acknowledging that these rushes can bring in tens of thousands of people. This sapphire boom must be fully assessed in light of the requirement to assess the “likely development of the population size of the identified main agent groups (See VM 3.1 c). See NCR 09/13. 4. Large-scale mining The Ambatovy mine is a large scale mine outside of the project area, but near it's boundary. The mine has management over approximately 7,000 ha. of the project area as part of a biodiversity offset. Officials from the mine were interviewed, as well as government officials, and it was confirmed that there are no plans for additional large scale mines in the project area. In summary, the proponent fails to adequately assess small-scale illegal miners and small-scale loggers as agents of deforestation in the project area. See NCR 09/13.
VM 3.2 Identification of deforestation drivers	The proponent makes a mostly full and adequate assessment of the driver variables influencing the claimed sole major source of deforestation—<i>tavy</i> by subsistence farmers. The PD does not analyse deforestation drivers for the two agents that may also be major (small-scale miners and small-scale loggers). See NCR 09/13 above. Under the key driver variable “Access to forest from existing villages” the PD claims “There are no planned new roads...in the project area”. According to an interview with Andrew Cook, Environmental Manager of the Ambatovy Mine, the mine now plans to maintain what was originally a temporary road going across the project area. The road is for pipeline access. This may dramatically change access to the forest in this region (the South of the project) and must be assessed. It should be noted that Mr. Cook said that deforestation along the road will be monitored. Still, the PD must capture this detail and assess its future development and how project measures will address it. See NCR 10/13.
VM 3.3 Identification of underlying causes of deforestation	A full and adequate identification of key underlying causes of deforestation is performed. Some statistics do not have a citation. For example, for the Key Underlying Cause # 2, it is cited that 80% of households are poor and rural with no referenced source. This problem occurs multiple times in this step and throughout the PD. For another example, see Key Underlying Cause #2, when population growth is cited as 2.8% with no referenced source. All data must be evidenced and substantiated. See NCR 11/13.
VM 3.4 Analysis of chain of events leading to deforestation	An extensive chain of events is described both verbally and graphically (Figure 16 of the PD). This chain of events is accurate with the observations that auditors made in the field and is consistent with communication that auditors had in community interviews.
VM 3.5 Conclusion	The proponent cites a conclusive judgement that deforestation will continue in the reference region and project area. The analysis of agents, drivers, and causes supports this conclusion, as well as the evidence collected by the audit team in the field.

	Not all facts are cited again. The PD claims in Section 3.5 that transport infrastructure is projected to be improved, but cites no source. It is true that the audit team observed upgrades to one road near the project. However, all assertions should be fully evidenced and supported. See NCR 11/13. The historical average deforestation rate (1990-2005) is cited to be 1.21% in this section 3.5 as well as Step VM 7.1.2, yet p.88, Step VM 4.1.3 cites the rate as 1.26%. This discrepancy must be resolved. See NCR 13/13. Steps VM 3.1-3.5 are adequate only if it is more evidence is provided that small-scale loggers and small-scale miners are not major agents of deforestation. Evidence was seen in the field audit to indicate that these may be significant and that a full assessment of their impact has not been completed in step VM 3.1. See NCR 09/13.
VM 4.1 Projection of the quantity of future deforestation	See below steps. The proponent does not stratify the reference region so is not required to produce Table 8. The jurisdiction has not adopted a VCS or UNFCCC baseline deforestation rate applicable to the project area, leakage belt, or reference region, therefore the proponent must complete analytical sub-steps 4.1.1-4.1.3.
VM 4.1.1 Selection of the baseline approach	The Project Proponent chooses option “a”, historical average approach. This is conservative given ample evidence that deforestation is likely to increase with continued population growth which is expected.
VM 4.1.2 Analysis of constraints to the further expansion of deforestation	The PD claims that there are effectively no biophysical constraints to deforestation. Although this is surprising, our field audit confirmed that this is the case. During a fly over of the entire project area and part of the reference region, deforestation was observed across all elevation and ranges of slope. It is possible that there is some other explanation for the deforestation of the very steep slopes, other than <i>tavy</i>, seeing as how these would be extremely poor agricultural lands. However, the audit team could not determine another explanation from interviews with local communities. It may be that local communities do farm these extremely steep slopes, or that fires that are used to clear land for <i>tavy</i> on lower slopes escape and burn the steepest parts. Either way, it was confirmed that <i>tavy</i> is the driver of deforestation and that there are essentially no large scale biophysical constraints. Additionally, the PD claims there are no socioeconomic constraints to expansion of deforestation. This was found to be true as well given absent enforcement of forest conservation laws and the strong tradition of <i>tavy</i> practice. The conclusion that all forest in the reference region is susceptible to conversion is supported. The PD accordingly stratified the “Maximum Possible Deforestation Map” into the three recommended suitability classes (optimal, average, and suboptimal) based on biophysical and socioeconomic variables.
VM 4.1.3.1-4.1.3.2 Quantitative projection of future deforestation	The Project Proponent selects approach “a”, historical average deforestation rate. But, cites this rate as 1.26% when earlier it is

	cited as 1.21% (see step 3.5 above). This discrepancy must be resolved. See NCR 13/13. Other than this, the Project Proponent correctly stratifies the baseline deforestation map into appropriate suitability classes and completes location analysis as required by step 4.2 in the Methodology.
VM 4.1.3.3 Summary of step 4.1.3	The Project Proponent presents the results of the previous step in Tables 9a-9c of the PD as required for the first 10 year baseline period.
VM 4.2 Projection of the location of future deforestation	The Project Proponent uses the IDRISI Land Change Modeller model to spatially project future deforestation. Within IDRISI they chose the neural network approach over other approaches using multiple regressions due to the recognition of a lack of independence among some driver variables. The audit team observed CI's modelling expert at work in Madagascar. The complete process of selecting and evaluating appropriate driver variables was observed as well as a discussion of the appropriateness of the neural network approach. The expert demonstrated competence with the model. All model steps were observed in brief up to the point of actually running the model which takes 2+ days. Cramer's V values were used to select the appropriate driver variables. Above a 0.2 value was considered important while those above a 0.16 value were considered significant. A single very important variable (distance from forest edge) with a value of 0.84 was removed from the analysis because this masked the impacts of all other variables. Default values for IDRISI as well as the accompanying manual were used when appropriate.
4.2.1 Preparation of factor maps	The Project Proponent uses the Heuristic Approach. The methodology requires that information should be collected from credible and verifiable sources of information regarding change in the spatial variables. Dependent on this, multiple factor maps that represent these changes over time may need to be created. All of the variables assessed are unlikely to change with time except for the "distance to roads" variable. The proponent has not demonstrated that an assessment of planned infrastructure has occurred and incorporated the pipeline access road being built for the Ambatovy mine as a permanent road. See NCR 10/13. The methodology specifies that the empirical approach should be preferred over the heuristic approach. The proponent has selected the heuristic approach, which should be used "only where there is insufficient information about the spatial location of historical deforestation or where the empirical approach does not produce accurate results when validated against a historical period." The justification provided in the PD is that distance maps categorized by classes (e.g. class 1 distance between 50 and 150, class 2 distance between 151 and 250...) are not ideal input variables in the LCM. Categorizing variables also requires assumptions and sometimes guesswork to create classes, making the variability very subjective. LCM automatically created classes (virtual nodes) based on the spatial correlation between the factor maps and the historical deforestation data. This justification was also provided in person to

	the Audit team.
4.2.2 Preparation of deforestation risk maps	The Project Proponent successfully produces the required factor maps and table listing the variables maps, and factor maps (Table 10), as well as the flow-chart diagram illustrating the process for generating it. The model used is an internationally peer-reviewed model and conforms to methodology requirements. However the methodology states that “Several risk maps should be produced using different combinations of Factor Maps and modelling assumptions in order to allow comparison and select the most accurate map”. These multiple risk maps have not been documented in either the PD or an appropriate methodological annex. See NCR 04/13.
4.2.3 Selection of the most accurate deforestation risk map	The Project Proponent appropriately uses “Option A” for calibration and confirmation of the model output, using the 1990-2000 time period for calibration and the 2000-2005 period for confirmation. The process is sufficiently documented and was observed in person by the audit team in Madagascar. Adherence to good practice was observed. An FOM of 50% is required for frontier landscape configuration and 80% for mosaic landscape configurations. The proponent does not identify anywhere in the PD whether this project address frontier or mosaic deforestation. This was discussed during the field audit and the RA audit team agrees that the deforestation has attributes of both, with some spatial variation. However to be in conformance with this aspect of the methodology one single deforestation pattern must be selected to compare the FOM requirement against. See NCR 14/13.
5.1 Calculation of baseline activity data per forest class	The PD successfully calculates the data based on the relevant Annual Baseline Deforestation maps for 2008-2017 as required and presents it in VM Table 11 for the initial 10 year baseline period.
5.2 Calculation of baseline activity data per post-deforestation forest class	The Project Proponent has selected Method 1: Historical LU/LC change. Because they have not stratified either the forest or the non-forest class into different strata or land cover types the results of this step (VM Table 12a-c) are identical to table VM 9a-c. This lack of stratification for the non forest types is sufficiently justified. Tavy fallows of different ages are indistinguishable without field sampling and sometimes farmer knowledge. Additionally they represent little long term carbon storage as the fallow cycle is very short (5 yrs or less). The lack of stratification of the forest classes is not justifiable. See NCR 05/13.
5.3 Calculation of baseline activity data per LU/LC change category	This step is only applicable if Method 2 was chosen in step 5.2. Method 2 was not chosen.
Conformance	Yes ☐ No ☒ N/A ☐
NCR/OBS	NCR 04/13, NCR 05/13, NCR 07/13, NCR 09/13, NCR 10/13, NCR 11/13, NCR 13/13, NCR 14/13.

3.3.1 VCS Standard Section 3.14: Additionality

Additionality shall be demonstrated and assessed in accordance with the requirements set out in the methodology applied to the project.

Findings from Field Audit

Step 1:

The proponent identifies two potential alternative baseline scenarios, i) continued widespread deforestation through *tavy*, the pre-project land use, and ii) the proposed AUD activity in the absence of carbon finance. Both are credible, although as the proponent notes, the likelihood of long term funding in absence of carbon finance for scenario ii is unlikely. Our field audit confirms this, where forest areas (owned by the GOM) have been heavily deforested outside of national protected areas. The protected areas in the immediate area are a fraction of the size of the project area, and appear to have only moderate success in protection.

Scenario i, or continued *tavy* is selected as the most plausible scenario. The audit team's field audit confirms this. There is no evidence of significant funding for AUD activities in the absence of carbon finance. This is particularly true considering that foreign aid has reduced since the recent military coup in 2009.

Step 2:

Option 1, Simple cost analysis is appropriately used for the Investment Analysis:

Based on the CAZ financial plan, which has been reviewed, as well as key stakeholder interviews, it is clear that the project will generate no financial benefits to the proponent other than carbon credit funds from the sale of VCUUs.

Step 3:

In the Barriers Analysis, investment barriers, institutional barriers, barriers relating to tradition, and barriers relating to land tenure are all identified. The field audit and interviews confirmed that additional funding for project activities on a large scale is not available without this project (small scale funding is). Forest land in Madagascar is owned by the GOM and it is clear that forest land is deforested with little obstacle to deforestation agents from enforcement of laws. It is also clear that *tavy* is a deeply rooted agricultural system. Other than wet rice production, no other forms of agriculture were seen in the rural areas near the project. All of these barriers are likely to remain without substantial funding.

Step 4:

The PD describes how in Madagascar it is not common practice to implement conservation projects through carbon finance. The Project Proponent does recognize that there is one other REDD project being implemented in the region, there is no record of any project in the region that has performed similar activities that compare to the scale and timeframe of those proposed by CAZ. The proposed REDD project aims to implement a unique strategy of combating deforestation in CAZ through a co-managed protected area in which local community groups are an essential actor in the governance structure. It is noted that VT0001, the VCS AFOLU Additionality Tool, states that VCS AFOLU projects should be removed from this analysis.

As the project activities meet all applicable criteria for Steps 1-4 in the VCS Tool for the Demonstration and Assessment of Additionality in VCS AFOLU Project Activities the project is considered additional.

Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.3.2 Quantification of GHG emissions

3.3.2.1 VCS Standard Section 3.15: Quantification of GHG emission reductions and removals

GHG emissions and/or removals shall be estimated for each GHG source, sink and/or reservoir relevant for the project (including leakage) and the baseline scenario.

Findings from Field Audit
Quantification of GHG emission reductions and removals is addressed in other parts of this Validation checklist (see below). In addition to the information in the other sections described below, the audit team has also assessed the field inventory skills of the consultant team that conducted the inventory that is the basis for much of these calculations. The consultant team was highly qualified both academically and professionally to conduct the inventory measurements. The audit team first observed the consultant team conducting two independent measurements of forest carbon stocks as well as carbon stocks of non-forest (<i>Savoka</i> areas following <i>Tavy</i>) to verify the measurement tactics. Nested circular plots of 20m radius were used with the smallest class of trees measured in the first nest (4m radius), medium size trees were measured in the second nest (14m radius), while the largest trees were measured in the 20m radius nest. The diameter limits that defined the tree sizes for each nest were varied depending on a subjective estimate of the density of trees at the different plots. This does not bias the carbon calculation as long as the "rule" determining which nest trees are allocated to is followed consistently within each plot to ensure that the appropriate expansion factor is used. The audit team, in conjunction with the consultant team, then conducted a remeasurement of 6 forest plots in two different regions of CAZ to verify the accuracy of the plots. Although there was some minor discrepancy in the carbon stock measurements of the plots that were remeasured, this was minor and can be attributed to both tree growth and mortality since 2008 when the original inventory occurred, as well as some level of GPS error (the plots were temporary plots so we could not relocate the exact center). Furthermore, it was evident that the audit team was remeasuring the same plots because many of the trees were still visibly marked from the 2008 inventory (machete marks).

These remeasurements also included assessment of standing dead trees as well as lying dead wood transects. The inventory equipment used by the consultant team was adequate and in keeping with best practice and included:

- Flagging for marking trees, plot center, and “DBH stick”
- Digital measuring equipment (DME) for determining which nest a tree was in. Measures distance to a sensor at plot center. The DME was appropriately recalibrated at each plot
- Clinometer for slope measurement
- DBH tape for measurement of tree diameter at breast height
- Hypsometer for measurement of height of standing dead trees (height not required for live trees)
- Inventory sheets, provided by Winrock International
- distance tape for lying deadwood transects
- compass for general navigation and direction of lying deadwood transects
- Handheld GPS units for general navigation and locating plot center

In addition, the audit team reviewed the original and summary results of the inventory and independently recalculated a sample of the calculations, which were verified to match with the reported calculations. Inventory results from the excel files representing individual regions where inventory plots were conducted were traced through to the inventory summary sheet (file: caz_all_vieilledent_WD_corrected_0.61.xlsx) and verified to match. Additionally, the mean carbon stock value of all the plots was matched with the mean carbon stock value of forest used in the PD (776 tCO₂e). There was a high level of confidence in the inventory calculation spreadsheet as it was provided by Winrock International, a well regarded consultancy.

1. Section 3.2.6.3 “Calculation of emissions in the baseline scenario (ex ante estimate)” below, includes relevant steps to calculate emissions in the baseline scenario (Steps 6.1-6.2). Numerous NCRs are identified and further elaborated upon in this section and include: **NCR 15/13 , NCR 16/13 NCR 05/13, NCR 19/13, NCR 21/13, NCR 22/13, NCR 23/13)**
2. Section 3.2.6.4 includes the relevant steps to calculate emissions reductions and avoided emissions in the project scenario (ex ante estimate (Steps 7.1-7.3). Numerous NCRs are identified and further elaborated upon in this section and include: **NCR 17/13, NCR 24/13, NCR 25/13.**
3. Leakage is assessed in Sections 3.3.2.9 – Section 3.3.2.13 of this report. Numerous NCRs are identified and further elaborated upon in these sections including **NCR 09/13, and NCR 27/13**
4. The estimated emissions reductions and removals are calculated from the difference in these estimates and is reported in Step VM 9.2, which is assessed in this report in Section 3.2.6.15 “VCU Calculation”.

The proponent utilizes the correct equation (Equation 23) of VM0015, $\Delta\text{REDDt} = (\Delta\text{CBSLPat} + \text{EBBSLPat}) - (\Delta\text{CPSPat} + \text{EBBPSPat}) - (\Delta\text{CLKt} + \text{ELKt})$ to calculate the *ex ante* estimated total net GHG emission reductions and removals. However, as noted in Section 3.2.6.15, there are multiple NCRs that must be addressed to ensure the final accuracy of the GHG emission reductions and removals.

Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	NCR 05/13, NCR 09/13, NCR 15/13 NCR 16/13 , NCR 19/13, NCR 21/13, NCR 22/13, NCR 23/13 NCR 17/13, NCR 24/13, NCR 25/13, NCR 27/13		

3.3.2.2 VCS AFOLU Requirements Section 3.1.1: Data requirements

As set out in the *VCS Standard*, standards and factors used to derive GHG emissions data as well as any supporting data for establishing baseline scenarios and demonstrating additionality shall be publicly available and derived from a reputable and recognized source, such as *IPCC 2006 Guidelines for National GHG Inventories or the IPCC Good Practice Guidance for Land Use, Land-Use Change and Forestry*.

Findings from Field Audit

All standards and factors used to derive GHG emissions data in the last iteration of project documents received from the Project Proponent were appropriate, but the source of the standard or factor was not always cited appropriately.

1. Allometric equation:

Originally the proponent inappropriately used a global moist tropical equation from Chave et al (2005). While these equations are a reputable source, Appendix 2 of VM0015 requires that they either use more regionally appropriate allometric equations, or demonstrate that global scale equations such as *Chave* are appropriate through destructive sampling. During the field audit an NCR was raised against this issue and the Project Proponent elected to alter the equation to a new locally derived equation (Vielledent et al, 2012) for moist wet forests of Madagascar. Hence, an NCR is issued regarding the initial use of Chave (2005) for tracking purposes only but the NCR is considered already closed with this report. The Vielledent equation meets the requirements of VM0015 and is demonstrably conservative, having reduced carbon density by nearly 30%. This equation follows good practice and is in conformance with the methodology. See also Section 6.1.1 and **closed NCR 15/13.**

2. Wood density: The proponent originally mistakenly used a wood density from Asia in the utilization of the Chave equation. This was raised as an NCR during the field audit and the proponent correctly changed to a more appropriate local wood density value from Asner et al (2012). See Section 6.1.1 and closed NCR 16/13. 3. Carbon content: Through evaluation of the formulas used in the inventory calculation spreadsheets provided to the proponent by Winrock International, it is clear that 0.50 was used as the factor for determining the carbon content of biomass which is appropriate and good practice. 4. Effectiveness Index: An Effectiveness Index (EI) is required by the methodology to calculate the <i>ex ante</i> estimation of non-CO2 emissions and carbon stock changes. (Step VM 7.1.2). The proponent does not provide a source for the equation used to develop the EI. Failure to cite a source for this and/or to explain why it is conservative and accurate results in non-conformance and an NCR being issued. NCR 17/13. See also Step VM 7.1.2 in Section 3.2.6.4.			
Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	NCR 15/13 (closed), NCR 16/13 (closed), NCR 17/13		

3.3.2.3 VCS AFOLU Requirements Section 4.5: Calculation of emissions in the baseline scenario (ex-ante estimate)

Methodologies shall establish procedures to quantify the GHG emissions or removals for the project and baseline scenario. *The IPCC 2006 Guidelines for National GHG Inventories* or the *IPCC 2003 Good Practice Guidance for Land Use, Land-Use Change and Forestry* shall be used as guidance for quantifying increases or decreases in carbon stocks and GHG emissions. The IPCC Guidelines shall also be followed in terms of quality assurance/quality control (QA/QC) and uncertainty analysis.

Section 4.5.3 of the AFOLU Guidance includes specific requirements for the quantification of carbon stocks in belowground, dead wood, soil carbon, and wood products pools. Projects shall follow methodological guidance for the estimation of carbon stock change all required and selected SSRs.

Findings from Field Audit	
6.1 Estimation of baseline carbon stock changes	See sub-steps below.
6.1.1 Estimation of average carbon densities	Initial training for the estimation of carbon stock densities was provided by Winrock international to teams of consultants that conducted the inventory. The proponent first conducted a test inventory of 18 plots around Raboana to obtain values for variance and sample carbon stocks used to estimate to required number of inventory plots. Typically this exercise would be conducted in each estimated strata. 1. There is no explanation as to why Raboana was chosen as the location for the preliminary inventory, nor is there explanation for why 18 sample plots is a sufficient number. It is not clear to the auditors why Raboana was used for the test plots and how this area is representative of the diversity of the project area. The auditors consider this as crucially important since the number of total plots used in the full inventory is derived from this. See NCR 05/13. 2. The source of the formula used to determine the required number of sample plots is not cited, nor is it the same formula suggested in Appendix 2 of VM0015. See NCR 19/13. 3. The proponent then used the IDRISI LCM model to stratify the forest into areas likely to be deforested in 30 years and persistent forest. This model was later discarded and a second version of the IDRISI LCM projection of deforestation

	over 30 years was used. Following this, carbon measurements were taken in both forest types and the average of the two strata is used for all assumptions of forest carbon stocks of the single strata the PD identifies. As stated in the methodology; “If the locations of future deforestation are known at the time of field measurements, the sample sites should be located at the locations expected to be deforested to achieve maximum accuracy of the carbon stock measurements. The project followed this guidance in that initial measurements were focused on the areas predicted to be deforested based on the preliminary spatial model, but additional plots were also sampled in areas not projected to be deforested in order to cover all possibilities that the model might change in the future. Since the current model projections of the locations of deforestation are different from the preliminary ones, it was not possible for the Project Proponent to consider that the locations of future deforestation were known at the time of field measurements. In addition, the current field measurements provide an average carbon value for the entire project area at an acceptable level of accuracy of 6.9% which is below the minimum requirements of the methodology which is 10%. 4. In the overflight of the project area as well as during excursions into the forest the audit team observed that canopy height and mean tree diameter varied greatly with the elevation and topography and as a result, carbon stocks would vary as well. The proponent argues as justification for not stratifying the forest that these patterns are masked by local-scale variation in carbon stocks. A statistical analysis included within “Carbon stocks in the Ankeniheny-Zahamena: supplementary information on the sampling design and analysis of the biomass data” is provided as justification for not stratifying the forest. Six variables were assessed utilizing Spearman’s rank test to look for relationships with carbon densities and no significant relationship was found. The audit team does not dispute the results of this assessment and it is impossible for an alternate statistical analysis to be conducted. However, given the globally recognized significant relationship between elevation/topography and carbon stocks, as well as other analyses¹ in the region that confirm elevation as a strong predictor of carbon stocks in the same forest type near the project area, there is support for the need of the Project Proponent to further stratify the forest. Additionally, it must be remembered that due to difficulty in access only four locations were used for the final inventory and it is very possible that these locations do not represent the entire project area accurately. Stratification could be simply conducted using elevation to stratify, consistent with Madagascar’s 1997 national forest inventory, where humid forest at 0-800m is a single strata, with forest from 800-1,800m as a different strata. It is our understanding that this was also the approach used in the Kew mapping of Madagascar as well, in which CI took part.² The Project
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¹ Asner et al. (2012). *Human and environmental controls over aboveground carbon storage in Madagascar*. Carbon Balance and Management.

² Du Puy, D.J. and Moat, J.F. (1998). *Vegetation Mapping and classification in Madagascar (using GIS): implications and recommendations for the conservation of biodiversity*.

	Proponent would have to demonstrate that the required level of accuracy is still achieved within each strata, or add more samples until this level is achieved. See NCR 05/13. 5. The methodology requires that a map and all coordinates of sampled locations be included in the PD. A map is included but the coordinates are not included. These could alternatively be included in the methodology annex or the PD itself. See NCR 21/13. 6. The PD mentions the source (Cairns et al 1997) for root to shoot ratios used to calculate belowground biomass in forests, and this is a reputable source, but the project Proponent fails to identify which specific conversion factor/root to shoot ratio, is used. This could be included in a methodological annex or directly in the PD. See NCR 22/13. 7. The Project Proponent initially used the global moist tropical equations from Chave et al (2005). While these equations are a reputable source, Appendix 2 of VM0015 requires that they either use more regionally appropriate allometric equations, or demonstrate that global scale equations such as <i>Chave</i> are appropriate through destructive sampling. During the field audit this NCR was raised and the Project Proponent elected to alter the equation to a new locally derived equation (Vielledent et al, 2012) for moist wet forests of Madagascar. Hence, an NCR is issued regarding the initial use of Chave (2005) for tracking purposes only but the NCR is considered already closed with this report. The Vielledent equation meets the requirements of VM0015 and is demonstrably conservative, having reduced carbon density by nearly 30%. See NCR 15/13. The new equation that is being used results in significantly more conservative carbon densities, closer to those observed in other projects and studies in the region. 8. The Project Proponent initially used a wood density value from Asia in the utilization of the Chave equation. This was a mistake and an artefact of Winrock having not updated the excel spreadsheet provided to the Project Proponent. This was raised at the field audit and the proponent rectified this, using an appropriate regional default wood density (0.61, from Chave 2012), so is issued an NCR in this report that is already closed and only issued for tracking. See closed NCR 16/13. 9. In the updated calculation sheets (for example, FIERENANA_all_vieilledent_wd_corrected_0.61.xlsx), even though the new correct wood density (0.61, from Chave 2012) is used, the old Asia generic wood density of 0.57 is still cited. This should be updated for record keeping purposes. See OBS 06/13. 10. An additional NCR is issued but considered closed with this first report. The Project Proponent initially did not include belowground biomass in the shrub-like Savoka plots used to
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	estimate carbon stocks in non-forest carbon stocks. This omission increases the difference in the project scenario and baseline, thus generating more emission reductions. See closed NCR 23/13. At the conclusion of the field audit the Project Proponent elected to immediately correct this NCR by using the appropriate root:shoot value for tropical shrubland and the non-conformance has already been closed, but included in this report for tracking purposes. 11. The Project Proponent places table VM 14 in step 6.1.1, despite the fact that VM0015 places this table in the next step, 6.1.2. See OBS 07/13. The audit team observed four members of the original consultant team that conducted the inventory. We travelled to two of the four areas where initial inventory plots were conducted and re-measured a total of 6 forest plots. The carbon stocks from re-measured plots were similar to those observed in the initial inventory although not identical due to tree growth and mortality since the Project's inventory in 2008 and minor errors in relocating the exact center of the plot. The audit team selected plots to be re-measured based off of risk, selecting the highest carbon stock plots of those that were accessible. The audit team additionally observed the consultant team re-measuring savoka (nonforest) biomass plots. The consultant team is composed of a number of local Madagascar experts and demonstrated excellent knowledge and proficiency throughout. Carbon densities were calculated using a spreadsheet provided by Winrock International for this purpose, available at: http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CCkQFjAB&url=http%3A%2F%2Fwww.winrock.org%2Fecosystems%2Ffiles%2FWinrock_Sampling_Calculator.xls&ei=hpySUO7UH6j30gG9wYCwAQ&usq=AFQjCNFHSot9Tw8cQUt15g-rhD7YfB-hrA&sig2=EZZhRc1okneBArA-duDa9w For each of the four sampling locations, a sample of the carbon calculations using the Vielledent equation were independently calculated and verified to be correct. Additionally, the results of the carbon density calculations were traced throughout the PD and found to be correct and consistent.
6.1.2 Calculation of baseline carbon stock changes	The Project Proponent selects, Method 1, relying upon activity data for each class. Uncertainty is accounted for in step 6.1.1 as the final non-forest class carbon stock was increased to the higher boundary of the 90% confidence interval because the uncertainty for this measure was greater than 10%. All required tables (VM 15 a-c) were completed. A sample of calculations were traced through the relevant tables and confirmed to be accurate
6.2 Baseline non-CO2 emissions from forest fires	The Project Proponent follows all methodology steps fully and adequately. IPCC default values are used when appropriate to produce a conservative estimate of CH₄ emissions (N₂O is appropriately excluded). The proponent claims that 100% of the deforestation in the project area is done through fire and results

	accordingly in CH₄ emissions. Although this may seem surprising, our field visit confirms that this is most likely accurate. Recently cleared tavy fields subject nearly all aboveground vegetation to fire, with some very few minor exceptions. Hence the default value of 32% for the amount of felled biomass subjected to burning is conservative. Baseline CH₄ emissions are estimated for the first 10 year baseline period.		
Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	NCR 05/13, NCR 15/13 NCR 16/13 , NCR 19/13, NCR 21/13, NCR 22/13, NCR 23/13 (closed) OBS 06/13, OBS 07/13		

3.3.2.4 Calculation of emissions reductions or avoided emissions due to the project (ex-ante estimate)

Findings from Field Audit	
7.1 Ex ante estimation of actual carbon stock changes	See sub steps below.
7.1.1 Ex ante estimation of actual carbon stock changes due to planned activities	The Project Proponent claims that in Category B (Sustainable Use Area) forest that planned harvesting of timber and fuelwood will not reduce carbon stocks. The existing justification of no statistically significant relationship between carbon stocks and distance from forest edge (as proxy for past harvest) is insufficient. Further evidence must be provided that this is truly conservative. See NCR 24/13. It is true that the AUD project activity involves no planned deforestation but there is planned harvesting that may lead to reduction in forest carbon stocks and may be significant. The Project Proponent has not completed the recommended assessment in VM0015, described under "Mandatory accounting of significant carbon stock decreases" as a means of determining whether projected harvesting is significant. As most of the forest is steady state old growth forest, the proponent appropriately does not seek credit for carbon stock increases.
7.1.2 Unplanned deforestation that cannot be avoided.	The Project Proponent states that the Effectiveness Index (EI) was conservatively estimated based on project implementation activities. It was assumed that in the first year they would have a EI of 0.2 and 0.84 in the year 2017. The yearly increment on the EI was proportional to the projected costs (also used as input in the financial viability analysis) adding up to 0.84, which represents the proportional decrease of the deforestation rate when compared to a well-established protected area (Table 12). The deforestation rate inside a well-established protected area is 0.20%/y, being a 84% reduction of the historical deforestation rate within CAZ (1.26%/y). The Project Proponent provides no source or justification for why the calculation of the Effectiveness Index (EI) is conservative. It is not clear where the equation to calculate the constant (0.12) came from, or why an exponential decay function is used instead of a more linear projection. The rate of the EI should be related to projected implementation of project activities that will reduce deforestation. See NCR 17/13. Table 13 is appropriate and accurate if the calculation used to determine the Effectiveness Index can be demonstrated to be appropriate and accurate.
7.1.3 Ex ante estimated net carbon stock change in the project area	This step is accurate and complete.based on the proponent correctly

under the project scenario		utilizing Equation 20 of VM0015 to estimate the ex ante net actual carbon stock changes in the project area, which is reported in VM Table 22.	
7.2 Ex ante estimation of actual non-CO2 emissions from forest fires		This step requires that the Effectiveness Index (EI) calculated in step 7.1.2, be applied to the baseline non-CO₂ emissions from forest fires to calculate the actual <i>ex ante</i> estimation of non-CO₂ emissions from forest fires. Table VM 23 in the PD contains values which do not correspond to the Effectiveness Index multiplied by the appropriate baseline year estimation of non-CO₂ emissions from forest fires. For example, given that the EI for year 2008 is 0, and that the baseline non-CO₂ emissions from forest fires for year 2008 is 25,580 tCO₂e, the <i>ex ante</i> actual emissions of non-CO₂ gasses for 2008 (VM Table 23) should also be 25,580, but is instead 17,703. Investigation of the excel file CAZ_VM15_PDtables_19Oct2012.xlsx reveals that the incorrect year is referenced in the application of the Efficiency Index (EI) to the baseline non-CO₂e emissions from forest fires. This results in incorrect calculations and hence is not in conformance with the VCS Standard nor the VM0015 methodology. See NCR 25/13.	
7.3 Total ex ante estimations for the project area		VM Table 24 has been appropriately filled out. A sample of values were traced through to other parts of the PD to ensure consistency and accuracy.	
Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	NCR 17/13, NCR 24/13, NCR 25/13		

3.3.2.5 Calculation of emissions from project activities (ex-ante estimate)

Findings from Field Audit			
Emissions are not expected from project activities. The methodology considers CO ₂ emissions from fossil fuels in the project scenario. Additionally the VCS Standard considers N ₂ O from fertilizers to always be insignificant.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.3.2.6 VCS AFOLU Requirements Sections 3.1.8 and 4.5.4: ARR and IFM Long-term average calculation

ARR or IFM projects with harvesting activities shall not be issued GHG credits above the long-term average GHG benefit maintained by the project. The long-term average GHG benefit shall be calculated as set out in Section 4.5.3 of the VCS AFOLU Requirements.

Findings from Field Audit			
Section 1.2 of the PD details the sectoral scope and project type. The Project falls under scope 14 of the VCS, Agriculture, Forestry, and Other Land Use (AFOLU). The AFOLU category is Reducing Emissions from Deforestation and Forest Degradation (REDD). The REDD Project activity type is Avoided Unplanned Deforestation (AUD), since the land in the project is not legally authorized and documented to be converted to non-forest in the baseline. The Project is stated to not be a grouped project.			
Since this is not an ARR or IFM Project type, the long term average calculation covered by these sections of the AFOLU Requirements is not applicable.			
Conformance	Yes ☒	No ☐	N/A ☒
NCR/OBS	None		

3.3.2.7 The assumptions made for estimating GHG emission reductions and/or removals

Findings from Field Audit			
The assumptions used are transparent and clear as communicated to the audit team verbally and by demonstration. However, the proponent fails to create a detailed methodology annex as required by the methodology to document assumptions used in the spatial analysis and modelling as well as the carbon calculations. See NCR 04/13 .			
Conformance	Yes ☐	No ☒	N/A ☐

NCR/OBS	NCR 04/13
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3.3.2.8 Leakage

3.3.2.9 VCS AFOLU Requirements Section 3.6.1: Identification of leakage

The potential for leakage shall be identified, and projects are encouraged to include leakage management zones as part of the overall project design. Leakage management zones can minimize the displacement of land use activities to areas outside the project area by maintaining the production of goods and services, such as agricultural products, within areas under the control of the project proponent or by addressing the socio-economic factors that drive land use change.

Leakage that is determined, in accordance with Section 4.3.3, to be below *de minimis* (ie, insignificant) does not need to be included in the GHG emissions accounting. The significance of leakage may also be determined using the CDM A/R methodological tool *Tool for testing significance of GHG Emissions in A/R CDM Project Activities*.

Findings from Field Audit			
The Project Proponent has identified potential causes of leakage and spatially identified and appropriate leakage belt, as well as large leakage management area.			
The primary cause of leakage will be activity shifting/displacement leakage from <i>tavy</i> that is shifted to other areas of forest outside the protected area (the main project activity). As this is identified as the only significant cause of deforestation, the Project Proponent identifies shifting of this activity as the only source of leakage. If the Project Proponent demonstrates that small scale mining is an insignificant source of deforestation and that small scale permitted and illegal logging are insignificant sources of forest degradation, then this argument is adequate. If these other drivers of deforestation cannot be proved to be insignificant then they must be assessed as activity shifting as well. See NCR 09/13 .			
Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	NCR 09/13		

3.3.2.10 VCS AFOLU Requirements Section 3.6.2: Leakage mitigation

Activities to mitigate leakage and sustainably reduce deforestation and/or degradation are encouraged and may include the establishment of agricultural intensification practices, lengthened fallow periods, agroforestry and fast-growing woodlots on degraded land, forest under-story farming, ecotourism and other sustainable livelihood activities, and/or sustainable production of non-timber forest products. Leakage mitigation activities may be supplemented by providing economic opportunities for local communities that encourage forest protection, such as employment as protected-area guards, training in sustainable forest use or assisting communities in securing markets for sustainable forest products, such as rattan, vanilla, cacao, coffee and natural medicines.

Findings from Field Audit	
Multiple leakage mitigation activities have been identified in the leakage management areas including:	
Improved water management, and the construction of irrigation systems and small reservoirs; • Promoting biological anti-erosion measures and the planting of hedges / natural barriers; • Adopting zero- or low-tillage cultivation techniques; • Bee keeping; • Chicken rearing; • Putting in place agroforestry; • Reforestation and enrichment planting of degraded natural forest; • Establishing community or private woodlots for fuelwood, charcoal production and timber; • Improving the long term sustainability of savoka fallows through the use of native species and better management of the <i>Tavy-savoka</i> cycle. Leakage mitigation activities are identified based off community input and interest and this was observed in the field although some communities interviewed expressed interest in more and different project types. The identification and implementation of leakage activities occurs through the NODE small grant program as well as other programs in which local NGOs are integral partners. Due to the large project size our audit team only had the opportunity to sample a small range of mitigation activities. The team observed a moderate degree of success in these activities with poultry rearing appearing particularly successful. We saw no evidence, nor heard from any interviewed stakeholder that significant enrichment planting of degraded forest was occurring, or that activities to improve “the long term sustainability of savoka fallows through the use of native species and better management of the <i>Tavy-savoka</i> cycle” were occurring. If these mitigation activities are not occurring or definitely planned to occur they should be removed from the PD for the sake of accuracy. If they are occurring, the proponent should provide the audit team with documentation to support this. It is noted that these activities may be implemented in the future, but if there is actually no concrete plans to implement them, they should be removed. See OBS 10/13.	

Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	OBS 10/13		

3.3.2.11 VCS AFOLU Requirements Section 3.6.4, 4.6.4, 4.6.14 and 4.6.15: Market leakage

Market leakage assessments shall occur at validation and verification. The rules and requirements for the assessment of market leakage are set out in Section 5 of VCS AFOLU Requirements. Projects shall account for market leakage where the production of a commodity (eg, timber) is significantly affected by the project. The significance of timber production is determined as set out in Section 4.3.3 above or as set out in Table 3 of the VCS AFOLU Requirements.

Findings from Review on INSERT FIRST DATE			
The project does not significantly impact the production of any commodities, as long as it is demonstrated that small-scale logging is insignificant. Regardless, market leakage for this would not have to be calculated as the background level of small-scale logging is very low (though possibly significant). As such, market leakage is irrelevant.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.3.2.12 VCS AFOLU Requirements Sections 4.6.8 – 4.6.22: Project type specific leakage requirements

The VCS AFOLU Requirements includes the following project type specific criteria (see VCS AFOLU Requirements for complete reference of criteria requirements):

- ARR: VCS AFOLU Requirements Sections 4.6.8 – 4.6.9
- ALM: VCS AFOLU Requirements Sections 4.6.10 – 4.6.12
- IFM: VCS AFOLU Requirements Sections 4.6.13 – 4.6.14
- REDD: VCS AFOLU Requirements Sections 4.6.15 – 4.6.16
- ACoGS: VCS AFOLU Requirements Section 4.6.17 – 4.6.18
- WRC: VCS AFOLU Requirements Sections 4.6.19 – 4.6.22

Findings from Field Audit			
The PD and project address the socio-economic factors that drive deforestation in the project area. A thorough analysis of agents and drivers of deforestation has been conducted and project activities as well as leakage mitigation activities have been designed with the input of community members, thus increasing the likelihood of successfully addressing these socio-economic factors.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.3.2.13 VCS AFOLU Requirements Section 4.6.3: Quantification of leakage

GHG emissions from leakage may be determined either directly from monitoring, or indirectly when leakage is difficult to monitor directly but where scientific knowledge provides credible estimates of likely impacts. The GHG credit calculation table provided in Section 4.7 of the VCS AFOLU Requirements includes an example of indirect leakage accounting.

Findings from Field Audit			
Leakage has been adequately assessed spatially as well as quantified. The proponent identifies a leakage belt in step VM 1.1.3 through using IDRISI to do a Multi-Criteria Evaluation to complete a mobility analysis. The audit team observed this process with CI's team in Madagascar. The following criteria were used to evaluate population mobility:			
a) Distance to fokontany (point) b) Distance to communes (point) c) Distance to district (point) d) Distance to primary road e) Distance to secondary road f) Distance to river g) Altitude h) Slope i) Distance from forest edges j) Distance from project area			
Based on the audit team's evaluation of the project area these criteria were found to be appropriate. The leakage belt does not surround the project area as is common practice. Instead the leakage belt is concentrated in the extreme south of the project. This is unusual, but appropriate in this situation because this is the only available forest where deforestation agents could move. Other surrounding areas are non-forested or have strict protection as national parks.			

Step VM 8.1.1: The proponent does not complete the required steps (a-h) of step VM 8.1.1 which require the proponent to list, describe, and map the leakage prevention areas, as well as any potential reduction in carbon stocks from these activities. Nor does the proponent produce the information for Tables 25a-c as required, quantifying this. This step is required by the methodology. However, the audit team agrees with the Project Proponent's assessment that steps (a-h) are not necessary to demonstrate that mitigation activities will cause no reduction in carbon stocks or increase in GHG emissions. All mitigation activities will have a neutral impact or positive impact on carbon stocks and will not lead to increases in GHG emissions since VM0015 considers fossil fuel emissions to always be insignificant. Although this step is required by the methodology, the auditors contacted the methodology developer to seek clarification on whether or not step 8.1.1 is required when a decrease in carbon stocks or an increase in GHG emissions is not planned or foreseen as part of the project's leakage. In a documented email response received back from the methodology developer, the auditors received guidance indicating that step 8.1.1 a-h are only mandatory if leakage prevention activities are expected to result in a decrease in carbon stocks or increase in GHG emissions. Since this is not the case for the CAZ project, it was determined to be acceptable by the auditors for step 8.1.1 in the methodology to be skipped.

Step VM 8.1.2: The proponent describes that "although there is some tradition of current practice of grazing animals in the larger landscape encompassing the project area, it is very small scale and insignificant." Based on observations in the field this statement is accurate and in the multiple villages that we walked through there were few small cattle herds. They do appear to be insignificant and no leakage mitigation activities will increase grazing livestock.

Step VM 8.1.3: No significant sources of either carbon stock changes or GHG emissions from leakage prevention and management is reported by the proponent. This is acceptable and accurate provided the NCR in step VM 8.1.1 is addressed.

Step VM 8.2 Method 1 is used with activity data for forest and non forest classes estimated from previous modelling. Baseline carbon stock changes in the leakage belt are reported adequately in VM Table 29a-c.

The Displacement Leakage Factor (10%) used in the PD is not sufficiently conservative. The field audit took place in 2012, five years after implementation of project activities. Six communities were interviewed as part of the field audit and all agreed that more resources were needed for them to participate in project activities. It was not feasible to visit the hundreds of communities surrounding the project area during the field audit. It may be that all communities are invited to participate in leakage mitigation activities, but for now there are insufficient resources. A more conservative DLF must be used. See **NCR 27/13**.

Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	NCR 27/13		

3.3.2.14 Summary of GHG emission reductions and removals

3.3.2.15 VCU Calculation

As set out in the AFOLU Requirements, any leakage shall be subtracted from the number of GHG emission reductions and removals eligible to be issued as VCUs.

VCUs should be estimated, and auditors should evaluate the correct calculation of buffer contribution in order to derive ex ante estimates of anticipated VCUs from project activities.

Findings from Field Audit
9.1 Significance Assessment: An significance assessment was conducted by the Project Proponent using the appropriate tool (EB-CDM "Tool for testing significance of GHG emissions in A/R CDM project activities" and is demonstrated in the file (CAZ_VM15_PDtables_19Oct2012.xlsx). The uncertainty assessment calculations were assessed and verified to be correct by tracing the expected emissions all the way through all relevant tables included in the document from baseline and ex ante annual area change and emissions factors to deductions for leakage, etc. The Project Proponent appropriately concludes that aboveground, belowground and dead wood pools are significant and must be included and determines to additionally include CH₄ from forest fires which is not significant but optionally is included in this case. 9.2 and 9.3, Calculation of ex-ante estimation of total net GHG emissions reductions and Calculation of ex-ante VCUs The Project Proponent identifies and utilizes the appropriate equations in section 9.2 and 9.3 for calculating the ex ante total net GHG emissions and the ex ante VCUs to be produced by the project. The file (CAZ_VM15_PDtables_19Oct2012.xlsx) provides all relevant tables and calculations used throughout the PD that eventually lead to the calculation of VCUs in VM Table 34. The audit team traced a sample of the eventual calculations in VM Table 34 through all tables in the file to verify the accuracy of the calculations. In this exercise all observed calculations were correct.

However, the accuracy of the final VCU calculation is dependent upon the accuracy of earlier calculations and estimates in several areas throughout the PD. Consequently, the following NCRs must be addressed to finally verify the accuracy of VM Table 34:

- **NCR 05/13 - Stratification**
- **NCR 10/13 - Building of the new road**
- **NCR 24/13 - Planned harvest NCR (unplanned harvest NCR can be left out of this as it is more of an issue for monitoring in the future)**
- **NCR 17/13 -Effectiveness Index NCR**
- **NCR 13/13 -Appropriate deforestation rate (1.26 vs. 1.21, both are cited in PD). In 3.2.4**
- **NCR 25/13 – (VM Step 7.2) Ex ante estimation of actual non-CO2 emissions from forest fires**
- **NCR 30/13, NCR 31/13, NCR 32/13, NCR 34/13, NCR 35/13 – Project Risk Rating determination**

There are no problems with the calculation of VCUs once these NCRs have been addressed and the tables in the file (CAZ_VM15_PDtables_19Oct2012.xls) are updated, if required.

Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	NCR 05/13, NCR 10/13, NCR 24/13, NCR 17/13, NCR 13/13, NCR 25/13, NCR 30/13, NCR 31/13, NCR 32/13, NCR 33/13, NCR 34/13, NCR 35/13		

3.3.2.16 Uncertainties assessment associated with the calculation of emissions

Generally uncertainty deduction methods are detailed within the VCS approved methodologies. Auditors should confirm appropriate uncertainty assessments have been conducted when calculated GHG emission reductions and/or removals.

Findings from Field Audit			
Uncertainty assessment of carbon stocks is required in by Step 6.1.1 (f) in VM0015. It is required that if the uncertainty of the total average carbon stock of a given class is greater than 10%, that the lower boundary of the 90% confidence interval must be used in all calculations if it is an initial forest class in the project area or a final non-forest class in the leakage belt. Additionally, the higher boundary must be used if it is an initial forest class in the leakage belt or final non-forest class in the project area. The proponent calculates the uncertainty of the non-forest class as greater than 10% and hence uses the higher bound of the 90% confidence interval for the final non-forest classes in the project area (VM Table 15b). This is in conformance. However, in Step VM 8.2, VM Table 29b, “Baseline carbon stock change in post-deforestation (non-forest) classes”, the proponent fails to use the lower bound of the 90% confidence interval which is mandatory in this case because this represents the final non-forest class in the leakage belt. This is not in conformance with VM0015. See NCR 28/13.			
Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	NCR 28/13		

3.3.3 VCS Standard Section 3.5: Methodology Deviations

Deviations from the methodology applied to the project are permitted where they represent a deviation from the criteria and procedures relating to monitoring or measurement, for example relating to data and parameters at validation, or monitored in the monitoring plan (but not quantification) of GHG emission reductions or removals set out in the methodology. Deviations relating to any other part of the methodology shall not be permitted. Methodology deviations shall not negatively impact the conservativeness of the quantification of GHG emissions reductions or removals.

Methodology deviations shall be permitted at validation or verification and their consequences shall be reported in the validation or verification report, as applicable and all subsequent verification reports. Methodology deviations are not considered to be precedent setting.

Findings from Field Audit			
Step VM 8.1.1: The proponent does not complete the required steps (a-h) of step VM 8.1.1, nor does the proponent produce the information for Tables 25a-c as required. This step is required by the methodology. However, the audit team agrees with the Project Proponent's assessment that steps (a-h) are not necessary to demonstrate that mitigation activities will cause no reduction in carbon stocks or increase in GHG emissions. Although this step is required by the methodology, the auditors contacted the methodology developer to seek clarification on whether or not step 8.1.1 is required when a decrease in carbon stocks or an increase in GHG emissions is not planned or foreseen as part of the project's leakage. In a documented email response received back from the methodology developer, the auditors received guidance indicating that step 8.1.1 a-h are only mandatory if leakage prevention activities are expected to result in a decrease in carbon stocks or increase in GHG emissions. Since this is not the case for the CAZ project, it was determined to be acceptable by the auditors for step 8.1.1 in the methodology to be skipped. It is likely appropriate to skip this step given that mapping all the leakage activities implemented by a large number of small dispersed NGOs is impractical and unnecessary as no proposed leakage mitigation activities would reduce carbon stocks or increase GHG emissions.			

Additionally, in response to a new requirement in VM0015 V1.1 in which it is required that the Minimum Mapping Unit (MMU) for the historical land cover change analysis should be 1 ha, the audit team approves a methodology deviation allowing the proponent to use the MMU of 2 ha which was originally used and which was acceptable under the V1 of the VM0015 methodology. This 2 ha MMU was used as part of an important historical land cover change analysis for which the intermediate steps have been erased that was conducted by the national government. It would be an undue burden on the proponent to conduct an entirely new analysis given that this would not lead to a more conservative estimation of the GHG reduction benefits of the project. This is especially true given that the project area exhibits primarily frontier deforestation pattern in which small forest blocks are uncommon and largely irrelevant.

The requested methodology deviation is approved.

Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.3.4 Monitoring plan

3.3.4.1 VCS Standard Section 3.17.1: Data and parameters available at validation

The project proponent shall ensure that all documents and records are kept in a secure and retrievable manner for at least two years after the end of the project crediting period.

Findings from Field Audit			
Section 4.1 of the PD is intended to cover the data and parameters available at validation. The following data units/parameters are identified in this section of the PD:			
• 2005 Forest Cover Benchmark • Reference Region • Leakage Belt • Annual areas of baseline deforestation in the reference region (ABSLRR_{i,t}) • Projected Forest Cover Maps (2007 – 2016) • Above ground biomass carbon pools of trees derived through application of allometric equation (AGB) • Diameter at breast Height (DBH) • Wood density (D) • Above ground biomass carbon pools of fallows (AGB – non-forest class) • Below ground biomass carbon pool of trees (BGB – forest class) • Below ground biomass pool of fallows (BGB – non-forest class) • Dead wood pool (DW) • Carbon Fraction of dry matter (CF) • Proportion of forest area burned during the historical reference period in the forest class <i>icl</i> (FBurn_{nticl}) • Average proportion of biomass burnt in the carbon pool <i>p</i> in the forest class <i>icl</i> (Pburn_{tp,icl}) • Average combustion efficiency of the carbon pool <i>p</i> in the forest class <i>icl</i> (CE_{p,icl}),			
Section 4.3 of the PD provides a detailed description of the monitoring plan. Under the heading “plans for storage and data management,” the PD clearly states that all documents and records will be kept in a secure retrievable manner for at least two years after the end of the project crediting period. See section 3.2.8.3 of this report below for full details on the monitoring plan.			
As required by section 3.17.2 in the VCS Standard V3, for validation, the auditors have been provided with the Project Description (document # 1), evidence of right of use (section 1.12.1 in the PD, and through interviews), as well as the information requested by the auditors to support statements and data in the project description and evidence of right of use.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.3.4.2 VCS Standard Section 3.16 Data and parameters monitored

Data and parameters used for the quantification of GHG emission reductions and/or removals shall be provided in accordance with the methodology. Quality management procedures to manage data and information shall be applied and established. Where applicable,

procedures to account for uncertainty in data and parameters shall be applied in accordance with the requirements set out in the methodology.

Findings from Field Audit			
Section 4.2 of the PD details the data and parameters monitored. Here it describes how in addition to the data listed below (see bullet list in this finding below), that will be collected directly at every verification period, the following tables in the methodological annex may be updated and included in the verification report (VM tables 15a, 15b, 15c, 22, 24, 29a, 29b, 29c, 32, 33, and 34. Also, in the case of a catastrophic event, VM Tables 20e, 20f, 20g, 21e, 21f, and 21g will be updated.). Section 4.2 of the PD then provides tables outlining the data and parameters monitored as follows: - Digital map of forest cover in the project area and leakage belt for the verification period (Forest cover maps) - Annual area of observed deforestation in the project area for the verification period per forest strata ($ABSLPA_{i,t}$) - Annual area of observed deforestation in the leakage belt for verification period per forest strata ($ABSLK_{i,t}$) Additionally, if planned harvesting is not proven to be <i>de minimis</i> it is therefore subject to monitoring, including the annual area of planned logging activities in each forest class ($APLPA_{i,t}$) and the annual area of planned fuel-wood activities in each forest class ($APF_{i,t}$) Quality control procedures are asserted to include independent desk review and keeping of clear and detailed documentation. Additionally, quality control procedures for remote sensing are implemented in accordance with CI's remote sensing methodology: "Forest Cover Mapping and Change Detection using Moderate-Resolution Satellite Imagery, Steininger et al, 2006).			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.3.4.3 VCS Standard Section 3.16.3 – 3.16.5 VCS AFOLU Requirements Section 4.8: Monitoring plan

The project proponent shall establish a GHG information system for obtaining, recording, compiling and analyzing data and information important for quantifying and reporting GHG emissions and/or removals relevant for the project (including leakage) and baseline scenario.

A monitoring plan for the project that includes roles and responsibilities shall be established. Where measurement and monitoring equipment is used, the project proponent shall ensure the equipment is calibrated according to the equipment's specifications and/or relevant national or international standards.

Leakage shall be monitored as set out in Section 4.6 of the VCS AFOLU Requirements. Where projects are required to account for leakage, such leakage evaluation shall be documented in the appropriate section of the project description and/or monitoring report, as applicable.

Findings from Field Audit
Section 4.3 of the PD provides a description of the monitoring plan. The purpose of the monitoring plan is given under the heading "Purpose of the CAZ GHG monitoring plan" as being a means to standardize the methods and procedures applied for the collection, compilation and analyses of the data used to estimate the GHG benefits of the CAZ project, and guarantee that the information is processed in a consistent way throughout the Project's lifetime, comparable with the data and processes used during validation and in accordance with the VCS approved methodology being employed (VM0015). Further the purpose of the management plan is to assure that the GHG benefits are estimated in a conservative manner with accuracy, precision and reliability, as well as to document results to demonstrate the achievement of the CAZ Project's goals in terms of emissions reductions. The organizations(s) and staff involved in implementation of the monitoring plan are described in section 4.3 of the PD. CI Madagascar is stated to be the responsible organization for the data management in terms of: - overall administration and supervision (Project Director) - data storage and organization (CAZ GIS technician) - back-up and system security (IT Manager) - remote sensing processing (RS Specialist) - GIS analysis (CAZ GIS technician) - documentation and outreach (communications coordinator) Section 4.3 of the PD, provides information on the data to be collected, under the heading "Description of the data to be collected." The PD indicates that the GHG benefits of the CAR Project will be estimated by comparing the baseline emissions with the actual emissions during each monitoring period, and that actual emissions will be estimated by measuring the forest loss multiplied by the emission factor. The emissions factor is stated to be consistent during the project lifetime, since the carbon stock of the forest is considered constant, and therefore the only data to be measured in each monitoring event will be forest loss due to land use change. It is conservative for the proponent to assume static carbon stocks (and hence emission factors) for the strict conservation area, but in the sustainable use zone

(Category B), it must be demonstrated that planned and unplanned harvesting will not lead to a significant reduction in carbon stocks and hence a reduction in the emission factor used in monitoring periods. See **NCR 09/13 & NCR 24/13**. Forest losses will be estimated in each monitoring period by analysing a time series of Landsat images, and the forest map will be overlaid with the Project Area and Leakage Belt to estimate the area converted to non-forest within those boundaries. Images used in this analysis will include a sample from enough dates within each year to ensure the least amount of problems related to cloud cover interference as possible. If there are cases where portions of the Project Area and Leakage Belt to be monitored are obscured by clouds, these areas will be temporarily excluded from the project monitoring until the next verification period.

Plans for storage and data management are also described in the monitoring plan section of the PD. The data management plan is designed on the data management and publishing guidelines of the MIT Libraries. All GIS data, including the raw and processed satellite images will be stored in the GIS lab of CI Madagascar. All data is to initially be backed up using an external drive with weekly backups to a network drive. The network drive uses CI's SAN server system and provides a redundant backup to ensure that a retrieval system will be in place in case of a computer, hardware, or internet connection failure. Data collected as hard copies will be converted to digital format unless otherwise specified, and in such cases a physical location in the GIS lab of CI Madagascar will be designated to store such material. The GIS Manager of CI Madagascar will be responsible for keeping any hard copies in a secure location, and will also be responsible for collecting, copying and storing any relevant files generated by the CAZ partners or external consultants. It is clearly stated that all documents and records will be kept in a secure retrievable manner for at least two years after the end of the project crediting period.

The PD makes it clear that the data collected or generated by the CAZ project is the property of CI Madagascar unless otherwise specified, but that confidentiality of research subjects, where applicable, will be maintained to ensure continued participation in research and monitoring. Policy provisions for data access are specified and all data collected or generated by the CAZ project will be publically available upon request through the contact information provided in the PD unless under contractual obligation not to be disclosed.

It is clear that the data is being well-maintained by CI Madagascar and that there is a structure in place to maintain data integrity in the future. Additionally, auditors were provided with all requested documents on hand in Madagascar, with the exception of some that are not yet finalized, and one which was at the Department of Forestry. However, CI Madagascar is not the proponent, and crucially, could be removed from the project in the future. There is no procedure to ensure that the Government of Madagascar (the proponent) would receive all needed data to ensure a robust GHG information system if CI were no longer involved in the project. See **NCR 29/13**.

Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	NCR 09/13, NCR 24/13		

3.4 Environmental Impact

3.4.1 VCS AFOLU Requirements Section 3.1.5: Negative environmental and socio-economic impacts

Project proponents shall identify potential negative environmental and socio-economic impacts and shall take steps to mitigate them. Additional standards such as the Climate, Community & Biodiversity Standards (CCBS) or Forest Stewardship Council (FSC) certification may be applied to demonstrate social and environmental benefits beyond GHG emissions reductions or removals. VCU's may be tagged with additional standards and certifications on the VCS project database where both the VCS and another standard are applied.

Findings from Field Audit
Section 5 of the PD describes the assessment of environmental impacts. As a result of an environmental and social impact assessment the project is not expected to have any negative environmental impacts. The project consists of protecting natural forest and biodiversity, does not involve building any infrastructure and is therefore overwhelmingly positive in terms of its environmental impact. The creation and management of the Ankeniheny-Zahamena Protected area, as Natural Resource Reserve (equivalent to an IUCN category VI protected area), with its emphasis on sustainable use of natural resources, aims to protect ecosystem services and to contribute to the development and to the well-being of the local human population. This large protected area, classified as one of the priority areas for conservation in Madagascar, contains the majority of the remaining rainforest in the central eastern part of the country. To achieve the management objectives of the protected area, a participatory approach was used to design strategies that have been included in the Management Plan of the Protected Area, which is the main framework document for activities that need to be undertaken in this protected area. These activities are all designed to maintain the ecological balance and ecosystem functions through sustainable use of resources. The strategies considered key for the establishment and effective management of the protected area include: 1) Public and local and regional authorities integration in the corridor management system of Ankeniheny-Zahamena for better protection of resources. 2) Integration of the protected area in the regional, local and national main document references. 3) The improvement of the living standards of local populations. 4) Development and implementation of sustainable financing mechanisms, as the resulting activities aim at protecting the habitats and

species of the area and the intrinsic values of the protected area, while ensuring that they will not harm the welfare of neighboring communities. Monitoring and evaluation of project activities on a regular basis will help to make a readjustment of these management strategies for the sustainability of the protected area.

While it was made clear to the auditors in the PD and through interviews with the project manager that an environmental and social impact assessment was carried out according to the ONE guidelines for EIAs for protected areas and adhering to the World Bank's "safeguard" Operational Policy OP4.12 that covers restriction of access to natural resources (see section 3.1.7 of this report), the auditors have not been provided, with specific evidence that the Environmental and Social Impact Assessment and Management Plan intended to satisfy the MECIE requirements have been accepted by ONE. See **NCR 02/13**.

Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	NCR 02/13		

3.4.2 VCS AFOLU Requirements Section 3.1.6: Conversion of native ecosystems

Project activities that convert native ecosystems to generate GHG credits are not eligible under the VCS Program. Evidence shall be provided in the project description that any ARR, ALM or PRC project areas were not cleared of native ecosystems to create GHG credits (eg, evidence indicating that clearing occurred due to natural disasters such as hurricanes or floods). Such proof is not required where such clearing or conversion took place at least 10 years prior to the proposed project start date. The onus is upon the project proponent to demonstrate this, failing which the project shall not be eligible. **Additional requirements for WRC project types** are outlined in VCS AFOLU Requirements section 3.4.3

Findings from Field Audit			
In various section of the PD including section 1.8, the project activities are clearly described, and do not give any indication that the activities will involve any conversion of native ecosystems to generate GHG credits. Rather, the Project aims to reduce deforestation of primary Malagasy forest by creating a corridor to protect the remaining native forests between the Zahamena National Park and the forest collectively known as the "Ankeniheny" in central eastern Madagascar. The strategy for this project is the creation and implementation of a protected area that encompasses the project area, and does not involve any conversion of native, or natural forest.			
The principle cause of deforestation is slash and burn cultivation (Tavy), and the combination of a co-managed, multiple use protected area with a suite of development actions is aimed to reduce Tavy and effectively address the key causes of deforestation. Goals of the CAZ protected areas are provided with the primary objective of the project being to reduce deforestation through the creation and management of a co-managed protected area financed by revenues from the sale of carbon credits. The project also aims to enhance the well being of resident communities through sustainable livelihood development, to conserve biodiversity, to maintain ecosystem services and to enable the sustainable use of natural resources by local residents.			
The fact that the project activities do not involve the conversion of native ecosystems to generate GHG credits is consistent with auditor discussions with the project manager and various stakeholders during the field audit.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.5 Comments by stakeholders

3.5.1 Findings from stakeholder comments received

Findings from Field Audit			
Section 6 of the PD focuses on stakeholder comments. The creation of the CAZ (and any other protected areas) in Madagascar requires detailed stakeholder consultation at each key step. The Project has fulfilled these requirements in compliance with the national laws and the World Bank safeguard Operational Procedures 4.12. Formal consultations with national and local stakeholders began in 2004 with the initiative to create the protected area and have been ongoing since.			
Local communities, local and regional authorities (traditional and administrative), representatives of the relevant government departments were all consulted in this process. From 2005 to 2007, meetings were held in every village within the communes concerned by the protected area limits to discuss, negotiate and validate the limits. During the protected area delimitation, a formal process existed for all community members to voice their complaints. Public consultations in defining boundaries of the protected areas, land use planning, losses for households during protected area creation and safeguards/compensation measures for losses, are conducted in a participatory way, as a negotiation. Each session is documented by a meeting minute, integrating comments, recommendations of the targeted group. All these minutes validated locally and signed are gathered in a folder, as an annex of the Environmental and Social Safeguard Management Plan. Documented evidence of these community consultation activities were provided to the auditors. Additionally, auditors interviewed stakeholders during the field audit about the community consultation process, in particular the creation of the boundaries of the park, and the			

boundaries of the community management transfer areas that make up the Sustainable Use Zone (Category 2). Stakeholders confirmed their participation in this process, and the level of satisfaction varied by individual, as would be expected in this situation. Some stakeholders did note a level of dissatisfaction with the amount of resources available for full implementation of project and leakage management activities, something that could be resolved through carbon revenue. However, the inclusion of input from stakeholders was evident and documented in CAZ.

The main outcomes of the community consultations carried out include:

- A co-management structure that includes members of the local communities, regional and national government authorities and CI
- A protected area management plan that takes into account the needs of local stakeholders
- The communities that will be impacted by the protected area were identified
- A determination of the initial compensation that must be paid to stakeholders should be
- The types of alternative livelihoods that they want to develop would be

The PD also discusses on-going communication with stakeholders and communities. The co-management structure of the protected area, together with the transfer of the management of its buffer zone to the resident communities, forms an inclusive mechanism for ongoing stakeholder communication.

Comments from Community Interviews During Field Audit:

When talking to different communities, they confirmed that they received many trainings from the project proponent and partners (CI, ANAE, MATEZA...) and they have been involve during the selection of the various activities. The trainings received were focused on: fish farming, rice cultivation, poultry...improved materials and inputs has been given to the project beneficiaries. But village federations are not involved in the monitoring of the use of inputs and activities conducted in the field, this leads to problems in some localities. Also at community level, forest police don't have basic material and incentives to implement the trainings received and conduct the surveillance.

It is clear from the community interviews that took place during the field audit that community members do have both praise and complaints regarding the CAZ project. Most of the complaints focus on insufficient funding, training, or resources for both leakage mitigation activities and project activities. This is to be expected in the early stages of the project. The proponent has submitted evidence that demonstrates that funding and plans are in place to take into account community feedback including the CAZ Management Plan.

Strategy 4.1 of the CAZ Management Plan (file: PAGCAZ_oct2009 Version mail.pdf) which allocates \$38,500 for ensuring regular assessments of the management system to ensure the interests of stakeholders are taking into account (Action 2). Additionally, the management plan allows for modifications during the 5 year period of validity, in order to adapt to community feedback. Also there is an annual work plan planning process involving all major stakeholders which provides formal opportunity to provide feedback.

Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	None		

3.6 Non-permanence Risk Assessment

Note: Risk factors are determined through a qualitative analysis conducted, following the guidance of the VCS AFOLU Non-Permanence Risk Tool. As stated in Section 1.1.3 "Project proponents shall clearly document and substantiate the risk analysis covering each risk factor applicable to the project. During the analysis, the validation/verification body shall evaluate the risk assessment undertaken by the project proponent and assess all data, rationales, assumptions, justifications and documentation provided by the project proponent to support the non-permanence risk rating."

3.6.1 VCS AFOLU Non-Permanence Risk Tool Section 2.2.4: Projects with tree harvesting

For ARR and IFM projects with harvesting, project longevity may include the length of time the activities that maintain carbon stocks will continue, either through the continuation of the project activity or by replanting or re-growth of the trees after the last harvest in the project crediting period. Such commitment to continue the management practice, or to replant or allow re-growth shall be demonstrated through evidence such as certification of sustainable forest management under Forest Stewardship Council (FSC), Programme for the Endorsement of Forest Certification (PEFC) or other internationally recognized schemes, or contractual agreements for timber supply beyond the last harvest in the project crediting period. Re-growth may be considered only where project areas, after harvesting, will be managed for regeneration (naturally or with assistance), maintaining the current species mix and allowing trees to re-grow to an age equivalent to at least the age at which trees were harvested, as demonstrated in management plans.

Findings from Field Audit
This requirement from the VCS AFOLU Non-Permanence Risk Tool, regarding projects with tree harvesting is only applicable to ARR & IFM

project types.

Section 1.2 of the PD details the sectoral scope and project type. The Project falls under scope 14 of the VCS, Agriculture, Forestry, and Other Land Use (AFOLU). The AFOLU category is Reducing Emissions from Deforestation and Forest Degradation (REDD). The REDD Project activity type is Avoided Unplanned Deforestation (AUD), since the land in the project is not legally authorized and documented to be converted to non-forest in the baseline. The Project is stated to not be a grouped project.

The Project aims to reduce deforestation of primary Malagasy forest by creating a corridor to protect the remaining native forests between the Zahamena National Park and the forest collectively known as the “Ankeniheny” in central eastern Madagascar. Goals of the CAZ protected areas are provided with the primary objective of the project being to reduce deforestation through the creation and management of a co-managed protected area financed by revenues from the sale of carbon credits. The project also aims to enhance the well being of resident communities through sustainable livelihood development, to conserve biodiversity, to maintain ecosystem services and to enable the sustainable use of natural resources by local residents.

As made clear in the PD, the primary project activities do not involve tree harvesting. Some sustainable levels of harvesting will be allowed in the sustainable use zone of the protected area, with removal levels dictated by the community use management plans.

Conformance	Yes ☐	No ☐	N/A ☒
NCR/OBS	None		

3.6.2 VCS AFOLU Non-Permanence Risk Tool Section 2.1.1: Risk analysis

Projects shall prepare a non-permanence risk report in accordance with VCS document *AFOLU Non-Permanence Risk Tool* at both validation and verification. In the case of projects that are not validated and verified simultaneously, having their initial risk assessments validated at the time of VCS project validation will assist VCU buyers and sellers by providing a more accurate early indication of the number of VCUs projects are expected to generate. The non-permanence risk report shall be prepared using the *VCS Non-Permanence Risk Report Template*, which may be included as an annex to the project description or monitoring report, as applicable, or provided as a stand-alone document.

The potential transient and permanent losses in carbon stocks shall be assessed over a period of 100 years from the start of the current monitoring period, unless otherwise specified in Sections 2.2 to 2.4 of the VCS AFOLU Non-Permanence Risk Tool, to determine the appropriate risk rating.

Risk Factor	Self Assessment Risk Rating	Findings (including description of any mitigation activities as required per VCS AFOLU Non-Permanence Risk Tool Section 2.1.2.2)	NCR/OBS
Internal Risks (VCS AFOLU Non-Permanence Risk Tool Section 2.2):			
Project Management: Shall be assessed using Table 1 of VCS AFOLU Risk Tool.	-2	The auditors have made the following findings based on the Non-Permanence Risk Report provided with respect to Project Management Risk: a) The CAZ Project falls under the REDD category and the project activity type is AUD. Therefore the Project is not seeking GHG credits from reforestation and this risk item is non-applicable. b) The main strategy of the CAZ Project for reducing deforestation is the establishment of a protected area which is detailed in the PD. The Non-Permanence Risk Report indicates that ongoing enforcement is expected to be necessary and has given this risk item a rating of 2. c) The rating for this risk item is identified as zero in the Non-Permanence Risk Report, and indicates that the management team with day to day management responsibilities includes individuals with the necessary skills and experience (over 5 years) to successfully undertake all project activities. The roles and responsibilities of the Project Proponent as well as other entities involved in the Project are outlined in section 3.1.3 of this report. The Risk Report describes how the day-to-day management team is headed by CI Madagascar's	None

		Director of Field Projects, Bruno Rajaspera, who has over 15 years experience of managing large complex projects to protect forests and promote community management of natural resources, including 5 years working to develop the CAZ Project, and another similar Project – the Ambositra- Vondrozo Corridor. CI's regional office responsible for implementing the CAZ Project is based in Toamasina and is headed by Hantanirina Ravololonanahary, with 13 years experience working in the CAZ region, originally conducting research activities and then managing all of CI's activities in the region. Hantanirina has been the primary responsible person responsible in the field for establishing the CAZ project and organizing all the activities leading to the creation of the CAZ. The Risk Report also discusses the co-management of the CAZ with village level associations and federations of these groups and the important role they play in implementing activities. This co-management structure will remain in place although the organization responsible for overall coordination (currently CI) may change overtime. Given the experience of the management team as documented in the risk report, and as demonstrated during the field audit, the risk rating for this item as zero is supported. Although after 2014, it is not definite what role CI will play in the CAZ project, and hence the above expertise is not guaranteed to be involved with the project, for this first verification period the risk rating of zero remains valid. The first verification period ends on December 31, 2011. See associated findings in section 3.3.4.3 of this report and NCR 29/13. d) As discussed in the Risk Report under item Project Management risk item d, members of the management team are located in Madagascar and are within one day's travel from the Project Area. In addition, given the co-management structure employed by the Project, community associations from people living immediately adjacent to the Project Area are a fundamental part of the project management structure and have specific responsibilities for implementation of project activities and management of the protected area. The project managers assert that based on the management structure in place, and the proximity of management staff to the Project Area that it will be under constant surveillance for threats and natural risk to carbon stocks. The auditors have determined that the risk rating of zero for this item is appropriate. e) A risk ranking of -2 has been given for item e) under Project Management Risk. The Risk Report describes how the management team includes individuals with significant experience in designing AFOLU projects, implementing activities to reduce deforestation and ensure monitoring reporting and verification. The management team based at CI's HQ Office has already been responsible for getting an avoided deforestation project in Peru validated and verified against the VCS standard. The CI Madagascar based team has also designed another project in the Ambositra-Vondrozo corridor that is also seeking validation and verification against the VCS standard. The auditors feel that based on the past experience of individuals working on the management team who have taken other projects through validation	
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		and verification with the VCS program, the mitigation risk ranking of -2 is appropriate. f) The Risk Report indicates that the CAZ Project is managed under an adaptive management approach and structure involving multiple stakeholders as outlined in the PD, and that an adaptive management plan is in place. The management plan was developed through a participatory process involving the local communities, local and regional authorities and government services, civil society organizations and the Ministry of Environment and Forests. The management plan is stated to include a monitoring plan designed to provide timely data needed for project decision-making, and also includes an analysis of the capacity and risks associated with the Project. The CAZ Management Plan (file: PAGCAZ_oct2009 Version mail.pdf) outlines elements of the adaptive management plan in Strategy 4.1 Integration de la population et des autorites locales et regionals dans le systeme de Gestion de la reserve CFAZ and allocates \$38,500 for ensuring regular assessments of the management system to ensure the interests of stakeholders are taken into account (Action 2). Additionally the management plan provides for modifications during the 5 yedar period of validity. Annual planning process involving all major stakeholders of the project is in place and provides a formal opportunity to adapt strategies and activities to changing circumstances. This annual planning process results in an annual workplan that is agreed and approved by all the stakeholders involved in the management structure of the Project. CI has provided the auditors with a copy of a report for the most recent annual process meeting (file: Rapport reunion 1au4 mai Mrg.docx) as well as the resulting workplan for 2012 (PTA CAZ 230712AR.xlsx). Monthly meetings are also organized between CI, the regional forestry departments, the federations of community associations responsible for implementing activities at the local level and any contractors involved in work to support the Project in order to provide regular opportunities to adapt planned activities based on changing circumstances. Sample reports of these monthly meetings from 2008, 2010, and 2011 have been provided to, and reviewed by the auditors. The montly meeting reports, annual workplan meeting reports and output, and components of the CAZ Management Plan demonstrating allocation of funds for adaptive management together constitute sufficient evidence of conformance. Total Project Management Risk = (a + b + c + d + e + f) = (n/a + 2 + 0 + 0 + -2 + -2) = -2	
Financial viability: Shall be assessed using Table 2 of VCS AFOLU Risk Tool.	0	The Non-Permanence Risk Report provided for auditor review has selected risk items d & h from the Financial Viability Risk section. The Risk Report describes how the Project cash flow breakeven point is greater than 4 years and up to 7 years from the current risk assessment (item d), and how the Project has secured 80% or more of funding needed to cover the total cash out before the Project reaches breakeven (item h). d) The Risk Report describes how a comprehensive financial model has been developed, which shows income to the Project and associated expenses from December 2007 through the 30 year crediting period. During Project development (2005 – 2012) funding has been provided by grants (NORAD and CI) and a forward payment for future credits by the World Bank Biocarbon Fund. In 2013 it is assumed that there will be a transition to funding provided through the sales of VCUs on the voluntary market.	NCR 30/13 NCR 31/13

		The model was shown to the auditors via a web meeting held on October 10, 2012 through Skype in which the financial model was demonstrated. The model includes full costing for all aspects of managing the Project, registration of the VCUs, government tax and marketing and the assumptions. The model allows analysis of the financial performance of the Project with changes to a wide range of variables including; carbon volumes, carbon price, inflation rates etc. Due to the volume of credits generated by the Project, it has significant resilience and would attain the break even condition even if expectations on the percentage sold were not met, and based on this analysis; the Project has classified the Financial Viability under section d. However, although most figures in the financial model are sufficiently justified, this is not always the case. The AFOLU Non-Permanence Risk Tool requires that each risk factor be clearly documented (1.1.3). The proponent does not justify nor document a source for the estimated 70% of credits to be sold annually. See NCR 30/13. The Risk Report explains that how under the scenarios modelled, the Project generates fairly significant surpluses over the long term, allowing for future discussion about the allocation of these funds to community support, increased project activity or the creation of an endowment or trust fund to support the Project in the long-term after the end of the crediting period. h) The Risk Report describes how during the development phase of the Project, funding has been provided by NORAD and CI from both restricted and unrestricted funds. It also states that due to the potential of the Project to quickly move to financial break-even, CI and other partners including the World Bank, through its purchase of an initial tranche of 340,000 credits from the initial verification are in a position to support the Project until credit sales are initiated in 2013 or soon thereafter. CI's corporate financial statements are said to be attached and provide evidence of a level of financial resources which would allow allocation of funds to the Project during the transition from grant support to revenue generated by credits sales. The initial purchase of 340,000 credits by World Bank is not supported with a purchase agreement or another signed contractual agreement. See NCR 31/13. Total Financial Viability Risk = [(a, b, c, or d) + ((e, f, g, or h) + i)] = [(0) + (0)] = 0 Although the Total Financial Viability Risk is correctly calculated based on the Project Proponent's determination of the Financial Viability Risk items a-i, the auditors have not been provided with sufficient evidence to demonstrate that the risk rating for item h is appropriate. See NCR 30/13 & NCR 31/13.	
Opportunity cost: Shall be assessed using Table 3 of the VCS AFOLU Risk Tool.	0	The Risk Report gives a rating for Opportunity Cost as zero (item d); "NPV from the most profitable alternative land use activity is expected to be between 20% more than and up to 20% less than from project activities; or where baseline activities are subsistence-driven, net positive community impacts are demonstrated." As outlined in the PD, and observed during the field audit, the baseline activities are subsistence driven in that Tavy is the principle form of cultivation in the area immediately surrounding the CAZ Project, and subsistence farmers practice Tavy because of topographic constraints, the low labour and monetary input required relative to returns, and tradition. The Project has been designed to provide net positive community impacts through direct payments and community development activities. The Risk Report describes how safeguard	NCR 32/13

		procedures following the methodology of the World Bank's Operational Procedures 4.12 have been followed with the objective of ensuring that the project leaves no households in a poorer or more vulnerable state than prior to the Project. Implementation of the Project therefore expects all the payments and community development activities (as described in the PD), to be implemented through the Project will be making a net positive contribution. Independent assessments of the impacts of community development activities done to date are stated to be available to the auditors upon request. However, auditors are not aware of these independent assessments. See NCR 32/13. Mitigation items g & h under the Opportunity Cost Risk Table (Table 3) are identified as non-applicable, but the Risk Report does describe how; CI, a non-profit organization, has been the main promoter of the Project since project preparation activities began in January 2005 and is the delegated manager of the Project until December 2014 with possibility of extension (g). Also, with respect to mitigation item h; the Project Area made up of the CAZ protected area is currently under provisional protected status and is expected to be legally gazetted by December 2012 at which point there will be a legally binding commitment to protect carbon stocks over the length of the project crediting period and over at least 100 years. The GOM has also entered into a legal agreement for the management of the protected area with CI that clearly indicates its intent to permanently gazette the protected area and ensure its protection during the crediting period. This however has not yet occurred, so the auditors concur that this mitigation risk category is non-applicable. Total Opportunity Cost Risk = [(a, b, c, d, e or f) + (g or h)] = 0 Although the Total Opportunity Cost Risk is correctly calculated based on the Project Proponent's determination of the Opportunity Risk items a-h, the auditors have not been provided with sufficient evidence to demonstrate that the risk rating is appropriate. See NCR 32/13.	
Project longevity: Shall be assessed using Table 4 of the VCS AFOLU Risk Tool.	6	As described in the Opportunity Risk section above, the Project is not legally protected over the entire length of the crediting period or over the next 100 years. This permanent protection status is however expected to be in place by December 2012. As stated in section 1.6 of the PD, the crediting period is 30 years – which will be renewed twice for a total project longevity of 90 years. The Risk Rating for the Project Longevity Risk has been calculated using item a) in table 4: Project Longevity Risk = 24 – (project longevity/5) = 24 – (90/5) = 24 – 18 = 6 The auditors concur with the Project's determination of the Project Longevity risk rating.	
Total Internal Risk: Shall be calculated using Table 5 of the VCS Risk Tool.	4	Total Internal Risk = Project Management Risk + Financial Viability Risk + Opportunity Cost Risk + Project Longevity Risk Total Internal Risk = -2 + 0 + 0 + 6 = 4 Although the Total Internal Risk is correctly calculated based on the Project Proponent's determination of the four Internal Risks, the auditors have not been provided with sufficient evidence to demonstrate that some of the risk ratings have been correctly determined. See NCR 30/13, NCR 31/13, NCR 32/13.	NCR 30/13 NCR 31/13 NCR 32/13

External risks (VCS AFOLU Non-Permanence Risk Tool Section 2.3):			
Land and resource tenure: Shall be assessed using Table 6 of the VCS Risk Tool.	0	The Risk Report identifies risk items b – g) as non-applicable. Item a) with a rating of zero has been selected and indicates that the entire area of the CAZ Project is owned by the GOM, who is also the Project Proponent as identified in the PD and confirmed through interviews during the field audit. Access to and use rights to resources on the Project Area are also owned by the GOM who can formally allow resource use rights by local communities on a temporary but renewable basis through “Transfer of Management” contracts. Copies of these contracts were reviewed by the auditors. This collaborative management between the government and local communities is being done in the context of the carbon project as a part of the management strategy for reducing deforestation. The Project asserts that in respect to risk management, there is low risk since the government owns the land and retains the rights over land use decisions. Item b) is non-applicable since the GOM is both the landowner of the Project Area as well as the Project Proponent. Item c) is stated to be non-applicable as “there are no disputes over land tenure or ownership in the Project Area. No land tenure disputes were noted during the public consultation process for establishing the Project.” No land tenure disputes were described to the auditors during the stakeholder interviews carried out during the field audit. Results of the public consultation meetings were reviewed by the auditors, and no access/use right disputes were noted. Item d) in the Risk Report indicates there are no disputes over access/use rights that were identified through the public consultation process, and that results of the public consultation meetings are available for review. Copies of the public consultations with local communities were provided to the auditors, and access use rights appear to have been resolved and agreed upon. During interviews with local communities, some individuals expressed a concern that the sustainable use area although currently large enough to meet their needs, will likely not meet the needs of the communities in years to come due to population growth. No specific disputes over land tenure or ownership in the Project Area were raised during stakeholder interviews, although this could be a potential problem in the future if the sustainable use areas will not meet the needs of future population growth. For now, it is in conformance. Item e) in the Risk Report is identified as non-applicable. Although there is no supporting information provided to support why this risk item under Land Tenure and Resource Assess/Impacts is not applicable to the Project, the auditors are confident that the CAZ project is not a Wetland Restoration and Conservation AFOLU Project type as indicated in the PD and confirmed throughout the audit. Mitigation item f) is appropriately identified as non-applicable, since the Project Area is not yet legally protected over the crediting period or over the next 100 years. Permanent protection is expected by December 2012 however, but is not in place yet. Mitigation item g) is stated to be non-applicable as there are no competing claims over land tenure, ownership or access/use rights. This is consistent with the auditors understanding of the ownership of the Project Area in that the entire area is owned by the GOM – the Project Proponent. As evidenced by the Transfer of Management Contracts provided for auditor review, local communities have been given temporary access/use rights to manage the community management areas (sustainable use areas) with conservation	

		activities. Total Land Tenure Risk = ((a or b) + c + d + e + f) = 0	
Community engagement: Shall be assessed using Table 7 of the VCS Risk Tool.	-5	The Risk Report indicates that items a & b) from the Community Engagement Risk Table are non-applicable, and has selected a score of -5 for item c). a) The Risk Report describes how no households live within the Project Area as determined by the public consultation and social safeguard process, and that the Project has been designed so that settlements are outside of the Project Area. Those settlements close to the Project Area are within the leakage management zone. No households were observed to be present in the Project Area during the field audit. The auditors agree with the Project Proponent's determination that no households exist within the Project Area, as the Project Area consist entirely of forest, and all households practicing Tavy convert forestland to non-forestland and thus would not be present in a forested area. There are however, small scale gold and sapphire mining camps within the protected area. The audit team had the opportunity to visit one such camp and it is the impression of the audit team from the field visit as well as conversations with stakeholders, that these mining camps are temporary. If they were to become permanent it is likely that the miners would being to commence tavy farming and it would therefore be detected in the project monitoring which would be measured in subsequent verification reports. b) All households living within the Communities (the administrative unit with approximately 20-30 km radius around the Project Area) are stated to have had an opportunity to comment on plans for the Project during the consultation process. Evidence of the results of the consultation process was reviewed by the auditors. Households that were identified as being reliant on the protected area were identified through the consultation process to create the protected area and their views were taken into account to design the boundaries and management rules. As part of the social safeguard process, where resource restrictions due to the Project were identified as having a potential negative impact to households depending on the forest , compensation measures were identified and are expected to be implemented within the next year. The Risk Report asserts that the majority of such households are involved in the co-management structure of the Project through local associations that have local management responsibility for project activities. c) The Risk Report describes how the Project expects to generate multiple net positive impacts for the local communities that live around, and may use the Project Area. One benefit is that as part of the Project local communities gain official access and use rights for the forests within the Project Area. Also, individuals within the community management associations who do work related to the Project receive payments making the Project be a source of revenue. Communities living on the edge of the forest benefit from the small scale development projects that will be funded in the long term by revenues generated by the GHG emission reduction credits. The Risk Report indicates that two independent analyses on the impacts of these small scale development activities concluded that the projects improve the livelihoods of households living around CAZ. Both involved a participatory approach to assess the impacts of the project activities. The social safeguard plan is stated to ensure that no-one is worse off because of the Project, and that all development activities funded by the Project will ensure that there is a net positive benefit on	NCR 33/13

		the livelihoods of the local communities living around CAZ. This safeguard plan includes funds from the World Bank's Biocarbon Fund earmarked to compensate those that lose access to resources as a result of the project. The auditors are unaware of the two independent analyses that are referenced. Further, when these are provided to the auditors, they should still be referenced here to be in compliance with 1.1.3 of the AFOLU Non-Permanence Risk Tool. See NCR 33/13. Further, the CAZ Project has been designed and will be seeking validation under the Climate, Community, and Biodiversity Standard (CCB). Total Community Engagement Risk = a + b + c = -5 Although the Total Community Engagement Risk is correctly calculated based on the Project Proponent's determination of the Community Engagement Risk items a-c, the auditors have not been provided with sufficient evidence to demonstrate that the risk rating is appropriate. See NCR 33/13.	
Political risk: Shall be assessed using Table 8 of the VCS Risk Tool.	2	In the Risk Report reviewed by the auditors items b & f) have been selected for the CAZ Project while items a, c, d, & e, have been identified as non-applicable. b) The Risk Report indicates that based on the most recent available Worldwide Governance Indicators (WGI) scores for Madagascar (2007-2011) the average score across the 6 indicators for these five years is -0.537 (referenced source http://info.worldbank.org/governance/wgi). Auditor review of the average WGI scores for Madagascar over the last 5 years confirmed the risk rating for this item is appropriate, though they computed an average score across the six indicators for these five years as -0.524. f) The Risk Report indicates that Madagascar is implementing REDD+ readiness activities as set out in the VCS Risk Tool in that the country is part of the FCPF process although it has not yet received funding from FCPF because some FCPF donors do not recognize Madagascar's current government. It also describes how Madagascar has benefited from readiness funds provided by bilateral (e.g. Norad) through civil society organizations to help develop projects and methodologies that contribute to the REDD+ readiness process. AFD is also stated to currently be providing technical assistance to the National Environment Office to support the National Level Monitoring Reporting and Verification. In addition, the Risk Report describes how the GOM requested a \$42 million loan from the World Bank in 2011 that also includes a \$2 million component to support REDD+ activities. While it appears a risk rating for this item as -2 is appropriate in that Madagascar is receiving REDD+ readiness funding from the World Bank, and bilateral civil society organization (e.g. Norad), specific evidence of this funding has not been provided. See NCR 34/13. Total Political Risk = ((a, b, c, d or e) + f) = 4 + -2 = 2 Although the Political Risk is correctly calculated based on the Project Proponent's determination of the Political Risk items a-f, the auditors have not been provided with sufficient evidence to demonstrate that the risk rating is appropriate. See NCR 34/13.	NCR 34/13
Total external risks: Shall	0 (score of -3)	Total External Risk = (Land Tenure and Resource Access/Impacts Risk +	NCR 33/13

be calculated using Table 9 of the VCS Risk Tool.	but total cannot be less than 0)	Community Engagement Risk + Political Risk) = 0 + -5 + 2 = -3 = 0 (Total External Risk may not be less than zero) Although the Total External Risk is correctly calculated based on the Project Proponent's determination of the associated risk items (Land and Resource Tenure, Community Engagement, Political Risk), the auditors have not been provided with sufficient evidence to demonstrate that the total risk rating is appropriate. See NCR 33/13, & NCR 34/13.	NCR 34/13
Natural Risks (VCS AFOLU Non-Permanence Risk Tool Section 2.4):			
Natural risks: Shall be assessed using Table 10 of the VCS Risk Tool.	2	As described in the Risk Report, the required natural risks were assessed for the Project Area; forest fires, pest and disease outbreaks, cyclones, and geological risk. Forest Fires: The Risk Report indicates that no natural fires have been recorded in the humid rainforest ecosystem of Madagascar because it is too wet. Natural fire in Madagascar are stated to be mostly limited to savannah habitats and that even the drier forests of western Madagascar are often fire resistant and have long term stable boundaries that indicate that even manmade fires have little impact on them. A reference is provided to Kull 2002. No loss from fire is expected. During the field audit, at the camp where the team stayed for 2 nights (the Sahanomana area), a tree with a significant fires scar was noticed. This evidence of apparent natural fire was however limited to a single stem and was likely caused by lightning during a dry period. No evidence of fire spread was noted, and this was the only evidence of potential natural fires observed in the field. It is likely that trees are occasionally burned by individual lightning strikes, but that medium-large scale natural fires do not occur in this region due to the high rainfall. Likelihood is determined to be less than once per 100 years, resulting in a score of 0 with no significant losses expected. Pest and Disease Outbreaks: The Risk Report describes how no major pest or disease outbreaks leading to die off of forests have been recorded in rainforest of Madagascar. Large scale tree pest and disease outbreaks are reported to be extremely rare in tropical natural forest due to the high diversity of tree species and low densities that are typical. Pest and disease are more of a concern in tropical plantations which do not occur in the Project Area. A reference to Nair, 2007 is cited. The significance of this risk item is identified as no loss expected from pest or disease outbreaks. The auditors observed no evidence of major pest or disease outbreaks during the field audit and agree with the assessment of tropical forest ecology in that the high species diversity tends to greatly reduce the risk of large scale dieback from pests and disease. In addition the inventory plots that the audit team measured in the field confirmed that there is very high species diversity in this area. The risk from pests and diseases is expected to be insignificant with low likelihood. Cyclones: The proponent correctly identifies that cyclones are a frequent risk in the CAZ area. The proponent asserts that carbon losses from cyclone are expected to be insignificant, citing the fact that CAZ is not immediately on the coast, and the assertion that for a given cyclone in CAZ, a small amount of the carbon stocks are likely to be impacted. A study (Birkinshaw, 2007) of cyclone	

		damage to forest in the Masoala peninsula is cited in which 3.2% of the forest is impacted by a severe cyclone, although this area is more coastal. Additionally, a World Bank study (World Bank 2008) is cited to demonstrate that cyclones lose power over land. The proponent notes that cyclones go through the CAZ area every few years. The auditors accept the identified risk rating for cyclone damage and associated impacts on carbon stocks for the Project. Geological: The proponent indicates that no loss is expected from geological risks in the project area, asserting that Madagascar experiences extremely low frequency of earth tremors, which when they do occur, are of low magnitude. Furthermore the proponent cites a source (USGS Earthquake hazards program) as evidence that Madagascar has one of the lowest earthquake disaster risks in the world. This is a reputable source and the audit team concurs that this risk is insignificant and unlikely. The single geological risk to carbon stocks is probably from landslides. CAZ occurs in a region with high rainfall and very steep slopes (up to 60 degrees). In regions such as this, landslides are somewhat common. However, no landslides were observed by the audit team during the site visit, including the flyover of the project area. Additionally, landslides typically impact small areas, and in a project area of 370,000 ha would be highly unlikely to ever add up to a significant level (more than 5% of carbon stocks). As such, the proponent's assertion that geological risks are minimal is justified. Other Natural Risk: The Risk Report indicates that no loss is expected from other natural risk, and that there are no other significant natural risk likely to reduce carbon stocks in the forest of CAZ. The auditors are not aware of any other natural risk that pose a significant threat to the forest of CAZ and concur with the Project Proponent's findings for other natural risks to the Project Area.	
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3.6.3 VCS AFOLU Non-Permanence Risk Tool Section 2.5.1 – 2.5.3: Overall Project Risk Calculation

Note: As per VCS AFOLU Non-Permanence Risk Tool 2.5.2, the minimum risk rating shall be 10, regardless of the risk rating calculated using Table 11. Furthermore, where overall risk rating is greater than 60, project risk is deemed unacceptably high and the project fails the entire risk analysis (see VCS AFOLU Non-Permanence Risk Tool 2.5.3). For additional information on project risk assessment failure see VCS AFOLU Non-Permanence Risk Tool 2.1.

To determine the number of buffer credits that shall be deposited in the AFOLU pooled buffer account, the overall risk rating shall be converted to a percentage (e.g., an overall risk rating of 35 converts to 35%). This percentage shall be multiplied by the net change in the project's carbon stocks (stated in the verification report), as set out in the VCS document *Registration and Issuance Process*. Where a project is divided into more than one geographic area for the purpose of risk analysis, the overall risk rating percentage for each area shall be multiplied by the net change in the project's carbon stocks (stated in the verification report) in such geographic area.

Risk Factor	Self Assessment Risk Rating	Findings	NCR/OBS
Overall non-permanence risk rating as determined using Table 11 of the VCS Risk Tool.	10 (score of 6 – but minimum is 10)	The Project Proponent has calculated a total internal risk rating of 4, a total external risk rating of 0, and a total natural risk rating of 2. The overall risk rating is calculated to be 6. However the Risk Report correctly indicates that the risk tool requires a minimum overall risk rating of 10 must be applied. Before the auditors can confirm the correctness of the overall risk rating score	NCR 30/13 NCR 31/13 NCR 32/13 NCR 33/13 NCR 34/13

		of 10, evidence to address the conformance issues needs to be provided. See NCR 30/13, NCR 31/13, NCR32/13, NCR 33/13, NCR 34/13.	
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1.1.1

Based on Project's conformance with audit criteria, the auditor makes the following recommendation:		
Final Report Conclusions		
☒	Validation approved: NCR(s) closed	
☐	Validation not approved: Conformance with NCR(s) required	
Draft Final Report Conclusions (10/7/2013)		
☒	Validation approved: NCR(s) closed	The Project Proponent has 7 days from the date of this report to submit any comments related to the factual accuracy of the report or the correctness of decisions reached. The auditors will not review any new material submitted at this time.
☐	Validation not approved: Conformance with NCR(s) required	
Draft Report Conclusions (11/21/2012)		
☐	Validation approved: No NCRs issued	The Project Proponent has 30 days from the date of this report to revise documentation and provide any additional evidence necessary to close the open non-conformances (NCRs). If new material is submitted the auditor will review the material and add updated findings to this report and close NCRs appropriately. If no new material is received before the 30 day deadline, or the new material was insufficient to close all open NCRs the report will be finalised with the NCRs open, and validation and/or verification will not be achieved. If all NCRs are successfully addressed, the report will be finalised and proceed towards issuance of a assessment statement.
☒	Validation not approved: Conformance with NCR(s) required	

4 VALIDATION CONCLUSION

Rainforest Alliance Report Criterion	Draft Report Project Conformance		Final Report Project Conformance	
1 Project Design	☐ Yes	☐ No	☒ Yes	☐ No
2 Application of Methodology	☐ Yes	☐ No	☒ Yes	☐ No
3 Additionality and baseline selection	☐ Yes	☐ No	☒ Yes	☐ No
4 Quantification of GHG emissions	☐ Yes	☐ No	☒ Yes	☐ No
5 Leakage	☐ Yes	☐ No	☒ Yes	☐ No
6 Net emission reductions and removals	☐ Yes	☐ No	☒ Yes	☐ No
7 Monitoring plan	☐ Yes	☐ No	☒ Yes	☐ No
8 Environmental Impact	☐ Yes	☐ No	☒ Yes	☐ No
9 Comments by stakeholders	☐ Yes	☐ No	☒ Yes	☐ No
10 Non-permanence Risk Assessment	☐ Yes	☐ No	☒ Yes	☐ No

4.1 Nonconformance evaluation

Note: A non-conformance is defined in this report as a deficiency, discrepancy or misrepresentation that in all probability materially affects carbon credit claims. Each NCR is brief and refers to a more detailed finding in the appendices.

NCRs identified in the Draft Report must be closed through submission of additional evidence by the Project Proponents before Rainforest Alliance can submit an unqualified statement of conformance to the GHG program. Findings from additional evidence reviewed after the issuance of the draft report are presented in the NCR tables below.

*Following the issuance of the draft validation report the audit team held a call with the Project Proponent to discuss the NCRs. The Project Proponent raised some concerns about the legitimacy/necessity of some NCRs, and after auditor review of the associated project documents, the applicable standard requirements, and in some cases seeking clarification/guidance from the VCS, it was determined that some of the NCR originally raised were not warranted. These included NCR 01/13, NCR 08/13, NCR 20/13, NCR 26/13, & NCR 35/13. Also while discussing the draft validation report, the Project Proponent raised some concerns that some NCRs were very similar to one another, and that in some cases the same issue was covered under multiple NCRs. In response to these concerns, the auditors merged/combined some NCRs together. These include NCR 06/13 (merged with NCR 05/13), NCR 12/13 (merged with NCR 11/13), & NCR 18/13 (merged with NCR 05/13).

NCR#:	02/13
Standard & Requirement:	VCS AFOLU Requirements Version 3.3, section 3.1.3.
Report Section:	Section 3.1.7 Section 3.4.1
Description of Non-conformance and Related Evidence:	
The PD states that “the Project is complying with the MECIE through the development of an Environmental and Social Impact Assessment and Management Plan. These have been submitted to the <i>Office National pour l’Environnement</i> (ONE) for review and approval. The methodology used was consistent with the ONE guidelines for EIAs for protected areas and goes further by adhering to the World Bank’s “safeguard” Operational Policy OP4.12 that covers restriction of access to natural resources. Through discussions during the field audit, the auditors were told that approval of the Environmental and Social Impact Assessment and Management Plan by ONE was ongoing, and the auditors have not been provided evidence that the Environmental and Social Impact Assessment and Management Plan intended to satisfy the MECIE requirements have been formally accepted by ONE.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Documents # 3a, 4a, 8a – 14a.
Findings for Evaluation of Evidence:	Document 9a outlines the Project Proponent’s response to NCR 02/13, which is supported by the updated PD (document # 3a & 4a), and additional evidence offered in documents #8a – 14a. In their response, the Project Proponent offers clarification on the Social and Environmental Safeguard Plan (PGESS) for CAZ and indicates that the PGESS is; “a document defining general orientations, the process and principles to determine safeguard measures for affected people by the protected area establishment, according to the protected area code law (COAP), the MECIE decree and its application texts. The objective is to enable affected people to participate in the management of the protected area, and also to contribute to finding solutions to avoid losses due to the protected area creation after prohibition of use of resources.” The Project Proponent states that the PGESS for CAZ was developed in accordance of COAP, MECIE and World Bank policies, and was initially submitted to the Environment National Office (ONE) on December 2010, for its environmental evaluation in order to obtain the environmental permit. A documented letter (document #10a) confirming CAZ’s PGESS was reviewed, and validated by the World Bank in September 2012 to confirm its compliance to the EP3 “Cadre Fonctionnel de procedure de sauvegarde” framework has been provided. In the letter signed by the World Bank Head of Operations for Environment and Natural Resources it states that after analysis of the information received (the PGESS), they give their non-objection by the World Bank and validate the CAZ Environmental and Social Safeguard Plan (March 2012 version) is in accordance with due procedures under the Environmental

	Program Phase III. In this regard the World Bank invites the publication of the results of the plan and proceeding with its implementation. Another document provided (document #12a.) gives the official request for the environmental evaluation by ONE of the CAZ PGEES, signed on behalf of the CAZ Technical Committee. The latest version of the PGEES was resubmitted to ONE in January 2013, and an agreement protocol is being prepared along with ONE to move forward with the Environmental Evaluation in the field, including the public consultation process, to lead to the delivery of the environmental permit. In the response letter to NCR 02/13, the Project Proponent acknowledges that even though the process was not complete and the environmental permit was not issued yet, the provided documents demonstrate that the PGEES is in the process and that ONE has accepted the documents (e.g. the PGEES). The Auditors discussed this issue with VCS, who indicated that they would expect this process to be finalized, and for the PGEES to be formally accepted by ONE before this NCR could be closed. Findings from 4 October 2013: The project proponent, on 4 October 2013 submitted to the audit team the environmental operating permit (document 42a) with an approval date by Le Directeur Général de L'Office National Pour L'Environnement (ONE) on 4 October 2013. The permit demonstrates approval of the Plan de Gestion Environnementale du Project (PGEP--Management Plan) for the CAZ protected area. The PGEP arises out of the PGEES process and is particular to the environmental management of the project which ONE oversees. The proponent has now demonstrated compliance with applicable laws and regulations.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	03/13
Standard & Requirement:	VCS Standard Version 3.3, section 3.1
Report Section:	Section 3.2.1
Description of Non-conformance and Related Evidence:	
Section 2.1 of the PD provides the title and reference to the methodology employed by the Project as follows: Title: Methodology for Avoided Unplanned Deforestation Reference: VM0015, Version 1.0, approved by VCS on July 12, 2011 This methodology is however currently undergoing revisions by the VCS. As stated on the VCS website for this methodology (http://v-c-s.org/methodologies/VM0015), "As of September 30, 2012, VM0015 V1.0 is no longer valid. Projects that have not completed validation by September 30 can no longer apply VM0015 V1.0. VM0015 V1.0 must be revised to conform to Section 4.5.3 of AFOLU Requirements V3.2, specifically to address baseline requirements for accounting GHG emissions released from belowground biomass, soil organic carbon, dead wood, and harvested wood products. Revisions are undergoing a streamlined approval process facilitated by VCS." The Project is therefore not currently employing a valid VCS methodology, and must conform to the requirements of the updated version of VM0015 once it is given final approval for use by VCS.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Documents # 4a, 5a, 7a, & 41a.

Findings for Evaluation of Evidence:	Following the submission of the draft CAZ validation & verification reports, the auditors held a call with the Project Manager to discuss the conformance issues identified in the Draft. During this call it was discussed how the Project Proponent would not only make the necessary adjustments to the Project, and provide additional evidence as need to close the identified NCRs, but would also assess how the requirements of the updated version of VM15 would impact the Project. In document #41a, the Project Proponent states that Version 1.1 of VM0015 was released on December 03, 2012, and that some revisions were incorporated. The document acknowledges that the CAZ PD was developed based on an older version of VM0015, and that some updates to the PD were necessary to meet the requirements of VM0015 version 1.1. A total of 6 sections of the updated methodology were identified as requiring changes to the Project design, and a response plan for each of these identified changes is offered. Three other minor updates regarding the project such as tables 11 – 36 of VM0015 v1.1 are also identified. The Audit Team reviewed the proposed actions to be taken by the Project Proponent to ensure the Project meets conformance with the requirements of VM0015 v1.1. A general agreement with the Project Proponent's response plan was given, and no real concerns with the proposed action were identified. Section 2.1 of the updated PD has been revised in response to this NCR too. The title and reference of the methodology used on the CAZ Project now clearly indicates VM0015 Version 1.1 – Methodology for Avoided Unplanned Deforestation, approved by VCS on December 03, 2012. The changes made to the PD (V3) that were required by the updated VM0015 methodology include: 1. In Step 6.1.1 of the methodology the long term (20 year) average carbon stock must be reported for each post-deforestation LU/LC class. Auditor review of response: In the PD (V3) the proponent has successfully reported the long term 20 year average carbon stock value for the single post-deforestation LU/LC class (tavy). The proponent used values from the literature, as is permitted by the methodology, and applied a 30% discount factor to the average carbon stock as is also required by the methodology if literature values are used. This is in conformance. 2. The methodology has new requirements for the decay rate of belowground biomass and dead wood, both of which are included in the project boundary Auditor review of response: The proponent, in Step VM 6.1.2 successfully describes how the new VM0015 requirements apply in the case of this project, impacting BGB and DW only, as well as the post deforestation class. Table VM20a and Table VM20b depict the changes in carbon stock from initial forest classes to deforestation and for final nonforest classes. It is clear that the required linear functions have been used to represent the decay of belowground biomass and dead wood as required. Additionally, the auditors confirmed that these values were used in the corresponding calculations in the accompanying excel files (document 7a) 3. The methodology requires a linear function is used to increase the carbon stocks of the final non-forest class (tavy) from 0 to 100% of the long term (20 yr) average carbon stock in year 10 Auditor review of response: Auditor review confirmed that this linear increasing function was applied as required by the new methodology and the results were presented in VM Table 20b. 4. The minimum threshold for the best fit as measured by the FOM is defined as the net observed change in the reference region for the calibration period of the model Auditor review of response: The proponent has demonstrated that the FOM achieved by the model (4.4%) is greater than the net observed change during the calibration period (3.1%). This is reviewed in some depth in NCR 14/13 below in this report. The proponent had not initially met the required FOM threshold in the v1 version of VM0015. However, as described, the proponent has met the requirements of the new v.1.1 version of VM0015. Additionally, the audit team observed the process of calculating the FOM in the CI Headquarters office in Madagascar. 5. There are two options for estimating baseline activity data per post-deforestation forest class, 1) historical LU/LC change and 2) modelling. VM0015 requires that for option 1), chosen by the proponent, that the reference area should be divided into zones that represent different possible post-deforestation land uses Auditor review of response: As the proponent has justifiably concluded that there is only a single relevant post deforestation land use (tavy), there is no need for the proponent to perform this analysis. The
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	assertion that tavy is the only significant post deforestation land use is supporting abundantly by secondary data as well as the audit teams visit to the project area, including an overflight of the project area in which it was very clear that Tavy was the only relevant and significant driver of deforestation. 6. V1.1 of VM0015 requires that the Minimum Mapping Unit (MMU) must not be more than one hectare regardless of forest definition in the analysis of historical land use/land cover change. Auditor review of response: As the proponent has used the national forest cover and land use change map for part of its analysis, which was filtered to an MMU of 2 ha, it would require undue and prohibitive work by the proponent to meet this requirement of the methodology. The intermediate steps of this analysis were not actually saved, thus requiring the proponent to perform much of an entirely new analysis. Additionally, in the opinion of the audit team it would not improve the accuracy of the overall emissions assertion of the project, at least not in any way that would be significant. Although there are some areas of the project area that exhibit mosaic like deforestation patterns, the overwhelming pattern is more of a frontier deforestation pattern, as such, changing the minimum mapping unit to 1 ha would have little positive impact to the project. The proponent is requesting a methodology deviation in this instance as this is a measurement and monitoring issue, as permitted by Section 3.5.1 of the VCS Standard. The audit team approves this methodology deviation as it does not negatively impact the conservativeness of the quantification of GHG emission reductions or removals. No other relevant changes in the VM0015 methodology have been identified which the proponent must respond to. Based on auditor review of the updated PD, and additional evidence provided for during the second review it was determined that the Project is meeting the requirements of VM0015 v1.1. See also the findings for evaluation of evidence for each of the other NCRs in this report.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	04/13
Standard & Requirement:	VM0015, Step VM 2.1 Collection of appropriate data sources Step VM 2.4.2 Interpretation and Classification Step VM 2.6 Preparation of a methodology annex to the PD Step 4.2.2 Preparation of deforestation risk maps
Report Section:	Section 3.2.4 (VM 2.1, VM 2.4.2, VM 2.6, VM 4.2.2) Section 3.3.2.7
Description of Non-conformance and Related Evidence:	
The Project Proponent selects the appropriate spatial resolution data as defined by the methodology (Landsat-30m resolution), high resolution data is also appropriately selected. The Project Proponent however fails to “describe...the sampling design” used to collect the high resolution data for validation as required by the methodology. Normally this would be included in the methodology annex for which CI is submitting the “Forest Cover Mapping and Change Detection using Moderate-Resolution Satellite Imagery” (Steininger et al. 2006) document. This document is generic and does not include specific information on the actual CAZ project, but rather generic processes. VM0015 requires that “the detailed methodological procedures used in pre-processing, classification, post classification processing, and accuracy assessment of the remotely sensed data, must be carefully documented in an Annex to the PD.” (VM 2.6). This requirement has not been fulfilled. The Project Proponent is lacking a complete methodology annex specific to this project. This methodology annex is described in detail in Step 2.6 of VM0015. The document “Forest Cover Mapping and Change Detection using Moderate-Resolution Satellite Imagery” (Steininger et al. 2006) submitted by the Project Proponent to take the place of the methodology annex is insufficiently detailed. During the field audit the auditors observed the CI team replicating this process both in the Madagascar and the US office and the high-resolution validation process was considered accurate. However, the sampling design and other details are not documented as required by VM0015. Interpretation and classification processes were observed by auditors at the CI office in Madagascar. Good practice was observed with	

supervised classification utilized with ERDAS. The minimum mapping unit was consistent with the minimum area threshold in the forest definition thus conforming to the methodological guidance. The process is described in general terms in the CI Remote Sensing methodological guidance document (Forest Cover Mapping and Change Detection using Moderate-Resolution Satellite Imagery, Steininger et al, 2006). The description is not sufficiently detailed.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	18a, 15a, 16a
Findings for Evaluation of Evidence:	The proponent has provided new evidence in the documents identified above to sufficiently document the process for describing the sampling design used in selecting the high resolution data used for validating the imagery. Additional concerns were noted throughout the first draft audit report detailing other times when particular steps were required by VM0015 to be detailed in a methodological appendix. The generic appendix provided by CI was initially insufficient. The new appendix, "Supplementary Information Land Cover and Land Change Analysis for the CAZ REDD+ Project, Madagascar" (Document 18a) describes the methodology specific to the CAZ project in great detail and hence fulfils the requirements of the methodology and demonstrates conformance with the VCS Standard. As noted above, the actual interpretation and classification processes were observed by the audit team and the CI team showed great proficiency. Given this additional supplementary evidence describing the sample design, this NCR is now closed.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	05/13
Standard & Requirement:	VM0015, Step VM 2.2 Definition of classes of land-use and land-cover Step VM 2.4.3 Post-processing Step 5.2 Calculation of baseline activity data per post-deforestation forest class Step 6.1.1 Estimation of average carbon densities
Report Section:	Section 3.2.4 (VM 2.2, 2.4.3, 5.2) Section 3.2.6.3 (6.1.1) Section 3.2.6.15 Section 3.3.2.1 Section 3.3.2.3 (6.1.1) Section 3.3.2.15
Description of Non-conformance and Related Evidence:	
The proponent selects four Land-use and Land-cover (LULC) classes: 1. Forest land in reference region 2. Forest land category A (strict protection zone in project area) 3. Forest land category B (sustainable use zone allowing harvesting in project area) 4. Non-forest land The proponent only stratifies the forest into strict protection (Category A), and sustainable use (Category B) forest. This stratification is simply for purposes of designating where activities may occur, and not for the purpose of obtaining accurate carbon stock measurements.	

The proponent does not stratify forest land. The proponent asserts that forest land in the reference region is not further stratified for multiple reasons including the fact that carbon stock measurements across elevations, forest types, etc. showed no distinguishable carbon densities. The evidence for this remains unclear. The auditors were provided with carbon measurements taken in the project area, but not with carbon measurements from the much larger reference region. Further, VM0015 does not require that an assessment of carbon stocks be used in determining the reference region. Other ecological characteristics are used by the Project (VM0015 Section 1.1.1) and found to be appropriately justified. Initial training for the estimation of carbon stock densities was provided by Winrock international to teams of consultants that conducted the inventory. The proponent first conducted a test inventory of 18 plots around Raboana to obtain values for variance and sample carbon stocks used to estimate to required number of inventory plots. Typically this exercise would be conducted in each estimated strata. There is no explanation as to why Raboana was chosen as the location for the preliminary inventory, nor is there explanation for why 18 sample plots is a sufficient number. It is not clear to the auditors why Raboana was used for the test plots and how this area is representative of the diversity of the project area. The auditors consider this as crucially important since the number of total plots used in the full inventory is derived from this.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	43a, 44a
Findings for Evaluation of Evidence:	The organization has submitted evidence of the appropriateness of the sampling design for the CAZ project area. CI conducted an analysis of the presumed drivers of biomass density (slope, aspect, precipitation, elevation) assessing these drivers i) at the plot locations of their actual biomass inventory, ii) as well as at 300 systematically placed points throughout the project area. The concern of the auditors was that failure to stratify the forest area, as well as to more evenly distribute the biomass sampling plots across the project area, may lead to errors in the biomass/carbon density used in the project. In the analysis CI conducted it was demonstrated for these presumed drivers of biomass density (also identified by the VM00015 methodology as drivers to be considered), via t-test, are not significantly different between the actual biomass inventory plots and the well distributed 300 points across the project area. A GIS was used to locate these 300 points, as well as to calculate the driver value (eg. Elevation in meters) at each point as well as the biomass inventory points. The audit team accepts this as evidence that the biomass inventory plots are reasonably assured to represent the biophysical diversity of the project area. VM00015 directs project developers to consider other drivers of biomass stocks including Management regime, as well as disturbance dynamics. The management regime is homogenous across the project area and therefore is irrelevant. The disturbance regime, in the absence of stochastic cyclone damage, can be assumed to be primarily tree-fall gaps and either be i) homogenous spatially, or ii) strongly linked to drivers already assess including elevation and slope. Anthropogenic disturbance would be concentrated at the edges of the project area, which is where the biomass inventory plots were generally located, thus this would be captured. This evidence is supplemented by a professor at a Malagasy University with relevant ecological knowledge of the project area, forest types, and spatial variation of biomass density. The audit team accepts the provided evidence as closure of the NCR.

NCR Status:	CLOSED
Comments (optional):	None

NCR#:	07/13
Standard & Requirement:	VM0015, Step VM 2.2 Definition of classes of land-use and land-cover
Report Section:	Section 3.2.4 (VM 2.2)
Description of Non-conformance and Related Evidence:	
The proponent asserts that the conservative forest definition used (80% canopy cover) will ensure that forest cover is not overestimated . This audit team questions whether this is fully implemented because all remote sensing specialists interviewed in Madagascar and the US confirmed that they could not differentiate between 80% canopy cover and forest with less than 80% canopy cover. They could differentiate between secondary forest, intact forest, and savoka (agricultural fallows) visually and this was demonstrated. The audit team agreed with the visual assessment of the differences between secondary forest, intact forest, and savoka and that this assessment is clear and accurate. However the assertion that the 80% canopy cover forest definition is fully utilized, remains unclear as the remote sensing specialists cannot quantitatively differentiate between forest with less than and greater than 80% canopy cover. Their ability to distinguish between forest and non-forest was demonstrated.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Documents # 4a, 5a
Findings for Evaluation of Evidence:	Section 2.2.c) in the updated PD has been revised, and the definition of forest used by the Project Proponent has been adjusted in response to this NCR. This section of the PD now states that the Project Area is defined using a conservative definition of forest (Harper et al. 2007 and MINENVEFT et al. 2009) and is comprised of old-growth natural forest. This is stated to more than meet the DNA definition of forest and is the same one as that used in the government's national analysis of deforestation for 1990-2000-2005. Auditor checks to these referenced materials confirmed the definition of forest being used by the Project. Harper et al. 2007 defines forest as; "areas of primary vegetation dominated by tree cover at least seven meter in height, with neighbouring trees crowns touching or overlapping when in full leaf."
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	09/13
Standard & Requirement:	VM0015, Step VM 3.1 Identification of Agents of Deforestation Step VM 3.2 Identification of deforestation drivers Step VM 3.5 Conclusions VCS AFOLU Requirements, Section 3.6.1 – Identification of Leakage VCS Standard Section 3.15: Quantification of GHG emission reductions and removals
Report Section:	Section 3.2.4 (VM 3.1, VM 3.2, VM 3.5) Section 3.3.2.1 Section 3.3.2.9 Section 3.3.4.3
Description of Non-conformance and Related Evidence:	

The Project Proponent identifies all major and minor agents of deforestation that were observed during the field audit, including subsistence farming, charcoal production, small-scale logging, small-scale illegal mining, and large-scale mining. Subsistence farmers are identified as the sole major source of deforestation in the project area, exclusively through *tavy*, or swidden agriculture.

Evidence of small scale logging was observed and is permitted in the Sustainable Use Area (Category B Forest) according to community level management plans created through Management Transfer Agreements. Additionally, all representatives from villages that were interviewed confirmed that illegal logging to supply markets in Moramanga and Antananarivo occurs near their villages, or occurred in recent years. During a field visit in the project area, one audit team member observed a very large (approx. 100 cm dbh) tree that had been felled by chain saw and the bole had been removed. It was confirmed by local guides that this was a precious wood.

Further analysis and demonstration that both permitted small-scale logging, and illegal small-scale logging is insignificant, is needed.

Small-scale gold mining was observed during the field visit. The gold mine visited resulted in more forest degradation than deforestation, and was minor. The proponent cites past analyses that demonstrate mining has historically been minor. The potential for significant deforestation from mining would likely come from *tavy* associated with mining, rather than the mining itself. This is captured in #1, above.

However, key interviews and media report searches highlighted a recent (July 2012) sapphire boom in the CAZ, near Didy in which significant numbers of people were involved (one interviewee cited up to 40,000 people). This was not mentioned to the audit team, and sapphire mining is not mentioned in the PD. A source, (Tilghman et al, 2007) is cited for previous mining rushes at other areas in Madagascar, acknowledging that these rushes can bring in tens of thousands of people. This sapphire boom must be fully assessed in light of the requirement to assess the “likely development of the population size of the identified main agent groups (See VM 3.1 c).

In summary, the proponent fails to adequately assess small-scale illegal miners and small-scale loggers as agents of deforestation in the project area.

Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	6a, 22a, 27a, 28a, 29a, 30a, 31a
Findings for Evaluation of Evidence:	Regarding small-scale mining, the proponent has provided a much fuller analysis than occurred in the original PD, documenting recent issues such as the July 2012 sapphire mining boom in the CAZ area near Didy. The following text has been inserted into the PD (V3) in VM Step 3.1. The proponent has provided sufficient justification that prior to the 2012 sapphire boom that there was no reason to expect that small scale mining would be a significant driver of deforestation in the CAZ project area given that the historical level of mining was very small, particularly in comparison the 360,000 ha+ project area. Indeed, the audit team had the opportunity to visit a small-scale gold mine and concurred that no deforestation was occurring and that degradation that did occur was localized over a 5 ha area. The proponent cites media reports and personal communications with the local Director of Forestry and Community associations (VOI) in an updated assessment of mining taking into account the sapphire boom. These reports conclude that the sapphire boom was unpredictable and has since largely terminated due to the military relocating the illegal miners from the area, as well as documented poor and dangerous mining conditions. As such the proponent concludes that further analysis of small scale mining as a driver of deforestation is not reasonably necessary. The audit team concurs that the mining is unpredictable in scale and location, and that given vigilance by the necessary authorities it is unlikely to result in significant deforestation. Additionally, the proponent has provided an analysis in excel (file: CAZ_logging analysis.xlsx) to demonstrate that the carbon loss from both legal and illegal small-scale logging is in fact insignificant. The analysis focuses only on the Didy region of the project area as this is the only area for which there was data available. However, it is reasonable to assume this is conservative given that interviews with forestry officials as well as review of forest management plans confirmed that Didy is subject to a greater level of legal logging, and possibly illegal logging, compared to the rest of the project area. Additionally, the Didy commune is of substantial size, representing 32% of the total project area. The analysis demonstrates that the estimated carbon stock loss from known illegal and legal logging is a small fraction

	of the estimated carbon stock increment increase from natural regeneration over equivalent time periods. Thus, it can reasonably be concluded that carbon stock removals due to both illegal logging as well as legal logging permitted in forest management agreements is insignificant. The proponent provides sufficient background and description of the methodology used in this analysis in (file: Sup Info_Impact of logging in CAZ.docx). An IPCC endorsed methodology is used and the input data used is from reputable sources (USAID report, CONGESFOR, etc.). The supplemental evidence provided on the analysis of the significance of small scale mining, illegal logging and legal logging impacts to carbon stocks, the proponent has satisfied the requirement to fully assess all agents of deforestation and this NCR is now closed.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	10/13
Standard & Requirement:	VM0015, Step VM 2.6 Preparation of a methodology annex to the PD Step VM 3.2 Identification of deforestation drivers Step 4.2.1 Preparation of factor maps
Report Section:	Section 3.2.4 (VM 2.6, 3.2, 4.2.1) Section 3.3.2.15
Description of Non-conformance and Related Evidence:	
Under the key driver variable "Access to forest from existing villages" the PD claims "There are no planned new roads...in the project area". According to an interview with Andrew Cook, Environmental Manager of the Ambatovy Mine, the mine now plans to maintain what was originally a temporary road going across the project area. The road is for pipeline access. This may dramatically change access to the forest in this region (the South of the project) and must be assessed. It should be noted that Mr. Cook said that deforestation along the road will be monitored. Still, the PD must capture this detail and assess its future development and how project measures will address it.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Documents # 1a, 25a, 26a,
Findings for Evaluation of Evidence:	During the call held after the issuance of the draft validation & verification report, the Project Managers indicated that the statement; "there are no planned new roads...in the project area" is accurate since the road referenced in this NCR does not go through the project area, and rather cuts through the reference region. The Project Managers also noted that the Ambatovy Mine pipeline road is a private access road and the same level of access and deforestation threats on public roads is not expected. In addition they noted to the auditors that the Ambatovy Mine Company has a legal responsibility to mitigate for any deforestation along this road as part of its environmental compliance. Document 26a provided as additional evidence to address this NCR shows a map of the southern end of the project area, and identifies the mining footprint, as well as the location of the mining pipeline in relation to the project area. The map clearly shows that the pipeline and road that runs in parallel do not cut through the project area. Shape files for the Ambatovy Mine were also provided allowing the auditors to overlay the mine and the mine pipeline location with that of the project area. When doing so, the auditors confirmed the mine pipeline in fact did not cut through the project area. By confirming the mine pipeline and road that runs parallel does not cross into the project area the auditors concern about increased access into the project area via this road, and potential associated changes in rates of deforestation were alleviated. No changes to the PD were necessary, and the auditors consider this NCR closed.

NCR Status:	CLOSED
Comments (optional):	None

NCR#:	11/13
Standard & Requirement:	Step VM 3.3 Identification of deforestation drivers Step VM 3.5 Conclusion
Report Section:	Section 3.2.4, VM 3.3, VM 3.5
Description of Non-conformance and Related Evidence:	
A full and adequate identification of key underlying causes of deforestation is performed. Some statistics do not have a citation. For example, for the Key Underlying Cause # 2, it is cited that 80% of households are poor and rural with no referenced source. This problem occurs multiple times in this step and throughout the PD. For another example, see Key Underlying Cause #2, when population growth is cited as 2.8% with no referenced source. All data must be evidenced and substantiated. Also, the proponent cites a conclusive judgement that deforestation will continue in the reference region and project area. The analysis of agents, drivers, and causes supports this conclusion, as well as the evidence collected by the audit team in the field. Not all facts are cited again. The PD claims in Section 3.5 that transport infrastructure is projected to be improved, but cites no source. It is true that the audit team observed upgrades to one road near the project. However, all assertions should be fully evidenced and supported.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	5a, 6a, 19a, 20a, 21a, 22a, 23a, 24a
Findings for Evaluation of Evidence:	Review of the revised PD (CAZ_VCS_PD_revised_2013_01_31_trackchanges.docx) has confirmed that the proponent has supported statistics, facts, and other pertinent information to the identification of deforestation agents and drivers, with citations. These citations were crucial as the identification of agents and drivers of deforestation is the foundation for many other analyses in the PD, and a misattributed statistic could result in failure to identify an important driver or agent. The proponent provided six additional citations to the audit team in a folder on dropbox. These citations supported all unsupported facts that the audit team had identified, as well as a few other minor facts that had been uncited. The audit team reviewed the supporting documents and has confirmed that they support the facts and figures cited in the PD. Therefore this NCR is closed.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	13/13
Standard & Requirement:	VM 0015, Step VM 3.5 Conclusion Step VM 4.1.3.1-4.1.3.2 Quantitative projection of future deforestation
Report Section:	Section 3.2.4, VM 3.5, VM 4.1.3-4.1.3.2 Section 3.3.2.15
Description of Non-conformance and Related Evidence:	

The proponent cites a conclusive judgement that deforestation will continue in the reference region and project area. The analysis of agents, drivers, and causes supports this conclusion, as well as the evidence collected by the audit team in the field. The historical average deforestation rate (1990-2005) is cited to be 1.21% in this section 3.5 as well as Step VM 7.1.2, yet p.88, Step VM 4.1.3 cites the rate as 1.26%. This discrepancy must be resolved.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Documents # 1a, 5a, & 6a
Findings for Evaluation of Evidence:	Auditor review of the updated PD confirmed that this discrepancy has been resolved. The historical average deforestation rate of 1.26% per year is consistently referenced throughout the PD. Upon review of the PD (V3), the proponent has updated the PD to reflect only the accurate deforestation rate of 1.26%.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	14/13
Standard & Requirement:	VM0015, Step 4.2.3 Selection of the most accurate deforestation risk map
Report Section:	Section 3.2.4 (4.2.3)
Description of Non-conformance and Related Evidence:	
The Project Proponent appropriately uses "Option A" for calibration and confirmation of the model output, using the 1990-2000 time period for calibration and the 2000-2005 period for confirmation. The process is sufficiently documented and was observed in person by the audit team in Madagascar. Adherence to good practice was observed. An FOM of 50% is required for frontier landscape configuration and 80% for mosaic landscape configurations. The proponent does not identify anywhere in the PD whether this project address frontier or mosaic deforestation. This was discussed during the field audit and the RA audit team agrees that the deforestation has attributes of both, with some spatial variation. However to be in conformance with this aspect of the methodology one single deforestation pattern must be selected to compare the FOM requirement against.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Documents # 1a, 5a, & 6a
Findings for Evaluation of Evidence:	The draft report assessed the CAZ project PD against the VM0015 V1 methodology. On 3 December 2012, the V1.1 of the VM0015 methodology was released in which the FOM requirements changed compared to V1. In V1.1, the minimum threshold for the FOM must be equal or greater than the net observed change in the reference region during the calibration period of the model. The deforestation (net observed change) in the reference region during the 1990-2000 calibration period was 3.1%. As noted in both the earlier and the current version of the PD, the FOM achieved by the model was 4.4%, which exceeds the required 3.1%. The process for calculating the FOM and the net observed change in the reference region was observed by the audit team at the CI Headquarters office in Antananarivo during the field audit. Thus, the PD is now in conformance with the new version of the VM0015 methodology and the VCS requirements.
NCR Status:	CLOSED

Comments (optional):	None
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NCR#:	15/13
Standard & Requirement:	VM0015, Step 6.1.1 Estimation of average carbon densities, Appendix A
Report Section:	Section 3.2.6.3 (6.1.1) Section 3.3.2.1 Section 3.3.2.2
Description of Non-conformance and Related Evidence:	
The proponent initially used the global moist tropical equations from Chave et al (2005). While these equations are a reputable source, Appendix 2 of VM0015 requires that the proponent either use more regionally appropriate allometric equations, or demonstrate that global scale equations such as <i>Chave</i> are appropriate through destructive sampling.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Updated documentation from the proponent confirms that a new (Vielledent 2012), Madagascar humid forest specific equation was utilized in all calculations. This has been confirmed through audit of the carbon calculations including in the following files and documents: -caz_all_vielledent_WD_corrected_0.61.xlsx -DIDY_all_vielledent_WD_corrected_0.61.xlsx -Fetraomby_all_vielledent_WD_corrected_0.61.xlsx -FIERENANA_all_vielledent_WD_corrected_0.61.xlsx -Maromiza_all_vielledent_WD_corrected_0.61.xlsx
Findings for Evaluation of Evidence:	During the field audit this NCR was raised and the proponent elected to alter the equation to a new locally derived equation (Vielledent et al, 2012) for moist wet forests of Madagascar. The Vielledent equation meets the requirements of VM0015 and is demonstrably conservative, having reduced carbon density by nearly 30%. The new equation that is being used results in significantly more conservative carbon densities, closer to those observed in other projects and studies in the region.
NCR Status:	CLOSED
Comments (optional):	This NCR was issued regarding the initial use of Chave (2005) for tracking purposes only but the NCR is considered already closed with this report.

NCR#:	16/13
Standard & Requirement:	VM0015, Step 6.1.1 Estimation of average carbon densities, Appendix A
Report Section:	Section 3.2.6.3 (6.1.1) Section 3.3.2.1 Section 3.3.2.2
Description of Non-conformance and Related Evidence:	
The proponent initially used a wood density value from Asia in the utilization of the Chave equation. This was a mistake and an artefact of Winrock having not updated the excel spreadsheet provided to the Project Proponent.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	The proponent has updated the default wood density to 0.61, from Asner (2012) and submitted the following documentation as evidence:

	-Human and environmental controls over aboveground carbon storage in Madagascar - Appendices, Carbon Balance and Management – Gregory Asner, July 2012 -caz_all_vielledent_WD_corrected_0.61.xlsx -DIDY_all_vielledent_WD_corrected_0.61.xlsx -Fetraomby_all_vielledent_WD_corrected_0.61.xlsx -FIERENANA_all_vielledent_WD_corrected_0.61.xlsx -Maromiza_all_vielledent_WD_corrected_0.61.xlsx
Findings for Evaluation of Evidence:	This issue was raised at the closing meeting of the field audit and the Project Proponent rectified this, using an appropriate regional default wood density (0.61, from Asner 2012) as verified by auditor review of all updated carbon calculation excel worksheets (see above) as well as the corresponding results in the PD.
NCR Status:	CLOSED
Comments (optional):	This NCR was issued regarding the initial use of a wood density value from Asia, and has already been verified to have been closed, and is only included in this report for tracking purposes.

NCR#:	17/13
Standard & Requirement:	VCS AFOLU Requirements Section 3.1.1: Data Requirements VM0015, Step 7.1.2 Unplanned deforestation that cannot be avoided.
Report Section:	Section 3.3.2.1 Section 3.3.2.2 Section 3.3.2.4 (7.1.2) Section 3.3.2.15
Description of Non-conformance and Related Evidence:	
An Effectiveness Index (EI) is required by the methodology to calculate the <i>ex ante</i> estimation of non-CO2 emissions and carbon stock changes. (Step VM 7.1.2). The proponent does not provide a source for the equation used to develop the EI. It is not clear where the equation to calculate the constant (0.12) came from, or why an exponential decay function is used instead of a more linear projection. The rate of the EI should be related to projected implementation of project activities that will reduce deforestation.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Documents # 1a, 5a, & 6a
Findings for Evaluation of Evidence:	In response to this NCR the proponent has added new clarifying text to the PD in Section 3.2. Initially, the proponent had not explained the source or justification behind the equation used to develop the Effectiveness Index (EI). However, the proponent has now clarified the underlying assumptions including an initial effectiveness of 0.2 and a final effectiveness of 0.84 in 2017. This high value represents the reduction in deforestation rate documented in a well-established protected area, compared to the CAZ historical deforestation rate. The logic behind the equation used to develop the EI is now clear given the additional text that the proponent has added. Additionally, the underlying assumptions are well reasoned, based off of observations of another protected area in Madagascar. Additionally, final effectiveness will be measured in later verification audits. The proponent is now in conformance with these aspects of the methodology and VCS standards and this NCR is closed.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	19/13
Standard & Requirement:	VM0015, Step 6.1.1 Estimation of average carbon densities
Report Section:	Section 3.3.2.1 Section 3.3.2.3 (6.1.1)
Description of Non-conformance and Related Evidence:	
Initial training for the estimation of carbon stock densities was provided by Winrock international to teams of consultants that conducted the inventory. The proponent first conducted a test inventory of 18 plots around Raboana to obtain values for variance and sample carbon stocks used to estimate to required number of inventory plots. Typically this exercise would be conducted in each estimated strata.	
The source of the formula used to determine the required number of sample plots is not cited, nor is it the same formula suggested in Appendix 2 of VM0015.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Documents # 1a, 5a, & 6a
Findings for Evaluation of Evidence:	Within the updated PD, additional text has been added into the section covering VM Step 6.1.1 – Estimation of average carbon densities. With respect to the Project's use of a semi-randomized/clustered randomized sampling design of biomass inventory for the CAZ project some justification has been offered. Due to the size of CAZ it was determined by the Project Proponent that fully randomized sampling of the area was not logistically feasible. This section of the PD now states that VM0015 suggests that; in case of remote areas and areas with poor accessibility (either because of physical or social barriers such as unsafe areas) may be excluded for the location of sampling plots, using transparent and conservative procedures, assuming the representativeness of the plots for the corresponding stratum (reference also given to Supplementary Information – Sampling design of biomass inventory for CAZ). A clear reference to the source of the formula used to determine the required number of sample plots is now given. As described in the updated PD; "Eighteen plots were sampled in total. Based on the preliminary data collected, the number of sample plots necessary to attain a certain precision in the biomass measurement was calculated using the formula by Pearson et al (2005). The actual formula is subsequently displayed in this section of the PD (pg 117).
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	21/13
Standard & Requirement:	VM0015, Step 6.1.1 Estimation of average carbon densities Step VM 2.6 Preparation of a methodology annex to the PD
Report Section:	Section 3.2.4, (VM 2.6) Section 3.3.2.1 Section 3.3.2.3 (6.1.1)
Description of Non-conformance and Related Evidence:	
Initial training for the estimation of carbon stock densities was provided by Winrock international to teams of consultants that conducted the inventory. The proponent first conducted a test inventory of 18 plots around Raboana to obtain values for variance and sample carbon stocks used to estimate to required number of inventory plots. Typically this exercise would be conducted in each estimated strata.	
The methodology requires that a map and all coordinates of sampled locations be included in the PD. A map is included but the coordinates are not included. These could alternatively be included in the methodology annex or the PD itself.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s)

	referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Documents # 1a, 5a, & 6a
Findings for Evaluation of Evidence:	In the updated PD and section covering VM Step 6.1.1 – Estimation of Average Carbon Densities, Table 12 has been added. Within this table the Project Proponent displays the coordinates of the sampling points (coordinates are in UTM Zone 38N) as required by the methodology.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	22/13
Standard & Requirement:	VM0015, Step 6.1.1 Estimation of average carbon densities
Report Section:	Section 3.3.2.1 Section 3.2.6.3 (6.1.1)
Description of Non-conformance and Related Evidence:	
The PD mentions the source (Cairns et al 1997) for root to shoot ratios used to calculate belowground biomass in forests, and this is a reputable source, but the proponent fails to identify which specific conversion factor/root to shoot ratio, is used. This could be included in a methodological annex or directly in the PD.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Documents # 1a, 5a, & 6a
Findings for Evaluation of Evidence:	The proponent added new text both in Section 4.1 “Data and Parameters Available at Validation” and VM Step 6.1.1 of the PD to clarify that the appropriate default root:shoot ratio for tropical forests was used. The proponent has therefore demonstrated conformance with the relevant section of the methodology as well as the VCS requirements.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	23/13
Standard & Requirement:	VM0015, Step 6.1.1 Estimation of average carbon densities, Appendix A
Report Section:	Section 3.3.2.1 Section 3.2.6.3 (6.1.1)
Description of Non-conformance and Related Evidence:	
The Project Proponent initially did not include belowground biomass in the shrub-like Savoka plots used to estimate carbon stocks in non-forest carbon stocks. This omission increases the difference in the project scenario and baseline, thus generating more emission reductions.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by	The following file was reviewed to confirm that the appropriate belowground biomass root:shoot default

Organization:	was used: File: Savoka_plots_data_bg0_4.xlsx
Findings for Evaluation of Evidence:	At the conclusion of the field audit the Project Proponent elected to immediately correct this NCR by using the appropriate root:shoot value for tropical shrubland and the non-conformance has already been closed, but included in this report for tracking purposes. The proponent utilizes the default root:shoot value provided for tropical shrubland by the IPCC (Table 4.4; IPCC, 2006), which is considered best practice.
NCR Status:	CLOSED
Comments (optional):	This NCR was issued since the Project Proponent did not include belowground biomass in the shrub-like Savoka plots, and has already been verified to have been closed, and is only included in this report for tracking purposes.

NCR#:	24/13
Standard & Requirement:	VM0015, Step 7.1.1 Ex ante estimation of actual carbon stock changes due to planned activities
Report Section:	Section 3.3.2.1 Section 3.3.2.4 (Step7.1.1) Section 3.2.6.15
Description of Non-conformance and Related Evidence:	
The Project Proponent claims that in Category B forest (Sustainable Use Area) that planned harvesting of timber and fuelwood will not reduce carbon stocks. The existing justification of no statistically significant relationship between carbon stocks and distance from forest edge (as proxy for past harvest) is insufficient. It is true that the AUD project activity involves no planned deforestation but there is planned harvesting that may lead to reduction in forest carbon stocks and may be significant. The proponent has not completed the recommended assessment in VM0015, described under “Mandatory accounting of significant carbon stock decreases” as a means of determining whether projected harvesting is significant. Further evidence must be provided that this is truly conservative. Additionally, it should be noted that a major project activity is to increase the number of Management Transfer Contracts in the Category B forest. These contracts give communities formal access to forest resources, and require that a local management plan be developed. These management plans provide for harvesting both for household consumption as well as in some cases for commercial production of timber and wood products. Thus, it is reasonable to expect that the project scenario may increase the level of legal planned harvesting both for domestic and commercial use (both are allowed in the Management Transfer Contracts) over the baseline scenario.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Documents # 27a, 28a, 29a, 30a, 31a
Findings for Evaluation of Evidence:	The proponent has provided an alternative justification to demonstrate that the legal harvesting permitted in the Management Transfer Contract areas within the Category B forest will not lead to significant reductions in forest carbon stocks in the project scenario, even if the project is successful in greatly increasing the number of Management Transfer Contract areas. The proponent uses reputable assumptions derived from documents 28a, 29a, and 30a to complete an analysis using an IPCC endorsed methodology (file: CAZ logging analysis.xlsx) that demonstrates that the legal logging as allowed in the Management Transfer Contracts can reasonably not be expected to lead to a significant reduction in forest carbon stocks through forest degradation. The analysis focuses only on the Didy region of the project area as this is the only area for which there is data available. However, it is reasonable to assume this is conservative given that interviews with forestry officials as well as review of forest management plans confirmed that Didy is subject to a greater level of legal logging, including for some minor commercial purposes, compared to the rest of the project area. Additionally, the Didy commune is of substantial size, representing 32% of the total project area. The analysis demonstrates that the estimated carbon stock loss from known legal logging is a small fraction of the estimated carbon stock increment increase from natural regeneration over equivalent time

	periods. Thus, it can reasonably be concluded that carbon stock removals due to legal logging as currently permitted in forest management agreements is insignificant. The analysis projects this level of legal harvesting over the entire Category B forest area and demonstrates that even under this scenario, the reduction in carbon stocks would remain insignificant. Further information and description is provided in file "Sup_Info Impact of logging in CAZ.docx". Given the analysis presented by the proponent it can be concluded with reasonable assurance that the level of legal harvesting for home consumption and very minor legal logging for commercial purposes will not significantly reduce forest carbon stocks in this area. Thus the project is in conformance with these aspects of the methodology and the VCS requirements.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	25/13
Standard & Requirement:	VM0015, Step 7.2 Ex ante estimation of actual non-CO2 emissions from forest fires
Report Section:	Section 3.3.2.1 Section 3.3.2.4 (7.2) Section 3.3.2.15
Description of Non-conformance and Related Evidence:	
VM Step 7.2 requires that the Effectiveness Index (EI) calculated in step 7.1.2, be applied to the baseline non-CO2 emissions from forest fires to calculate the actual <i>ex ante</i> estimation of non-CO2 emissions from forest fires. Table VM 23 in the PD contains values which do not correspond to the Effectiveness Index multiplied by the appropriate baseline year estimation of non-CO2 emissions from forest fires. For example, given that the EI for year 2008 is 0, and that the baseline non-CO2 emissions from forest fires for year 2008 is 25,580 tCO2e, the <i>ex ante</i> actual emissions of non-CO2 gasses for 2008 (VM Table 23) should also be 25,580, but is instead 17,703. Investigation of the excel file CAZ_VM15_PDtables_19Oct2012.xlsx reveals that the incorrect year is referenced in the application of the Efficiency Index (EI) to the baseline non-CO2e emissions from forest fires. This results in incorrect calculations and hence is not in conformance with the VCS Standard nor the VM0015 methodology.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	5a, 6a, 7a
Findings for Evaluation of Evidence:	The original table (Table VM 23) in the PD (V2) that this NCR was based on no longer exists in the PD (V3) due to the recent changes to the VM0015 methodology. Therefore, analysis of this NCR did not require revisiting this table in the original excel file (CAZ_VM15_PDtables_19Oct2012.xlsx). However, the auditor did review the new excel file (CAZ_VM15_PDtables_2013_01_31.xlsx) that goes with the new PD to confirm that the Effectiveness Index (EI) is reported accurately in the excel file. This review focused on spreadsheets Table X-3-Effec Index, VM Table 28, VM Table 27, and VM Table 21 a-c 1-3. Review of these spreadsheets allowed the auditor to determine that the EI is used correctly in all cases and leads to accurate calculations. The auditor could clearly trace the logic of the calculations through the spreadsheet from the information source, Table X-3 Effec Index through the other relevant spreadsheets. Additionally, the auditor reviewed the new PD (V3) and confirmed consistency between the concerned tables in the excel spreadsheets and the PD itself.

	As the proponent has now demonstrated internal consistency between the PD (V3) and the relevant excel file that is the source of the tables for the PD, the NCR is now closed.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	27/13
Standard & Requirement:	VCS AFOLU Requirements Section 4.6.3: Quantification of Leakage VCS Standard Section 3.15: Quantification of GHG emission reductions and removals
Report Section:	Section 3.3.2.1 Section 3.3.2.13
Description of Non-conformance and Related Evidence:	
The Displacement Leakage Factor (10%) used in the PD is not sufficiently conservative. The field audit took place in 2012, five years after implementation of project activities. Six communities were interviewed as part of the field audit and all agreed that more resources were needed for them to participate in project activities. It was not feasible to visit the hundreds of communities surrounding the project area during the field audit. It may be that all communities are invited to participate in leakage mitigation activities, but for now there are insufficient resources. A more conservative DLF must be used.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Documents # 1a, 5a, 6a
Findings for Evaluation of Evidence:	In response to the NCR and the observations made by the audit team during the field audit, the proponent doubled the Displacement Leakage Factor (DLF) from 10% to 20% of baseline carbon stock changes. The proponent provides as justification the fact that the project is implementing significant leakage prevention measures throughout the project area, the minimal resources available to agents of deforestation, difficulties in relocation, etc. Additionally, the methodology notes that "where leakage prevention activities are implemented the factor shall be equal to the proportion of the baseline agents estimated to be given the opportunity to participate in leakage prevention and project activities." CAZ is implementing leakage prevention measures with all communities surrounding the project area. However, interviews conducted during the field audit confirmed that community members felt that there were insufficient resources for these measures to be fully implemented. Therefore, it would not be appropriate to use a DLF of 0, under the assumption that all agents are able to participate. However, given that the proponent has doubled the initial DLF from 10% to 20%, and the difficulties cited for relocation of agents, it is reasonably conservative to assume this DLF, given the lack of more specific guidance from the methodology. Additionally, leakage will be measured during subsequent verifications. Therefore the project is in conformance with these aspects of the methodology as well as the VCS principle of conservativeness.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	28/13
Standard & Requirement:	VM 0015, Step VM 8.2, VM Table 29b - Baseline carbon stock change in post-deforestation (non-forest) classes
Report Section:	Section 3.3.2.16

Description of Non-conformance and Related Evidence:	
Uncertainty assessment of carbon stocks is required in by Step 6.1.1 (f) in VM0015. It is required that if the uncertainty of the total average carbon stock of a given class is greater than 10%, that the lower boundary of the 90% confidence interval must be used in all calculations if it is an initial forest class in the project area or a final non-forest class in the leakage belt. Additionally, the higher boundary must be used if it is an initial forest class in the leakage belt or final non-forest class in the project area. The proponent calculates the uncertainty of the non-forest class as greater than 10% and hence uses the higher bound of the 90% confidence interval for the final non-forest classes in the project area (VM Table 15b). This is in conformance. However, in Step VM 8.2, VM Table 29b, “Baseline carbon stock change in post-deforestation (non-forest) classes”, the proponent fails to use the lower bound of the 90% confidence interval which is mandatory in this case because this represents the final non-forest class in the leakage belt. This is not in conformance with VM0015.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Documents # 1a, 5a, 6a
Findings for Evaluation of Evidence:	The proponent is not using the same data that was used in the PD (V2) that was assessed for the first draft report. Due to changes in the VM0015 methodology the proponent assesses nonforest carbon stocks using a very different method. Post-deforestation classes are divided into a rice phase and multiple fallow phases based on a study conducted near the project area in 2006 and 2009 cataloguing the carbon stock value of these different classes. As such, values from the literature for post-deforestation (nonforest) carbon stocks are used. As required by the methodology in VM Step 6.1.1, the proponent applies a discount factor of 30% <i>added</i> to the average carbon stock. The usage of these values from the literature negates the NCR because those post deforestation carbon stock values are no longer used. The new values used are in conformance with the methodology and are derived from a reasonable and accurate source—a study in the project area. Therefore this NCR is closed.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	29/13
Standard & Requirement:	VCS Standard Version 3.3, Section 3.16.3 – 3.16.5 VCS AFOLU Requirements Section 4.8: Monitoring Plan
Report Section:	Section 3.3.4.3
Description of Non-conformance and Related Evidence:	
It is clear that the data is being well-maintained by CI Madagascar and that there is a structure in place to maintain data integrity in the future. Additionally, auditors were provided with all requested documents on hand in Madagascar, with the exception of some that are not yet finalized, and one which was at the Department of Forestry. However, CI Madagascar is not the proponent, and crucially, could be removed from the project in the future. There is no procedure to ensure that the Government of Madagascar (the proponent) would receive all needed data to ensure a robust GHG information system if CI were no longer involved in the project.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation

Evidence Provided by Organization:	Documents # 1a, 5a, & 6a
Findings for Evaluation of Evidence:	In response to this NCR some additional information was incorporated into the Section 4.3 of the PD – The Description of the Monitoring Plan. Under the heading Plans for Data Transfer within this section, the PD now describes how if Conservation International (CI) ceases to be the Implementing Partner in charge of the carbon monitoring aspects of the project, all data will be transferred to the Project Proponent and/or the entity indicated by the Project Proponent that will continue on as the Implementing Partner. More specifically this section of the PD describes how CI would transfer the entire external hard drive where all the GIS and non-GIS related information on this project is stored to the appointed manager. This approach will allow for all the folder structures to remain the same, and the links created by the GIS software will be preserved. Any map documents and project databases will be complete and easily assessable. CI will also ensure the new responsible individual(s) are trained and informed regarding the database, information management, updates, and the back-up system. The above described plan added into the PD in terms of how data integrity will be maintained if CI is no longer the Implementing Partner at some time in the future was found to be sufficient to close this NCR.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	30/13
Standard & Requirement:	VCS AFOLU Non Permanence Risk Tool Version 3.2, Table 2
Report Section:	Section 3.6.2, Financial Viability, Total Internal Risk Section 3.6.3, Overall Project Risk Calculation
Description of Non-conformance and Related Evidence:	
Due to the volume of credits generated by the Project, it has significant resilience and would attain the break even condition even if expectations on the percentage sold were not met, and based on this analysis; the Project has classified the Financial Viability under section d. However, although most figures in the financial model are sufficiently justified, this is not always the case. The AFOLU Non-Permanence Risk Tool requires that each risk factor be clearly documented (1.1.3). The proponent does not justify nor document a source for the estimated 70% of credits to be sold annually	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Documents # 1a, 5a, 6a, & 32a
Findings for Evaluation of Evidence:	The auditors were provided an updated version of the PD, and a response document specific to this NCR as additional evidence by the Project Proponent. Within the response document (document #32a), the Project Proponent has provided a general discussion on the state of the carbon market(s), and more specifically on supply and demand of REDD credits. The response document also provides a detailed description of the sensitivity analysis undertaken to determine that the Project cash flow breakeven point is 4 years or less from the current risk assessment. With respect to the discussion on the state of the carbon market(s) offered, the Project Proponent describes how during the last year the market for REDD credits took a major step forward with the first REDD projects being verified, registering and issuing credits, and that there is only a limited transaction history for verified REDD credits in the market place. The Project Proponent also describes how transactions of REDD credits as documented in well known carbon market publications such as the Ecosystem Marketplace Annual Report on the State of the Voluntary Carbon Market, and the State of the Forest Carbon Markets have all presented increases in credit purchases. Based on the Project

	Manager's knowledge of the state of the carbon market(s) and with consideration of the information provided in the cited reports, they assert that there is significant positive changes in the voluntary market place and along with expansions in the regulatory carbon market, there is likely to be growth in the demand for REDD credits. In order to demonstrate that section d of the Financial Viability Risk Table is appropriate for the CAZ project, the Project Proponent must demonstrate that the "Project cash flow breakeven point is 4 years or less from the current risk assessment. The year 2016 was used as the 4-year breakeven point from the current risk assessment. The financial model was run assuming percentages of credits sold with a range of 10-70% (in increments of 10%), and VCU process of \$3, \$5, &7, & \$9. The results are presented tabular form in tables 1 & 2, and graphically in figures 1 & 2. As described in the response document in terms of meeting the breakeven point within four years of the current risk assessment, the model results show that there is a low sensitivity to the assumption on the percentage of credits sold. For all VCU prices in the range considered (\$3, \$5, &7, & \$9) the Project only fails to breakeven within four years when the percentage of credits sold is reduced to 10%. If only 20% of the directs are sold, the results show that meeting the breakeven point within 4 years is only not met with VCU prices of \$3 and \$5. The Project Proponent asserts that the ability of the project to meet the breakeven point within four years for a wide range of assumptions about the percentage of credits sold and at levels significantly below the 70% assumed in the PDD is a result of the fairly high volumes of credits that the project will deliver, and that the selection of item d in the Financial Viability Risk Table is appropriate. Lastly, to support this assertion, the Project Proponent contacted Wildlife Works to gather information on the percentage of verified credits they have sold from two Projects in Kenya (Kasigau Corridor Projects Phase 1 & 2) for which they serve as the Project Proponent. These projects estimate annual volumes of VCUs as about 1.8 million and the verified 2012 monitoring report for these projects show VCU volumes at these predicted levels. The Project Proponent has provided a documented email communication from Mike Korchinsky, CEO of Wildlife Works in which they have reported selling 96% of the credits from these projects. Based on the response document to this NCR provided, the Project Manager's overall knowledge of the current state of the carbon markets(s), the financial viability analysis completed, and the supporting letter from the Wildlife Works projects, selection of item d from the Financial Viability Risk Table was determined to be appropriate.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	31/13
Standard & Requirement:	VCS AFOLU Non Permanence Risk Tool Version 3.2, Table 2
Report Section:	Section 3.6.2, Financial Viability, Total Internal Risk Section 3.6.3, Overall Project Risk Calculation
Description of Non-conformance and Related Evidence:	
The Risk Report describes how during the development phase of the Project, funding has been provided by NORAD and CI from both restricted and unrestricted funds. IT also states that due to the potential of the Project to quickly move to financial break-even, CI and other partners including the World Bank, through its purchase of an initial tranche of 340,000 credits from the initial verification are in a position to support the Project until credit sales are initiated in 2013 or soon thereafter. CI;s corporate financial statements are said to be attached and provide evidence of a level of financial resources which would allow allocation of funds to the Project during the transition from grant support to revenue generated by credits sales. The initial purchase of 340,000 credits by World Bank is not supported with a purchase agreement or another signed contractual agreement.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence

	above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Document # 33a
Findings for Evaluation of Evidence:	The proponent produced the Emissions Reduction Purchase Agreement between the Government of Madagascar and the World Bank IBRD. The audit team has reviewed the agreement and confirmed that this is accurate. This resolves the non-conformance and this NCR is closed.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	32/13
Standard & Requirement:	VCS AFOLU Non Permanence Risk Tool Version 3.2, Table 2
Report Section:	Section 3.6.2, Opportunity Cost, Total Internal Risk Section 3.6.3, Overall Project Risk Calculation
Description of Non-conformance and Related Evidence:	
As outlined in the PD, and observed during the field audit, the baseline activities are subsistence driven in that Tavy is the principle form of cultivation in the area immediately surrounding the CAZ Project, and subsistence farmers practice Tavy because of topographic constraints, the low labour and monetary input required relative to returns, and tradition. The Project has been designed to provide net positive community impacts through direct payments and community development activities. The Risk Report describes how safeguard procedures following the methodology of the World Bank's Operational Procedures 4.12 have been followed with the objective of ensuring that the project leaves no households in a poorer or more vulnerable state than prior to the Project. Implementation of the Project therefore expects all the payments and community development activities (as described in the PD), to be implemented through the Project will be making a net positive contribution. Independent assessments of the impacts of community development activities done to date are stated to be available to the auditors upon request. However, auditors are not aware of these independent assessments.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Documents # 10a, 11a,12a, 13a, 14a, 15a, 34a, 35a
Findings for Evaluation of Evidence:	The auditors reviewed two documents submitted that were developed by independent consultants and assessed early impacts of the CAZ project. To comply with the MECIE requirement (see also NCR 02/13) as well as the World Bank's Operational Procedures, the proponent has created a Plan de Gestion Sauvegarde Sociale et Environnementale (PGESE) document which addresses potential losses to stakeholders involved in the project and compensates them with funding allocated by the World Bank to mitigate these losses. Interviews with World Bank officials have confirmed that the funding is allocated for this purpose. Review of the document "World Bank Approval Letter PGESE CAZ" confirms that the PGESE has been accepted by the World Bank. Therefore this demonstrates no net loss of well-being to livelihoods of local communities involved in CAZ. However, this does not necessarily demonstrate net <i>positive</i> benefit to affected communities. Net positive benefit is successfully demonstrated through the combination of the PGESE, which compensates for any losses and the documents, "Narioela_Rapport Evaluation externe CSP ENGLISH.pdf" and "Rapport Evaluation externe NODE Version Final 18 avril 2012.pdf". These external evaluations document and assess project benefits to communities at two different points in time. Both external reports do document positive benefits accruing to stakeholders and local communities from the activities associated with the CAZ project including improved agricultural production, smallholder involvement, funding for community forestry patrols, agroforestry, etc. Therefore benefits associated with these activities do conclusively demonstrate positive impacts from the project beyond the compensation provided and documented through the PGESE.

	Therefore, the NCR is closed, as the proponent has demonstrated net positive community impacts and provided the auditors with the requested independent assessments that demonstrate this.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	33/13
Standard & Requirement:	VCS AFOLU Non Permanence Risk Tool Version 3.2, Table 2
Report Section:	Section 3.6.2, Community Engagement, Total External Risk Section 3.6.3., Overall Project Risk Calculation
Description of Non-conformance and Related Evidence:	
The Risk Report indicates that two independent analyses on the impacts of these small scale development activities concluded that the projects improve the livelihoods of households living around CAZ. Both involved a participatory approach to assess the impacts of the project activities. The social safeguard plan is stated to ensure that no-one is worse off because of the Project, and that all development activities funded by the Project will ensure that there is a net positive benefit on the livelihoods of the local communities living around CAZ. This safeguard plan includes funds from the World Bank's Biocarbon Fund earmarked to compensate those that lose access to resources as a result of the project. The auditors are unaware of the two independent analyses that are referenced. Further, when these are provided to the auditors, they should still be referenced here to be in compliance with 1.1.3 of the AFOLU Non-Permanence Risk Tool.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Documents # 10a, 11a,12a, 13a, 14a, 15a, 34a, 35a
Findings for Evaluation of Evidence:	The project is reported to have "generally exceeded the expected results" and is noted to have successfully disseminated improved agricultural techniques and alternative income generation activities to 250 village associations with about 7,800 beneficiaries. To comply with the MECIE requirement (see also NCR 02/13) as well as the World Bank's Operational Procedures, the proponent has created a Plan de Gestionne Sauvegarde Sociale et Environnementale (PGESE) document which addresses potential losses to stakeholders involved in the project and compensates them with funding allocated by the World Bank to mitigate these losses. Interviews with World Bank officials have confirmed that the funding is allocated for this purpose. Review of the document "World Bank Approval Letter PGESE CAZ" confirms that the PGESE has been accepted by the World Bank. Therefore this demonstrates no net loss of well-being to livelihoods of local communities involved in CAZ. However, this does not necessarily demonstrate net <i>positive</i> benefit to affected communities. Net positive benefit is successfully demonstrated through the combination of the PGESE, which compensates for any losses and the documents, "Narioela_Rapport Evaluation externe CSP ENGLISH.pdf" and "Rapport Evaluation externe NODE Version Final 18 avril 2012.pdf". These external evaluations document and assess project benefits to communities at two different points in time. Both external reports do document positive benefits accruing to stakeholders and local communities from the activities associated with the CAZ project including improved agricultural production, smallholder involvement, funding for community forestry patrols, agroforestry, etc.. Therefore benefits associated with these activities do conclusively demonstrate positive impacts from the project beyond the compensation provided and documented through the PGESE. Therefore, the NCR is closed.
NCR Status:	CLOSED

Comments (optional):	None
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NCR#:	34/13
Standard & Requirement:	VCS AFOLU Non Permanence Risk Tool Version 3.2, Table 8
Report Section:	Section 3.6.2, Political Risk, Total External Risk Section 3.6.3, Overall Project Risk Calculation
Description of Non-conformance and Related Evidence:	
The Risk Report indicates that Madagascar is implementing REDD+ readiness activities as set out in the VCS Risk Tool in that the country is part of the FCPF process although it has not yet received funding from FCPF because some FCPF donors do not recognize Madagascar's current government. It also describes how Madagascar has benefited from readiness funds provided by bilateral (e.g. Norad) through civil society organizations to help develop projects and methodologies that contribute to the REDD+ readiness process. AFD is also stated to currently be providing technical assistance to the National Environment Office to support the National Level Monitoring Reporting and Verification. In addition, the Risk Report describes how the GOM requested a \$42 million loan from the World Bank in 2011 that also includes a \$2 million component to support REDD+ activities. While it appears a risk rating for this item as -2 is appropriate in that Madagascar is receiving REDD+ readiness funding from the World Bank, and bilateral civil society organization (e.g. Norad), specific evidence of this funding has not been provided.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Documents # 36a, 37a, 38a
Findings for Evaluation of Evidence:	The evidence provided in the cited materials clearly documents bilateral funding provided to the Malagasy government, the proponent. Clear documented evidence demonstrates that Madagascar is a recipient of NORAD funding, AFD technical assistance, and a proposed additional grant from the World Bank that would include \$2 million to support REDD+ activities. As a result of the provision of this documentation, the project is now in conformance with this requirement and the NCR is closed.
NCR Status:	CLOSED
Comments (optional):	None

4.2 Observations

Note: Observations are issued for areas that the auditor sees the potential for improvement in implementing standard requirements or in the quality system; observations may lead to direct non-conformances if not addressed. Unlike NCRs, observations are not formally closed. Findings from the field audit related to observations are discussed in Appendix A below.

**Several of the Observations (OBS) raised in the draft validation report were addressed by the Project Proponent, and were removed from the draft final validation report. This includes OBS 01/13, OBS 03/13, OBS 04/13, OBS 05/13, OBS 08/13, OBS 09/13 & OBS 11/13.*

OBS 02/13	Reference Standard & Requirement: VM0015 Step VM 2.4.3 Post-processing
The PD states that analysis and data for the land cover change analysis have been published in two studies, yet only one is listed (Harper et al, 2007). The auditors have seen the results of this second study (for year 2000-2005) yet all sources have not been documented fully in the PD and bibliography.	
Observation: The Project Proponent should update the PD and associated bibliography to fully document all data and resources considered in the development of the project.	
OBS 06/13	Reference Standard & Requirement: VM0015 Step 6.1.1 Estimation of average carbon densities
The Project Proponent initially used a wood density value from Asia in the utilization of the Chave equation. This was a mistake and an artefact of Winrock having not updated the excel spreadsheet provided to the Project Proponent. This was raised at the field audit and the proponent rectified this, using an appropriate regional default wood density (0.61, from Chave 2012), so is issued an NCR in this report that is already closed and only issued for tracking. See closed NCR 16/13 .	
In the updated calculation sheets (for example, FIERENANA_all_vieilledent_wd_corrected_0.61.xlsx), even though the new correct wood density (0.61, from Chave 2012) is used, the old Asia generic wood density of 0.57 is still cited.	
Observation: The Project Proponent should update the calculation worksheets to reflect the new correct wood density (0.61, from Chave 2012) that was confirmed to be properly used.	
OBS 07/13	Reference Standard & Requirement: VM0015 Step 6.1.1 Estimation of average carbon densities
The Project Proponent places table VM 14 in step 6.1.1, despite the fact that VM0015 places this table in the next step, 6.1.2.	
Observation: The Project Proponent should update the PD to correctly place table VM 14 next to step 6.1.2.	
OBS 10/13	Reference Standard & Requirement: VCS AFOLU Requirements, Section 3.6.2
Due to the large project size our audit team only had the opportunity to sample a small range of mitigation activities. The team observed a moderate degree of success in these activities with poultry rearing appearing particularly successful. We saw no evidence, nor heard from any interviewed stakeholder that significant enrichment planting of degraded forest was occurring, or that activities to improve “the long term sustainability of savoka fallows through the use of native species and better management of the Tavy-savoka cycle” were occurring. It is noted that these activities may be implemented in the future, but if there is actually no concrete plans to implement them, they do not belong in the PD.	
Observation: If mitigation activities involving enrichment planting of degraded forest, or activities to improve “the long term sustainability of savoka fallows through the use of native species and better management of the Tavy-savoka cycle” are not occurring or definitely planned to occur, they should be removed from the PD by the Project Proponent for the sake of accuracy. If they are occurring, the proponent should provide supporting documentation, or relevant information in the PD.	

4.3 Actions taken by the Project Proponent address NCRs (including any resolution of material discrepancy)

Action Taken by Project Proponent following the issuance of the Draft Report	Date
Additional documents submitted to audit team (additional documents listed below)	☒ Yes ☐ No ☐ N/A February 1, 2013; October 4, 2013
Additional stakeholder consultation conducted (evidence described below)	☐ Yes ☒ No ☐ N/A N/A
Additional clarification provided	☒ Yes ☐ No ☐ N/A February 1, 2013; October 4, 2013
Documents revised (document revision description noted below)	☒ Yes ☐ No ☐ N/A February 1, 2013
GHG calculation revised (evidence described below)	☒ Yes ☐ No ☐ N/A February 1, 2013

Included in the actions taken by the Project Proponent to address NCRs was the submission of the following revised files:

Ref	Title, Author(s), Version, Date	Electronic Filename
1a.	CAZ Project NCR Responses, CI, 02/01/2013	CAZ V+V NCR summary_2013_02_01.xlsx
2a.	CAZ Project Monitoring Tables, CI, 01/31/2013	CAZ_Mon_tables_2007_2011_v2-13_01_31.xlsx
3a.	CAZ Project Monitoring Report, CI, 01/31/2013	CAZ_Monitoring_Report_revised_2013_01_31clean.docx
4a.	CAZ Project Monitoring Report Track Changes, CI, 01/31/2013	CAZ_Monitoring_Report_revised_2013_01_31_trackchanges.docx
5a.	CAZ Project Project Description, CI 01/31/2013	CAZ_VCS_PD_revised_2013_01_31_clean.docx
6a.	CAZ Project Project Description Track Changes, CI, 01/31/2013	CAZ_VCS_PD_revised_2013_01_31_trackchanges.docx
7a.	CAZ Project VM15 Tables, CI, 01/31/2013	CAZ_VM15_PDtables_2013_01_31.xlsx
8a.	CAZ Project Functional framework for social safeguard procedure, Government of Madagascar – Ministry of Environment and Forest, 01/31/2013	Cadre fonctionnel de procédure de sauvegarde sociale.pdf
9a.	CAZ Project Response to NCR 02/13, CI, 01/31/2013	NCR02-12_PGESS process.pdf
10a.	CAZ Project World Bank PGESS Approval Letter, World Bank, September 2012	World Bank Approval Letter PGESS CAZ.pdf
11a.	CAZ Project PGESS Document # 1, CI, 01/31/2013	NCR 02-12 Image I.jpg
12a.	CAZ Project PGESS Document #2, CI, 01/31/2013	NCR 02-12 Image II.jpg
13a.	CAZ Project PGESS Document #3, CI, 01/31/2013	NCR 02-12 Image III.jpg
14a.	CAZ Project PGESS Document #4, CI, 01/31/2013	NCR 02-12 Image IV.jpg
15a.	Deforestation and CO2 Emissions in Coastal Tanzania from 1990 to 2007, Fabiano Godoy et al, March 2011	Godoy_et_al_2011 Deforestation and CO2 emissions in costal Tanzania from 90 to 07.pdf
16a.	Quantifying Changes in the Rates of Forest Clearing in Indonesia from 1990 to 2005 Using Remotely Sensed Data Sets, Matthew Hansen, July 9, 2009	Hansen 2009_Quantifying changes in the rates of forest clearing in Indonestia 1990-2005.pdf
17a.	CAZ Project Shapefile Points, CI, 2005	CAZ Project Shapefiles.zip (Zip folder containing 7 files of various formats)
18a.	Supplementary Information Land Cover and Land Change Analysis for the CAZ REDD+ Project, Madagascar, Timothy Wright, December 2012	Sup Inf_Land cover change analysis CAZ.pdf
19a.	Environmental Assessment Ambatovy Project – Summary, Dynatec Corporation of Canada, January 2006	Dynatec_2006_Environmental Assessment Ambatovy Project.pdf
20a.	The Madagascar Action Plan – Commitment 6 - High Growth Economy, Government of Madagascar, 2006	Government_Madagascar_2006_Madagascar Action Plan_Commitment Six, High Growth Economy.pdf
21a.	Madagascar Demographics and Health 2008-2009, National Institute of Statistics Ministry of Economy and Industry, April 2010	INSTAT_2010_Enquete Demographique et de Sante de Madagascar ENGLISH.pdf
22a.	Ruby and Sapphire Rush Near Didy, Madagascar (April – June 2012)Pardieu & Rakotosaona, October 15, 2012	Pardieu_Rakotosaona_2012 Ruby anjd sapphire rush near Didy Madagascar.pdf
23a.	Paradise Lost? Lessons from 25 years of USAID Environment Programs in Madagascar, USAID, July 2010	USAID_2010_Paradise Lost_Lessons from 25 years of Environmental Programs in Madagascar.pdf
24a.	Madagascar Towards an Agenda of Economic Recovery, World Bank, 2010	World Bank_2010_Madagascar vers un agenda de reliance.ENGLISH.pdf
25a.	CAZ Project Shapefiles Package, CI, 01/31/2013	CI shapefiles package(081208).zip (54 files of various formats in a zip folder)
26a.	CAZ Project Mining Road Map, CI 01/31/2013	Planned_road.jpg
27a.	CAZ Project Logging Analysis, CI, 01/31/2013	CAZ_logging analysis.xlsx
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