

MANOA REDD+ PROJECT VCS CCB VALIDATION REPORT



Rainforest Alliance

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Summary:

This final report documents the results of the validation process of the Manoa REDD+ project under the CCB (3rd Ed. 2013) and VCS (version 3) standards. It systematically evaluates the project's conformity to the indicators and the referenced documents' requirement, and highlights non-conformities (NCRs) and observations (OBSs). This evaluation was done on a sample manner thru document analysis, interviews with the interested and relevant actors, observations and measurements taken directly at the field. The audit team counted with nine people, among them were six auditors at the field and three at the office. The field work lasted five days, during which the audit team carried out forest inventories, walked through rivers and roads, analysed different landscape aspects including deforestation agent's action at Manoa farm and its surroundings, and interviewed the forest management enterprise workers and residents of properties surrounding the farm, among other relevant stakeholders.

This REDD+ project aims to reduce unplanned deforestation at Manoa farm, curtailing specific actors that promote illegal activities at the territory, such as the unauthorized wood/timber extraction, invasion and land grabbing. Developed based on the VM0015 v1.1 methodology, the project estimates a total emission reduction of 7.457.914 tCO₂ over the baseline scenario throughout the 30-year project lifetime. Beyond climate benefits generated by the deforestation reduction at the region, with consequent maintenance and increase in carbon stock, the project strives for the promotion of social benefits to its workers and other actors, residents of the surrounding area and the youth from the region, through training activities, capacitation and other educational activities. Relating to biodiversity, the project aims for maintaining forest cover, ecosystemic interconnectivity, habitat conservation and enhancement, and rare and endemic species protection. The project was designed to promote exceptional benefits to biodiversity, seeking the CCB Standard Gold Level of certification.

The audit team raised 29 NCRs and 06 OBSs. This document represents the validation report final version.

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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 14065:2013 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.

The Instituto de Manejo e Certificação Florestal e Agrícola - IMAFLORA works in partnership with the Rainforest Alliance under its accreditation, delivering certification, validation and verification services of forest enterprises and carbon projects in Brazil. For a full list of services offered by Imaflora visit: http://www.imaflora.org/certificacao-socioambiental_carbono.php.

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 Manoa REDD+ project with the requirements of the Climate, Community, and Biodiversity Standard Third Edition (2013) and VCS Version 3. The project was developed by “Biofilica Investimentos Ambientais” e “Triângulo”, hereafter referred to as the “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 validation audit is to assess the conformance of the Manoa REDD+ Project in Cujubim, RO, Brasil, against the Climate, Community, and Biodiversity Standard Third Edition (2013) and VCS version 3. 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 72.843 ha. The land is private. The project has a lifetime of 30 years, and estimates it will avoid the emission of 7.457.914 tCO₂e over

the course of the project lifetime.

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

- CCBA. 2013. Climate, Community & Biodiversity Project Design Standards Third Edition. CCBA, Arlington, VA. December, 2013. At: www.climate-standards.org.
- CCBA. 2013. Rules for the Use of the Climate, Community & Biodiversity Standards (December 2013). CCBA, Arlington, VA, USA. December, 2013. At: www.climate-standards.org.
- Verified Carbon Standard Program Guide 2017 v. 3.7;
- Verified Carbon Standard 2017 v. 3.7;
- Verified Carbon Standard Agriculture, Forestry and Other Land Use (AFOLU) Requirements 2017 v. 3.5;
- Verified Carbon Standard AFOLU Non-Permanence Risk Tool 2017 v.3.3;
- VM0015 – Methodology for Avoided Unplanned Deforestation, v1.1;

Materiality: All material GHG sinks, sources and/or reservoirs (SSRs) and GHG emissions equal to or greater than 5% of the total GHG assertion was considered in the validation decision. The project ex-ante estimates it will lead to 7,457,914 tCO₂e over the project lifetime, with an average annual reduction of 248,598 tCO₂e. Hence, it is not considered as a VCS large project because the credits will not exceed 300,000 t CO₂ yr⁻¹ and is subject to a 5% materiality threshold.

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 Manoa REDD+ project is a partnership between the Biofílica and the Grupo Triângulo, located at Manoa Farm, at the Cujubim municipality, within Rondônia state, it has an area 73,821 hectares. Throughout its almost 30 years of history, Manoa improved its forest management techniques, becoming an operational model allied to nature conservation to a global reference level.

The farm's forest area of about 73 thousand ha is one of the few forests remaining in private area at the region, which suffers from specific groups acting as illegal deforestation agents. Manoa is fundamental for the landscape's connectivity, being next to conservation units and adjacent to the Jamari and Jacundá National Forests, forming altogether a block of 480 thousand ha. For deforestation reduction, and consequently, the greenhouse gases emission reduction to happen, the Manoa project will foster:

- Monitoring and forest protection: Monitoring and field surveillance, along with improved management practices sustainable certificate by the FSC;
- Scientific research: Management impact monitoring, monitoring and studying of the identified threatened and/or endemic species, partnerships with teaching or research institutions for knowledge production and dissemination;
- Local economic development: Through its own training centre, the CEFLOM, the project oversees capacitation and trainings of improved management techniques to the population and its surrounding areas;
- Social Empowerment: Environmental education for residents of Cujubim and its surrounding communities, aiming for the environment conservation and consequent quality of life improvement for these people;

Benefits to climate: The project's goal relating to climate is to avoid 248.598 tons of CO₂ emission/year or 7.457.914 tons of CO₂ over the project's 30-year lifetime. This corresponds to 22.118 ha of avoided deforestation.

Benefits to the community: The project's main goals regarding the community include environmental education of families neighbouring the project area, including the youth and academic audience from Rondônia state, as well as aiming for improvements in local quality of life, and knowledge dissemination. In the work and capacitation matters the project expects to inform workers and others on their labour rights and regulations, and support a qualified labour force for acting over the forest management of timber and non-timber certificate.

Benefits to Biodiversity: The project aims to maintain forest cover, avoiding deforestation of about 12.000 ha over the project's 30-year lifetime. This will also serve to protect 177 identified species of plants and 360 identified animal species. Among them, 12 species of mammals and 9 species of birds are at some level of threat according to the IUCN. The landscape-level importance of the project area has also contributed to maintenance of forest cover for "ecological corridors" with Conservation Units in Rondônia state, minimizing the region's negative degradation impacts.

2 VALIDATION PROCESS

2.1 Method and Criteria

The audit was carried out by field evaluation and remote analysis, by evaluating the project's documentation, in office. Fieldwork was between September 26th-30th, 2016. During this period, five auditors covered the project area, taking observations, measurements and interviewed stakeholders relevant to the project, in a way to ensure sufficient sampling over all auditable aspects. In this way, six inventory parcels were remeasured, and the neighbouring properties of Manoa farm were visited. Farm workers, project collaborators, public agency representatives and settlement residents in Cujubim municipality were all interviewed by the audit team to evaluate the activities from deforestation agents and the adopted baseline scenario, among other relevant aspects. The desk audit of the project's documentation counted on the contribution of two additional auditors, who focused their observations on questions relating to financial aspects of the project, as well as social questions.

Audit team:

Auditor(s)	Qualifications
Bruno B. Souza – Lead auditor	Climate and Environmental Services Coordinator at Imaflora. Senior lead auditor. Forest Engineer graduated by Escola Superior de Agricultura "Luiz de Queiroz" (ESALQ). Biologist graduated by Universidade de São Paulo (USP). Bruno was empowered by the Instituto Floresta Tropical (IFT) and Imaflora through intensive evaluations in FSC Forest Certification and Reduced Impact Exploration. He was trained as lead auditor of management systems by ATSG (Lead Assessor ISO 14001:2004). He has six years of work experience in FSC, when he worked with forest management and chain of custody certification, which has included promotional statements and trademark approval processes. He was trained to be a carbon auditor by Rainforest Alliance and currently integrates Imaflora's climate team. He has technical expertise on VCS and CCB standards and is also experienced on the development of REDD+ policies social and environmental safeguards. He has three years of work experience with climate changes, payment for environmental services and environmental services certification schemes,

	when he had audited several projects in Brazil.
Bruno Matta – Field Auditor	Master in Conservation of Biodiversity and Sustainable Development by the School of Environmental Conservation and Sustainability (ESCAS / IPÊ) with research related to the development of a deforestation baseline using methodology VM0015. He has experience in valuing Environmental Services and in the use of tools and mechanisms to support management and environmental planning. He has strong expertise in Geoprocessing, Remote Sensing and Geographic Information Systems, experience in the development, validation and verification of AFOLU projects. He has extensive knowledge in the certification process, especially for forest carbon standards (VCS and CCBS). He has worked in the different Brazilian biomes: Amazon, Caatinga, Cerrado and Mata Atlântica, in public, private and third sector institutions, always in matters related to environmental services, with emphasis on forest carbon.
Guilherme Stucci – Field Auditor	Forest Engineer (MSc - ESALQ / USP). He has 8 years of experience in forest management in the Brazilian Amazon, where he worked in certified companies of the timber sector in the states of Rondônia and Pará. Auditor of Imaflores in FSC® certification processes for the management of natural forests since 2010. Lead Auditor in Environmental Management Systems based on ISO 14001: 2004
Isabel G. Drigo - Desk auditor	PhD in Environmental science by PROCAM/USP/AgroParisTech/França, with thesis about barriers on implantation of forest concessions in Latin America. Author of a dissertation about impacts of FSC forest certification over two communities in the state of Acre. She was trained to be an internal auditor of FM-06, April 19th, 2012 ISO 9001:2000. She has seven years of experience in audit team administration at organic certification processes. Since 2008 she executes audits over the social principle and criteria in community forest management and in forest

	management enterprises. She was also trained as lead auditor of management systems by ATSG (Lead Assessor ISO 14001:2004) and to be a carbon auditor by Imaflora.
Mauro Isler – Field Auditor	Engenheiro Agrônomo com experiência em auditorias de BPF, GLOBALGAP, orgânicos e sistemas de produção e gestão da qualidade na produção agrícola e florestal, atuando como auditor desde 1997. Auditor líder ISO 9000:2000 conferida pela ATSG/ INMETRO em 2004. Especialista em Turismo e Meio Ambiente. Possui formação em auditoria de certificação FSC de manejo florestal conferida pelo IMAFLORA em 2013.
Nathalia Ribeiro – Field auditor	Forestry Engineer and graduated in Agrarian Sciences from the University of São Paulo (ESALQ / USP). Trained as a leading auditor in management systems by ATSG (Lead Assessor ISO 14.001); Trained at the Tropical Forest Institute for the Management Course of Extraction in Forest Management and in Imaflora by the Course of FSC Management Standards; Serves as an analyst of geographic information systems (GIS).
Renan Kamimura – Field auditor	Forest Engineer graduated by Lavras Federal University (UFLA) in 2009. Renan has a strong working experience with environmental conservation and rural socioeconomic development projects. He is a specialist in GIS and forest biomass inventory, having worked on several REDD+ projects and PES initiatives as a consultant, developer and manager in Brazil. Renan has a comprehensive field experience in Amazon, Cerrado, Caatinga and Mata Atlântica biomes.
Roberto Sartori - Desk auditor	Economist and Master in Forestry Resources, Doctorate in Energy and Environment. Lead Auditor with recognition by RABQSA. He has been working in Forestry Economics for 12 years, integrating Imaflora chain of custody and forest management audit teams since March 2013. Experience in projects in the Amazon, forestry and forest-based industry in

	private, public and third sector initiatives.
Matheus Couto - Desk auditor	Forest Engineer (ESALQ / USP) with master's degree in forestry science (Yale F & ES), project coordinator at Imaflora for 5 years. Works in projects related to low carbon sustainable agricultural production, rural development, studies of value chains.
Klaus Geiger - Senior Internal Reviewer (RRA Reviewer)	Klaus Geiger is a forester with professional experience in Latin America. As Carbon Services Staff Auditor with Rainforest Alliance Klaus conducts and leads carbon field audits for projects under six different carbon standards, including AFOLU, REDD+, and the VCS Double Approval Methodology. Prior to working with Rainforest Alliance, Klaus researched Sri Lankan non-timber forest products by documenting species composition and mapping spatial distribution in traditional agroforestry gardens, co-managed the 8,000 acre FSC-Certified Yale School Forest, promoted sustainable agriculture techniques for over three years with the Peace Corps in Panama, and, among other experiences, cruised timber with the U.S. Forest Service in Tahoe National Park. Klaus received his Masters of Forestry from the Yale University School of Forestry and Environmental Studies, and holds a Bachelors of Forestry from University of Missouri-Columbia. Klaus is fluent in Spanish and conversational in Sinhala.

2.2 Document Review

The following documentation was reviewed during the audit:

Ref.	Title, Autor, Version, Date	Electronic File Name
1	Projeto REDD+ Manoa Project Description, Biofílica Investimentos Ambientais S.A ,v. 1.0, 30 de Agosto de 2016.	PD_Manoa_v2.9_Pt.pdf
2	Arquivo digital com estradas principais e vicinais existentes na Região de Referência	GEO Manoa\Linha de Base Manoa\4.Factor_Maps\Estradas_RR.shp
3	Arquivo digital com estradas principais existentes na Área do Projeto	GEO Manoa\Dados_inventário_Florestal\Estradas_Principais_WGS84.shp
4	Arquivo digital com estradas secundárias de Manejo Florestal Sustentável existentes na Área do	GEO Manoa\Dados_inventário_Florestal\Estradas_S

	Projeto	ecundarias WGS84.shp
5	Arquivo digital em poligono e delimitação espacial da Área do Projeto	GEO Manoa\Linha de Base Manoa\2. Limites\Area_Projeto\Area_Projeto.shp
6	Arquivo digital em poligono e delimitação espacial das Unidades de Produção Anual (UPA) em atividades de Manejo Florestal Sustentável	GEO Manoa\Dados_inventário_Florestal\Divisão_de_UPAS_WGS84.shp
7	Imagem de Satélite Landsat - Ano 2000 – Cena I	GEO Manoa\Linha de Base Manoa\1.Aplicabilidade_VM0015\2000\LT52320 662000188XXX02.tif
8	Imagem de Satélite Landsat - Ano 2000 - Cena II	GEO Manoa\Linha de Base Manoa\1.Aplicabilidade_VM0015\2000\LT52310 662000165XXX04.tif
9	Título de reconhecimento de domínio – INCRA – Gleba Jacundá C	Título Definitivo - Incra - Dominio 16.pdf
10	Título de reconhecimento de domínio – INCRA – Gleba Jacundá B	Título Definitivo - Incra - Dominio 15.pdf
11	Título de reconhecimento de domínio – INCRA – Gleba Jacundá A	Título Definitivo - Incra - Dominio 14.pdf
12	Certidão de inteiro teor de fusão de imóveis contíguos pertencentes ao mesmo proprietário	CERTIDÃO INTEIRO TEOR DEZ 2013.pdf
13	Certidão Vintenária - Ofício de Registro de Imóveis	certidao vintenária 12-12-2013.pdf
14	Cadastro Ambiental Rural do Imóvel	Manoa_CAR FAZENDA MANOA_retificado.pdf
15	Imagem de Satélite Landsat - Ano 2000 – Cena I	GEO Manoa\Linha de Base Manoa\1.Aplicabilidade_VM0015\2000\LT52320 662000188XXX02.tif
16	Imagem de Satélite Landsat - Ano 2000 - Cena II	GEO Manoa\Linha de Base Manoa\1.Aplicabilidade_VM0015\2000\LT52310 662000165XXX04.tif
17	Arquivo digital com pontos georreferenciados das infraestrutura na Área do Projeto	GEO Manoa\Transporte\Estradas_infra\Infraestrutura.shp
18	Arquivo digital em poligono e delimitação espacial do Cinturão de Vazamento	GEO Manoa\Linha de Base Manoa\2. Limites\Cinturao_vazamento\LK_2.shp
19	Estudo técnico para definição de limites do Projeto e determinação de linha de base - Planilha de cálculo	VM0015_planilha de calculo_Manoa_v1.xlsx
20	Informações espaciais georreferenciadas disponibilizadas pelo proponente	Geo MANOA.zip
21	Arquivo digital em poligono e delimitação da área do projeto e classes de uso do solo	GEO Manoa\Linha de Base Manoa\1.preparacao_dados\Vetorial\PDigital2014_matriz.shp
22	Arquivo digital em poligono e delimitação da área do projeto e classes de uso do solo para o período de referencia	GEO Manoa\Linha de Base Manoa\1.preparacao_dados\lulc2000.tif GEO Manoa\Linha de Base

		Manoa\1.preparacao_dados\lulc2007.tif F:\sig\manoa_redd\GEO Manoa\Linha de Base Manoa\1.preparacao_dados\lulc2010.tif
23	Relatório final: Estimativa do Estoque de Carbono Florestal do Projeto REDD+ na Fazenda Manoa. Lovatti <i>et al.</i>	RELATORIO FINAL ESTOQUE DE CARBONO_VERSÃO 1.3 – alteração DAP.pdf
24	Metodologia para o Cálculo da Taxa Anual de Desmatamento na Amazônia Legal. Instituto Nacional de Pesquisas Espaciais - Coordenadoria Geral de Observação da Terra: Programa Amazônia – Projeto PRODES. São Jose dos Campos, 30 de outubro de 2013	metodologia_TaxaProdes.pdf
25	Projeto Manoa – Plan FC Projeto	Modelo_Economico_Manoa-3.xlsx
26	Resultado do projeto Triângulo 2015	Resultado_PR_2015-4
27	Estudo técnico de Inventário Florestal de Biomassa	RELATORIO FINAL ESTOQUE DE CARBONO_VERSÃO 1.3 - alteração DAP.pdf
28	Estudo técnico de Inventário Florestal de Biomassa - Planilha de cálculo	RELATORIO FINAL - FICHA DE CAMPO - DAP REDUZIDO PARA 124_final.xlsx
29	Análises estatísticas comparativas de inventário	Manoa.R
30	Diagnóstico Socioeconômico da região do projeto de REDD+ Fazenda Manoa	RELATARIO SOCIOECONOMICO FINAL REDD+ MANOA.pdf
31	Relatório final: Estimativa do Estoque de Carbono Florestal do Projeto REDD+ na Fazenda Manoa. Lovatti <i>et al.</i>	RELATORIO FINAL ESTOQUE DE CARBONO_VERSÃO 1.3 – alteração DAP.pdf
32	Puyravaud, J.-P., 2003. Standardizing the calculation of the annual rate of deforestation. Forest Ecology and Management, 177: 593-596	Puyravaud, J.-P., 2003. Standardizing the calculation of the annual rate of deforestation. Forest Ecology and Management, 177: 593-596.pdf
33	“NON-PERMANENCE RISK REPORT MANOA REDD+ PROJECT	Risk analyse and buffer determination_v1.docx
34	Diagnóstico Socioeconômico da região do projeto de REDD+ Fazenda Manoa	RELATARIO SOCIOECONOMICO FINAL REDD+ MANOA.pdf
35	Caracterização do meio físico	Caracterização do meio físico
36	Relatório Meio Físico_Final.pdf	Relatório Meio Físico_Final.pdf
37	Arquivo digital em polígono e delimitação espacial das Unidades de Produção Anual (UPA) em atividades de Manejo Florestal Sustentável	Arquivo digital em polígono e delimitação espacial das Unidades de Produção Anual (UPA) em atividades de Manejo Florestal Sustentável
38	Carta Circular Nº 19/2016/ ECOPORÉ” datada de 20 de setembro de 2016	Carta_devolucao_26091600.pdf
39	“NON-PERMANENCE RISK REPORT MANOA REDD+ PROJECT	Risk analyse and buffer determination_v1.docx
40	Contrato de Prestação de Serviços	Manoa_DSEA_Contrato_Ecopore_final.docx
41	Contrato de Prestação de Serviços	Manoa_casa da floresta_assinado.pdf

42	Contrato de Prestação de Serviços	Manoa_LinhaBase_Contrato_Hdom_Final.docx CV_casa da floresta.pdf
43	Curriculo do Sistema de Currículos Lattes	CV_Ecopore.pdf
44	Curriculo Vitae	HDOM-CV-02_Francisco-Higuchi.pdf
45	Curriculo os profissionais da equipe	Currículo MARCIO LOVATTI.pdf
46	Instrumento Particular de Prestação de Serviços e outras Avenças	Contrato_Manoa_assinado.pdf
47	Contrato de Prestação de Serviços	Manoa_Estoque_Contrato_Florestal_final.docx
48	DIAGNÓSTICO SOCIOECONOMICO REDD+ FAZENDA MANOA RURAL	Questionario rural DIAG SOCIOECON REDD FAZENDA MANOA_TH perguntas abertas.doc
49	DIAGNÓSTICO SOCIOECONOMICO REDD+ FAZENDA MANOA RURAL	Questionario rural DIAG SOCIOECON REDD FAZENDA MANOA_TH perguntas
50	DIAGNÓSTICO SOCIOECONOMICO REDD+ FAZENDA MANOA RURAL	Questionario urbano DIAG SOCIOECON REDD FAZENDA MANOA_TH perguntas
51	DIAGNÓSTICO SOCIOECONOMICO REDD+ FAZENDA MANOA RURAL	Questionário Trabalhadores_TH.docx -
52	DIAGNÓSTICO SOCIOECONOMICO REDD+ FAZENDA MANOA RURAL	Questionario urbano DIAG SOCIOECON REDD FAZENDA MANOA_TH perguntas fechadas.docx
53	Plano de Manejo Florestal Sustentável da Fazenda Manoa	Material impresso
54	GOFC-GOLD, 2015, A sourcebook of methods and procedures for monitoring and reporting anthropogenic greenhouse gas emissions and removals associated with deforestation, gains and losses of carbon stocks in forests remaining forests, and forestation. GOFC-GOLD Report version COP21-1, (GOFC-GOLD Land Cover Project Office, Wageningen University, The Netherlands).	GOFC-GOLD, 2015, A sourcebook of methods and procedures for monitoring and reporting anthropogenic greenhouse gas emissions and removals associated with deforestation, gains and losses of carbon stocks in forests remaining forests, and forestation. GOFC-GOLD Report version COP21-1, (GOFC-GOLD Land Cover Project Office, Wageningen University, The Netherlands).
55	GOFC-GOLD_Sourcebook.pdf	GOFC-GOLD_Sourcebook.pdf
56	High spatial resolution land use and land cover mapping of the Brazilian Legal Amazon in 2008 using Landsat-5/TM and MODIS data. Almeida <i>et al.</i> Acta Amazonica, 2016.	High spatial resolution land use and land cover mapping of the Brazilian Legal Amazon in 2008 using Landsat-5/TM and MODIS data. Almeida <i>et al.</i> Acta Amazonica, 2016.
57	1809-4392-aa-46-03-00291.pdf	1809-4392-aa-46-03-00291.pdf
58	Determination of baseline for Manoa REDD+ Project. Biofilica Investimentos Ambientais, v01, 2016.	Determination of baseline for Manoa REDD+ Project. Biofilica Investimentos Ambientais, v01, 2016.
59	Projeto Manoa – Plan FC Projeto	Modelo_Economico_Manoa-3.xlsx
60	Projeto Manoa – Plan FC Premissas Manejo	Modelo_Economico_Manoa-3.xlsx
61	Projeto Manoa – Plan FC Avaliação Carbono	Modelo_Economico_Manoa-3.xlsx
62	Projeto Manoa – Plan Avaliação Manejo	Modelo_Economico_Manoa-3.xlsx
63	Resultado do projeto Triângulo 2015	Resultado_PR_2015-4
64	Contrato_Manoa_assinado	Contrato_Manoa_assinado.pdf
65	Relatório Meio Físico_Final	Relatório Meio Físico_Final.pdf
66	Relatorio_Manoa_Biodiversidade_Final	Relatorio_Manoa_Biodiversidade_Final.pdf

67	Planilha com estoques de carbono revisados_Biofilica_13Jul17	Comparativo_EstoqueUPAs_AnoExplor.xlsx
68	Mapa de variação da biomassa na área do projeto_Biofilica_13Jul17	Estoque_conglomerados.jpg
69	Projeto REDD+ Manoa Project Description, Biofilica Investimentos Ambientais S.A ,v. 2.0, 22 de Agosto de 2017.	PD_Manoa_V2_ING_FINAL.PDF PD_Manoa_V2_Pt_FINAL.PDF
70	Acervo de arquivos SIG referentes a mapas de cobertura Florestal e desmatamento no período de 2000 a 2012	NCR#03/17.zip
71	Análise de acurácia sobre classificação de imagens_Biofilica_17Jul17	kappaProdes2012.xls Acurácia.rar
72	Conjunto de imagens Rapideye	Imagens Rapideye.zip
73	Análise de deslocamento de pixels (RMSE)_Biofilica_20Jul17	Resposta NCR2.docx PLANILHA_RMSE_IMAGENS_232_66.xls PLANILHA_RMSE_IMAGENS_231_66.xls PDigital2001_23266_gtif.zip PDigital2001_23166_gtif.zip
74	Artigo científico_Almeida et al_2016	Almeida_etal_2016_TerraClass.pdf
75	A Atividade Madeireira na Amazônia Brasileira Imazon 2009	miolo_resexec_polo_03_95_1.pdf
76	Relatório tecnico Ecoporé 2015	RELATÓRIO SOCIOECONOMICO FINAL REDD+ MANOA.pdf
77	Dossiê Urupá_Biofilica_18Ago2017	NCR7.zip
78	Modelagem especial_Biofilica_11Ago17	Modelagem especial desmatamento.zip
79	Análise de figura de méritos_Biofilica_17Jul17	Validacao_fom.rar
80	Artigo Científico_West et al_2013	West et al. 2013. Forest biomass recovery after conventional and reduced-impact logging in Amazonian Brazil.pdf
81	Planilha de cálculo revisada_Biofilica_2017	VM0015_planilha de calculo_Manoa_2.1.xlsx
82	Imagens Rapid eye	2034817_2011-08-14T152136_RE3_3A-NAC_11056869_149190.rar 2034915_2011-05-31T152601_RE4_3A-NAC_11056867_149190.rar 2034916_2011-05-31T152601_RE4_3A-NAC_11056831_149190.rar 2035016_2011-05-31T152557_RE4_3A-NAC_11057036_149191.rar 2035215_2011-08-23T153224_RE2_3A-NAC_11083302_149371.rar
83	Shapes Urupa_Biofilica_07Ago17	Pratica comum.rar
84	Planilha financeira do projeto_Biofilica_04Ago17	Modelo_economico_Manoa_3.0.xlsx
85	Documentos complementares Adicionalidade_Biofilica_07Ago17	Existe Guerrilha em Rondonia.pdf G1_Brasil – Noticias – Ibama e PF fecham 15 serrarias em Rondonia.pdf Relato_Marcio Lovatti.msg
86	Artigo científico_Wandelli_fearnside_2015	Wandelli_fearnside_2015.pdf
87	Relatório de risco de não permanência revisado_v2.1_Biofilica_09Ago17	Manoa_Risk analysis and buffer determination_v2.1.docx VCS Risk Report Calculation Tool, v3.0_Manoa.xls

88	Acervo digital GEO_Biofilica revisado	Acervo digital GIS_Manoa.rar
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2.3 Interviews

Interviews covered government and non-government representatives, for example, the representative of the municipal government department and members of the public safety force. Representatives of farmers settled in and out the surrounding areas of the project, were also selected for the sample. The selection came out of a list provided by the proponent. Local business owners that render services for the proponent were interviewed, as well as others with whom the proponent keeps a commercial relationship. The sample also includes forest management workers. A total of 26 individuals were interviewed.

Interviewed	Local	Date	Number of participants
Ezequiel da Silva Araújo, Proprietário Krismilla ME	Cujubim	26/09/2016	01
Andrei Vinicius Vieira de Souza, Técnico Florestal, Triangulo	Cujubim	26/09/2016	01
Marinalva Massie Pereira Ramos, Cozinheira Krismilla	Cujubim	28/09/2016	01
Lenilson Ribeiro, Caseiro Ceflon Manoa	Cujubim	28/09/2016	01
Gean Carlos Chicovski, motosserrista Krismilla	Cujubim	28/09/2016	01
Rosemiro de Freitas, planejista Krismilla	Cujubim	28/09/2016	01
João batista de Castro motosserrista Krismilla	Cujubim	28/09/2016	01
José Roberto Souza Silva, medidor Manoa	Cujubim	28/09/2016	01
Rogério Santos Vieira, motosserrista Krismilla	Cujubim	28/09/2016	01
Wuillian Tacio Fatel da Silva, Aux. Adm. Manoa	Cujubim	28/09/2016	01
Rodrigo Henrique Lima Barros Alimentador Krismilla	Cujubim	28/09/2016	01
Helcio Edson Pereira Administrativo Triangulo	Cujubim	26/09/2016	01
Adair Galdino, associado ASPROJ	Cujubim	27/09/2016	01
Raulino Galdino, Presidente ASPROJ	Cujubim	27/09/2016	01
Carlos Galdino, Associado ASPROJ	Cujubim	27/09/2016	01
Antônia Bezerra Filgueiras, Diretora Escola Municipal 23 Março	Cujubim	27/09/2016	01
Leocádia Santana, moradora assentamento	Cujubim	27/09/2016	01
Aldo Silva, Presidente ASPLACA	Cujubim	27/09/2016	01
Luiz Felipe Uchoa, ONG Rio Terra	Cujubim	27/09/2016	01
Wellington Lima, Cerealista Com Café	Cujubim	27/09/2016	01
Vilson Garcia Rodrigues, Agricultor e empresário	Cujubim	27/09/2016	01
Elisangela Recheski, secretária Municipal Rafaela de Assis Lize, diretora municipal de meio ambiente	Secretaria Municipal de Meio Ambiente Cujubim	28/09/2016	02

Luiz Claudio Wagner, Secretaria municipal de agricultura Cleide Rodrigues, Secretária municipal de agricultura	Secretária municipal de agricultura de Cujubim	28/09/2016	02
Natanael Alves da Silva, Vice presidente STTR Rose Bueno, tesoureira STTR	Sindicato dos Trabalhadores rurais de Cujubim	28/09/2016	02
Sgto Carvalho, Comandante do Grupamento da Polícia Militar Cujubim e da Patrulha Rural Soldado Valdiclei	Grupamento da Polícia Militar Cujubim	28/09/2016	02
Nilton Machado de Miranda, proprietário do Sítio 4 Pupunhas	Cujubim	28/09/2016	01
Gerson (Florestal - Planejamento, Paisagismo e Consultoria LTDA)	Fazenda Manoa. Parcelas permanentes - Inventário Florestal de Biomassa	26 a 30 de Setembro de 2016	03
Márcio José Lovatti (Florestal - Planejamento, Paisagismo e Consultoria LTDA)	Fazenda Manoa. Parcelas permanentes - Inventário Florestal de Biomassa	29 a 30 de Setembro de 2016	03
Wilson (Florestal - Planejamento, Paisagismo e Consultoria LTDA)	Fazenda Manoa. Parcelas permanentes - Inventário Florestal de Biomassa	26 a 30 de Setembro de 2016	03
Caio Soares Ribeiro Gallego (Biofílica Investimentos Ambientais)	Fazenda Manoa. Parcelas permanentes - Inventário Florestal de Biomassa	26 a 30 de Setembro de 2016	05
Thaís Hiramoto, proponente do projeto, coordenadora de Projetos REDD+, Biofílica	São Paulo, SP, Brasil	26/09/2016	01
Caio Gallego, proponente do projeto, analista de projetos, Biofílica	São Paulo, SP, Brasil	26/09/2016	01
Thaís Hiramoto (Biofílica Investimentos Ambientais)	Fazenda Manoa	26 a 30 de Setembro de 2016	05
Hermínio (Triângulo Piso de Madeira)	Fazenda Manoa	26 a 30 de Setembro de 2016	05

2.4 Site Inspections

The table below summarizes the sites visited during the validation audit:

Site	Date
Cujubim, entrevista, empresa Krismilla ME	26/09/16
Cujubim, entrevista, empresa Triângulo	26/09/16
Cujubim, entrevista, Associação de Produtores Assentados no entorno, APROJ	27/09/16
Cujubim, entrevista, Escola Municipal	27/09/16
Cujubim, entrevista Associação de Produtores Assentados no entorno, ASPLACA	27/09/16
Cujubim, entrevista, representante ONG Rio Terra	27/09/16
Cujubim, entrevista, empresa cerealista Com Café	27/09/16
Cujubim, entrevista, empresário local individual	27/09/16
Cujubim, entrevista, Secretaria Municipal de Meio Ambiente	28/09/16
Cujubim, entrevista, Secretaria Municipal de Agroicultura	28/09/16
Cujubim, entrevista, Sindicato dos Trabalhadores Rurais	28/09/16
Cujubim, entrevista, Grupamento da Policia Militar	28/09/16
Cujubim, entrevista, produtor rural morador do entorno	28/09/16
Cujubim, entrevista, Departamento Administrativo Manoa	28/09/16
Cujubim, entrevista, Equipe Operacional Manoa	28/09/16
Cujubim, entrevista, CEFLOM na Manoa	28/09/16
Sede Triângulo Piso de Madeiras. Cujubim - RO. Reunião de abertura	26/09/16
Fazenda Manoa. Conglomerado 8 (Subparcela 3). Floresta Ombrófila Aberta Submontana com Cipós. Inventário Florestal de Biomassa	27/09/16
Fazenda Manoa. Conglomerado 9 (Subparcela 1). Floresta Ombrófila Aberta Submontana com Cipós. Inventário Florestal de Biomassa	27/09/16
Fazenda Manoa. Conglomerado 26 (Subparcela 2). Floresta Ombrófila Aberta Submontana com Cipós. Inventário Florestal de Biomassa	28/09/16
Fazenda Manoa. Conglomerado 27 (Subparcela 1). Floresta Ombrófila Aberta Terras Baixas com Palmeiras. Inventário Florestal de Biomassa	28/09/16
Fazenda Manoa. Conglomerado 35 (Subparcela 3). Floresta Ombrófila Aberta Terras Baixas com Palmeiras. Inventário Florestal de Biomassa	29/09/16
Fazenda Manoa. Conglomerado 23 (Subparcela 1). Floresta Ombrófila Aberta Submontana com Cipós. Inventário Florestal de Biomassa	29/09/16
Sede Triângulo Piso de Madeiras. Cujubim - RO. Reunião de encerramento	30/09/16

2.5 Public Comments

The project's CCB public comment period was open from September 2nd to October 2nd 2016, to receive public feedback on the project. No comments were received.

2.6 Resolution of Findings

29 NCRs, 06 OBSs were issued by the audit team and described in this report. A full description of the audit notes can be found in Annex 1. This report represents the final conclusions and provides a full description of the corrective actions taken by project proponents to resolve audit findings, ie non-conformance reports. In summary, the proponent has revised its baseline, deforestation modelling, and GHG emission reduction estimates to consider several specific components, ranging from project boundary definition, image classification, deforestation rates, identification of deforestation agents and drivers, carbon stock estimates, and additionality. The proponent also revised his social approach in order to distinguish "traditional communities" from "other actors", following the concepts of the CCB standard. The corrective actions taken by the proponent and the analysis of evidence carried out by the audit team can be fully evaluated in Appendix 1.

2.7 Forward Action Requests

No FARs were raised during the evaluation of the project in question.

3 GENERAL

3.1 Summary Description of the Project

The REDD+ project was designed to avoid non-planned deforestation on a private area of 72.843 thousand ha. Manoa Farm is located at the Cujubim municipality, in Rondônia state. The PD section 1.1 (ref. 1) describes the project's objectives relating to climate, communities and biodiversity. Among the project activities remote monitoring, field surveillance and forest management with FSC certification have all been included. The project proponents assert that a certified management operation will increase the business management's strength and administration over territory, consequently, also increasing the area's protection. Social impacts from the project will start with training and capacitation activities, as well as environmental education. Directed to families neighboring the project's area including the youth and academic audience from Rondônia state, such activities will be held at a training Center called CEFLOM, built by the proponent at the project area for this purpose. The training center is ready to accommodate groups, and it has an advanced forest base. The project's impacts to biodiversity are related to maintaining forest cover, the connectivity between forest fragments, and habitats maintenance particularly for rare and endemic (or at some threat level) species protection, within the project area.

3.2 Project Location

The project design presents maps, geographical coordinates and geo-referenced polygons, for all its spatial limits, including the project's area and zone, its belt, and leakage management areas (ref. 02). The project also carries a detailed description of its physical aspects, such as vegetation, climate, hydrology, geology, geomorphology and soils (ref. 01 – PD 1.2, 1.3).

By the proponent, under the PD document (ref. 1, section 6.1.1, page 127, figure 30), are presented the project area's boundaries, the locations of four agrarian reform settlement projects (PA Agostinho Becker, PA Cujubim, PA Marechal Dura, PA Renascer) and other land categories. These social groupings are located around the project area, as the map shows:

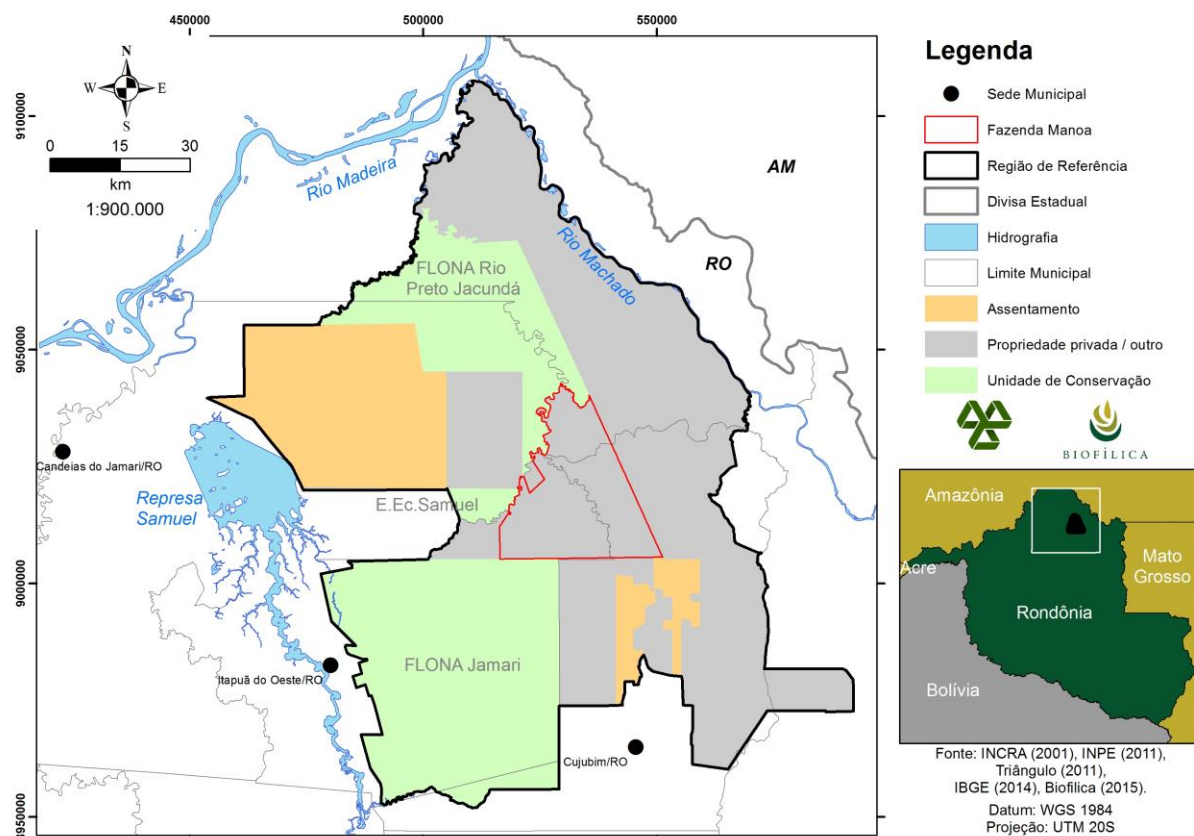


Fig.1: Project location, land categories over the reference region

3.3 Conditions Prior to Project Initiation

The proponent brings a description of different types of forests found at the project's reference region (ref. 1, section 1.3), besides other flora and fauna parameters found at the same area. The region is marked by the determinant occurrence of Open Ombrophylous Forest (FOA). In the low land forest class, there are palm trees, sub-montane forests with palm trees and sub-montane with vines. Previous phytosociological surveys reveal the occurrence of 117 arboreal species. Fauna surveys reveal the occurrence of 43 mammal species, 273 bird species, 44 herpetofauna, and 234 fish species.

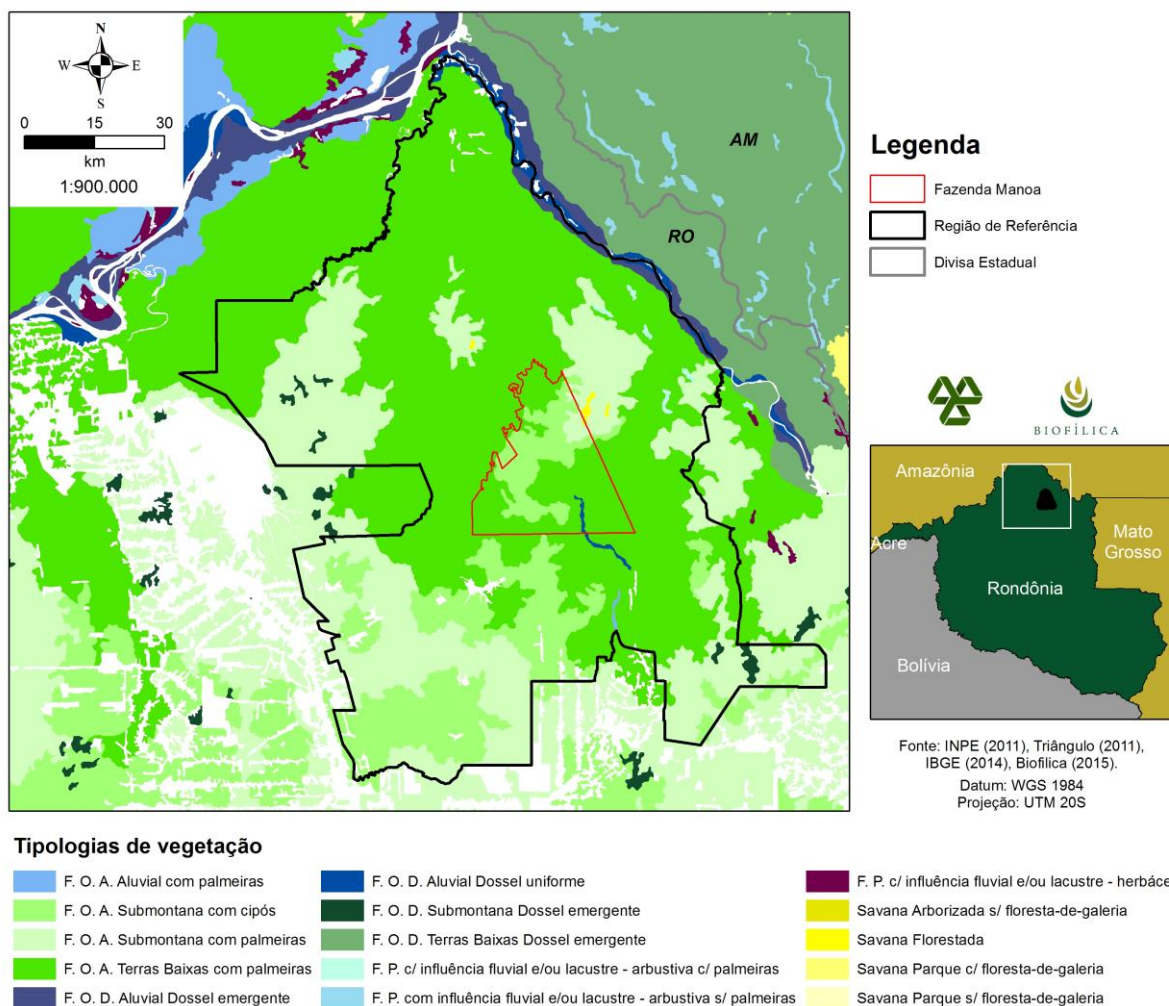


Fig.2: Project location and vegetation types over the reference region

The project brings an analysis of the historical dynamics of territory use and occupation, and a detailed description of the socioeconomic aspects for the municipalities where the project is located (ref. 01 – PD section 1.2, 1.3). At a second moment, the analysis effort is focused on the present rural settlements at the municipality of Cujubim, the ones believed to have a greater influence over the project area. Thus, aspects linked to income and women participation over the family earnings, agricultural production and revenue resources, use of fire and plot management practices, education level and illiteracy rates, aspects linked to health and basic sanitation, public safety and sexual violence, are analyzed.

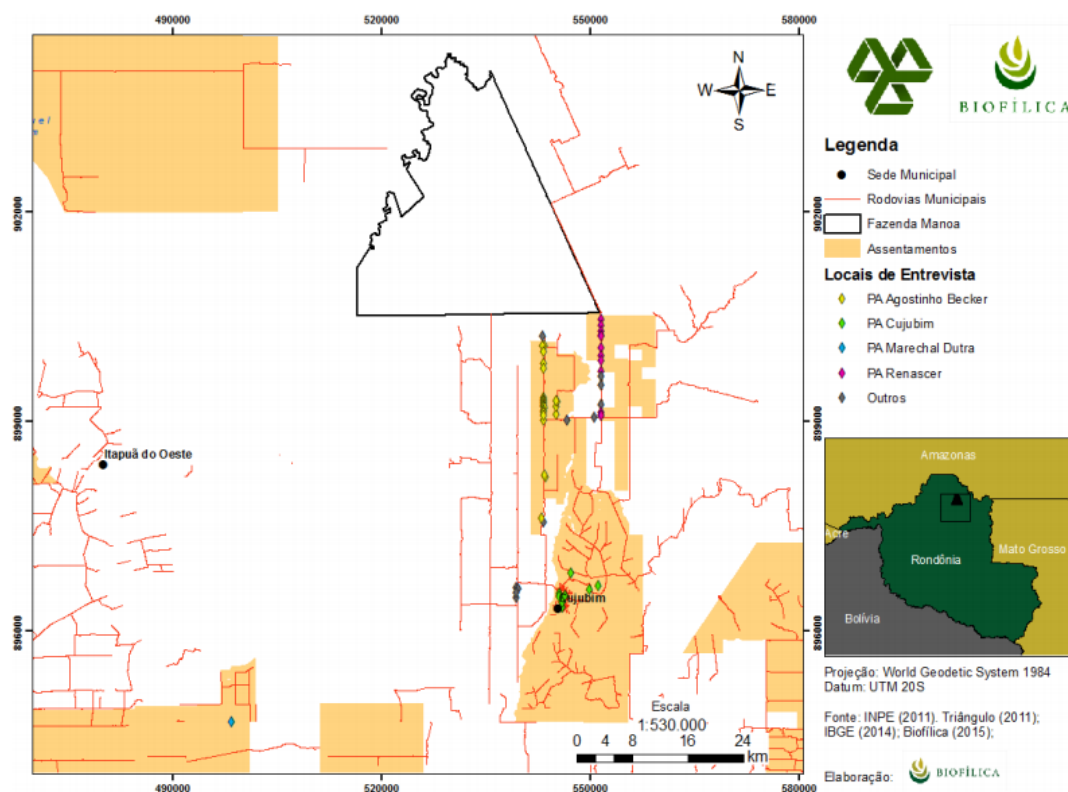


Fig.3: Project location, settlements and social interviews location over the reference region

3.4 Project Proponent

Biofilica Investimentos Ambientais SA and Triângulo Pisos y Panels Ltda. present themselves as project proponents. Biofilica identifies itself as the main project proponent, being responsible for the project development and implementation. The data for contacts, roles and responsibilities of both actors are specifically described in the project documentation (ref. 01, PD section 1.4). Biofilica is responsible for the socioeconomic and environmental diagnoses and studies on baselines and carbon stock; the development and financing of the PDD (Project Design Document); activities aimed at monitoring deforestation; coordination of complementary activities of the project in other spheres, such as social; the validation / verification and commercialization of credits, and finally, the co-management of the project throughout its duration and implementation of conservation activities. It is up to Triângulo to coordinate and control the activities of the project. Triângulo is the executor of the forest management operations in the farm that occur in synergy with the REDD + project activities. As reported in the PDD (ref. 08, Table 14), the maintenance of the current pattern of forest management is linked to the results and resources derived from the carbon project. The audit team confirms that the responsibilities are clearly stated in the

project design, in accordance with the requirements of the CCB and VCS standards.

3.5 Other Entities Involved in the Project

The proponent describes the project partner organizations role (ref. 01 – PD section 1.5). The description evidences the main technical abilities needed for effective project implementation, including aspects relating to the community and biodiversity, as well as mediation and carbon monitoring. Structured over the Biolífica and Triângulo activities, the project uses the technical hiring of Casa da Floresta, Ecoporé and Instituto Ipê. The companies are hired for implementation of the project specific monitoring tasks, as well as the elaboration of documents for the verification and audit processes.

3.6 Project Start Date

The project start date is 01 January 2013 (item 1.6, ref 69), when REDD+ project activities to prevent deforestation and protection of the carbon stocks of Fazenda Manoa began to be carried out. These activities include training and environmental education activities, aimed at the surrounding people among other stakeholders, activities focused on the deforestation monitoring, patrimonial surveillance of the farm and also integrated activities to the execution of the forest management itself.

3.7 Project Crediting Period

The project credit period is 30 years and corresponds to the project duration. The project activities will be developed and considered at the same period, from January 1st, 2013 to December 31, 2042 (ref. 1, section 1.7).

3.8 Project Scale and Estimated GHG Emission Reductions or Removals

The project has an area of 73.821 ha and estimates to avoid an annual average emission of 248.598 tCO₂e. The proponent correctly identifies the project's scale on its design (ref. 1, section 5.1), as a regular project. The project intends to avoid the deforestation of 22.118 ha within the project area, to avoid the emission of an estimated 7.457.914 tCO₂e into the atmosphere throughout its duration.

3.9 Leakage Management

The project's design shows the leakage management area limits (PDD refs. 1, fig. 12 & ref. 5, fig. 1), defining the criteria and aspects for its delimitation. The management areas were positioned south of Manoa farm and at CEFLOM's area; in sites without forest cover. The proponent points to education and environmental awareness measures, focused on families that live at the areas, to minimize potential leakage.

The audit team confirms that the premises adopted for the delineation of the leakage management areas are in accordance with the adopted methodology and that the project strategy is appropriate.

4 DESIGN

4.1 Sectoral Scope and Project Type

It is a REDD+ project (AUD – Avoiding Unplanned Deforestation), operating under the ALOFU sectorial scope, developed based on the VCS VM0015 v1.1 methodology and eligible for validation under the CCB and VCS standards. The project area can be qualified as forest since 2002 (ref. 02). The activities at the baseline and project scenarios comprehend forest management, which is allowed by used methodology.

4.2 Description of the Project Activity

The project activity is described on section 2.2 of the project description (ref. 1). The project contemplates territory monitoring activities via satellite, and physically on site. In addition to activities protecting carbon stocks, the operational planning of forest management is performed under FSC certification requirements. The project's social activities are linked to training, farm worker's capacitation, and environmental education activities targeting selected groups, such as the state's youth and academic public as well as resident families around the Project area. The impacts of the project over biodiversity relate to maintaining forest cover, connecting forest fragments and protecting habitat for rare, endemic and at some level, threatened species.

The proponent mentions on the PD document (ref. 1, section 2.2, page 29,30 & 32, table 5) that the benefits to the communities are linked to environmental awareness of the families that reside at the surrounding areas of Manoa farm, in Cujubim. The PDD explains further that the focus group in the region is the youth, including outreach through quarterly activities, engaging a maximum of 30 people each course/capacitation.

The proponent claims that another benefit will be training skilled staff for the timber and non-timber forest management certificate chain, aiming at a regional coverage for the targeted audience.

4.3 Management of Risks to Project Benefits

The proponent considers risk situations and mitigation measures regarding the project's objectives, in observation to the CCB standard requisites. Using a risk-based perspective, the project's design addresses the occurrence of potential problems concerning carbon credit commercialization and the lack of community participation and other stakeholders, such as research bodies and government, in matters that are relevant to the project.

The mitigation measures elaborated are focused on dissemination about the project activities through promotional actions in order to maintain a network of potential carbon credits buyers and, relevant stakeholders' integration and the prospection of alternative financing sources.

4.4 Measures to Maintain High Conservation Values

The project's strategy for protecting identified threatened species is focused on periodic monitoring of fauna, diversity of "taxa" found and under the status of species on IUCN and ICMBio lists. The proponent points to the existence of species under some type of threat, as well as the presence of "saleiros" as high value attributes for conservation at the project area. "Saleiros" or "barreiros" are specific ecosystem niches, capable to bear and attract foraging animals from different food chains, due to the biochemical nature of its soils (ref. 01). The strategy for "saleiros" is guided from establishing the annual production units of forest management in relation to the operation distance from the management operations of the attribute in question.

The audit team confirms that the protection measures to the identified attributes have been taken by the proponent on the project design and are consistent with the precautionary principle.

4.5 Project Financing

Based on the project's economic and financial planning analysis and other documentary evidence (ref 59, 60, 61, 62 and 63), the audit team confirms that an adequate flow of effective and projected resources has been demonstrated for the project implementation, to achieve the benefits to the climate, the community and the biodiversity of the project. In addition, the enterprise also presented documents that allow the audit team to evaluate the proponents' financial health.

The project cash flow contemplates all activities assertively and coherently with the costs and revenues of the activities carried out and still pending for the project. The costs and returns of forest management were also presented. The spreadsheets were based on the information contained in the accounting and management controls of previous years. The worksheets presented, as well as accounting records and independent audit of the financial balance of the proponents allowed a greater understanding of the assumptions used in the model, resulting in greater robustness, besides allowing a sensitivity analysis under different scenarios. The proponent also gathered documentation to assess the financial health of the organizations involved (ref. 84). The referenced documents were presented to the audit team and are considered by the project proponent as commercially sensitive information.

4.6 Employment Opportunities and Worker Safety

Part of the project activities is related to Manoa's farm employees and outsourced workers training in matters related to forest management and forest conservation practices and payment for environmental services mechanisms.

Based on field observations and interviews, the audit team confirms that the employee and outsourced workers form the main labour force involved and instructed and participating on the project activities. However, the training and capacitation procedures do not cover personnel rotation. Therefore, there is a risk that this capacitation will not reach newly hired staff or outsourced personnel from third party companies (**OBS#03/17**).

The proponent explains (ref. 1, section 2.6.1, page 37) in the project design that the Manoa workers are selected from the Cujubim municipality, and the third-party companies are also hired at the region. The REDD+ project's workers, up to the validation and verification audit date, are the same workers from the certified forest management at Manoa. There are no traditional communities at the surrounding areas of the project, however, the audit team confirms that there is no way to demonstrate that work opportunities were offered equally among the community members. Taking this in to consideration, the G3.10 requisite becomes non-applicable.

The REDD+ field activities, i.e. patrolling, will be operated by the Manoa's farm regular employees. In that sense, the same safety protocols established for the certified forest management operations will be in place to specific project activities where applicable. There are no "communities" on the surrounding areas of the project, but there are families residing in the areas surrounding the project. Therefore, the project activities' work safety risks are the ones linked to forest management. The audit team confirms that Manoa has procedures to cover forest management worker's health and safety through its conformance to the FSC certification scope and that they are applied to the workers who come to perform specific and necessary roles to the REDD+ project implementation and monitoring.

4.7 Stakeholders

According to the project design (ref. 1, section 1.3 and 1.4, page 27), the identification process conducted for stakeholder identification within and around the project zone came about when hiring and while executing a socio-economic diagnosis by Ecoporé a non-profit organization with headquarters and operation at Rondônia state.

The PDD (ref. 1, section 1.3, page 22 and section 2.7, page 39-42), presents collected data and the analysis resulting from the socioeconomic diagnosis. The methodology, data and results were analyzed by the partner entity mentioned above, which executed the diagnosis that is enclosed on the "Diagnóstico Socioeconômico e Ambiental da região do Projeto REDD+ fazenda Manoa" (ref. 2).

There are no communities traditionally dependent on the project area or its surroundings. The project proponents identified a severe lack of technical assistance and access to public programs directed to small and medium farmers and other residents. Understanding that this shortage, associated with the

opportunity cost of land, is associated with deforestation in the region, guided the project's activities to develop productive forest chains, non-timber products, the recovery of degraded areas through agroforestry systems, such as silvopastures and responsible forest management. Thus, the identified target audience of these activities are: small farmers, farmers and squatters in rural areas, Manoa farm employees, and, representatives of the population and local public agencies in urban areas such as the Municipal Education Office of Cujubim (SEMEC), described as "Other Actors or Other Stakeholders".

The strategy of the public consultation procedure was focused on public institutions and local social organizations, which in turn are included in the group of stakeholders of the project, and these institutions directly represent the actors that wish to be involved in the activities. In addition, the project intends to involve such institutions during the implementation of activities, seeking support in direct communication with society. The project document shared during the public consultation process, as well as a copy of the letter presented to the public institutions were made available to the audit team.

The "Community and Other Stakeholders" section meets the requirements of the CCB standard. The description appears in a clear and contextualized way to demonstrate what the project proposes. However, there is a risk that choosing to communicate exclusively in writing without supplementing face-to-face outreach events with oral and / or illustrated exchanges has made it difficult for the target audience to understand what the project is ultimately about. The social actors interviewed during the field audit say they do not understand what a REDD + project is and its implications (**OBS#04/17**).

According to CCB standards, "Communities" are defined as all groups of people—including Indigenous Peoples, mobile peoples and other local communities—who derive income, livelihood or cultural values and other contributions to well-being from the Project Area at the start of the project and/or under the with-project scenario. Considering that the people living around the project area are not reliant on the project area to survive, not accessing the project area for any purpose the audit team considered G3.2 and G3.6 of the CCB standard as not applicable. The presence of "Communities" in the social context where the project was inserted has not been evidenced. Field interviews with a sample of stakeholder groups identified by the proponent allowed the audit team to understand which are their main economic activities, how they interact with the project area and the Manoa as a forest management enterprise, according to their own perspective. Sampling responses show that these are groups of settled smallholders and middle and large farmers who live outside the project zone and do not earn any income within the project area, so they do not fit into the definition of "Communities".

The description of the project (Ref 1, Section 3.1, page 46) addresses the issue of discrimination by listing the International Labor Organization Convention No. 111 of 1958, ratified by Brazil on 01/03/1965,

which provides for discrimination with respect to employment and occupation and through its mechanisms for redressing complaints.

The proponent in the PD (Ref 1, Section 2.7.2, page 42) establishes that the channel of communication for complaints, controversies and resolutions with the local stakeholders would be the same one that already exists and is made available by Fazenda Manoa by virtue of their FSC certification. Mano Manoa's General Procedural Manual (Ref 4, Section 21.0, page 154) establishes how to deal with the communities surrounding the Forest Management Unit (FMU, the project area in FSC terminology) and the policy of losses and damages. The PDD (Ref. 1, Section 2.7.2, page 42) also establishes a new committee under the REDD+ project governance structure. It is a committee that will analyze the possible problems brought by the communication channel as follows: "In case of receiving complaints and complaints, a committee formed by Biofílica, Manoa and Ecoporé will analyze the case, classifying it into one of the following categories: invasion, theft of wood (illegal logging), fishing and hunting and loss of rights, and shall take appropriate action within 30 days of receipt of the complaint."

The project documentation provides information on the responsibilities, deadlines, and steps for receiving, treating, responding, documenting, and arranging for possible redress when legitimate complaints are raised against the REDD + project.

The proponent asserts in the PD (Ref. 1, Section 3.2, page 48) that there are no objections, no third-party dispute reports for land tenure nor the existence of dispute over natural resources or property, and that Manoa Farm has a good relationship with its neighbors. Beyond the information in the PD (Ref. 1) about land tenure and rights of use, the interviews with municipal and state authorities show that there are no complaints regarding the property tenure, and there are no disputes over natural resources present at the area.

Also, as evidence of regular possession and use of resources, we can cite the FSC certificate owned by Triangulo (project proponent) to operate Manoa's farm. FSC standard requires in its principles 1 and 2 proofs of regular land possession as an essential condition for obtaining the certificate. The property title (In Portuguese: *certidão de inteiro teor*) in its full content, was made available in person only, and it consists of the merger of two properties, belonging to the same owner, under the Number 1920 and 1921, pages 161 and 162 of the book No 002-G of the 1st City and Region General Registry services of Porto Velho, with an area of 73.079,1522 ha. The property registration No 15.418 consists of registrations referring to the management plan responsibilities AV-2, AV-3, AV-5, AV -6, AV -7, AV -9, AV and AV 15 with the area rectification of 74.038,7488 ha.

4.8 Commercially Sensitive Information

The proponent lists some documents to be considered confidential for containing information commercially sensitive: project budget, financial projections, Triângulo's financial demonstrations, Biofílica's financial demonstrations, agreements and signed contracts between the involved parties. The audit team has accessed and analyzed all the project documentation, including the ones considered by the proponent as commercially sensitive, in a way to evaluate its conformity to the CCB and VCS standards. The omission of documents that are considered commercially sensitive by the proponent, do not affect the demonstration of the baseline scenario, the project additionality demonstration nor the GHG estimates.

4.9 Sustainable Development

The project description is oriented to promote sustainable development, through conservation, sustainable forest management and educational practices. The audit team confirms that through the project activities implementation the project proponent will help to mitigate climate change, promote biodiversity conservation and promote decent work for their labour, thus acting in favour to the UN Sustainable Development Goals.

4.10 Grouped Projects

N/A. The Manoa REDD+ project was not designed as a group project.

5 LEGAL STATUS

5.1 Compliance with Laws, Statutes, Property Rights and Other Regulatory Frameworks

The proponent presents a list of applicable legislation on the PDD (Ref. 1, Section 3.1, page 43). The REDD+ project workers are the same from the FSC-certified forest management of Manoa Farm. The audit team confirms that the workers know and are kept informed of their rights. Interviews with workers, done in the field, throughout the evaluation, and Manoa Farm's conformity to the FSC standard requirements, which brings the need for legal adaptation and staff instruction, support this conclusion. It is worth mentioning that the Manoa Farm has maintained FSC-certification for 10 years.

The proponent lists the regulations and mentions the FSC certification as an applicable legislation compliance guarantee. The field analysis, including the historical review of FSC certification conformities, supports that the proponent follows the legislation which the project is subject to. Nevertheless, the project design brings a relevant legal framework to its matter. The PDD and supporting documentation highlight the laws and normative/regulatory instructions linked to forest management and occupational aspects, as well as international agreements relative to the biodiversity and climate change conservation,

and REDD+.

5.2 Evidence of Project Ownership

The rights over natural resources at the project area, in other words, over the carbon, emerge from the definitive land title (ref. 09, 10, 11 & 12) and other documents that prove the Triângulo property (one of the proponents of the project) has rights to the Manoa Farm, where the project area is located. Among other cited documents are the property title (in Portuguese: *certidão de inteiro teor* - ref. 12), the virtary certificate (in Portuguese: *certidão vintenária* - ref. 13), the domain recognition title (ref. 10, 11 & 12) and the environmental license in rural property (ref. 14). The audit team analyzed the documents in question to evaluate their accuracy. Another aspect that supports the Triângulo rights over the carbon is the farm's forest management certification through FSC. It is understood that the FSC brings criteria related to the legal adequacy and soon, the need for documents that prove the ownership over the lands and consequently, over the natural resources.

The Biofílica rights over carbon emerge from the signed contract with Triângulo, in which can be verified the existence of specific terms that define a partial alienation of carbon credits to be generated by the project from one entity (Triangulo) to another (Biofílica) (ref. 64), thus confirming Biofílica rights over the carbon as well. The audit team confirm that both proponent organizations have proven their rights over carbon.

5.3 Emissions Trading Programs and Other Binding Limits

The project design document (Ref. 1, Section 3.4) correctly specifies that Brazil is not part an Annex I country of the Kyoto Protocol, and therefore there is no national requirement on GHG emission reductions. The audit team confirmed that the project has no current nor historical involvement with any initiative to generate credits under the scope of regulatory (MDL) or voluntary carbon offset schemes.

5.4 Participation under Other GHG Programs

The project design document (ref. 1, section 3.4) correctly specifies that the project was not, nor desires to be, registered under another standard. The audit team confirmed that the project has no current nor historical involvement with any initiative to generate credits under the scope of regulatory (MDL) or voluntary carbon offset schemes.

5.5 Other Forms of Environmental Credit

The proponent alleges the project does not have nor pretend to generate any type of credit related to greenhouse gas emissions or indicated removals outside the VCS program (ref. 1, section 3.5). However, the clause 1.2 of the contract between Triângulo and Biofílica (ref. 64) points to the potential generation of

credits linked to other environmental services. The audit team understands the distinction between the VCS standard methodological scope and the framework of other accreditation systems, and payment for ecosystemic services. However, the team issued an observation to highlight the inherent risk to the potential non-alignment between the project design and the VCS standard regarding other forms of environmental credits (**OBS#05/17**).

5.6 Projects Rejected by Other GHG Programs

The proponent asserts that the project has not been previously submitted to validation/verification by any other type of GHG program (ref. 1, section 3.6) and therefore, has not been rejected by alternative programs. The audit team verified that the project is not listed under any other GHG program.

5.7 Respect for Rights and No Involuntary Relocation

The project was designed and implemented on private property, where the presence of traditional or local communities with the purpose of housing or even natural resources use has not been verified. The audit team agrees with the proponent in the sense that no right to land would be potentially affected by the project activities, with no involuntary removal of people or activities important for the way of life and culture of nearby communities.

5.8 Illegal Activities and Project Benefits

Illegal activities involving unauthorized wood/timber extraction, and land/territory invasion by deforestation agents are part of the baseline scenario in both the project area and its reference region. These illegal activities constitute one of the main points of concern for the project activities. The audit team confirms that the project activities focus exactly on illegal activities that generate deforestation at the region, having the project's design in conformity to the CCB requisites.

6 APPLICATION OF METHODOLOGY

6.1 Title and Reference of Methodology

The proponent selected the VM0015 v1.1 methodology, "Methodology for Avoided Unplanned Deforestation", for the development of the Project, identifying it correctly on section 4.1 of the project design document (ref. 1). The information is enough for the identification and reference to the chosen methodology.

6.2 Applicability of Methodology

Baseline activities include management with selective logging and unplanned deforestation from agricultural and livestock activities (item 4.2, ref.1). The proponent excluded areas of CEFLOM,

courtyards, roads and other infrastructures, in a manner consistent with the methodology, which states that the entire project area should be considered forest 10 years before the start of the project.

In addition to the aspect described above, the use of the VM0015 v1.1 methodology is justified by the application conditions defined in the project design:

- The project baseline activities include unplanned deforestation due to agricultural and livestock activities, per the most recent version of the VCS standards.
- Project activities include forest protection, with controlled and selective wood exploitation, in conformity to the “D” scope of the chosen methodology.
- The types of forest found at the project area do not include humid forests in swamp areas or common forest areas in peat.

6.3 Methodology Deviations

Section not applicable. Methodological deviations were not made.

6.4 Project Boundary

The proponent demonstrates the coherence of its approach and the adoption of premises for establishing the reference region, considering the project design (ref. 1 – section 4.4), the technical study for the project limits definition, and determination of the baseline (ref. 5 – section 1), in specific to subsection 1.1 – spatial limits, from the adopted methodology on the Project design. The design of the reference region followed all the applicability/enforceability for baseline (Table 2 – VM00015 v1.1), geographically including the project area limits, leakage belt and leakage management area, which was checked independently by the audit team thru maps and digital images collection, made available by the proponent of the project (ref. 2, 3 & 4).

The reference region described comprises a total area of 1,009,243 ha, an area 14 times larger than the project area. The analysis of criteria demonstrate similarity and representativeness between the project area and reference region, and considered aspects of landscape configuration (altimetry, precipitation and slope) and ecological conditions (vegetation), for spatial definition of the reference region, was evidenced by project proponent in a transparent manner, so as to allow ample reconstruction of the methodological approach employed and thus to determine compliance with the methodology in question. The proponent analyzes criteria of similarity regarding landscape configuration and ecological conditions, such as: 1) type of vegetation, 2) elevation, 3) slope and 4) precipitation. Table 10 shows the occurrence and variation range of each parameter considered to demonstrate the similarity between the project area

and the reference region for the considered parameters. Finally, the proponent considered the socioeconomic and cultural conditions of the project area and the reference region to further demonstrate their similarity. In this component of the analysis, the proponent proves that the land situation, legal status, ownership and legal framework applicable to land in the project area also occur in the reference region. In other words, there are private areas in the reference region, these being subject to the same laws as the owner of Fazenda Manoa (ref 69, fig 13). The audit team confirms that the reference region has been demarcated in observance of the similarity criteria set forth in the adopted methodology and is therefore in compliance with the VCS standard.

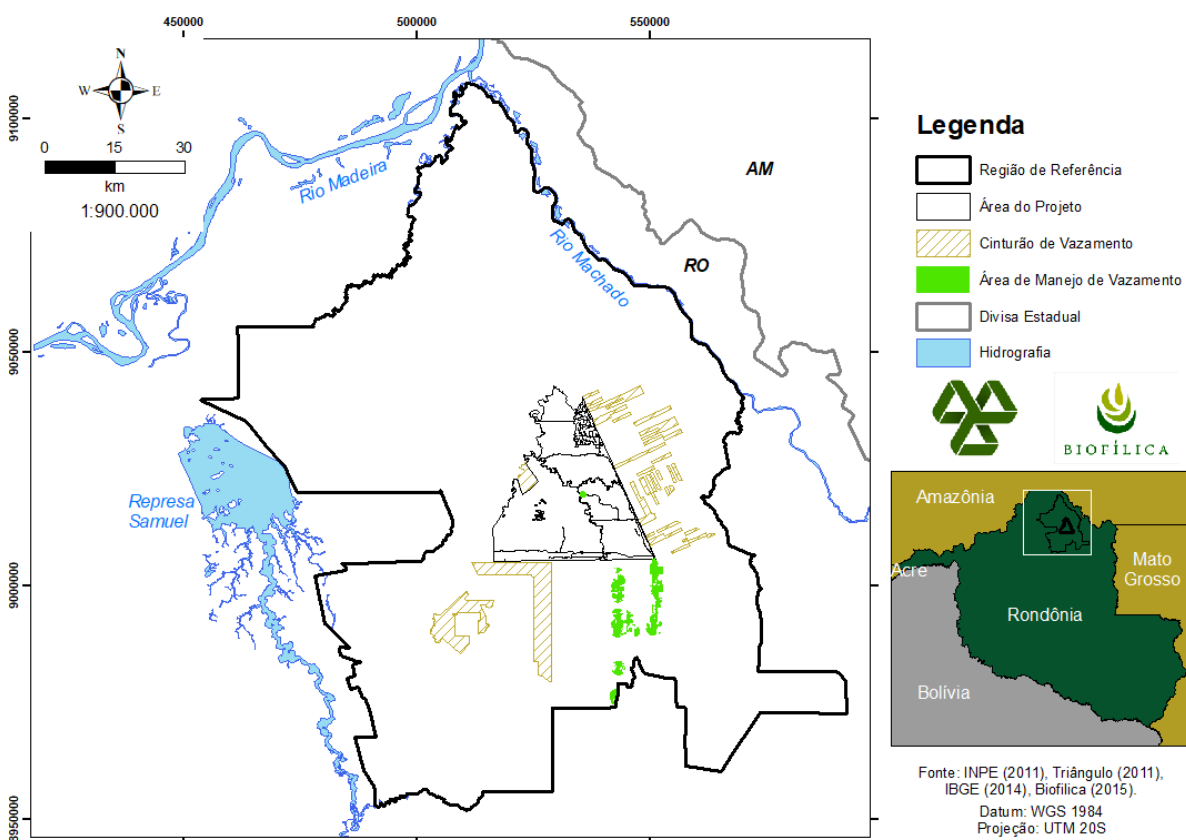


Fig.4: Project boundaries

The evaluation carried out by the project team (Refs. 5, 6, 7 and 8) indicates that the proponent has defined the geographical limits according to the criteria of land area of the project area, and is evidenced in digital format (shapefile) in a geographic information system (GIS) environment and appropriate satellite images in accordance with the methodology adopted in the project design.

The leakage belt was defined through the mobility analysis, based on a multicriteria analysis, derived

from the deforestation risk map (facilitation criteria) and from other reference region features (constraining criteria).

Using the deforestation risk map, the proponent selected the highest risk pixels considering “distance from roads” and “proximity with previously deforested areas” as facilitation criteria to determine the deforestation agents probable performance under the influence of specific drivers at the reference region.. It's worth to emphasize that “distance from roads” and “proximity to previously deforested areas” were the variables with greater weight in the model generated for the allocation and projection of deforestation in the reference region.

The other reference region features used as constraining criteria were “land features” (private or public land), “governance and type of activity” (forest management concessions or private owned forested lands) and “vulnerability to the deforestation agents”. The vulnerability criteria was inferred by the distance from the control stations and arbitrarily selected. That is the case related to the polygon adjacent to the project area, at the west side from Manoa’s farm which also represents a portion of land owned by the project proponent.

The project proponent has sufficiently explained the rationale behind the constraining and the facilitation criteria selection and has also presented table 23 (on section 4.5 of the project description) as a means of clarifying the weight given to each of the criteria used as facilitation criteria. It is important to note that the deforestation risk map generated in step 4.2.2 was used as a proxy for the determination of the facilitation criteria necessary for the leakage belt determination. Considering this approach, a complete analysis of these criteria selection was already performed by the project proponent in section 4.5 of the project description. In section 4.5, the project proponent explained how the software “Dinamica EGO”, which calculates the probability of transition from forest to deforested area in each pixel of the reference region, was used to construct the deforestation risk map. The deforestation risk map is produced by the software using the factor maps and deforestation rate. The project proponent has presented the factor maps to the audit team in raster files, during the auditing process. The audit team has analysed how the two different evidences with the most weight (distance from roads and distance from previous deforestation) were considered as input for the software and in the algorithm presented by the project proponent in the section 4.5 of the project description. In this same sense, the audit team has actually checked the maps presented by the project proponent for the delimitation of the leakage belt. Further the project proponent explains how the selection of the most accurate deforestation risk map was performed, using the figure of merit technique. Thus, the audit team has assessed the appropriateness of the facilitation criteria used to determine the leakage belt through the same methods used to assess the risk maps elaboration. In other words, assessing FOM and assuming the criteria were adequately selected by

the project proponent. The project proponent has selected the constraining criteria based on defined assumptions, such as “land ownership” (private or public land), “governance and type of land use” (forest management concessions or private owned forested lands) and “vulnerability to the deforestation agents”. These features were taken from open data sources from the Brazilian Forest Service and Imaflores. Brazilian Forest Service provides a government official data and the “Atlas Agropecuario Brasileiro” was constructed based on CAR (Cadastro Ambiental Rural, also a government open data source). The audit team considers them both as reliable source of information.

So, to define the leakage belt, the project proponent has identified all the polygons within these categories (as constraining criteria) that shown some overlap with the deforestation risk map (as facilitating criteria) or, in other words, the project proponent has assessed where each of the private and public lands under concession (for forest management) were overlapped with the calculated projection of deforestation, which in its turn was strongly influenced by distance from roads and pre-existing deforestation.

The leakage management area excludes areas with forest cover and correspond to those around the families living on settlements existing in the reference region and also the area of Ceflom. The audit team considers the selection criteria compatible with the purpose of a leakage management area and appropriate for implementation of associated mitigation measures, namely: the implementation of training, training and lectures aimed at sustainable socioeconomic development, and activities aimed at the development of associations of small local producers. The audit team independently reviewed the forms provided by the proponent to assess the occurrence of forest cover areas within the area of leakage management, concluding that the proposed new delimitation complies with the methodology adopted.

The time limits of the project were defined according to the applicable methodology (ref.1). The reference period for calculating the baseline was delimited between the years 2000 and 2012. The frequency of monitoring will be annual. The baseline review of the project will be carried out in the year 2023.

The proponent has conservatively selected the carbon reservoirs of the project (refs 1, table 11 and ref 2, page 12), and considers only the biomass quantification of the above and below ground tree reservoir in the baseline scenario. The other reservoirs were excluded, an approach allowed by the chosen methodology.

However, there was no evidence of insignificant analysis of the wood products pool, justifying the exclusion of this reservoir. The audit team confirms that in almost all situations it is conservative to exclude a carbon reservoir from the project design and that, for this specific pool, its inclusion would only

be justified in the case where the exploitation in the project scenario was reduced in relation to the expected baseline scenario. **(OBS#02/17)**.

The proponent demonstrates conservatism in the selection of project sources, excluding GHG emissions from biomass burning and livestock herding (ref. 1, table 13) and as suggested by the adopted methodology. Considering that livestock-related activities are not part of the project activities, excluding livestock emissions from the baseline scenario is a conservative measure since there would be no emissions of this nature monitored by the proponent in the project scenario. It is worth emphasizing that the methodology allows the exclusion of emission sources in situations where this proves to be conservative.

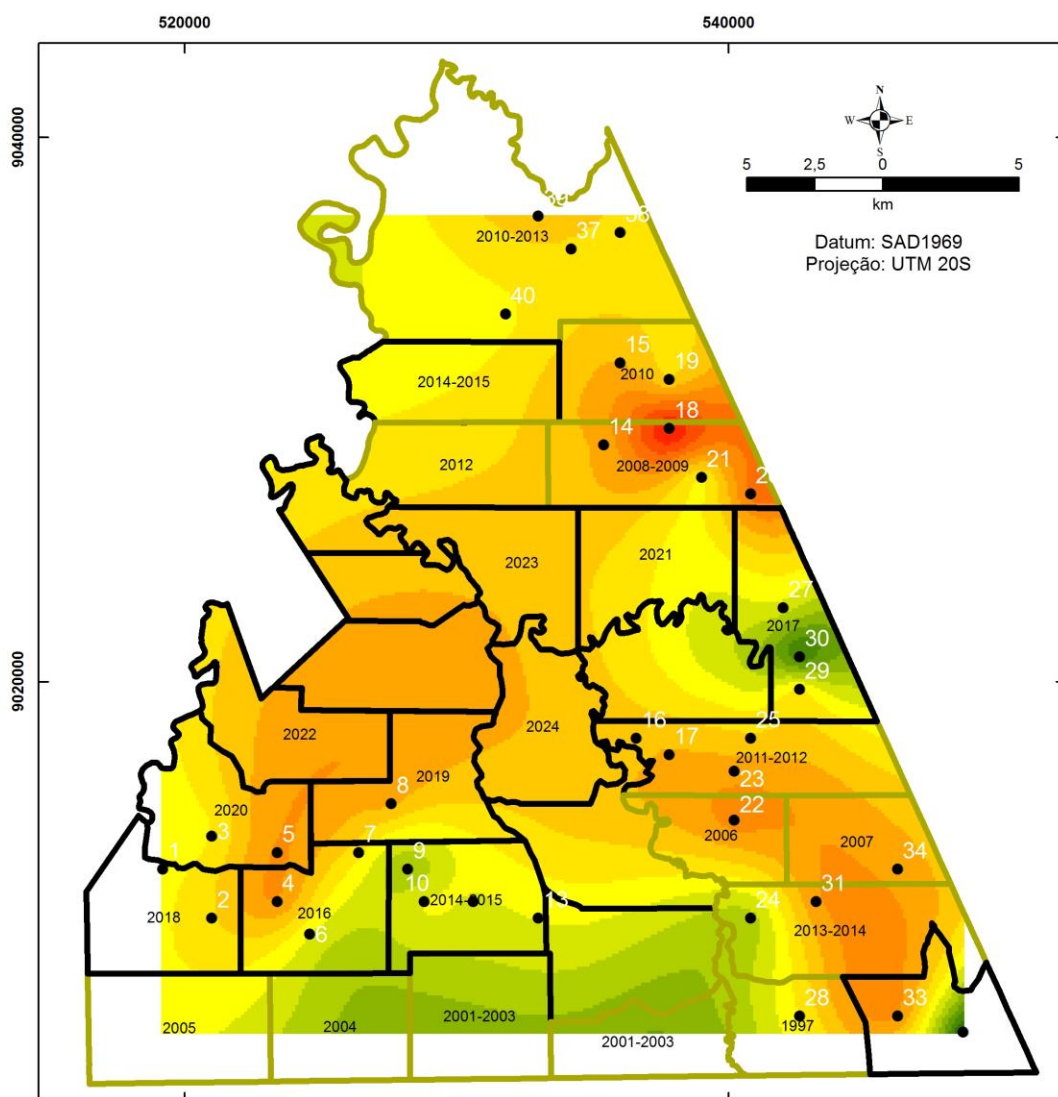
6.5 Baseline Scenario

The project proponent developed the baseline for the Manoa Farm REDD+ project estimating the amount of emissions in the absence of the same, using the VM0015 v1.1 methodology, approved by the VCS and thereby, attending to the CCB standard requisites.

According to the methodology used (Part 2, step 2.2, Tables 7a and 7b), carbon stocks within each land use and land cover class should be homogeneous and forest classes with different carbon stock densities should be considered as differentiated strata. The methodology indicates that the forest classes should be described according to the activities (timber management for wood production or for energy production) that happened at the project baseline. The project design includes four classes (anthropic vegetation in balance, forest, hydrology and non-forest vegetation) existing in the reference region, project area and leakage belt, among them only one forest class (ref.1, tab 14). The proponent conducted a multivariate analysis of variance (ANOVA) in order to prove that there are no significant differences between the carbon stocks among the different forest types in the project area, which are ultimately determinant for the estimation of reduction of emissions. The project description shows in step 6 the results of these analyses and the p values found, ie 0.157 for the different forest types found in managed areas and 0.5229 for the different forest types found in unmanaged areas. Thus, the audit team concludes that it is possible to accept the null hypothesis with 95% confidence. The carbon stocks among different forest types are not statistically different.

The proponent also submitted a carbon stock survey report (ref. 23), attached to the PD, a variance analysis was carried out among the existing forest classes within the project area; A comparative study of the stocks found in different plot conglomerates (ref. 67), shows the variation of the biomass found in the forest in the project area (ref 68 and 69). The map clearly shows that the biomass in the project area does not vary in response to the forest management in a uniform way; that is, a managed area can

present more or less biomass than an unmanaged area. The analysis of the map still suggests that the time is an influence factor in the variation of the biomass in the project area, because a concentration of UPAs (annual production units – in Portuguese: *Unidade de Produção Anual*) explored for more than 10 years in a spot of greater biomass is perceived. In interviews after the audit, the proponent presents the reasoning that the delimitation of two strata, distinguishing managed area from unmanaged at the time of project validation, would result in errors in estimates of GHG emission reduction over the duration of the project, Due to non-uniform biomass growth due to management activity. The audit team agrees with the project proponent that the definition of strata would certainly not entail more accurate estimates.



Legenda

UPA	Estoque (t.CO2e/ha)			
 Explorada	 75 - 85	 115 - 125	 155 - 165	 195 - 205
 Não explorada	 85 - 95	 125 - 135	 165 - 175	 205 - 215
• Conglomerado	 95 - 105	 135 - 145	 175 - 185	 215 - 225
	 105 - 115	 145 - 155	 185 - 195	

Fig.5: Carbon stocks variation over the project area

The proponent shows, through PDD ref.1 table 13, the orbital images used in his analysis of the dynamics of land use coverage; (Part 2, step 2.1) which guides the project proponent to present the remote sensing information in a tabular format according to the model (Table 5, page 30, item 7).

According to the methodology adopted (Part 2, step 2.4.1, item A), which provides for geometric correction, the mean displacement error between the images used for analysis of the land use dynamics must be less than 1 pixel. The project proponent presented the data of the Amazon Forest Monitoring Program (PRODES), prepared by the National Institute of Space Research (INPE), referring to its respective methodology (ref. 24), as a source for the temporal analysis of the dynamics of the use and coverage from the earth. The proponent calculated the Root Mean Square Error (RMSE) between Landsat images for the years 2001 and 2012, considering the same set of coordinates and presenting a result of less than 1 pixel (30 meters) for two different scenes. The audit team evaluated the images classified by PRODES and calculation memory brought by the proponent, and independently retested their conclusions.

According to the methodology adopted (Part 2, step 2.4.2) the minimum mapping area (AMM) should not be greater than 1 ha independent of forest definition. The project proponent presented the PRODES data for forest mapping of the reference reticule, leakage belt and project area. However, PRODES data has a minimum mapping area of 6.25ha, as seen on page 7 of the PRODES methodology (ref. 24). As the VM0015 methodology establishes that the AMM criterion serves only as a general guide to good practice, the audit team confirms that an observation applies in the sense that the proponent throughout the project refines its AMM to meet the guidelines of this methodology step (**OBS#01/17**).

The project proponent has properly followed the post- processing steps of the adopted methodology (Part 2, step 2.4.3), using a Geographical Information System and presenting the classification results as the “Forest Cover Benchmark Map” and the “Land-Use and Land-Cover Map” (from 2000 to 2012), respectively through figures 16 and 17; the “Deforestation Map” and the “Land-Use and Land-Cover Change Map” related information was presented simultaneously through figure 18; the “Land-Use and Land-Cover Change Matrix”, was presented as the table 18, over the project description.

The project design document (ref.1, fig.15) shows the most recent forest cover map and for the beginning of the reference period, in the reference region, presenting the classes of forest, non-forest area and adding the hydrology class.

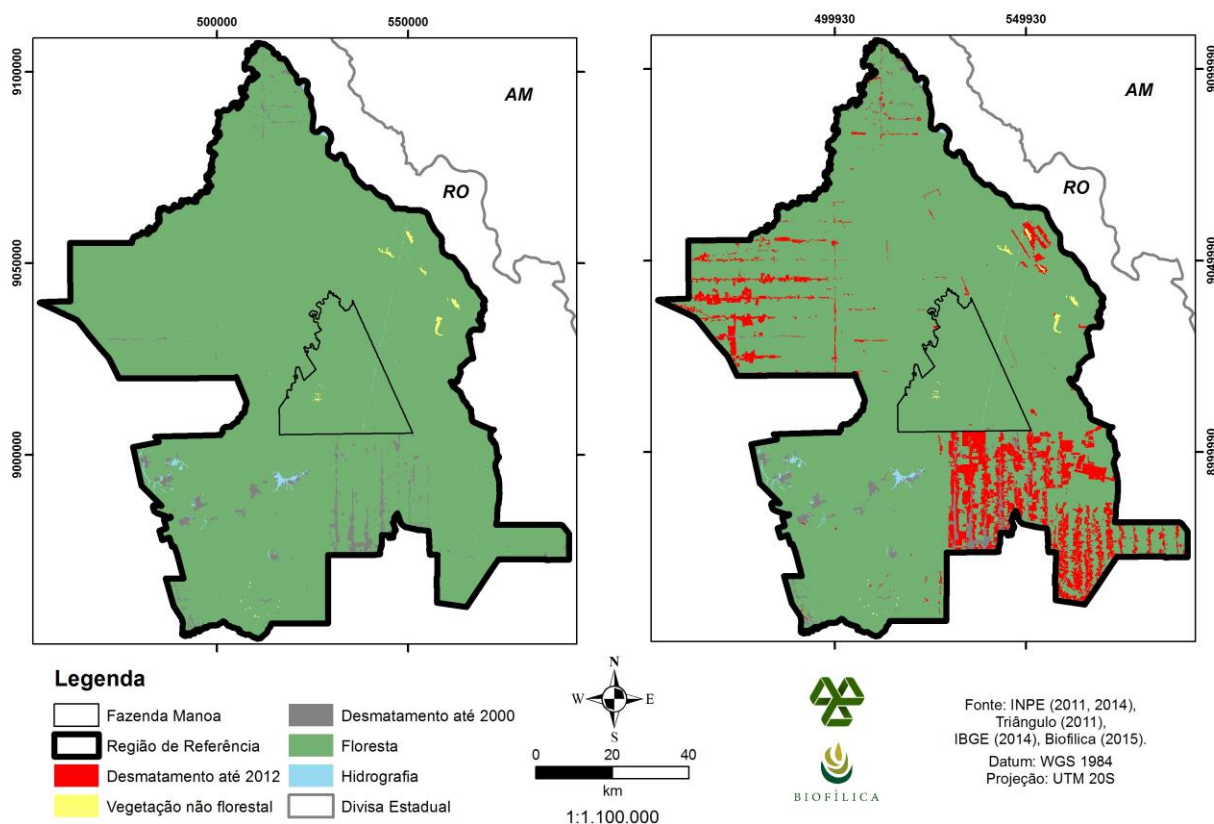


Fig.6: Forest benchmark maps

For step 2.5 of the methodology, all the maps produced in step 2 should be evaluated to an accuracy of 90% for the forest cover reference maps and 80% for each category of land use and occupation. The project proponent shows in table 16 of the project design document (ref.1) the results of the validation of the land use and land cover map for the year 2012. The proponent presented the set of 89 points used for the classification of accuracy and accuracy analysis in the last year of the reference period for baseline design and calculation and in accordance with the methodology (ref 71). The proponent showed the accuracy of its classification through "kappa indexes", which show percentages of success above 90% in all classes considered. The audit team performed an independent analysis on the images, using the same control points provided by the proponent, reiterating their conclusions.

Step 2.6 of the methodology used recommends that the same source of remote sensing data used for baseline design should be used for project monitoring. The project proponent used the PRODES data in their baseline analysis. However, in the preparation of the methodology attached to PD - ref. 1 (pp. 63-

64), the proponent will undertake all necessary geo-processing and remote sensing analyses to assess changes in land use and land cover over the duration of the project. This was considered as an approach acceptable to the methodology, since the monitoring of forest cover will be done with the same database.

The project design describes the baseline scenario for the reference region (ref.1). The proponent provides a detailed analysis of the groups of agents and drivers of deforestation associated with each land category and their contribution to deforestation observed in the reference period. The proponent defines four groups of deforestation agents, listed here in simplified form: 1) illegal loggers, 2) landowners who carry out forest suppression in their own areas, 3) “grileiros”¹ and squatters, and 4) farmers. In the rationale presented by the proponent, the groups of agents identified are interrelated to create the dynamics of deforestation in the reference region, which begins with forest degradation caused by illegal logging, invasion and land grabbing, and ends with land concentration and change in land use. The proponent estimates that there will be a growth of agent groups 1 and 3, due to real estate speculation, lack of inspection and impunity for environmental crimes characteristic of the region, aspects representative of the baseline scenario. The proponent also estimates a moderate growth of the group of deforestation agents 4, who work by assimilating degraded areas arising precisely from the activities of groups 1 and 3. The proponent estimates a decrease in the group of agents 2 due to the impossibility of maintaining forested areas in the context of the region, as discussed in the project description. The drivers associated with the deforestation agent groups activities are related to wood (illegal logging), land (squatters), livestock and agriculture (carried out under land tenure concentration). The project proponent follows the structure and instructions of the methodology in this specific section, making a brief description of each of the driver variables elected, pointing out their likely future development and listing mitigation measures, where applicable. These measures were specifically related to the selected drivers, which in its turn, are specifically related to the identified deforestation agents. The project proponent has chosen to address the lack of economic perspectives of the mentioned agents, since there is practically no technical assistance and incentive for sustainable practices, such as forest management, non-timber product harvesting or to diversified agricultural activities, that could contribute to the reduction of the migratory context, reduction of unproductive areas and reduction of practices that lead to the degradation of the remaining forest cover. The project has chosen to perform activities with local stakeholders, specifically with local farmers associations, such as professional training and environmental education with focus on the sustainable harvest of forest resources and sustainable socioeconomic development, in a way to address the identified drivers of deforestation

¹ Grileiros: invaders that forge land titles. In Brazil, grilagem is the falsification of documents to illegally take possession of vacant or third-party lands, as well as undivided buildings or buildings. The term also refers to the sale of land belonging to the public or private property through falsification of documents owned by the area.

The audit team agrees with the feasibility of the measures, based on the existence of CEFLOM, a fully equipped training centre constructed by the project proponent in the project area. This CEFLOM is located in the middle of an area of 70.000 ha, has accommodations for several people, classrooms and access to internet, and therefore has the capabilities for implementing the prescribed mitigation measures. The proponent also relates the driver variables that explain the quantity of deforestation to the specific deforestation agents referenced above. The chain of events described by the proponent is well-known in the Brazilian Amazon and corroborated through articles of scientific divulgation and technical reports (ref 75 and 76). The audit team then recognizes the performance of the deforesting agent groups described and the existence of related drivers in the reference region. The proponent still discourses about the underlying causes of deforestation, listing factors associated with the market, real estate speculation, politics, impunity for environmental crimes, cultural factors, among others. Finally, the proponents conclusively attest that the evidence raised in their baseline analysis explains the relationships between the agents, vectors, underlying causes and the deforestation pressure in the reference region.

The proponent asserts that the same deforestation pressure occurs in the project area. To corroborate its claim, the proponent refers cases of invasion to private properties and areas of forest management that, by having a facilitated road access structure, were totally depleted by the deforestation agents described in the PDD (ref. 77), when they ceased their exploitation activities thus losing their presence and governance over the area. The audit team agrees with the proponent's conclusion about future deforestation trends in the region of reference and admits that it is plausible that the same pressures manifest in the project area in situations that result in the loss of governance of the area.

In relation to the identification of deforestation agents (VM0015 v1.1, part 2, step 3.1), the logic used by the proponent to correlate existing deforestation in the reference region, hunting belt and project area with the groups of existing agents was set in the Terra Class Project (ref.1, table 18). The proponent presented a scientific paper (ref. 74) that corroborates this approach through which it becomes possible to link land use and the performance of different deforestation agents, influenced by different drivers. The audit team understands the scientific article to be reputable and the agent and driver identification approach is valid. The proponent opts for the historical media approach to calculate the rate of deforestation and projection of future deforestation in the baseline scenario (VM0015 v1.1, part 2 step 4.1.2). To that end, it assumes that conclusive evidence has emerged from the analysis of deforestation agents and vectors, but that, on the other hand, there is no significant correlation between variables that explain deforestation quantitatively and deforestation itself, in the reference period for determination of the baseline.

To support its identification and based on the identified deforestation vectors, the proponent compares two specific variables, namely: 1) annual production of wood in logs and 2) annual increase of the cattle herd, with annual deforestation rates, to prove the lack of a positive correlation and thus supporting the choice of the "a" baseline approach, which advocates the use of historical averages for the calculation of deforestation rates. In this comparison effort, the proponent shows r^2 values lower than [0.5] for both selected parameters. The audit team understands the choice of parameters as appropriate due to their relationship to drivers of deforestation; Agrees with the results of the comparative analysis carried out by the proponent, due to the low r^2 results evidenced and, finally, with the choice of the baseline approach to calculate deforestation rates by historical average. The methodology (VM0015 v1.1, part 2 step 4.2.1) provides for the preparation of the maps / explanatory variables of deforestation, mainly using two approaches: empirical and heuristic. The project proponent has adopted the empirical approach to mapping factors (ref.1, table 22). The proponent uses the EGO Dynamics program for the projection of future deforestation in the reference region. The program considers the variables represented by the factor maps and the map of the forest cover. By means of the "Weights of Evidence" (WoE) algorithm, the program selects the pixels with the highest risk of deforestation as a function of the change in the spatial configuration in the reference region during the calibration period of the model. Among the variables considered, the ones that presented the greatest weight were: distance from old deforestation, distance from roads, land category, vegetation class, soil type and slope of land. The model created exceeded the minimum acceptable threshold in its confirmation phase.

The project proponent carried out the calibration and confirmation steps of the deforestation modeling and calculation of the figure of merits obtaining a value of 73%, above the threshold determined by the methodology that is equivalent to the relative percentage of change in land use in the project area, in relation to the change observed in the reference grid in the same period (ref. 69).

6.6 Additionality

The proponent uses VCS tool VT0001 v3.0 for analysis and demonstration of project additionality (ref.1 - Section 4.6). In this sense, it elaborates alternative baseline scenarios to the scenario with the project, proves the financial additionality of the project and performs a common practice analysis.

As alternative to the project baseline scenario (sub-step 1a), the proponent considers 1) the continuity of the baseline scenario foreseen for the reference region, that means, the continuity of activities from deforestation agents and drivers identified on the project, which is translated in the Brazilian Amazon typical chain of events that leads to forest degradation and deforestation and 2) the accomplishment of project activities without the VCS standard record and therefore, with no resources originating from carbon credits. The project proponent considers all alternative scenarios as credible and discusses the

current and relevant legislation non-compliance at Cujubim municipality, in a way to justify the scenario 1, which foreseen illegal activities persistence at the territory (sub-step 1b). The result of this tool sub-step is a list with two alternative scenarios here described, being scenario 1 chosen as plausible by the proponent, which takes under consideration the project adopted methodology steps to determine the baseline scenario (sub-step 1c).

Considering the data presented by the proponent in the project design (ref.1), the audit team agrees with the proponent regarding the lack of governance and systematic lack of compliance with the law in the territory. The audit team still considers both scenarios' alternative strategies described as plausible, due to the acknowledged activity of the deforestation agents groups identified in the reference region, the recognized difficulties of the forest management enterprises in the sector that operate in an environment characterized by the effective lack of performance of the competent authorities, market competition with illegal timber and also, specifically, the financial operating result of Fazenda Manoa in recent years. The forest management operated at Manoa's farm characterizes an investment of an unattractive nature due to the variation over the net income for the year, the negative operating results in the period analyzed, the trend of reduction in the volume of timber harvested and mainly the internal rate of return associated with the risk inherent in the activity.

In relation to the investment analysis (step 2b), a robust and substantiated financial model was presented, covering all project activities and covering forest management (ref. 84). The analysis of investments compared economic indicators generated for the baseline scenario (continuation of pre-project activities in environment with risk of invasion) and project scenario (forest management with additional protection practices) without the financial resource arising from the commercialization of carbon credits. The financial spreadsheet presented shows sources of income and expenses related to the forest management operations, expenses related to the REDD+ project activities and consider a discount rate of 25%. Expenses were considered in relation to pre-operational investments, operating costs monitoring activities, payroll, taxes and certification. The values presented were obtained from the forest management activities carried on the project area in previous years and also updated with the current expenses related to the REDD+ project such as to forest cover monitoring, investments in surveillance, technical training and rural technical assistance, research and monitoring of biodiversity. To determine financial inputs the project proponent has used volume of timber harvested and the average price of timber. The audit team considers the parameters used, prices reported and assumptions made as coherent to the Brazilian forest management sector in Amazon. The comparison shows worse financial indicators for the project scenario without registration (NPV of R\$203,752), in comparison to the baseline scenario (NPV of R\$4,057,607) which is sufficient to demonstrate financial additionality of the project,

following the precepts of the tool used. It should be noted that for the NPV calculation a discount rate of 25% was used, which is coherent to the high risk related to the activity due to the timber sales price or the competition with illegal wood in domestic markets. The proponent also performs the sensitivity analysis (step 2c) based on the variation of the timber price to evaluate the strength of its comparative analysis, reaching the same conclusions. The proponent also performs the sensitivity analysis (step 2c) based on the variation of the price of the wood to evaluate the strength of its comparative analysis, reaching the same conclusions. The project proponent considers a pessimistic scenario, reducing the sale price of wood and therefore the financial inputs by 20% and an optimistic scenario, increasing the price of wood and therefore the financial inputs by 20%. This projection is compatible with acceptable variations, since analyses available in the literature show values between 5 and 15%. It is worth noting that the timber price does not only cover the fluctuation prices of one product/species alone, but rather a set of species presented in each POA (annual operational plan). In both pessimistic and optimistic scenarios, the financial indicator used is still worse for the project scenario, that is, forest management associated with REDD + activities without the use of carbon credits revenue. The audit team therefore agrees that the non-profit project scenario of carbon credit trading is less attractive than the baseline scenario.

In its analysis of common practice (step 4), the proponent identifies in the reference region the Urupa rubber tree, a private area with a management plan approved for 6,750 ha that has been invaded and has been illegally and systematically exploited by the same agents Identified in the project description (ref 83). The analysis of common practice is corroborated by local media reports (ref. 85) denouncing illegal activities of this nature in the region. Therefore, the audit team confirms that there are similar activities in the reference area and that there is an essential distinction between them, characterized precisely by the governance of the territory. That is, the absence of governance in the Urupá rubber tree led to the current condition characterized by high rates of deforestation and change in land use and land cover. The audit team also understands that the governance aspect in the project area deserves constant attention and care due to the inherent difficulties of the forest sector in the Brazilian Amazon, which corroborates the additionality of the REDD + project.

7 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

7.1 GHG Emission Reductions and Removals

The project proponent used the carbon and emission reduction estimates for calculus related to the VM0015, approved and used at several projects with similar characteristics. Therefore, the proponent can reach the impact from the project's activities on the GHG emission reduction, demonstrating efficient and

effective deforestation mitigation. It was also presented the net estimates and the GHG positive emission reduction. That way, the project design (Ref. 1), shows conformity to the CCB indicators.

The project proponent presented the baseline (VM0015, Part 2, step 5.1) calculations of the forest class over the project and area and leakage belt, being in conformance with the methodology requirements (ref. 1, tabs 27 and 28).

The proponent demonstrates the procedures used for estimating carbon stock change and baseline emissions in the project area (VM0015 v1.1, step 6) through the project design (ref. 1) of the technical study for setting limits of the project and determination of baseline - Calculation Worksheet (ref. 19) and the technical study of forest biomass inventory - Calculation Worksheet (ref. 28)

Carbon stocks for forest class were determined by surveying primary data with field measurement in a continuous forest inventory and monitoring in permanent plots (Ref. 1, Table 33), per step 6.1.1 (Estimation of the average carbon stocks of each LU / LC class) of the methodology adopted.

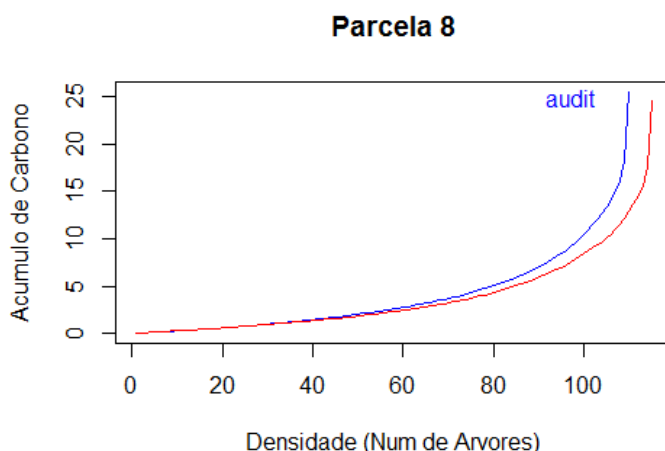
With the evaluation of the additional evidences presented, seen in Ref. 28, the proponent clearly showed the assumptions approached for sample design such as: definition and stratification of the different forest classes, definition of the optimal size of the sample unit (Conglomerate and subplot) for sampling, georeferencing the location of the sample units, measuring all tree individuals with DBH above ten (10) centimeters among other operational procedures employed. As ref. 28 clearly demonstrates, the general results of the inventory, calculation memo and statistical parameters used for estimation of biomass and carbon, allow for the reconstruction of statistical inference as well as analysis of the other approaches used as characterization of the different reservoirs, choice of allometric equations and conversion factors and estimation of GHG emissions, among others.

The proponent considered a single forest stratum with total carbon stock of 138t C / ha (± 2.29). To do so, it carried out a comparative study of the stocks found in different plot conglomerates (ref 67), generating a map showing the biomass variation found in the forest in the project area (ref 68 and 69). The map shows clearly that the biomass in the project area does not vary in response to forest management in a uniform way, meaning a managed area can present more or less biomass than an unmanaged area. The analysis of the map suggests that time is an influencing factor in the variation of the biomass in the project area, because a concentration of UPAs (in Portuguese – *Unidade de Produção Anual*) exploited for more than 10 years in a spot of greater biomass is perceived. In interviews after the audit, the proponent presented the reasoning that the delimitation of two strata, distinguishing managed area from unmanaged at the time of project validation, would result in errors in estimates of GHG emission reduction over the duration

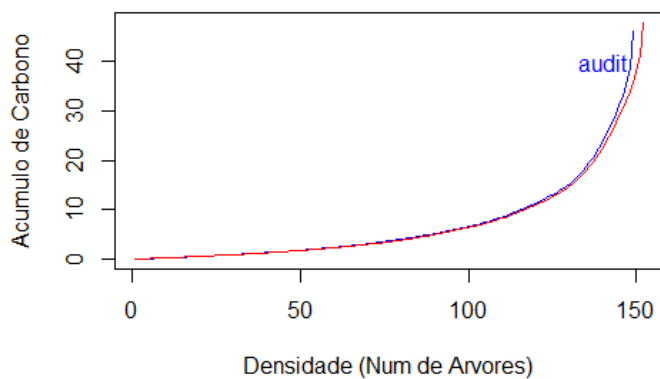
of the project, due to non-uniform biomass growth due to management activity. Based on the evidence presented and the proposed logic, the audit team agrees with the project proponent that the definition of strata would certainly not entail more accurate estimates.

For these estimates, the above-ground biomass equation ($\text{EXP} [-1,716 + 2,413 \times \text{LN} (\text{DAP})]$ of Nogueira (2008) was used for the estimation in Ombrophilous Open Forest and the equation ($0.0469 \times \text{DAP}^{2.4754}$). For estimating the below-ground carbon content the Silva (2008) coefficient was used for the estimation and calculation of reduced carbon equivalent emissions was 3.666667. The proponent presented the calculation of the optimum number of plots, following the orientation of the methodology. The audit team reviewed the spreadsheet and the application of the equation, and consider the project's approach to the methodology and assertion on carbon stocks as accurate.

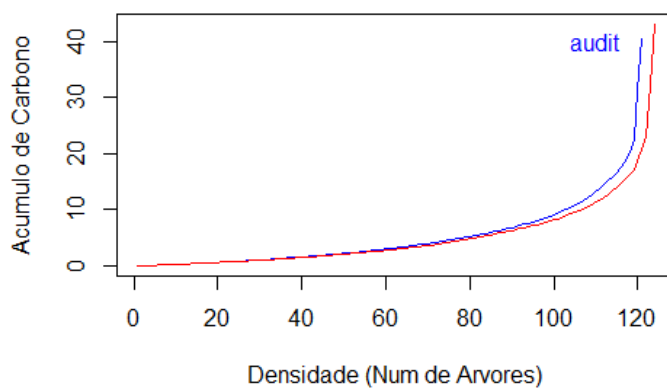
The audit team also carried out field visits to re-measure some sample units (permanent plots) for purposes of comparing the results of the Continuous Forest Inventory declared by the proponent. The results of the proponent and audit team inventories were compared using non-parametric statistics. The Wilcoxon test was used to compare the biomass values of the individuals sampled in plots 08, 09, 21, 23, 27 and 35 in an unpaired fashion. All results showed a p value above 5%, which leads to the acceptance of a null hypothesis, ie, the conclusion that the results of the inventories are statistically the same and that the assertion of carbon carried out by the proponent is acceptable (ref. 29). In addition to the statistical analyses performed, the audit team produced biomass accumulation graphs, comparing the results found by the proponent and their own results for all re-sampled plots. The graphs allow the visualization of a large degree of overlap between the curves obtained, corroborating the previous statistical analysis and the veracity of the test.



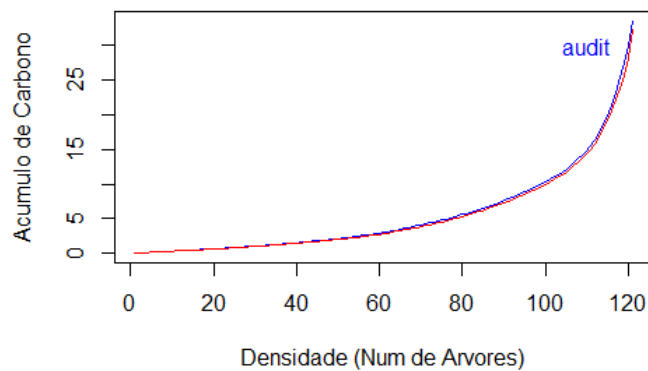
Parcela 9



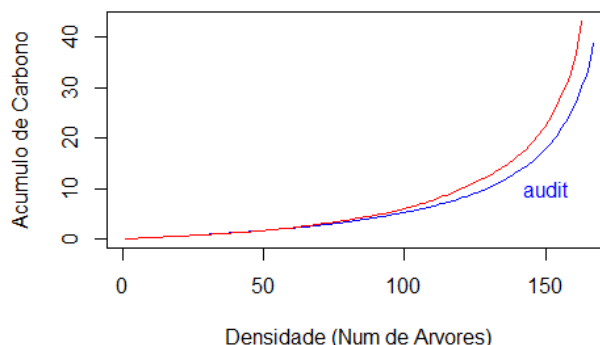
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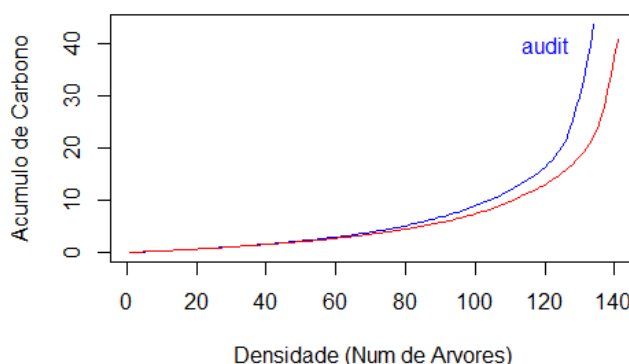
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Parcela 27



Parcela 35



Considering section 6.1.3 of VM0015 (Calculation of baseline carbon stock changes), the proponent also demonstrated clarity in the evidence of formulas used in the baseline calculation of carbon stock changes seen in Ref. 1 (Tables 36 and 37 - Page 109) and Ref. 6 and also in the estimates of the factors of change of both the decay of the stock resulting from the initial areas of forests and the increment of the stock in deforested areas as presented in Ref. 1 (Tables 34 and 35 - Page 103) . Both approaches were declared in a transparent manner, and allowed for the reconstruction of the calculation and approaches used according to requirement 6.1.3 of the VM0015 (Estimation of baseline carbon stock changes / 6.1.3 Calculation of baseline carbon stock changes - Page 72).

Wandelli and Fearnside (2015), are cited by the proponent as a bibliographical reference and used for estimation of change in the decay of the carbon stock of the post-deforestation classes (anthropic vegetation in equilibrium) projected for the Project Area and Leakage Belt In the baseline scenario and in the non-forest class in the Leakage Management Areas. The value found was calculated by the mean of forest carbon stocks in regeneration and pasture (ref.86), weighted by the relative proportion of each

class of cover in the project area (TerraClass - INPE). VM0015.

In relation to changes in carbon stocks due to planned activities (VM0015 v1.1, step 7.1.1) the proponent considers two types of activities: planned deforestation, due to the construction of yards and roads and planned degradation, depending on the forest exploitation. According to the methodology, if there is a significant change in carbon stocks due to a project activity, this change must be estimated ex-ante and ex-post measurement. The proponent presented an analysis of the significance of the planned carbon stock changes as a function of the forest exploitation, allowing excluding it (ref 81). This analysis was based on the “Tool for testing significance of GHG emissions in A/R CDM project activities”. The proponent has considered the average exploitation intensity, according to post exploitation reports and the forest regeneration capacity, based on the annual net volume increment of a similar forest and management condition, according to West (2013), to estimate the emissions related to the forest management activity. The emissions were compared to the overall project emissions, considering the equation 1 of the referenced tool. The audit team consider the proponent’s approach acceptable and the calculation presented as accurate (ref. 89). The proponent still constructs the reasoning that the emissions from the forest management activity were conservatively excluded from the project, due to the positive carbon balance, caused by the regeneration and growth of the trees after the exploitation, supporting their claim with scientific articles (ref. 80).

The audit team confirms that disregarding the emissions related to management is valid not only because of the atmospheric carbon absorption effect, admittedly existing in a post-logging environment, but also because the forest management activities are present both in the scenario of the baseline, as in the project scenario. It should also be noted that the carbon stocks in the project area were calculated with parcels established in managed and unmanaged areas. In other words, the average found was influenced by inventories in areas managed in different years, which means that the effect of forest management on inventories was considered in the calculation of emissions reduction in a broader sense.

The proponent has revised the calculations of emissions caused by planned deforestation as a function of the infrastructure required for the management, considering the information available in post-exploratory reports that calculate open area due to the construction of primary, secondary and courtyard roads. The average value used was 35.88 ha, corresponding to 1.59% of the annual management unit and was considered as plausible by the audit team, judging the management standard practiced on the farm (ref. 81).

The project design (EI - VM0015 v1.1, part 2 step 7.1.2) presents close to 100% over the project period due to the institutional arrangement implemented for the project. Governance of the area and thus

reduction of emission by deforestation. Due to the evidence presented, and because it is a necessary analysis in the ex-post scenario, the estimates presented by the proponent are valid and demonstrate the conformity of the project to this step of the methodology.

The design of the project (ref. 1, table 40) is in accordance with the methodology adopted in relation to estimates of change in carbon stocks in the project area (VM0015 v1.1, part 2 step 7.1.3, table 27). The design of the project does not consider emissions of non-CO₂ gases from forest fires in the baseline scenario, so the applicable methodology (VM0015, part 2, step 7.2) is consistent and considered by the audit team to be conservative. The project proponent presents in table 1, table 41, which meets the requirements of the methodology in question and is in accordance with the model proposed by VM0015 on page 92 in table 7.3, and therefore, the project compliant with this step of the methodology.

The proponent demonstrated transparency in the evidence of both the approach used and the formulas used in the calculation of the ex-ante estimation of leakage as seen in the design of the project (Ref. 1, tabs 42 and 43) and respective calculation memo (Ref. In accordance with sections 8.2 and 8.3 of VM0015 [Ex ante estimation of the decrease in carbon stocks and increase in GHG emissions due to leakage activity and Ex ante estimation of total leakage]).

The analysis of significance of the main carbon reservoirs of the project (VM0015, part 2, step 9.1) was considered according to the methodology adopted in the project design. The carbon reservoirs considered as significant in the accounting of carbon credits were biomass above ground and below, and therefore they can be used for calculations of GHG emission reductions.

The project proponent met the methodology requirements using equation 19 (VM0015 v1.1, part 2 step 9.2) of the methodology adopted in the project design for calculations of GHG emission reductions due to project activities, thereby attesting compliance with the criteria and methodological requirements. The project proponent met the requirements of the methodology, using calculations for equation 20 of the methodology adopted in the project design (VM0015 v1.1, part 2 step 9.3) and presenting the results in the model of table 36 of said methodology, which was considered as compliant by the audit team.

7.2 Climate Change Adaptation Benefits

The project was not designed to meet the optional requirements of the CCB standard for adaptation to climate change.

8 COMMUNITY

8.1 Net Positive Community Impacts

The project proponent has identified community groups as the families living in settlements in the project zone. The project description brings a complete social and economic characterization of the identified groups. The project proponent has chosen to address the lack of economic perspectives of these groups, since there is practically no technical assistance and incentive for sustainable practices, such as forest management, non-timber product harvesting or to diversified agricultural activities, that could contribute to the reduction of the migratory context, reduction of unproductive areas and reduction of practices that lead to the degradation of the remaining forest cover. The project has chosen to perform activities with local stakeholders, specifically with local farmers associations, such as professional training and environmental education with focus on the sustainable harvest of forest resources and sustainable socioeconomic development, in a way to promote net positive benefits, while addressing the identified drivers of deforestation. The audit team has assessed the described project activity, based on the project description, the theory of change approach and also the project implementation schedule/financial spreadsheet and considered it to be conforming to the CCB standard requirements.

The community methodology assessment will have focus on the number of workshops and training activities offered, as an initial output. Long term impacts will be assessed through annual evaluation of the social activities developed by the project, in which will be considered, the adoption of good social-environmental practices among the relevant stakeholders, the increase and the diversification of agricultural products, the autonomy of the farmer associations, the transformation of the baseline activities in the reference region and ultimately, the conservation of the forests remnants.

8.2 Negative Offsite Stakeholder impacts

The project proponent has considered all identified groups in the project zone, would be directly or indirectly affected by the project implementation in his community approach. In this sense, the project proponent has identified small ranchers, farmers and squatters in rural areas, Manoa farm workers and in urban areas, representatives of the population and local public agencies such as the Municipal Secretary of Education of Cujubim (SEMEC). The audit team confirms that the activities for the project have been oriented to cause positive impacts to the identified actors, as is stated and discussed in the section above. The audit team does not foresee that the implementation of the project could cause negative impacts to the other identified actors.

8.3 Exceptional Community Benefits

Not applicable. The design of the project was not drafted to attend to this group of optional indicators from the CCB indicators.

9 BIODIVERSITY

9.1 Net Positive Biodiversity Impacts

The proponent points to the habitat maintenance and forest fragments connectivity, promoted by deforestation containment activities to deforestation and by impacts reduction techniques of use as the main beneficial effects to the biodiversity found at the region (Ref. 1). Specific methodologies for forest cover monitoring and diagnosed biodiversity are presented on supplementary documentation (Ref. 65 & 66).

9.2 Negative Offsite Biodiversity Impacts

The proponent considers a potential increase on illegal hunting and fishing activities at the region bordering the project area in function of the project implementation. However, the project argues that the habitat maintenance would generate a compensation effect by the maintenance of natural refuge to wild life. The audit team agrees with the proponent on the allegation that the project implementation will cause a positive net effect over the biodiversity of the region.

9.3 Exceptional Biodiversity Benefits

The project zone presents regular incidence of threatened species according to the IUCN red list, as example, the Mico rondoni (sagui-de-rondônia), Hypocnemis ochrogyna (cantador-ocráceo), Ateles chamek (macaco-aranha-de-cara-preta), Pyrrhura perlata (tiriba-de-barriga-vermelha), Pyrrhura snethlageae (tiriba-do-madeira) e Tayassu pecari (queixada). Scientific research surveyed by the proponent support the population decrease tendency, presented on the project design, for species at the region. However, it is estimated that the generation of positive impact to these populations due to the decrease of deforestation with consequent habitat maintenance. The monitoring parameters on biodiversity set out in the project design cover several relevant aspects, including the occurrence of rare species and their threat status on the IUCN list. (Ref.1, section 7.4.3).

The audit team confirms that the implementation of the REDD+ Manoa project will bring exceptional benefits to biodiversity in the region, particularly to species threatened with extinction, thereby attesting the project's compliance to the optional requirements of the CCB standard set forth in this section and conferring thereon the Gold level for biodiversity.

10 MONITORING

10.1 Description of the Monitoring Plan

The project proponent used VM0015 a VCS approved methodology, to monitor the potential changes in the main carbon reservoirs considered, in addition to potential emission sources. Thus, the project documentation (ref. 1) shows the conformity to the applicable CCB requirements.

The project description provides monitoring protocols related to all relevant tasks determined by the adopted methodology. The project proponent will monitor the actual carbon stock changes and GHG emissions within the project area by satellite images, using data processed by PRODES² from INPE and through forest Inventory in project area, during the project lifetime. The audit team considers INPE as a reputable source and PRODES as a reliable source of information. The forest inventory data was assessed through inventory plots remeasurement and statistical analysis as referenced in section 7.1³. A complete set of data to be collected and a summary of the necessary procedures to collect the data can be found over the project description.

The procedures related to quality assessment, quality control, data archive and also responsibilities over these tasks can also be found over the project description (ref. 69). In order to validate the information obtained from the PRODES mapping, the mapped occurrence of deforestation information will be checked through high resolution images and data collected in the field with navigation GPS when necessary. The minimum accuracy in land use and land cover classification should be 80%. For cloud-covered areas, SAR sensor images such as RADARSAT-2, Cosmo SkyMed or TerraSar-X will be used. The audit team understands that the quality assessment is in conformity with VM0015 v1.1, section 2.5, in terms of the minimum overall accuracy threshold.

The monitoring of the project implementation will be performed through financial spreadsheets analysis, performance and quality reports, social management reports, vegetation coverage maps, meeting reports, invasion occurrence report and other relevant documents. The monitoring of land use changes and land coverage within project area, including planned deforestation due to forest management activities will be performed by satellite images, using data processed by PRODES and also through post exploratory reports, produced by the forest management regular operational activities. The project proponent assumes that the carbon stock will not change during the fixed baseline period, thus monitoring of carbon stocks will not be necessary until the baseline revalidation event. The project

² PRODES Project - Deforestation Monitoring System in the Amazon prepared by the National Institute for Space Research (INPE)

³ The results of the proponent and audit team inventories were compared using non-parametric statistics. The Wilcoxon test was used to compare the biomass values of the individuals sampled in plots 08, 09, 21, 23, 27 and 35 in an unpaired fashion. All results showed a p value above 5%, which leads to the acceptance of a null hypothesis, ie, the conclusion that the results of the inventories are statistically the same and that the assertion of carbon carried out by the proponent is acceptable (ref. 29)

description is also in accordance to the applicable methodology regarding the need to report possible significant losses of carbon stock in function of forest management activities. The monitoring of natural disturbance impacts and other catastrophic events will be performed via satellite by using the same methods applied for monitoring forest coverage in project area a complete set of data to be collected and a summary of the necessary procedures to collect the data can be found over the project description. The procedures related to quality assessment, quality control, data archive and also responsibilities over these tasks can also be found over the project description (ref. 69).

The leakage monitoring will be performed within the leakage area by satellite images, using data processed by PRODES and also considering the activities performed at the leakage management areas, during the project lifetime. Activity data in the leakage belt are determined through the same method applied to deforestation monitoring in project area. Reduction in carbon stocks due to activities developed in leakage management areas is not expected, once none of the activities to improve agricultural techniques or management of pasture areas can change carbon stocks and increase GHG emissions when compared to baseline scenario contain the implementation required. According to the adopted methodology, nitrous oxide (N₂O) emissions resulting from nitrogen fertilization and the consumption of fossil is always considered as insignificant in activities of AUD project and should not be considered. A complete set of data to be collected and a summary of the necessary procedures to collect the data can be found over the project description.

Ex post net GHG reduction will be displayed through table 26 of methodology applied VM0015 version 1.1 along with spatial data. The number of Verified Carbon Units (VCUs) to be created by activities in project REDD+ Manoa in year t will be calculated through equations 19 and 20, following the methodology requirements. A complete set of data to be collected and a summary of the necessary procedures to collect the data can be found over the project description. The procedures related to quality assessment, quality control, data archive and also responsibilities over these tasks can also be found over the project description (ref. 69).

Finally, the project description brings protocols to revisiting the baseline projections for future fixed baseline periods, in accordance to the adopted methodology. Updated information about agents, drivers and underlying causes of deforestation will be acquire according to the steps 2 and 3 of the adopted methodology. When available, forest management monitoring data and other activities developed by the project will be used. The adjustment of the land-use and land-cover change component of the baseline will be performed in accordance to the step 4 of the adopted methodology and in consideration to the annual area of deforestation and location of baseline deforestation. The adjustment of the carbon component of the baseline will be consider in function of new technologies and methodologies to assess

to biomass spatial estimate as, for example, LIDAR or SAR data.

The project description still brings a complete set of parameters, monitoring methods and monitoring frequencies related to the project social and biodiversity activities. In regards to the project social sphere, the proponent will monitor, in an annual basis, the number of courses and training courses, the number of persons trained, the frequency of publication of activity reports, the number of rural producers benefiting from the REDD+, the number of benefited associations and the gross revenue from new activities implemented after courses and training. In regards to biodiversity, the proponent will monitor the number of animal species over the project area, specifically, *Ateles chameck* (spider monkey) – which is consider to be endangers and the number of animal species over the “Saleiros” which correspond to the project HCV. The frequency and methods will vary, depending on the aspect. The project description brings the utilization of cameras trap twice a year, respectively over the dry and raining season as a methodological approach.

The table below shows the data and parameters available at validation and also brings the audit team assessment on regards to each of the relevant parameters. The table shows the information flow from the data collected in the field and through remote sensing analysis to the final ex-ante estimates:

Data/Parameter	Audit team assessment
ARRi,t-1	Area with forest cover in stratum i within the reference region at year t-1: ha, Presented according to VM0015, v1.1, part 2, section 2.3, table 7a. Measured through remote sensing. Assessed through GIS files presented by the project proponent to the audit team. Cross-checked with reported data within the carbon calculation spreadsheet.
RBSLRRi,t	Deforestation rate applicable to stratum i within the reference region at year t; %. Presented according to VM0015, v1.1, part 2, section 4.1.2.1. Calculated using Puyravaud (2003) equation. The audit team has assessed the carbon calculation spreadsheet and the referenced paper to determine the accurate use of the equation. Also

	assessed through the change in forest cover in the reference region in the reference period (2000-2012). The audit team has assessed the carbon calculation spreadsheet and crosschecked the reported data, with GIS files provided by the project proponent and also independently with PRODEs data, which is an open data source.
ABSLRR_{i,t} ABSLPA_{i,t} ABSLLK_{i,t}	Annual area of baseline deforestation in stratum i within the reference region/project area/leakage belt at year t; ha/year. Presented according to VM0015, v1.1, part 2, section 4.1.2.1, equation 3 and table 9. Calculated through $ARR_{i,t-1}$ and $RBSLRR_{i,t}$ (i. e. reference region). To be re-calculated during the baseline re-validation. The audit team has assessed the carbon calculation spreadsheet and the referenced paper to determine the accurate use of the equation (3) and Puyravaud equation. The audit team has cross-checked the project boundaries with the carbon calculation spreadsheet to determine an accurate calculation of these parameters.
Ctoticl	Ex ante average carbon stock per hectare of initial forest classes icl existing in the project area. Calculated according to allometric equations, and data measured in the field, following the requirements of VM0015 v1.1, Part 3, Step 1.1.2, table 15, as checked by the audit team, through the assessment of inventory data.
Ctotfcl	Average carbon stock of all accounted carbon pools in non-forest class fcl at time t; Calculated through a weighted average obtained from carbon stocks in post deforestation classes, according to Wanderlly and Fearnside (2015) and spatial data

	from Terra Class project. Reported over table 16, according to VM0015, v1.1, Part 3, Step 1.1.2. The audit team has assessed this parameter through the referenced paper and the calculation in the carbon calculation spreadsheet.
DBH	Diameter to breast height (130 cm) for each tree with DBH equal or superior 15 cm in each part of the forest inventory. The parameter was adopted according to forestry inventory good practices and conventions. The audit team has checked the measurement point in each tree while performing its own forest inventory. No relevant discrepancies were found.
Equation to convert DBH in fresh biomass	$BGB_{fw} = 0,0469 \times DAP^{2,4754} \times fc_1$ $AGB_{fw} = EXP(-1,716 + 2,413 \times \ln(DAP))$ Allometric equations used to calculate biomass, according to Silva (2007) and Nogueira (2008). The references used are to be considered as from reputable sources and appropriate for the forest type (FOD). The audit team has checked the correct application of these allometric equations considering the referenced papers and attest that the equations were correctly applied.
CF	Carbon fraction (over dry biomass) according to Nogueira (2008). Vaule applied 0,485. The audit team has checked the data value considering the referenced paper and attests it is accurate.
CO2 conversion factor	CO2 conversion factor of 44/12, according to IPCC (2006). The audit team has checked the data value considering the referenced literature source and

	attests it is accurate.
ΔCBSLPA_t , ΔCBSLLK_t	Total net carbon stock change of the project area/leakage belt, calculated from $\Delta\text{CBSLPA}_{icl,t}$ and $\Delta\text{CBSLPA}_{az,t}$ according to VM0015, v1.1, Part 2, Section 6.1.3, table 20 and 21 (i. e. project area). $\Delta\text{CBSLPA}_{icl,t}$ and $\Delta\text{CBSLPA}_{az,t}$ were also calculated taking in consideration the carbon stock change factors applicable to ΔCbb, following the requirements of VM0015, v1.1, Part 2, Section 6.1.3. The audit team has assessed the carbon calculation spreadsheet to check appropriateness of the equations used and the accuracy of the calculations.
$\text{APDPA}_{icl,t}$	Planned deforestation in forest category icl in year t in project area. Will be annually calculated through remote sensing images and technical maps and data generated by the forest management operator, such as the post exploratory of management. With this information is possible to clearly assess the planned deforestation due to forest management infrastructure, such as primary and secondary roads and yards. An average percentage of 1,6% over annual production units was considered to the ex-ante estimates. The value was taken from the forest management post exploitation reports and check by the audit team.
ΔCPAdPA	Total carbon stock decrease due to planned activities. Calculated from the total carbon stock decrease due to planned deforestation (ΔCPDdPA_t), total carbon stock decrease due to planned logging activities (ΔCPLdPA_t) and total carbon stock decrease due to planned fuel-wood

	and charcoal activities (ΔCPFdPA_t), following the requirements of VM0015, v1.1, Part 2, Section 7.1, table 25. Emissions from logging activities were considered to be negligible. Fuel wood and charcoal activities are no part of the project scenario. Therefore, ΔCPAdPA is equal to ΔCPDdPA_t . The audit team has assessed the carbon calculation spreadsheet to check appropriateness of the equations used and the accuracy of the calculations.
ΔCUDdPA_t	Total of current change in carbon stock due to unavoided unplanned deforestation in year t in project area. To be ex-post calculated from total baseline carbon stock change at year t in the project area and the effectiveness index (95%), following the requirements of VM0015 v1.1, Part 3, Step 1.1.2, table 27, as checked by the audit team.
ΔCPSPAt	Total carbon stock change in the project case. Calculated from total carbon stock decrease due to planned activities (ΔCPAdPA), total carbon stock increase due to planned activities (ΔCPAiPA_t) and the total carbon stock decrease due to unavoided unplanned deforestation (ΔCUDdPA_t), following the requirements of VM0015, v1.1, Part 2, Section 7.1.2, table 27. The project proponent conservatively assumes ΔCPAiPA_t as zero. The audit team has assessed the carbon calculation spreadsheet to check appropriateness of the equations used and the accuracy of the calculations.
ΔCLKt	Total net carbon stock change due to leakage. Calculated from total ex ante GHG emissions from increased grazing activities (EgLKt), total ex ante

	increase in GHG emissions due to displaced forest fires (EADLKt), total ex ante decrease in carbon stocks due to displaced deforestation (ΔCADLKt), following the requirements of VM0015, v1.1, Part 2, Section 8.3, table 35. All the leakage emissions were ex-ante estimated by the project proponent using a displaced leakage factor of 15%, applicable to ΔCBSLPAt. Leakage emission related to grazing activities and forest fires were not considered ex-ante, which is conservative because can lead to a higher leakage emissions in monitoring events. The audit team has assessed the carbon calculation spreadsheet to check appropriateness of the equations used and the accuracy of the calculations.
Δ REDDt	Ex ante net anthropogenic GHG emission reductions. Calculated from baseline carbon stock changes (ΔCBSLPAt), ex ante project carbon stock changes (ΔCPSPAt) and ex ante leakage carbon stock changes (ΔCLKt), following the requirements of VM0015, v1.1, Part 2, Section 9.3, table 36. The audit team has assessed the carbon calculation spreadsheet to check appropriateness of the equations used and the accuracy of the calculations.
VCUt	Ex ante VCUs tradable. Calculated from Ex ante net anthropogenic GHG emission reductions and the percentage associated to the risk rating (buffer), following the requirements of VM0015, v1.1, Part 2, Section 9.3, table 36. The audit team has assessed the carbon calculation spreadsheet to check appropriateness of the equations used and the accuracy of the calculations.

Data and parameters to be monitored

Data/Parameter	Audit team assessment
AUDPA _{icl,t}	Unavoided unplanned deforestation in forest category icl in year t in project area. Will be annually measured through remote sensing data, using data from PRODES.
APDPA _{icl,t}	Planned deforestation in forest category icl in year t in project area. Will be annually measured through GIS data and technical maps and data generated by the forest management operator, such as the post exploratory of management. With this information is possible to clearly assess the planned deforestation due to forest management infrastructure, such as primary and secondary roads and yards. The parameter will be monitored following the requirements of VM0015 v1.1, Part 3, Step 1.1.2, table 25a, as checked by the audit team..
ACPA _{icl,t}	Annual area affected by logging operations in forest category icl in year t in project area. Fixed ex-ante, based on the avarege of the impacted area due to forest management operations. Calculated ex-post through technical maps and data generated by the forest management operator, such as the post exploratory of management, following the requirements of VM0015 v1.1, Part 3, Step 1.1.2, table 25.b, as checked by the audit team. Emissions related to logging operations were proved to be negligible by the project proponent, According to the “tool for

	testing significance of GHG emissions in A/R CDM project activities”, referenced in the adopted methodology, but will be monitored annually, according to the project description.
ΔCPLdPA_t	Total decrease in carbon stock due to planned activities of harvesting in year t in project area. Fixed ex-ante, based on $\text{ACPA}_{\text{icl},t}$ and C_{tot} . Calculated ex-post through $\text{ACPA}_{\text{icl},t}$ and the carbon stocks per hectare of initial forest classes icl existing in the project area, following the requirements of VM0015 v1.1, Part 3, step 1.1.2, table 25.b, as checked by the audit team
ΔCUCdPA_t	Total decrease in carbon stock due to catastrophic events (winds) in year t in project area. Will be calculated ex-post through remote sensing images, using data PRODES and the carbon stocks per hectare of initial forest classes icl existing in the project area, following the requirements of VM0015 v1.1, Part 3, Step 1.1.2, table 25.f, as checked by the audit team.
ΔCUDdPA_t	Total of current change in carbon stock due to unavoided unplanned deforestation in year t in project area. To be ex-post calculated from total baseline carbon stock change at year t in the project area and the effectiveness index (95%), following the requirements of VM0015 v1.1, Part 3, Step 1.1.2, table 27, as checked by the audit team.
ΔCLPMLK_t	Cumulative carbon stock decrease due to leakage prevention measures. Calculated. Assumed to be zero in ex-ante estimates. The project proponent shows the methodology framework necessary to

	monitor emissions due to leakage prevention measures but do not expect them to happen, since activities to improve agricultural techniques or management of pasture areas are not planned.
EgLKt	Cumulative emissions from grazing animals in leakage management areas at year t. Calculated. Assumed to be zero in ex-ante estimates. The project proponent shows the methodology framework necessary to monitor emissions due to leakage prevention measures but do not expect them to happen, since activities to improve agricultural techniques or management of pasture areas are not planned.
ELPMLKt	Cumulative total ex increase in GHG emissions due to leakage prevention measures. Calculated. Assumed to be zero in ex-ante estimates. The project proponent shows the methodology framework necessary to monitor emissions due to leakage prevention measures but do not expect them to happen, since activities to improve agricultural techniques or management of pasture areas are not planned.
$\Delta C_{abBSLLKt}$	Total baseline carbon stock changes for the above-ground biomass pool in the leakage belt. To be calculated per table 22 of the VM0015 v1.1 in each renewal of the fixed baseline period.
DBH	Diameter to breast height (130 cm) for each tree with DBH equal or superior 15 cm in each part of the forest inventory. The parameter was adopted according to forestry inventory good practices and conventions. To be measured during the baseline

	re-validation.
Frequency of surveillance and patrol operations	Number of operations per year. Related to project activity implementation. Monthly frequency. The audit team considers that adopted frequency as appropriate to monitor the related project activity.
Number of courses and training courses	Number of courses and training courses performed in CEFLOM. Related to project activity implementation. Annual frequency. The audit team considers that adopted frequency as appropriate to monitor the related project activity.
Number of persons trained	Number of people who received training in a year. Related to project activity implementation. Annual frequency. The audit team considers that adopted frequency as appropriate to monitor the related project activity.
Frequency of publication of Activity Reports	Activity report. Annual frequency. The audit team considers that adopted frequency as appropriate to monitor the related project activity.
Number of rural producers benefiting from the REDD+	Number of producers participating in the REDD+ project activities that are receiving technical follow-up after the training phase. Annual frequency. The audit team considers that adopted frequency as appropriate to monitor the related project activity.
Number of benefited Associations	Number of associations benefited by the technical monitoring of the project. Annual frequency. The audit team considers that adopted frequency as appropriate to monitor the related project activity.
Gross revenue from new activities implemented after courses and training	Additional gross revenue generated for participants in project activities after implementation of new techniques learned. Annual frequency. This will be

	assessed by interviews with the relevant stakeholders (project activity beneficiaries). The audit team considers that adopted frequency and the method described as appropriate to monitor the related project activity.
Number of species of monitored animals	Diversity of animal species. The project proponent will be using camera traps to identify the occurrence of the different species in time in the project area. The field data will be recorded and processed in sheets and monitoring fauna reports. Bi-annual frequency (rain and dry season). The project proponent has realized an extensive work of initial biodiversity assessment, through a specialized hired consultancy. The audit team considers that a good basis for biodiversity monitoring exists.
Diversity in vegetation communities in permanent parts	Diversity of plant species The project proponent will be using forest inventory to identify diversity of plant species in the forest management annual production units before the exploitation activity occurs. The field data will be recorded and processed in sheets and biodiversity reports. Annual frequency. The audit team considers that a good basis for biodiversity monitoring exists.
Monitoring of Ateles chamek (Spider monkey)	Monitoring of Ateles chamek species (Spider monkey). The project proponent will be using camera traps to identify. The field data will be recorded and processed in sheets and monitoring fauna reports. Bi-annual frequency (rain and dry season). The project proponent has realized an extensive work of initial biodiversity assessment, through a specialized hired consultancy. The audit team considers that a good basis for biodiversity

	monitoring exists.
HCVF Saleiro	Number of species present. The project proponent will be using camera traps to identify. The field data will be record and processed in sheets and monitoring fauna reports. Bi-annual frequency (rain and dry season). The project proponent has realized an extensive work of initial biodiversity assessment, through a specialized hired consultancy. The audit team considers that a good basis for biodiversity monitoring exists.

11 NON-PERMANENCE RISK ANALYSIS

The compliance of the proponent with the carbon inventory non-permanence risk assessment (ref 33) was demonstrated in the table below:

Risk factor	Score	Findings	NCR/OBS
Internal risks			
Project management	-2	The project was developed in native forests in the Brazilian Amazon, reforestation is not part of the project activities. The project did not generate carbon credits previously. The project team is made up of professionals highly qualified for the task, as can be seen in the brief professional description presented by the proponent in the non-permanence risk analysis report (ref 33). The Triângulo team, one of the proponents of the project, maintains a physical presence at the Manoa farm, the project area.	None
Financial viability	4	The project financial worksheet shows the breakeven point between 4 and 7 years and less than 15% of the	None

		amount of funds needed to implement the project until the period in question. The score of this risk component was correctly applied by the project proponent.	
Opportunity costs	0	The project proponent conservatively considers the highest category of risk associated with this component. The proponent also considers the mitigation measure associated with the existence of a legal obligation to the conservation of the area, referring to the forest code (Law nº 12.651 of 2012/05/25) and the legal reserve of the Manoa farm. The score of this risk component was correctly applied by the project proponent.	
Project longevity	0	The project area is in an area protected by law (Brazilian Forest Code - Law 12.651 of 05/25/2012), the legal reserve of the Manoa farm. The law in question provides for the protection of so-called legal reserve areas for an indefinite period. The audit team evaluated the Rural Environmental Registry - CAR (in Portuguese: <i>Cadastro Ambiental Rural</i>) of the property to consider the legal reserve area demarcated at the Manoa farm. The risk of non-permanence of the carbon associated with the longevity of the project was considered as null, considering the requirements of the tool VCS AFOLU Non-permanence risk tool v.3.2, item 2.2.4, 5).	
Total internal risk	2	The score associated with the internal risk of the project was evaluated by the audit team and considered according to the tool in question.	
External Risks			
Land Tenure and Resource Access/Impacts	0	The rights to the land and its resources belong to Triângulo Pisos and Paineis, proponent of the project, as verified by the audit team through document evaluation and proof of title to the land.	

Community Engagement	0	There are no traditional or local communities that are dependent on natural resources in the project area. The score of this risk component was correctly applied by the project proponent.	
Political Risk	0	The audit team assessed the country's political risk independently using the World Bank tool and agrees with the score assigned by the project proponent as well as the associated mitigation measures.	
Total External risk	0	Due to the above, the audit team confirms that the risk of loss in carbon stocks associated with aspects external to the project has been correctly considered by the proponent.	
Natural risks			
Natural risks	0	Sufficiently supported by scientific literature and secondary data, the proponent considers the risk associated with the loss of carbon stocks in the project area as null and void, which was considered plausible by the audit team. The risk associated with fire was considered low due to the articles of Schroeder et al, 2009 and Goldammer, 1990. The risk associated with pests and diseases was considered as null, due to the biodiversity intrinsic to the biome, which was considered as plausible by the audit team. The risk of loss of stock due to drought is considered as null due to Lewis's article (2011) and data from CEPED (2013). The risk of geological hazards such as landslides was considered as null because of the article by Tominaga (2009). The risk of blowdowns was considered as null because of the Espirito Santo articles (2009). The audit team reviewed the referenced scientific literature to confirm the proponent's conclusions regarding the significance and	

		probability of the events in question.	
OVERALL NON-PERMANENCE RISK RATING AND BUFFER DETERMINATION: 10			
The proponent assumes the minimum possible risk according to the tool used, in accordance with its requirements.			

12 VALIDATION CONCLUSION

This is a final report. After reviewing the project description and all supporting documentation, the audit team concluded with the reasonable level of assurance that the project complies with all applicable requirements of the standards, methodologies and tools considered within the scope of this audit, following the recommendation:

Final Report Conclusion

- ☒ Validation approved:
☐ Validation not approved:

Final Draft Report Conclusion

- ☒ Validation approved:
☐ Validation not approved:

Draft Report Conclusion

- ☐ Validation approved
☒ Validation not approved
Corrective Actions Requested

CCB STANDARDS CRITERIA CHECKLIST:

GENERAL SECTION

- G1. Project Goals, Design & Long-Term Viability
G2. Without-project Land Use Scenario & Additionality
G3. Stakeholders Engagement
G4. Management Capacity
G5. Legal Status and Property Rights (Required)

CONFORMANCE

- YES
YES
YES
YES
YES

CLIMATE SECTION

CL1. Without-project Climate Scenario	YES
CL2. Net Positive Climate Impacts	YES
CL3. Offsite Climate Impacts	YES
CL4. Climate Impact Monitoring	YES
GL1. Climate Change Adaptation Benefits (Optional)	NA

COMMUNITY SECTION

CM1. Without-project Scenario for Communities	YES
CM2. Net Positive Community Impacts	YES
CM3. Offsite Stakeholder Impacts	YES
CM4. Community Impact Monitoring	YES
GL2. Exceptional Community Benefits (Optional)	NA

BIODIVERSITY SECTION

B1. Without-project Biodiversity Scenario	YES
B2. Net Positive Biodiversity Impacts	YES
B3. Offsite Biodiversity Impacts	YES
B4. Biodiversity Impact Monitoring	YES
GL3. Exceptional Biodiversity Benefits (Optional)	YES

The table below shows the estimates of ex-ante GHG emission reduction:

Year	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage (tCO ₂ e)	Non-permanence risk deductions (tCO ₂ e; Risk buffer = 10%)	Net GHG avoided emissions (tCO ₂ e)
2013	86.638	22.737	12.996	6.390	44.514
2014	186.203	25.853	27.931	16.034	116.383
2015	205.965	24.584	30.895	18.138	132.347
2016	157.957	21.564	23.694	13.639	99.059
2017	296.657	21.372	44.499	27.528	203.257
2018	220.015	20.605	33.002	19.940	146.465
2019	315.125	21.556	47.269	29.356	216.942
2020	281.411	21.219	42.212	26.019	191.960
2021	317.613	21.581	47.642	29.603	218.785
2022	312.781	21.533	46.917	29.124	215.205
2023	358.891	21.994	35.889	33.689	267.317
2024	445.111	22.856	44.511	42.225	335.517
2025	368.737	22.092	36.874	34.664	275.106
2026	390.739	22.313	39.074	36.842	292.509

2027	384.854	22.254	38.485	36.259	287.853
2028	387.040	22.276	19.352	36.476	308.935
2029	398.161	22.387	19.908	37.577	318.288
2030	336.770	21.773	16.839	31.499	266.658
2031	379.693	22.202	18.985	35.749	302.756
2032	391.243	22.318	19.562	36.892	312.470
2033	411.452	22.520	20.573	38.893	329.465
2034	392.537	22.330	19.627	37.020	313.558
2035	343.152	21.837	17.158	32.131	272.025
2036	308.012	21.485	15.401	28.652	242.472
2037	351.118	21.916	17.556	32.920	278.724
2038	418.404	22.589	20.920	39.581	335.312
2039	419.334	22.598	20.967	39.673	336.094
2040	300.105	21.406	15.005	27.869	235.822
2041	366.397	22.069	18.320	34.432	291.574
2042	341.389	21.819	17.069	31.956	270.542
Total	9.873.503	665.639	829.128	920.770	7.457.914

APPENDIX 1: NON-CONFORMANCE REPORTS, FORWARD ACTION REQUESTS AND OBSERVATIONS

1.1. Non-conformance 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.

NCR#:	01/17
Standard & Requirement:	VM0015, Part2, step 2.2 – item B & step 2.3 – Tabelas 7a e 7b
Report Section:	--
Description of Non-conformance and Related Evidence:	
The project design does not consider forest managed as a land use class and land cover existing in the reference region and present in the project area, thus hurting the requirements of the methodology used in step 2.2, item b) (ref.1, Section 4.5). According to the methodology, the carbon stocks within each class must be homogenous and the forestry classes with different stock density must be considered as differentiated strata. The methodology points yet that managed forests must be considered as distinct classes. The variance analysis among the existing forest classes within the project area showed a significant difference between existing carbon stocks in managed and unmanaged forests, which corroborates this point (ref. 31).	

Furthermore, there are date discrepancies, on the table title 17 from the PD – Ref. 1 (table 7a of VM0015) is outlined the year of 2010, but the final category described on the first column of the same table is as if was from the year of 2012.	
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 project validation
Evidence Provided by Organization:	Ref. 67: Carbon stocks comparative analysis Ref. 68: Conglomerate carbon stocks
Findings for Evaluation of Evidence:	The project proponent expanded his sample effort by installing and inventing a larger number of parcels in the forest. In addition, it carried out a comparative study of the stocks found in different plot conglomerates (ref 67), generating a map showing the biomass variation found in the forest in the project area (ref 68 and 69). The map shows clearly that the biomass in the project area does not vary according to the forest management in a uniform way, that is, a managed area can present more or less biomass than an unmanaged area. The analysis of the map still suggests that the time is an influence factor in the variation of the biomass in the project area, because a concentration of UPAs explored for more than 10 years in a spot of greater biomass is perceived. In interviews after the audit, the proponent presents the reasoning that the delimitation of two strata, distinguishing managed area from unmanaged at the time of project validation, would result in errors in estimates of GHG emission reduction over the duration of the project, due to non-uniform biomass growth due to management activity. Based on the evidence presented and the proposed logic, the audit team agrees with the project proponent that the definition of strata would certainly not incur more accurate estimates, closing this NCR. The mentioned date discrepancies, on the table 17, were properly addressed by the project proponent over the PD updated version (ref. 69). The project baseline reference period is from year 2000 to 2012, following the methodology adopted requirements.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	02/17
Standard & Requirement:	VM0015, Part2, step 2.4.1, item A

Report Section:	--
Description of Non-conformance and Related Evidence:	
According to step 2.4.1, item A, of the methodology used, the mean displacement error between the images used for the land use dynamics analysis of should be less than 1 pixel. The project proponent presented data from the PRODES – Amazon Forest Monitoring Program, created by the INPE – National Spatial Research Institute acknowledged on its methodology (ref. 24), as source for time analysis of the land use and land use coverage dynamic. After careful analysis of PRODES methodology, it was not found elements and evidences that present the existence or not of shifts from the images analyzed by the proponent, in order to meet the maximum error threshold of the methodology adopted in the project design.	
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 project validation
Evidence Provided by Organization:	Ref. 73: Pixel shift analysis
Findings for Evaluation of Evidence:	The proponent calculated the Root Mean Square Error (RMSE) between Landsat images for the years 2001 and 2012, considering the same set of coordinates and presenting a result of less than 1 pixel (30 meters) for two different scenes. The audit team evaluated the images classified by PRODES and calculation memory brought by the proponent, independently, retesting their conclusions.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	03/17
Standard & Requirement:	VM0015, Part2, step 2.4.3 - Post-processing
Report Section:	--
Description of Non-conformance and Related Evidence:	
Step 2.4.3, item A, of the methodology used, ref. 7, establishes that forest cover benchmark map for the Reference Region (RR) and for the Project Area (PA) should be presented for the most recent date and for 10 years showing only forest and non-forest areas. The project proponent presents in the PD, Figure 15 (ref.1), only the most recent forest cover benchmark map of the RR, presenting forest area, non-forest area and adding hydrological class. However, the same forest cover benchmark map for RR of 10 years ago was not presented in PD. Step 2.4.3, item C, of the methodology used, establishes that a deforestation map of the RR and PA must be presented for all subperiods analyzed.	

The project proponent presents these maps in the PD only for the project area and only for the years 2000 and 2010. Therefore, the information established by the methodology with respect to RR and the other years analyzed for the historical analysis of land use and land cover.	
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 project validation
Evidence Provided by Organization:	Ref. 69: Reviewed Project description Ref. 70: GIS files
Findings for Evaluation of Evidence:	The proponent formulated and included the forest cover benchmark maps over the reviewed project description and has provided deforestation maps for the reference region over the period specified in the project description (ref 69). The project proponent has also presented the GIS files used for its generation (ref 70).
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	04/17
Standard & Requirement:	VM0015, Part2, step 2.5 - Map accuracy assessment
Report Section:	--
Description of Non-conformance and Related Evidence:	
According to step 2.5 of the used methodology, all maps produced on step 2 must be evaluated, attending the 90% accuracy for of forest cover benchmark maps and 80% for each land use and land cover map. The table 17 (ref. 1), shows the map accuracy assessment results through the error matrix for the year of 2012, the most recent date. The 89 points randomly distributed and used for the map accuracy assessment were not made available for the audit team, making it impossible to assess the conformity.	
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 project validation
Evidence Provided by Organization:	Ref. 71: Classification Accuracy review
Findings for Evaluation of	The proponent presented the set of points used for the accuracy

Evidence:	classification and accuracy analysis in question, made for the last year of the reference period for calculating and delineating the baseline and in accordance with the methodology adopted by the project (ref 71). The proponent showed the accuracy of its classification through "kappa indexes", which show percentages of success above 90% in all classes considered. The audit team performed an independent analysis on the images, using the same control points provided by the proponent, reiterating their conclusions.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	05/17
Standard & Requirement:	VM0015, Part2, step 2.6 - Preparation of a methodology annex to the PD
Report Section:	--
Description of Non-conformance and Related Evidence:	
The step 2.6 from the used methodology, recommends that same sensing data source used for the baseline development to be used for the project monitoring. The project proponent used on its baseline analysis, data from PRODES, however, on the preparation of the methodology attached to the PD – Ref. 1 (page 63 & 64), the proponent will carry out all the necessary geoprocessing and remote sensing to evaluate changes on land use and land cover throughout the project's duration. It would be an acceptable approach by, as long as new sensing data were used, with superior quality and resolution to the data used for the baseline definition. However, the proponent, on page 63 of the PD, ref. 1, item A – Data acquisition, presents that the special resolution of the images that will be acquired, must be equal or superior to the ones used by PRODES, go against the methodology orientation; since this approach will potentially diminish the monitoring quality, negatively interfering with the ex post project evaluation	
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 project validation
Evidence Provided by Organization:	Ref. 69: Reviewed Project description
Findings for Evaluation of Evidence:	The proponent has revised the project description to clarify that the same source of remotely sensed data and data analysis techniques used to set the baseline will be used in the monitoring period, through PRODES data.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	06/17
Standard & Requirement:	VM0015, Part2, step 3.1 - Identification of agents of deforestation
Report Section:	--
Description of Non-conformance and Related Evidence:	
The methodology used to correlate existing deforestation in the Reference Region, Leakage Belt and Project Area with the existing deforestation agents groups was done based on the "Terra Class" Project (table 18 of PD - ref.1, p.66). The "Terra Class" project, from INPE (National Institute of Spatial Research) maps the land use and land cover showing different land use categories occupation percentages. This way, it is not clear what were the criteria used by the proponent to establish the relation between different land use and occupation (mapped by Terra Class), with the identified deforestation agents, as well as the relative importance of each of these deforestation agents present at the reference region.	
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 project validation
Evidence Provided by Organization:	Ref. 74: Almeida et al_2016
Findings for Evaluation of Evidence:	The proponent presented a scientific paper (ref. 74) that corroborates his approach, that is, through which it is possible to make the correspondence between land use and the performance of different deforestation agents, influenced by different drivers. The audit team understands the scientific article to be reputable and the agent and driver identification approach as valid.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	07/17
Standard & Requirement:	VM0015, Part2, step 3.5 – Conclusion
Report Section:	--
Description of Non-conformance and Related Evidence:	
The audit team does not understand the evidence used by the project proponent to determine future trends on deforestation in the project area as conclusive. The activities of deforestation agents and drivers is given on a distinct manner in different land categories at the region. The audit team understands that the deforestation dynamic elaborated by the proponent on	

the Project design, considering agents, affecting drivers, and its own chain of events that leads to deforestation makes sense at the reference region, especially in relation to the low governance in public areas but not in private areas, such as the Project area where good territory governance and effective natural resources management are observed. Therefore, the audit team confirms that the baseline scenario proposed on the PD is coherent to the reality found at the reference region, but it lacks credibility in relation to the Project area. This analysis was corroborated by field interviews, done with land owners of it surrounding area, rural settlements representatives as well as with project's forest management collaborators, who affirm the farm does not suffer from invasion problems. These testimonials can also be corroborated by the project area spatial analysis where no unplanned deforestation was monitored since the project's start date, or even during the reference period (ref. 19, 21 & 22). In other words, there are evidences of failure in the deforestation agents groups and deforestation drivers identification, or there is no correspondence between the deforestation dynamics existing in the project area and the reference region.	
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 project validation
Evidence Provided by Organization:	Ref. 69: Reviewed Project description Ref. 75: "A Atividade Madeireira na Amazônia Brasileira_Imazon_2009" Ref. 76: Technical report Ecoporé 2015 Ref. 77: Dossiê Urupá_Biofilica_18Ago2017
Findings for Evaluation of Evidence:	The proponent reviewed the project description, redefining the agents and drivers of deforestation, to explain the context and the way in which they operate in the reference region. The proponent defines four groups of deforestation agents, listed here in simplified form: 1) illegal loggers, 2) landowners who carry out forest suppression in their own areas, 3) "grileiros"⁴ and squatters, and 4) farmers. In the rationale presented by the proponent the groups of agents identified are interrelated to create the dynamics of deforestation in the reference region, which begins with forest degradation caused by illegal logging, invasion and land grabbing, and ends with land concentration and change in land use. The associated drivers are related to wood (illegal extraction), land (grabbing), livestock and agriculture (carried out under land tenure concentration). The chain of events described by the proponent is well-known in the Brazilian Amazon and corroborated through scientific studies and technical reports (ref 75 and 76). The audit team then, recognizes the deforesting agent groups described

⁴ Grileiros: invaders that forge land titles. In Brazil, grilagem is the falsification of documents to illegally take possession of vacant or third-party lands, as well as undivided buildings or buildings. The term also refers to the sale of land belonging to the public or private property through falsification of documents owned by the area.

	performance and the existence of their related drivers over the reference region. The proponent still discourses about the underlying causes of deforestation, listing factors associated with the market, real estate speculation, politics, impunity for environmental crimes, cultural factors, among others. Finally, the proponents conclusively attest that the evidence raised in their baseline analysis explains the relationships between the agents, drivers, underlying causes and the deforestation pressure in the reference region. According to the proponent the same deforestation pressure occurs in the project area. To corroborate its claim, the proponent refers to invasion cases in private properties and forest management areas that, by having a facilitated road access structure, were totally depleted by the deforestation agents described in the PDD (ref. 77), when they ceased their exploitation activities thus losing their presence and governance over the area.. The audit team agrees with the proponent's conclusion about future deforestation trends in the reference region and admits as plausible that the same pressures manifest themselves in the project area in situations that result in governance loss.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	08/17
Standard & Requirement:	VM0015, Part2, step 4.1.1 - Selection of the baseline approach
Report Section:	--
Description of Non-conformance and Related Evidence:	
The proponent uses the historical average approach for the deforestation rate calculus and future deforestation projection on the baseline scenario (VM0015 v1.1, part 2, step 4.1.2). For justifying this approach, the proponent assumes that the conclusive evidence originates from the agents and deforestation drivers analysis, but in contrast, assumes that there is no significant correlation between the variables that quantitatively explain the deforestation and the deforestation itself, on the reference period, for determining the baseline. To support its affirmation, the project's proponent compares log wood production and cattle flockwith annual deforestation rates on the reference period (Ref. 1, figures 20 & 21). The audit team confirms that the variables in questions cannot be logically correlated to the annual deforestation rate, because 1) the extraction of illegal wood, even if considered equal to the state log production (for rationale reasons), leads primarily to the forest degradation stage and only at a second moment, to deforestation itself; and 2) the size of the cattle population represents a cumulative parameter, as the annual deforestation rates vary, increasing and decreasing, year by year. This way, the audit team confirms that the approach "a" for deforestation rates calculus by historical average done by the proponent requires additional rationale. In function of the lack of conclusive information relating to the baseline approach selection process,	

especially on the correlation between the variables chosen and their supposed deforestation effects, the audit team confirms that the proponent did not present the necessary elements for the conformity of its analysis against the methodology requisites.	
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 project validation
Evidence Provided by Organization:	Ref. 69: Reviewed Project description
Findings for Evaluation of Evidence:	The proponent has revised his choice of approach for baseline definition in the project description (ref 69). Based on the identified deforestation drivers, the proponent compares two specific variables, namely: 1) annual production of wood in logs and 2) annual increase of the cattle herd, with annual deforestation rates, to prove the lack of a positive correlation and thus supporting the choice of the baseline approach "a", which recommends the use of historical averages for deforestation rates calculation . In this comparison effort, the proponent shows r^2 values lower than [0.5] for both selected parameters. In relation to the proposed revision, the audit team confirms that 1) the proponent has reiterated his choice of the parameter related to illegal logging and 2) corrected the parameter related to the "livestock" driver, which now shows the increment in the herd, a Parameter that varies annually in a non-cumulative way. The audit team understands the choice of parameters as appropriate due to their intrinsic relation to the deforestation drivers; Agrees with the results of the comparative analysis carried out by the proponent, due to the low r^2 results evidenced and, finally, with the choice of the baseline approach to calculate deforestation rates by historical average, closing the NCR.
NCR Status:	CLOSED
Comments (optional):	The analysis of deforestation agents and drivers leads to a conclusive result, that is, to a verifiable cause and effect relation between the existence of these agents and drivers and deforestation in the reference region.

NCR#:	09/17
Standard & Requirement:	VM0015, Part2, step 4.2.2 - Preparation of factor maps.

Report Section:	--
Description of Non-conformance and Related Evidence:	
The methodology foresees the preparation of the factor maps, using mainly two approaches: Empiric and Heuristic. The project's proponent adopted the empiric approach to create factor maps (Ref. 1, table 22). One of the factor maps typically used on the modeling and that has a strong influence over the deforestation potential is the distance from the old deforestation, dynamic characterized by frontier deforestation. This map was one of the selected by the proponent to consider spatial variables that most likely explain the patterns of baseline deforestation in the reference region. On table 22, Ref.1, the proponent present the data source for the variable (distance from the old deforestation) originating from PRODES data elaborated by INPE, however is it known that PRODES maps any deforestation area above 6,25 ha (Ref. 24) not differentiating planned or unplanned deforestation. The fact that the proponent has not filtered the different types of deforestation ended up resulting in an area with high deforestation potential in the middle of Manoa Farm, known as CEFLOM. The audit team could evaluate at field that the planned deforestation for CEFLOM creation would not be responsible for new deforestation on its surroundings, bearing in mind that the place's objective is being a reference of tropical forest management and function as a place for the replication of good experiences accumulated by Manoa Farm over the last decades, regarding forest management.	
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 project validation
Evidence Provided by Organization:	Ref. 78: Reviewed Spatial Modeling Ref. 69: Reviewed Project description
Findings for Evaluation of Evidence:	The proponent uses the EGO Dynamics program for the projection of future deforestation in the reference region. The program considers the variables represented by the factor maps and the forest cover map. By means of the "Weights of Evidence" (WoE) algorithm, the program selects the pixels with the highest risk of deforestation as a function of the change in the spatial configuration in the reference region during the model calibration period. Among the variables considered, the ones that presented the greatest weight were: distance from old deforestation, distance from roads, land category, vegetation class, soil type and slope of land. Considering that Ceflom was built in 2013, it is understood that the conversion of the forest area for its construction did not influence the model calibration, which occurred between 2000 and 2007. Therefore, it is understood that Ceflom has not been responsible for the weight of this variable and its consequent influence on the deforestation projection in the project area.

	Finally, understanding that the model created has exceeded the minimum acceptable threshold in its confirmation phase and that the existing roads within the project area would serve as access routes to the deforestation agents in a predicted situation in the baseline scenario, the audit team Closes the NCR.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	10/17
Standard & Requirement:	VM0015, Part2, step 4.2.2 - Preparation of deforestation risk maps e VCS Standard v3.5, seção 4.1.6.
Report Section:	--
Description of Non-conformance and Related Evidence:	
Step 4.2.2 of the methodology, ref. 7, establishes that several risk maps must be created using different combinations of the explanatory variables, to allow the comparison between them and, therefore, the selection of the most accurate map. The project's proponent presented a single map having 4 variables that potentially explain the deforestation at the reference region (land structure: settlements, private land and conservation units; vegetation type; distance from old deforestation and distance to roads; ref. 1). The proponent approach makes it impossible to accomplish the comparison between other deforestation risk maps having other explanatory variables combination that could assist on a sensitivity analysis for the selection of the most accurate one. Because the proponent did not present other risk maps that could aid in a sensitivity analysis for the selection of the most accurate, the audit team understands that this point does not comply with the methodological requirements.	
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 project validation
Evidence Provided by Organization:	Ref. 69: Reviewed Project description Ref. 79: Reviewed FOM analysis
Findings for Evaluation of Evidence:	The project proponent carried out the calibration and confirmation steps of the deforestation modeling and calculation of the figure of merits obtaining a value of 73%, thus, above the threshold determined by the methodology. This threshold is equivalent to the relative percentage of between change in land use change in the project area and reference region. (ref 69)

NCR Status:	CLOSED
Comments (optional):	None

NCR#:	11/17
Standard & Requirement:	VM0015, Part2, step 4.2.3 - Selection of the most accurate deforestation risk map e VCS Standard v3.5, seção 4.1.6.
Report Section:	--
Description of Non-conformance and Related Evidence:	
Step 4.2.3 (approach A) of the methodology adopted in the project description establishes that the final deforestation risk map should use the values of the calibration and confirmation period. The proponent presents (ref.1) only one risk map, figure 23, which is in prior step to the model confirmation process; It is not clear whether it only covers the values of the calibration period or whether it covers both the calibration and confirmation year.	
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 project validation
Evidence Provided by Organization:	Ref. 69: Reviewed Project description Ref. 78: Reviewed Spatial Modeling
Findings for Evaluation of Evidence:	In an interview with the audit team, the project proponent explained the process of calibration and confirmation of the deforestation model, relying on specific support documentation (ref 78) and stressing that it used both periods in question to manufacture the risk map in the PD updated version (v.2.0), (ref 69, fig 23).
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	12/17
Standard & Requirement:	VM0015, Part2, step 7.1.1 - Ex ante estimation of actual carbon stock changes due to planned activities
Report Section:	--
Description of Non-conformance and Related Evidence:	
According to the methodology if there is a significant change in carbon stocks due to a project activity, this change must be estimated ex-ante and ex-post measurement. The proponent did not present any analysis or significance test of the planned carbon stock change due to the forest exploitation that would allow a decision to be taken to disregard this change (ref.1).	

Regarding planned deforestation (yards and roads of forest management), a value of 27ha was adopted, in the understanding of the audit team, without adequate reference. Holmes et al. (2002) argue that less than 10% of the UPA area is impacted by forest management activities. However, it is known that the average area of UPAs already exploited at Fazenda Manoa is 2,353 ha, following Holmes's logic, the average planned deforestation in UPAs would be up to 235.3ha. The 27 ha of deforestation adopted by the proponent represent only 1.16% of the average area of a UPA.	
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 project validation
Evidence Provided by Organization:	Ref. 80: West et al_2013 Ref. 81 Revised carbon calculation spreadsheet
Findings for Evaluation of Evidence:	The proponents construct the reasoning that the emissions from the forest management activity were conservatively excluded from the project, due to the net positive carbon increment, caused by the regeneration and growth of the trees after the forest exploitation, supporting their claim with scientific articles (ref 80). The audit team confirms that disregarding emissions related to management is valid not only because of the atmospheric carbon absorption effect, which is recognized in the post-logging environment, but also because forest management activities are present in both the baseline, as in the project scenario. It should also be noted that the carbon stocks in the project area were calculated with parcels established in managed and unmanaged areas. In other words, the average found was influenced by inventories in areas managed in different years, which means that forest management effect on inventories was considered in the emissions reduction calculation in a broader sense. The proponent has revised his emission calculations caused by planned deforestation as a function of the infrastructure required for the management, considering the information available in post-exploratory reports that calculate open area due to the construction of primary, secondary and forest management yards. The average value used was 35.88 ha, corresponding to 1.59% of the annual operational unit in Portuguese: UPA) and was considered as plausible by the audit team, judging the management standard practiced on the farm (ref 81).
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	13/17
Standard & Requirement:	VCS Standard v.3.5, requisite 3.5.1 VM0015 v1.1 - Passo 4.1.2
Report Section:	--
Description of Non-conformance and Related Evidence:	
The proponent made a methodological deviation which was not relevant to the equation used to determine the deforestation rate in the reference period for baseline calculation. The equation adopted is equivalent to an equation proposed by Puyravaud (2003, ref. 32), thus differing from the equation required by the methodology used in the project design, in Step 4.1.2. The audit team understands the approach as conservative, but does not conform to the VCS standard requirements, which determine that methodological deviations are relevant only when related to "data and parameters available during validation", "monitored data and parameters" or " monitoring plans", (Ref 01).	
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 project validation
Evidence Provided by Organization:	Ref. 81: Reviwed carbon calculation spreadsheet Ref. 69: Reviewed Project descripton
Findings for Evaluation of Evidence:	The proponent revised his GHG emission reduction estimates to adopt the correct equation for the deforestation rates calculation following the methodology requirements (refs 69 and 81).
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	14/17
Standard & Requirement:	VM0015 v1.1 - Part 2 - Step 1
Report Section:	--
Description of Non-conformance and Related Evidence:	
The reference region described comprises a total area of 1,612,627 ha, an area 22 times larger than the project area. The analysis of criteria that demonstrates similarity and representativeness between the project area and the reference region, considering aspects of landscape configuration (altimetry, precipitation and slope) and ecological conditions (vegetation), for spatial definition of the reference region, was not evidenced by the project proponent in a transparent manner, so as to allow ample reconstruction of the methodological approach employed and thus to determine compliance with the adopted methodology. In addition, the audit team understands that there is a disparity between the project area and the reference región conditions, as regards the "socio-economic and cultural aspects of the region", inother words, the land-ownership structure, since in the reference region it observes the existence of large extensions of public areas (ref.1, fig.13), where the deforestation dynamics are	

remarkably different from those in private areas, such as the area of 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 project validation
Evidence Provided by Organization:	Ref. 69: Reviewed Project description
Findings for Evaluation of Evidence:	The proponent reviewed the project boundaries to consider land aspects and present an analysis of similarity criteria between project area and reference region (ref 69). In their analysis of similarity, the proponent lists the groups of deforestation agents identified and acting in the reference region, namely: 1) illegal loggers, 2) landowners who carry out forest suppression in their own areas, 3) "grileiros" and squatters and 4) farmers. The audit team confirms that the deforestation agents in question would act in the project area, on the influence of the same existing drivers in the reference region, in the absence of the project activities and in a context of loss of governance over the area, which is provided in the alternative scenarios for project implementation. The proponent also analyzes similarity criteria regarding landscape configuration and ecological conditions, such as: 1) type of vegetation, 2) elevation, 3) slope and 4) precipitation. Table 10 shows the occurrence and variation range of each parameter considered to prove the similarity between the project area and the reference region for the considered parameters. Finally, the proponent considered the socioeconomic and cultural conditions of the project area and the reference region to demonstrate their similarity. In this component of the analysis, the proponent proves that the land situation, legal status, ownership and legal framework applicable to land in the project area also is applicable to the reference region (ref 69, fig 13). The audit team confirms that the reference region has been demarcated in observance of the similarity criteria set forth in the adopted methodology and is therefore in compliance with the VCS standard.
NCR Status:	CLOSED
Comments (optional):	None
NCR#:	15/17
Standard & Requirement:	VM0015 v1.1 - Part 2 - Step 1

Report Section:	--
Description of Non-conformance and Related Evidence:	
In an independent check, the audit team noticed that several evidences and documents of land regularization (Refs 5, 9, 10, 11, 12 and 13) and environmental (Ref 14) conflict in the declaration of total area of the rural property. This aspect was not addressed by the proponent in the project design , so that there are uncertainties regarding the definition of the net area and spatial delimitation of the project area. In addition, the project design and the technical study for the definition of design limits and baseline determination (ref. 1, table 10 and ref.2, table 1) show that the area-based quantification of " Forest "was not respected when in the spatial delimitation of the project area. Areas with deforestation planned after 2000 (ten years prior to project start date) were not disregarded in the project area for the construction of the property and infrastructure of sustainable forest management activities (primary and secondary roads, courtyards and others). The audit team visited areas in the field (accommodation and dining rooms, operational monitoring bases among others), noting, by direct observation, considerable extensions of open areas in the project area. The proponent did not present a quantitative estimate of planned deforestation, despite the collection of satellite images (Refs 15 and 16) and the georeferencing of these points (Ref. 17), to demonstrate the existence of these non-forest areas. In addition, references 06 and 17 also show sustainable forest management activities after the year 2000 and, consequently, activities that lead to planned deforestation in the project scope.	
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 project validation
Evidence Provided by Organization:	Ref. 82: Rapid eye Images Ref. 12, 13 e 14: Land titles
Findings for Evaluation of Evidence:	The proponent has reviewed the project documentation to clarify how the project area has been delimited. The proponent supported the vertices and limits indicated in the Farm's land title (In Portuguese: Certidão de Inteiro Teor) and disregarded ineligible areas to the project, observing the methodology applicability conditions. The area presented in the CCIR is equivalent to that of the rural property registration receipt – CAR (In Portuguese: Cadastro Ambiental Rural) (Refs. 12, 13 and 14). The audit team performed an independent check based on the shapes reviewed and made available to the team to confirm the project area boundaries . In order to check eligible areas for the project, the proponent used Rapid Eye images (ref 82) to identify and exclude open areas depending on the management activity, considering primary, secondary roads, forest management yards, etc. The audit team performed an independent check using the images, the shapes of

	the excluded areas and shapes of the forest management structure provided by the proponent. The audit team analysis demonstrated the accuracy of the delimitation carried out by the proponent, that is, no open areas were found within the project boundaries prior to 10 years from the start date of the project.
NCR Status:	CLOSED
Comments (optional):	In its analysis of the shapes provided, the audit team verified the existence of secondary roads not excluded by the proponent at the project area. Although secondary roads are constructed as permanent structures in forest management, the rapid eye images did not show the absence of forest cover on the road mesh, which could be explained by the growth of the trees in the annual production units in question. Thus, the risk of a non-compliant delimitation of project boundaries is characterized, considering the eligibility criteria set forth in the methodology adopted. The note in question was made in a specific way through OBS # 05/17.

NCR#:	16/17
Standard & Requirement:	VM0015 v1.1 - Part 2 - Step 1
Report Section:	--
Description of Non-conformance and Related Evidence:	
The audit team's special analysis evidenced the misleading delineation of the leakage belt due to the inclusion of non-forested areas outside the project area. The project description is therefore not compliant with the adopted methodology (refs 7 and 8). The proponent uses the option 2 - Mobility Analysis for demarcation of the leakage belt, without presenting the parameters used for multicriteria analysis. It was only presented the mobility analysis results in the PD (Ref. 1, Figure 12 - Page 54), over the technical study for baseline definition (Ref. 2, Figure 4 and Page 9) and in the collection of images and spatial files and maps of the project (ref 18).	
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 project validation
Evidence Provided by Organization:	Ref. 69: Reviewed Project description
Findings for Evaluation of Evidence:	The proponent has revised the project description to redefine its spatial boundaries. The leakage belt was defined based on a multicriteria analysis, derived from the deforestation risk map and of the land-owner structure features for the region. The proponent

	selected the highest risk pixels within private areas, thus using spatial information, considering the performance of deforestation groups and agents under the influence of specific drivers and, therefore, presenting a transparent and valid methodological approach.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	17/17
Standard & Requirement:	VM0015 v1.1 - Part 2 - Step 1
Report Section:	--
Description of Non-conformance and Related Evidence:	
In an independent check the audit team evidenced that the leakage management area delimitation is not in accordance with the methodology adopted. These areas were delimited to the south of the project area and spatially cover both forest areas and deforested areas in private land ownership (refs 1 and 2).	
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 project validation
Evidence Provided by Organization:	Ref. 69: Reviewed Project description
Findings for Evaluation of Evidence:	The proponent has revised leakage management area spatial delimitation to exclude areas with forest cover and to include new areas. The current limits of the leakage management areas correspond to those families living on settlements existing in the reference region and also the area of Ceflom. The audit team considers the selection criteria compatible with the purpose of a leakage management area and appropriate to the implementation of associated mitigation measures, namely: the implementation of training, training and lectures aimed at sustainable socioeconomic development, and activities aimed at the development of associations of small local producers. In addition, the audit team reviewed the shapes reviewed and provided by the proponent independently to assess the occurrence of forest cover areas within the leakage management area, concluding that the proposed new delimitation complies with the adopted methodology.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	18/17
Standard & Requirement:	VCS Standard v.3.5, requirement 3.7
Report Section:	--
Description of Non-conformance and Related Evidence:	
The project started on December 30, 2010 (item 1.6, ref.1), and therefore does not complete its validation in up to 5 years. VCS Standard requirement 3.7.3 states that AFOLU projects initiated after 2008 must be validated no later than five years after their start date. In this way, the project is considered ineligible for validation. In addition, the audit team evaluates that the project start date was arbitrarily defined by the proponent as the Manoa's farm FSC recertification date, an aspect that does not include the set of valid activities to define the parameter in question, for not being tied to activities that have proven to have reduced deforestation in the project area in relation to the projected baseline scenario, effectively reducing GHG emissions.	
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 project validation
Evidence Provided by Organization:	Ref. 69: Reviewed Project description
Findings for Evaluation of Evidence:	The proponent revised the project description to consider specific REDD + activities and resulted in the effective reduction of GHG emissions in the project area in relation to the baseline scenario. In this effort, the proponent identified the date of 01 January 2013, which corresponds to the beginning of the activities to prevent deforestation and protection of the carbon stocks of Fazenda Manoa guided by the REDD + project. These activities include training, training and environmental education activities focused on the surrounding people among other stakeholders, activities focused on the deforestation monitoring, patrimonial surveillance of the farm and integrated activities to the execution of the forest management itself. Specific examples of these activities and carried out at the beginning of the project include the orientation of annual exploitation units at the north of the farm to ensure physical presence in the region, as well as the destruction of access roads and the construction of monitoring stations (. Other activities already carried out to date include trainings of SEDAM technicians, environmental education activities with municipal children and workshops on REDD + in Ceflom. The audit team understands activities as essential to the deforestation controlling in the project area, not only for establishing a forest protection plan, but also for working directly with the deforestation agent groups in the region.

NCR Status:	CLOSED
Comments (optional):	None

NCR#:	19/17
Standard & Requirement:	VCS VT0001 v3.3
Report Section:	--

Description of Non-conformance and Related Evidence:

The proponent uses VCS tool VT0001 v3.0 for analysis and demonstration of project additionality (ref.1 - Section 4.6). In this sense, it elaborates baseline scenarios that are alternative to the scenario with the project and perform an investment analysis, but fails to conduct a common practice analysis.

Considering the data presented by the proponent in the project design (ref.1), the audit team disagrees with the proponent regarding the plausibility of scenario 1 occurrence in the project area, that is, at the Manoa farm. The agents and drivers of deforestation act differently in different land categories in the region. The audit team confirms that the deforestation dynamics developed by the proponent in the project description, considering agents, drivers, underlying causes and the chain of events that leads to deforestation make sense in the reference region, especially in relation to public areas with low Governance and not in private areas, such as the project area, where good territorial governance and effective management of natural resources are observed. Thus, the audit team confirms that the baseline scenario proposed in the project design is consistent with the reality found in the reference region but lacks credibility in relation to the project area. This analysis was corroborated by field interviews conducted with landowners in the area, representatives of rural settlements and with the forest management enterprise's own collaborators.. These statements can also be corroborated by the spatial analysis of the project area where no unplanned deforestation was monitored, that is, caused by the deforestation agents described in the project design, from the project start date or even in the reference period (refs 19, 21 and 22). In other words, the audit team does not consider scenario 1, identified by the project proponent as an alternative to the scenario with the project, as credible and plausible in the project area.

In addition, in relation to the investments analysis, the proponent argued that the inclusion of the costs of carbon project activities to the costs of forest management would worsen their financial indicators, making it less attractive than at least one of the alternative scenarios described. The proponent also argues that investment in the management activity in the region is of high risk, due to institutional and market factors. The audit team understands, however, that the documentation presented, such as references 25 and 26, Tab. 14, do not reflect difficulties for the maintenance of such instruments, presenting profitable results and financial stability of the management project. In this sense, the auditor does not have enough evidence to evaluate the conformity of the application of the additionality tool and that a greater detail of the information contained in the presented documents is required, such as details of management activities and cash flow of Forest Management, as well as the of previous years statements results that can prove such an arguments.

Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above.
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	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 project validation
Evidence Provided by Organization:	Ref. 69: Reviewed Project description Ref. 83: Seringal Urupa Maps Ref. 84: Reviewed project financial spreadsheet
Findings for Evaluation of Evidence:	The proponent has revised its project additionality analysis to consider alternative and credible baseline scenarios for project activities (ref 69). In summary, the proponent considers the baseline scenario in which the identified deforestation agents and drivers would operate in the project area causing emissions due to unplanned deforestation in an environment characterized by loss of area governance. In other words, the scenario described points to the risk of invasion of the farm in the absence of the project activities and forest management activities, which would eventually reduce the physical presence in the site, creating an environment conducive to the action of the identified agent groups and of proven performance in the region of reference. The proponent still considers the scenario in which additional and complementary activities of protection to the farm would occur without registration of the project in the VCS, that is, without the financial resource coming from the commercialization of carbon credits. The audit team considers both alternative scenarios described as plausible, due to the acknowledged activity of the deforestation agents groups identified in the reference region, of the recognized difficulties of the forestry management enterprises in the sector that operate in an environment characterized by the effective lack of law enforcement, as well as, specifically, the financial operational result of Fazenda Manoa in recent years, which characterizes an investment of an unattractive nature due to the variation over the net income for the year, the negative operating results in the period analyzed, the trend of reduction in the volume of timber harvested and mainly the internal rate of return associated with the risk inherent in the activity. It is worth noting that the proponent has also reviewed its additionality analysis, including the common practice analysis, in which the "Seringal" Urupa is identified in the reference region, a private area with an approved management plan for 6,750 ha that has been invaded and has been illegally and systematically exploited by the same deforestation agents identified in the project description (ref 83). The common practice analysis is corroborated by local media reports (ref. 85) denouncing illegal activities of this nature in the region. Still, in relation to the investment analysis, a new financial model

	was presented, more robust and substantiated, covering all project activities and covering forest management (ref. 84). The investments analysis compares economic indicators generated for the baseline scenario (continuation of pre-project activities in environment with risk of invasion) and project scenario (forest management with additional protection practices) without the financial resource arising from the commercialization of carbon credits. The comparison shows worse financial indicators for the project scenario without registration, which is sufficient to demonstrate project financial additionality, following the precepts of the used VCS tool.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	20/17
Standard & Requirement:	VM0015 - Part 3 - Section 6 - Step 6
Report Section:	--
Description of Non-conformance and Related Evidence:	
The project documentation analysis demonstrates a non-representative sampling of the forest reservoir on the farm (ref 1, fig 28), considering the northern region of the project area, where no sample units were installed by the proponent. This specific region is under lease for the purposes of sustainable forest management to a third party, as declared by the proponent, besides being an area prone to loss in carbon stocks, considering the project description deforestation modeling. The audit team confirms that there is sufficient reason for further research into the carbon stocks in this region because the area constitutes a potential different stratum. Furthermore, even considering that the proponent indicated in the forest inventory (ref. 4) an error of less than 10% in the biomass stock estimates and also its proportionality criteria for sampling intensity over the strata, the proponent did not use the equation A3-1, as Suggested in the APPENDIX 3 of the VM0015 (Methods to estimate carbon stocks) to define the sample intensity and determine the optimal number of sample units (sample adequacy) of the different Strata.	
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 project validation
Evidence Provided by Organization:	Ref. 69: Reviewed Project description Refs.: 23, 27, 28: Forest inventory
Findings for Evaluation of Evidence:	The proponent increased its sample intensity, including four new conglomerates in the area leased to another forest management

	operator. The results of the forest inventory and determination of carbon stocks were duly revised by the proponent, considering the increase in sample intensity (refs 23, 27, 28). The proponent presented the calculation of the optimal number of plots, following the methodology adopted in the project. The audit team reviewed the spreadsheet and the application of the equation, considering the project according to methodology and assertion on carbon stocks as accurate.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	21/17
Standard & Requirement:	VM0015 - Part 3 - Section 6 - Step 6
Report Section:	--
Description of Non-conformance and Related Evidence:	
To estimate the carbon stock of the post-deforestation classes projected for the Project Area and Leakage Belt in the baseline scenario and in the non-forest class in the Leakage Management Areas, the proponent used an average value from literature, referenced in FEARNSIDE (1996). Despite understanding local studies and well-known scientific knowledge, the reference has more than ten years of publication and thus does not demonstrate compliance with section 6.1.1 of VM0015, which guides the use of references with less than ten years of publication referring to the date of publication. Beginning of the project. In this scenario, the audit team confirms that such an approach is not in accordance with the methodology 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 project validation
Evidence Provided by Organization:	Ref. 86: Wandelli_fearnside_2015 Ref. 69: Reviewed Project description
Findings for Evaluation of Evidence:	The proponent revised his baseline land use and land cover analysis, considering available literature (ref 86) and spatial data (ref 69) to redefine the average carbon stock per hectare in post-deforestation classes. Specifically, the value found was calculated by the average between forest carbon stocks in regeneration and pasture (ref.86), weighted by the relative proportion of each class of coverage in the project area (TerraClass - INPE). The publication used is recent and meets the eligibility criteria of the adopted methodology (step 6.1.1, a)).
NCR Status:	CLOSED

Comments (optional):	None
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NCR#:	22/17
Standard & Requirement:	CCB Standard Section G1.8
Report Section:	--
Description of Non-conformance and Related Evidence:	
The proponent does not explain the clear causal relationship between the “awareness process” that is intended as part of the project activities and the achievement of one of the project objectives related to local economic development and the empowerment of social groups. For example, it is not defined what concrete actions (educational activities, training, capacitation) will be offered, for what reasons and for what social groups exactly, in addition to those groups of workers who will perform the functions of certified forest management.	
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 project validation
Evidence Provided by Organization:	Ref. 69: Reviewed Project description
Findings for Evaluation of Evidence:	The proponent has revised the project description to demonstrate the social project proposal more clearly in the project description. The project seeks to generate benefits for the local community, with a focus on sustainable socio-economic development and environmental awareness. To this end, the project will carry out activities to promote forest conservation, through training, workshops, courses and lectures, aimed at families living near Manoa Farm in Cujubim and students from the region, using the Ceflom space. The audit team confirms that the social proposal of the project is clear and appropriate to the target public in question.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	23/17
Standard & Requirement:	CCB Standard Section G1.9
Report Section:	--
Description of Non-conformance and Related Evidence:	
The proponent establishes that the project community main objectives include the environmental	

awareness of families neighboring the project area and the young and university public of the state of Rondônia, aiming to improve the life quality of this population and the dissemination of local knowledge (Ref. 1, Section 1.1, page 10). However, it does not clearly state what the evaluation period of the social benefits generated by the project will be.	
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 project validation
Evidence Provided by Organization:	Ref. 69: Reviewed Project description
Findings for Evaluation of Evidence:	The proponent has revised the project description to define parameters and method of collecting data related to its social sphere. The parameters presented in the monitoring plan, namely: 1) number of training courses, 2) number of publications of activity reports, 3) number of producers benefited, 4) number of associations benefited, 5) gross revenue from new Activities implemented after courses and training, will have an annual frequency. Thus, the audit timeline understands that the evaluation period of the social benefits generated by the project is 30 years, as well as the project duration.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	24/17
Standard & Requirement:	AFOLU Non-Permanence Risk Tool, v3.3
Report Section:	--
Description of Non-conformance and Related Evidence:	
In regards to the non-permanence risk analysis, the proponent failed to assess the risk degree related to "Community Engagement", component. In the document "NON-PERMANENCE RISK REPORT MANOA REDD + PROJECT (Ref 33, page 9), component" Community Engagement ", item b), it is stated that less than 20% of the households within a radius of 20 km were consulted, there are no communities dependent on natural resources from the project area. This claim is corroborated by socioeconomic diagnosis (Ref 34), which makes the risk irrelevant in relation to this factor. Notwithstanding this, the proponent confers a grade 5 to this risk factor.	
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 project validation
Evidence Provided by Organization:	Ref. 87: Reviewed Non-permanence risk analysis
Findings for Evaluation of Evidence:	The proponent has revised its non-permanence risk report to reconsider the risk associated with this specific component, which now appears with a zero score.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	25/17
Standard & Requirement:	CCB Standard Section G1.5, G.1.6, G3.1, G3.3, G3.4, G3.5 e CM3.1, CM3.2, CM3.3, CM4.1 e CM4.3
Report Section:	--
Description of Non-conformance and Related Evidence:	
The proponent did not identify or correctly analyse the existent social groups over the reference region because he did not consider the correct definitions given by the CCB Standard on what characterizes a "Community" and what characterizes groups of "Other Stakeholders". Interviews with a sample of social actors at the reference region show that they can be characterized as "Other stakeholders". As it failed to identify the "other stakeholders", the proponent does not offer a list of actors that can be included in this category and does not show how consultation processes were made accessible to them or that the information was correctly disseminated. Also no communication methods to explain to the "Other Stakeholders" the details of the validation and verification process were found to be in place. A description is not presented in the PD (Ref 1) about how diverse actors could influence the project description design and its implementation through effective consultation. No project impact analysis and delineation of mitigation measures to this specific category was performed. Also, the proponent does not demonstrate the absence of net negative impacts on "Other Stakeholders". Finally, the monitoring plan was designed to address "Communities", that are not present over the project zone. Over the monitoring plan, part of the established parameters relates to "agricultural production". This parameter is not linked to the defined social project objectives that are mainly related to "environmental awareness" and "empowerment" . (Ref.1).	
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 project validation
Evidence Provided by	Ref. 69: Reviewed Project description

Organization:	
Findings for Evaluation of Evidence:	The project proponents understand that the previous description did not make clear the procedure for identifying stakeholders and applying activities aimed at this public. Therefore, the definition of social actors involved in the project was adjusted with the objective of clarifying the classification. Since there are no communities traditionally dependent on the project area or its surroundings, the project proponents changed the project social approach. Identifying a severe lack of technical assistance and access to public programs directed to small and medium farmers and other residents and the low value of forest areas compared to pastures as the main causes to deforestation in the region, the proponent focused on the creation of alternatives for "Other stakeholders". These alternatives would be related to forest productive chains development, such as non-timber products; to initiatives related to degrade areas recovering through agroforestry and intercropping systems; and also to responsible forest management. In this sense, relevant stakeholders were classified as "Other stakeholders" and considered over the project description. The public consultation strategy procedure was focused on public institutions and local social organizations, which in turn are included in the group of "other stakeholders" of the project, and these institutions directly represent the actors that would be involved in the project activities. In addition, the project intends to involve such institutions during the activities implementation, seeking support in direct communication with society. The project document shared during the public consultation process, as well as a copy of the letter presented to the public institutions were made available to the audit team. The "Community " section has been adjusted to CCB standard requirements and the project description has been remodelled to give more clarity to the context in which the proponent is and about what is the project social strategy.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	26/17
Standard & Requirement:	CCB Standard Section G3.7
Report Section:	--
Description of Non-conformance and Related Evidence:	

The proponent does not describe the measures necessary and taken to ensure that all other entities involved in the project design and implementation are not involved in any form of discrimination or sexual harassment.. In the PD document (Ref. 1, Section 3.1, page 44), the word discrimination appears only when it lists the International Labor Organization Convention No. 111 of 1958, ratified by Brazil on 03/03/1965, which provides for discrimination at employment and occupation conditions. Apart from this citation, the proponent does not disclose any measures to prevent involvement in forms of discrimination or sexual harassment.	
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 project validation
Evidence Provided by Organization:	Ref. 69: Reviewed Project description
Findings for Evaluation of Evidence:	The proponent has revised the project description, elaborating "Anti-Discrimination" protocols. The project strategy to deal with these issues and seek to mitigate possible impacts generated is based on the project communication channel and the application of evaluation questionnaires, which will be used to monitor the positive impacts of the project in function of its social activities. These questionnaires will also bring questions related to discrimination in a way that Manoa collaborators can bring to light situations in which, from their own perspective, discrimination or sexual harassment is occurring. .
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	27/17
Standard & Requirement:	CCB Standard Section G3.8
Report Section:	--
Description of Non-conformance and Related Evidence:	
The proponent has failed to establish a clear project procedure for receiving, analyzing, responding and attempting to resolve complaints within a reasonable timeframe for the REDD + project, regardless of the procedure and communication channel that already exists for Manoa Farm. The proponent has set up a new instance to handle complaints, a committee. However, neither the PD document (Ref.1) or complementary documents of the REDD + project management report in more detail the procedure of this committee: what are the responsibilities, deadlines and steps defined to receive, treat, respond, Document and arrange for possible redress when complaints are legitimate about the	

REDD + project.	
As there is only the idea of the committee and there is no procedure, the relevant social actors do not know this channel.	
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 project validation
Evidence Provided by Organization:	Ref. 69: Reviewed Project description
Findings for Evaluation of Evidence:	The proponent has reviewed the project documentation to better define relevant aspects of its communication channel. The structure of committee is formed by Manoa, Biofilica and Ecoporé; The protocols for receiving complaints already existing in the Manoa farm because its FSC certification and which also have a public ombudsman channel, as well as the deadlines for responding to complaints (30 days) are duly recorded in the project description
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	28/17
Standard & Requirement:	VCS program definitions v3.7 VCS Errata_Program Definitions, v3.
Report Section:	--
Description of Non-conformance and Related Evidence:	
<i>Biofilica Investimentos Ambientais SA and Triângulo Pisos y Panels Ltda.</i> Present themselves as project proponents. Biofilica identifies itself as the main project proponent, being responsible for the development and implementation of the project. The contact data, roles and responsibilities of both actors are specifically described in the project documentation (ref. 01, PD section 1.4). Biofilica is responsible for the execution of socioeconomic and environmental diagnoses and studies of baseline and carbon stock; The development and financing of the PDD (Project Design Document); The validation / verification and commercialization of credits, and finally, the co-management of the project throughout its duration and implementation of conservation activities. It is up to Triângulo to coordinate and control the project activities. Triângulo is the executor of the forest management operations in the farm that occur in synergy and complement the REDD + project activities. As reported in the PDD (ref. 08, Table 14), the maintenance of the current pattern of forest management is linked to the results and resources derived from the carbon project. The audit team confirms that the responsibilities are clearly stated in the project design and conform to the requirements of the CCB standard, but not in relation to the requirements of the VCS standard. To be considered a proponent of the project, the VCS standard determines that a given institution must necessarily have general control over the activities of the project that directly	

implicate in the reduction of GHG emissions in the territory. In this sense, it is not clear what Biofilica attribution would qualify it as proponent of the project in question.	
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 project validation
Evidence Provided by Organization:	Ref. 69: Reviewed Project description
Findings for Evaluation of Evidence:	The proponent reviewed the project description to clarify its attributions related to the effective reduction of GHG emissions. In this sense, it mainly focuses on monitoring activities on deforestation in the project area and for coordinating additional activities for the purpose of GHG reduction, within the scope of the project. The audit team confirms that monitoring is essential to guide specific activities to combat deforestation and that the coordination of additional activities, such as those addressed to stakeholders identified in the social sphere of the project, also play a key role, since they can potentially exercise influence over the Groups of identified deforestation agents groups.
NCR Status:	CLOSED
Comments (optional):	None

NCR#:	29/17
Standard & Requirement:	CCB Standard Section G4.3 e G1.12
Report Section:	--
Description of Non-conformance and Related Evidence:	
Based on analysis of the project's economic and financial planning and other documentary evidence (ref. 59, 60, 61, 62 and 63), the audit team does not consider that there has been an adequate flow of resources, effective and designed for the project implementation, in order to achieve the benefits to the project's climate, community and biodiversity. In addition, the enterprise also did not present documents that allow the evaluation of the financial health of the proponents. The proponent presents his estimates of revenue from the sale of carbon credits and defines the costs of the project (ref 61, Table 14). The premise of value for the sale of the volume of emissions is 10.00 R \$ / tCO₂. Four types of expenses are presented as costs a) personnel expenses, b) biodiversity research expenditures, c) social activities expenses, and d) climate expenditures. No details were presented for the analysis of the activities and costs involved in management operations and activities related to the carbon project. In the absence of this detail, especially in relation to the proposed social projects, it is not possible to evaluate whether the resources allocated are sufficient to conduct the activities. The financial result of the carbon project is based on the cash flow of the forest management operations ref. 59, Table 14. The cash flow for the	

management was elaborated from the result of Triângulo for the year 2015 (ref 63, Table 14). The annual net income estimate obtained in 2015 is used as a premise and projected for all project years - up to 2040 - which, in addition, exceeds the first cut-off cycle of the FMU, increasing the degree of uncertainty about the return of the operation. Management and weakening the premises adopted in the economic planning of the carbon project. Again, the lack of detail prevents a conclusive analysis on the existence of an adequate flow of resources for the implementation of project actions.

In addition to the above, the audit team noted specific inconsistencies in the project documentation and which compromise the compliance analysis of the project design with the CCB standard:

i. The document "Manoa Project - FC Carbon Assessment Plan" (ref. 61, Table 14) does not count cell I13 to determine the revenues in relation to the estimated emissions avoided. The amounts related to the payment of marketing fees (Pis / Cofins) in the sale of carbon are added to the value of gross sales. B) When considering sales with carbon sales in the project cash flow (item 1, Table 14), it disregards costs and fees. It is understood that analysis should be performed on the consistency of the assumptions and values of the documents.

ii. In the document "Result of the Triangle 2015 project" (ref. 63, Table 14), it is understood that a single income statement cannot reflect management performance over the entire cycle, which is conditioned by different conditions of the Production Units Annual (UPA), by the end of the cycle, but mainly for operational issues that can vary significantly in time.

iii. In the document "Manoa Project - FC Carbon Assessment Plan" (ref. 61, Table 14), the expenses with the carbon project are not very detailed. It is not possible to identify in what types of activities the resources will be allocated, and in this way it is not possible to evaluate their suitability. The social analysis document prepared by Ecoporé (ref 6, Table 14), whose results are also presented in reference 8, Tab 14, sets forth some propositions of activities to be carried out in the scope of social projects, but the planning of activities, as well as structuring costs are not presented. Likewise, details of activities and costs related to biodiversity, personnel and climate research expenditures are not presented.

The proponent did not submit the necessary documentation for the analysis and proof of the financial health of the project. The financial planning of the project (ref. 59, Table 14), as well as the operating result of Triângulo (ref. 63, Tab 14) make up two of the necessary evidences, but do not respond to the current financial situation of the projects involved in proposing Definitive form. The absence of documents such as the balance sheet, income statement for the past year, negative certificates of payment of legal fees and taxes, and the result of external accounting audits, among others, is an impediment to this type of analysis. In these documents, it is possible to evaluate assets to financial liabilities of the forest management activity, as well as of the companies involved in the carbon 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 project validation
Evidence Provided by Organization:	Ref. 69: Reviewed Project description Ref. 84: Reviewed financial spreadsheet
Findings for Evaluation of	The proponent adapted the cash flow of the project, updating it so

Evidence:	that it contemplates all the activities assertively and more coherent with the costs and revenues of the activities carried out and still pending of the project. To do so, a new analysis of the costs and returns of forest management was also presented. The spreadsheets were based on the information contained in the accounting and management controls of previous years. The worksheets presented, as well as accounting records and independent auditors of the balance sheet proponents allowed a better understanding of the assumptions used in the model and consequent greater robustness, besides allowing a probable scenario analysis to be presented. The proponent also gathered documentation to evaluate the financial health of the proponents and the company that conducts the forest management and processing of the wood. Thus, from the analysis of the documentation provided, as well as the analysis of scenarios for the project allowed the analysis that, in the short and medium term, the fulfilment of the activities could be compromised only by external and, therefore, unrelated factors the assumptions and cash flow of the project. Since the proponent can also document the financial health of the proponent the analysis of the auditors considered the satisfactory arrangements in fulfilling the requirement. It is worth noting that, from the cash flow presented, the financial reference of the project is established for future verification.
NCR Status:	CLOSED
Comments (optional):	None

1.2. 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.

OBS#:	01/17	Reference Standard & Requirement:	VM0015, Part2, step 2.4.2 - Interpretation and classification
Description of findings leading to observation:	According to step 2.4.2, of the methodology used - ref. 7, the minimum mapping area (MMA) should not be greater than 1 ha regardless of forest definition. The project proponent presented PRODES data for forest mapping of RR, LK and PA. However, PRODES data have a minimum mapping area of 6.25ha, according to page 7 of the PRODES-ref methodology. 4. As the VM0015 methodology establishes that the MMA criterion serves only as a general guide to good practice, the audit team confirms that an observation applies in the sense that the proponent throughout the project refines its MMA in the sense of Meet the guidelines of this methodology step.		
Observation:	Therefore, the risk of inaccuracy in the activities of interpretation and classification of images in the design of the project is pointed out.		

OBS#:	02/17	Reference Standard & Requirement:	VM0015, Part 2, Step 1.3
Description of findings leading to observation:	The proponent has conservatively selected the carbon reservoirs of the project (refs 1, table 11 and ref 2, page 12), and considers only the biomass quantification of the above and below ground tree reservoir in the baseline scenario. The other reservoirs were excluded, an approach allowed by the chosen methodology. However, there was no evidence of insignificant analysis of the wood products pool, justifying the exclusion of this reservoir. The audit team confirms that in almost all situations it is conservative to exclude a carbon reservoir from the project design and that, for this specific pool, its inclusion would only be justified in the case where the exploitation in the project scenario was reduced in relation to the expected baseline scenario.		
Observation:	Therefore, the risk of imprecision in the determination of significance in the change of carbon stocks in relation to this specific reservoir is pointed out.		

OBS#:	03/17	Reference Standard & Requirement:	CCB Standard Section G3.9
Description of findings leading to observation:	Based on field observations and interviews, the audit team confirms that the employee and outsourced workers form the main labour force involved and instructed and participating on the project activities. However, the training and capacitation procedures do not cover personnel rotation. Therefore, there is a risk that this capacitation will not reach newly hired staff or outsourced personnel from third party companies		
Observation:	There is therefore the risk that this training will not affect the newly hired team in the future, also considering the personnel of outsourced companies		

OBS#:	04/17	Reference Standard & Requirement:	VCS Standard item 3.11
Description of findings leading to observation:	The consultation process planned and executed by the proponent consisted solely in the distribution of project abstracts in written language, without face-to-face events.		
Observation:	There is also a risk that the choice of a language is unique and the non-planning of face-to-face events with oral and / or illustrated exchanges made it difficult to understand what the project is after all. The social actors interviewed say they do not understand what REDD + project is and its implications.		

OBS#:	05/17	Reference Standard & Requirement:	CCB Standard Section G3.1
Description of findings leading to observation:	The proponent claims that the project does not possess or intend to generate any other type of credit related to greenhouse gas emissions or removals indicated under the VCS program (section 1, section 3.5). However, Clause 1.2. Of the agreement between Triangulo and Biofilica (ref 64) points to the potential generation of credits linked to other environmental services.		
Observation:	The audit team understands the distinction between the scopes and methodological frameworks of the VCS standard and other systems for crediting and payment for ecosystem services, but has issued an observation to highlight the risk inherent in the potential non-alignment between project design and VCS standard in relation to other forms of environmental credit.		

OBS#:	06/17	Reference Standard & Requirement:	VM0015 v1.1 - Part 2 - Step 1
Description of findings leading to observation:	The proponent has reviewed the project documentation to clarify how the project area has been delimited. The proponent supported the vertices and limits indicated in the Certificate of Integer Content of the Farm and disregarded areas ineligible to the project, observing the conditions of application of the methodology. In order to check eligible areas for the project, the proponent used Rapid Eye images (ref 82) to identify and exclude open areas depending on the management activity, considering primary, secondary roads, forest management yards, etc. The audit team performed an independent check using the images and shapes of the excluded areas and shapes of the forest management structure provided by the proponent. The analysis of the audit team demonstrated the accuracy of the delimitation carried out by the proponent, that is, no open areas were found within the project boundaries prior to 10 years from the start date of the project.		
Observation:	In its analysis of the shapes provided, the audit team verified the existence of secondary roads not excluded by the project area proponent. Although secondary roads are constructed as permanent structures in forest management, the rapid eye images did not show the absence of forest cover on the road mesh in question, which could be explained by the growth of the trees in the production units in question. Thus, the risk of a non-compliant delimitation of project boundaries is characterized, taking into account the eligibility criteria set forth in the methodology adopted.		