FORTALEZA DO ITUXI REDD+ PROJECT VERIFICATION REPORT FOR N. S. DA CACHOEIRA DO ITUXI

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Summary:

This report shows the Fortaleza do Ituxi REDD+ project verification process results against VCS (version 3) standards. Its purpose is to systematically assess and report the project compliance with the VCS standard requirements indicating non-conformity reports (NCRs), forward action requests (FARs), and observations (OBSs). The evaluation was done through document analysis, interviews with interested parties and relevant actors, observations and measurements made directly in the field, considering a representative sample of the relevant project activities and different sites. The project initially contracted with Rainforest Alliance (RA) to conduct the validation. However, RA ceased providing services in the accredited scope, and the verification was transferred to S&A Carbon. The auditing process involved field and desk-based work in two different occasions, first from July 31th to August 04th, 2017 (under RA) and second from February 20th to February 24th, 2019 (under S&A). Verification activities performed by the validation/verification team (henceforth called, VVB) included: GIS analysis, forest inventory, interviews with residents from local communities and farm workers in the reference region, interviews with the REDD+ project managers, forest management operation staff and employees.

This REDD + project has reduced the emission of GHGs from unplanned deforestation in private areas. Developed based on the methodology VM0015 v1.1, the project proponent has estimated the GHG emission reduction of a total volume of 1,181,732 tCO2e over the first monitoring period, 15 December 2013 to 14 December 2017. The validation and the first verification were conducted simultaneously. 18 NCRs were raised and closed in the validation report. 01 NCR was raised and closed due to the verification process. 01 FAR and 01 OBSs were transcribed to this report. This document represents the final verification report.

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1 INTRODUCTION

S&A Carbon is accredited by the American National Standards Institute (ANSI) for the verification of Land Use and Forestry projects (Accreditation ID# 1207). The Instituto de Manejo e Certificação Florestal e Agrícola - IMAFLORA works in partnership with the S&A Carbon 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.

1.1 Objective

The purpose of this report is to document the conformance of Fortaleza do Ituxi REDD+ project with VCS Version 3 requirements. The project proponent is Nossa Senhora da Cachoeira do Ituxi. The report presents the findings of qualified S&A Carbon auditors who have evaluated the project proponent's systems and performance against the applicable standard(s). Imaflora was commissioned to conduct this unplanned deforestation project verification.

1.2 Scope and Criteria

Scope: To assess project conformance with the VCS standards and VM0015 - REDD+ Methodology for Avoided Unplanned Deforestation v. 1.1. This conformance assessment will involve all relevant standards criteria and methodology steps and requirements.

The project covers an area of 46,592 ha. The land is private. The project has a lifetime of 30 years and has estimated it will avoid the emission of 4,267,919 tCO2e. In the first verification period the project proponent has estimated a emission reduction of 1,181,732 tCO2e. All material GHG reservoirs, sinks and sources were evaluated following the VCS standard and methodology requirements and all will be expressed in values of metric tons of CO2e.

The project was evaluated to a reasonable level of assurance.

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

- 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 2013 v.3.6;
- Verified Carbon Standard AFOLU Non-Permanence Risk Tool 2016 v.3.3;
- VM0015, v1.1;

Materiality: All GHG sinks, sources and/or reservoirs (SSRs) and GHG emissions equal to or greater than 5% of the total GHG assertion unless otherwise defined by the standard criteria. The project cannot be considered as a VCS large project because the avoided GHG emissions will not exceed 300,000 t CO2 yr-1 in average.

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 project is located in the Amazonas state south region, in the municipality of Labrea, Brazil. This area is known by its current high deforestation rates. Deforestation activity in the region is mostly related to land-grabbing and expansions of cattle ranching, and is influenced by road proximity which has been increasing. The project area is located next to the “Jequitibá” and “do Boi” (or “do Baiano”) roads, which makes it especially susceptible to the deforestation agents and drivers of deforestation. The “Nossa Senhora da Cachoeira do Ituxi” farm, privately owned land where the project area is located, has a proven history of land invasions and illegal occupations. Currently, the farm owner and project proponent operates two forest management sites within the project area. The forest management activities on the forest management areas are the economic activity of the landowner. The farm sale to private investors who would likely convert the forest to other land uses is considered by the verifiers to be a plausible baseline scenario. To prevent this land conversion, the main project activities are oriented around surveillance activities and the creation of additional financial streams for land management through carbon financing in order to balance the Project Proponents’ farming business and avoid its sale.

Other Project activities are related to the creation of alternative business, involving commercialization of non-timber-forest-products (NTFPs) such as Brazil Nuts, the creation of fire brigades, provisioning of technical training on sustainable cattle raising and forest management for specific stakeholders, installation of a nursery for the propagation of native forest species and implementation of safety protocols for the farm workers.

2 VERIFICATION PROCESS

The project initially contracted with Rainforest Alliance (RA) to conduct the validation/verification, and RA subcontracted the validation/verification to Imaflora. Validation/verification services commenced in September 2015, with a site visit taking place between 31 July-4 August 2017. However, RA ceased work within the accredited scope in November, 2017, prior to completion of the validation/verification. At this time, Imaflora developed a relationship with S&A Carbon, and the validation/verification was subsequently transferred to S&A. Validation/verification services under S&A commenced in January 2019, with a site visit from 20 February – 24 February, 2019.

In March 2019, GHG-NT-714: Transfer of Accredited Validation and Verification was issued by the ANSI, which clarified the requirements for validation/verification transfer when a VVB ceasing work with the accredited scope. In accordance with these requirements, S&A conducted a risk assessment of the work completed prior to the transfer. All documents were available to the S&A team. This assessment included the following (note that many of these steps were completed prior to issuance of the ANSI requirement):

- Confirmation of the qualifications of the auditors involved in the assessment prior to the transfer

- Completion of a COI evaluation for all auditors involved prior to the transfer. No potential COI was found.

- Confirmation that both the issuing and accepting VVB are accredited for the scope of work. S&A was previously accredited for verification only, but submitted a validation scope extension application prior to the transfer. The application is being reviewed in conjunction with this validation.

- Confirmation that S&A carries sufficient insurance to cover the scope.

- Review of the NCs/OBS that were raised prior to the transfer (none of the NCs raised prior to the transfer were closed by RA).

- No legal compliance issues were identified. S&A and Imaflora held a call with the VCS and ANSI on 1 November 2018, to discuss the status of the project. The project was granted an exemption from the requirements of Section 3.7.3 of the VCS Standard v3.7, extending the deadline until 15 June 2019.

No issues were identified during this review that would prevent the transfer, though a second site visit was determined to be necessary to confirm the accuracy of the previous site visit. It should be noted that the Lead Validator was the same under both RA and S&A, ensuring consistency in the audit.

2.1 Method and Criteria

This verification and the validation assessment were carried out at the same time, by field evaluation and desk auditing. As described above, the assessment was carried out during two different periods

During the first site visit under RA fieldwork was carried between July 31th and August 04th, 2017. During this period, five auditors covered ground in the project area, observing the REDD+ Project and the forest management activities, installing inventory plots and interviewing relevant stakeholders, in a way to ensure sufficient sampling over all auditable aspects.

In this way, 32 inventory plots were randomly installed and the arborous individuals with DBH above 10cm found to be counted and distributed in distinct diameter classes, by the audit team. The individuals distribution among these classes were compared with the Weibull density probability function in order to estimate carbon stocks per hectare within the Project area (ref. 26). It is important to understand that this method was used in order to assess and corroborate the conservatism of the Project proponent carbon stocks estimates, which were performed through the use of secondary data. The use of secondary data in the carbon stocks calculation is allowed by the methodology. The discussion around eligibility of the data used by the project proponent in this process was performed in section 3.2.6 of this report.

During the second site visit under S&A, 20 of the 32 plots installed during the first visit, were randomly visited. The results confirmed the accuracy of the first site visit.

Besides that, two different forest management operation fronts in the project area were visited and audited by the audit team during the first site visit (there were no ongoing Forest Management

Operations ongoing during the second site visit). In this effort, the audit team has observed the forest management impact patterns, analyzing roads density, the degree of opened areas, the size of forest clearings left by directional felling, the number of stumps, volume of logs stocked in intermediary yards and exploitation and productivity reports. These analysis were performed through the means of direct observations, measurements and interviews with the responsible forest engineers and forest management workers.

The audit team visited neighboring properties of Nossa Senhora Da Cachoeira do Ituxi farm, interviewing its residents, farm workers, project collaborators, public agency representatives and settlement residents in Labrea municipalityin order to evaluate the reference region regular activities, deforestation agents behavior and plausibility of the adopted baseline scenario, among other relevant aspects.

The desk audit of the project's documentation counted on the contribution of one additional auditor, who focused their observations on questions related to financial aspects of the project, as well as social issues.

VVB team:

Auditor(s)	Qualifications
Bruno B. Souza – Lead Validator/Verifier	Climate Change 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). Trained as management systems lead auditor by ATSG (Lead Assessor ISO 14001:2004) and Rainforest Alliance. He has five years of work experience with carbon project validations and verifications, technical expertise on VCS and CCB standards, related methodologies, carbon accounting, MRV protocols, social and environmental safeguards implementation, among other related aspects. He is also experienced in REDD+ policies and REDD+ jurisdictional programs development, implementation and MRV, related to carbon accounting and social and environmental safeguards. Bruno was also empowered by Instituto Floresta Tropical (IFT) and Imaflora through intensive evaluations in FSC Forest Certification and Reduced Impact Logging. Bruno He has seven years of work experience with FSC standards, including forest management and chain of custody certification.
Lawson Henderson - Validator/Verifier	Lawson joined S&A Carbon as a Senior Associate in 2016, andexpands the existing capacity of the forest carbon offsetverification team. He is acts as an ARB Verifer on forest carbonoffset projects, and is qualified as a Lead Offset Verifier under theARB regulation. Lawson currently supports the S&A team withreviews of verification documents, field verifications of ARB forestcarbon offset projects, and S&A's actions to become accreditedunder the American National Standards

	Institute-ANSI). Lawsonbrings nearly a decade of experience in forest certification throughhis prior employment with Rainforest Alliance, where he acted as aproject manager and lead auditor of forest carbon offset projectsagainst the major voluntary GHG programs, and FSC ForestManagement & Chain of Custody Certifications. Lawson is qualifiedas a Lead Verifier under the Climate Action Reserve (CAR), and isalso qualified as a AFOLU IFM Expert under the Verified CarbonStandard (VCS) program. He has led the validation and verificationof IFM, AR & REDD forest carbon offset projects against the majorvoluntary GHG programs globally. He is a member of both the GoldStandard Foundation (GSF) Land Use and Forestry (LUF) andOversight and Assurance (OA) Technical Advisory Committees(TAC). Lawson holds a B.S.F in forest management from theUniversity of New Hampshire (2005).
Nathalia Ribeiro Validator/Verifier under observation	Forestry Engineer and graduated in Agricultural Sciences from University of São Paulo (USP). Coordinator of Certification in Imaflora, working with Chain of Custody, Forest Management, Carbon (VCS / CCB) and geoprocessing. Trained as lead auditor in management systems by ATSG (Lead Assessor ISO 14.001) and trained by Rainforest-Institute and Imaflora for Forest Management and Carbon Certification. She has experience in planning carbon audits using geoprocessing tools, as well as participation in carbon field audits
Pablo Reed - Technical reviewer	Pablo Reed is a Senior Associate at S&A Carbon, and a member of the forestry verification team. He is an ARB approved forestry project specialist and ARB lead verifier, and generally acts as a sector expert supporting internal reviews of verification documents. Prior to joining S&A, Pablo spent five years working at Det Norske Veritas (DNV), an international certification company, leading forestry validations and verifications across all major GHG programs. He is accredited as a lead validator/verifier of forestry projects submitted to the Climate Action Reserve, American Carbon Standard, and Verified Carbon Standard. He has extensive experience in MRVS systems, forestry inventories and logging operations, and with the development of environmental and social safeguards. Pablo also has extensive experience working with conservation and development projects in various countries in Latin America. He served as country director for a joint USAID/Idaho State University community conservation project in the Alta Verapaz region of Guatemala and spent time in Panama working as an environmental and GIS consultant. He also worked with the

	Peace Corps in Ecuador as a program manager for the posts' natural resource conservation program. Pablo received a Masters of Environmental Management degree from the Yale School of Forestry & Environmental Studies, and holds a Bachelor of Science degree in Forest and Ecological Engineering, and a minor in Latin American Studies from the University of Washington in Seattle. His research centered on the development of REDD (Reducing Emissions from Deforestation and Degradation) policy frameworks, especially as they pertain to the inclusion of communal Indigenous territories and lands under tropical forestry conservation projects.
Kyle Silon - Approver	Kyle Silon holds an M.S. in Energy and Environmental Economics. He has ten years' experience in climate change mitigation strategies and carbon reduction projects. Prior to founding S&A, he worked for a leading international certification company, specializing in validation and verification of small-scale household energy demand projects (such as cook stove and water filter projects), primarily located in South America, Asia, and Africa. He has participated in numerous verifications of forestry, landfill, and livestock projects, and has worked across all major GHG programs, including the Air Resources Board, Verified Carbon Standard, Climate Action Reserve, American Carbon Registry, Gold Standard, and Clean Development Mechanism (CDM).

The following auditors were involved in the assessment prior to the transfer to S&A, but did not directly participate after the transfer of the validation to S&A.

Diego Serrano – Validator/Verifier	Forest engineer graduated at Superior School of Agriculture "Luiz de Queiroz." – University of São Paulo (ESALQ / USP). Diego has master degree in Energetic System Planning – forest residues and biofuel by the State University of Campinas (UNICAMP). His abilities include coordination and elaboration of PDD's in the scopes 1, 4, 13 and 14. His most relevant professional abilities include technical coordination for rural projects under European Union Program in Mozambique (2005), consultancy for Extractive Reserves in Amazon basin under the UNDP Program (2004) and participation on the Brazilian Biofuels National Programme (2006). In the ambit of GHG projects, in private sector, he was technical coordinator of LULUCF PDD's, as afforestation, reforestation and REDD projects, also in charge of biodiversity and protected areas programs, forestry management and forest inventory in different

	South American biomes (2007). Also in private sector he was technical manager for more than 70 CDM and voluntary carbon projects, including 8 LULUCF PDD (2008-2009). From 2009 until 2014 he worked for Bureau Veritas (BVQI) as leader auditor and specialist for CDM and voluntary carbon projects and methodologies validation, focusing in AFOLU/LULUCF. In BVQI Diego audited over 60 projects, 44 of which were CDM. He is a leading auditor in GHG and ISO 14001: 2004. In 2009 he founded C3 – Floresta, Meio Ambiente & Energia, a consulting company that advises on carbon, forest (LULUCF and AFOLU) and solid biofuel projects. Currently Diego audits AFOLU VCS projects, through IMAFLORA.
Heberton Barros – Validator/Verifier, GIS specialist	Bachelor's degree in Forest Engineering from the Federal University of Espírito Santo (UFES) and Master's Degree in Tropical Forest Sciences from the National Institute of Amazonian Research (INPA) with emphasis on Human Support Capacity in Amazonian Agro-ecosystems. Since 2009, he has worked as a researcher in NGOs such as IDESAM and recently (2014) has been working as a research associate for CNPQ research groups (INPA), where he develops activities related to Earth Observation, Territorial Analysis and Planning in the Amazon using tools of geographic information systems and remote sensing. He worked on the conception, development and implementation of the Suruí Forest Carbon Project – PCFS between 2009 and 2010 applying the VM0015 tool, accompanying the implementation of the project up to the present moment. Participated in the auditing processes for validation of PCFS in the VCS and CCB standards, as well as in the two checks for credit generation. Since the implementation of PCFS, it is responsible for the monitoring of change of land use and annual generation of VCUs. Acted in the feasibility analysis of implementation of carbon projects in 4 indigenous lands (Analysis of drivers and deforestation agents, scenario analysis, additionality and economic viability). In 2017 he worked on the post-audit adequacy of the Amazon Rio REDD+ IFM project in the VCS Vs3.1 and CCB third edition standards. In that same year, he served as auditor in the "Fortaleza do Ituxi" REDD+ Project, nalysing the application of the VM0015 methodology, following the scope of the VCS Vs 3.4 and CCB third edition standards; specifically nalysing the spatial and temporal limits of the project within the scope of the VCS AFOLU Requirements and VM0015 tool, including the non-permanence risk analysis of the project following the VCS Non-Permanence Risk Tool Vs 3.2.

Mauro Isler – Validator/Verifier, social specialist	Agronomist with experience in GMP, GLOBALGAP, organic audits and systems of production and quality management in agricultural and forestry production, acting as auditor since 1997. Leading auditor ISO 9000: 2000 conferred by ATSG / INMETRO in 2004. Specialist in Tourism and Environment. Has training in auditing FSC certification of forest management conferred by IMAFLORA in 2013. He is a social auditor of REDD+ projects working for VCS and CCB Standards. She has participated in more than six verification audits working for Imaflora / Rainforest Alliance in Brazil.
Rogerio Marinho – Validator/Verifier, GIS, modelling specialist	Geographer graduated by Universidade Federal do Amazonas (UFAM) and Master in Remote Sensing by Instituto Nacional de Pesquisas Espaciais (INPE). Has training in Carbon Projects and Modeling of Environmental Systems by Instituto Nacional de Pesquisas da Amazônia (INPA). He has ten years of experience in GIS and remote sensing in the Amazon. He coordinated the baseline design of five REDD+ projects certificated in the VCS and CCB Standards (using VCS methodology VM0007 and VM0015). He has work experience in Carbon Validation/Verification Audit by Imaflora/ Rainforest Alliance.

2.2 Document Review

Tab.02: Documentation was reviewed during the audit:

Ref.	Title, Author, Version, Date	Eletronic file name
1	PD v.2.0, FORTALEZA ITUXI REDD PROJECT, Janaína Dallan, 19/07/2017	!ITUXI_Monitoring Report_12_03_2019
2	CATTLE_STATS (11 files), Carbonext	1302405_prodpec2005 to 1302405_prodpec2013
3	POPULATION_STATS (population statistics) , Carbonext	POPULACAO.xls and Pasta1.xls
4	GIS Files, Carbonext	Project boundaires (.kmz and .kml), project coordinates
5	farm invasion B.O. , Carbonext	
6	"BASELINE REFERENCES_REPORTAGENs", Carbonext	BASELINE REFERENCES_REPORTAGENS https://drive.google.com/drive/folders/0BymJ_dG8yAbtOG1veGhtOTM3TG8

7	The Increase in Deforestation in the Amazon in 2013: a point off the curve or out of control? (IMAZON)	!IMAZON_The Increase in Deforestation in the Amazon in 2013.pdf
8	Modelagem da dinâmica do desmatamento de uma fronteira em expansão, Lábrea, Amazonas / Claudia Suzanne Marie Nathalie Vitel. Manaus, 2009.	!!Dissertacao_ Claudia.pdf
9	"OFERTA DE COMPRA da area do projeto", Carbonext	OFERTA DE COMPRA.jpg
10	Adaptive Management Plan, Carbonext	Proced_Fortaleza_Ituxi P-02 PLANO DE GESTAO ADAPTATIVO 31_10_2017.doc
11	Brown Impact of selective logging on the carbon stocks of tropical forests: Republic of Congo as a case study	Brown_Winrock.pdf
12	TERCEIRO INVENTÁRIO BRASILEIRO DE EMISSÕES E REMOÇÕES ANTRÓPICAS DE GASES DE EFEITO ESTUFA - SETOR USO DA TERRA, MUDANÇA DO USO DA TERRA E FLORESTAS. Ministério da Ciência, Tecnologia e Inovação 2015	RR_LULUCF_Mudança de Uso e Floresta_pg 107_Tabela 14_BIOMASSA AS_2015_explicacao pg 126.pdf
13	Aboveground biomass and structure of rainforest in the southwestern Brazilian Amazon, Cummings et al. (2002)	!CUMMINGS.pdf
14	Baker, T.R. et al. (2004). Increasing biomass in Amazonian forest plots. Phil. Trans. R. Soc. Lond. B (2004) 359, 353-365. DOI 10.1098/rstb.2003.1422	Baker TR et al PTRSL 2004_BIOMASSA AUMENTANDO.pdf
15	Phillips, O.L. et al. (1998). Changes in the Carbon Balance of Tropical Forests: Evidence from Long-Term Plots. SCIENCE VOL 282 16, 439-442.	Phillips OL et al Science 1998_BIOMASSA AUMENTANDO.pdf
16	IPCC Good practices guide for LULUCF, annex 3A.1,	Annex 3A.1 Biomass Default Tables for Section 3.2 Forest Land
17	Google Earth Pro images from 1969 until 2016	https://www.google.com/earth/download/gep/agree.html
18	Diagnóstico da cadeia produtiva da madeira no município de Lábrea-AM, IEB	http://www.iieb.org.br/index.php/publicacoes/livros/diagnostico-produtivo-da-cadeia-produtiva-no-municipio-de-labrea-am/
19	POE – Plano Operacional de Exploração, Ricardo Stope	Plano Operacional de Exploração – POE.pdf
20	Starting date document support, Carbonext	CONTRATO-PDD-CASE-PDF (Ago-13).pdf
21	Farm, Ownership and operational licence documentation, Ricardo Stope	File "DOCUMENTACAO FAZENDA" (gdrive) containing 9 documents

22	Carbon Calculation spreadsheet, Ex-ante estimates, Carbonext	CALCULATION_25_11_2017.xlx
23	SFMP – Sustainable Forest Management Plan, Ricardo Stope	Plano de Manejo Florestal Sustentável – PMFS.pdf
26	Audit team forest inventory data, Imaflora	Dados_Biomassa_ITUXI.xlx
27	Project ownership and rights over the carbon related documents, Ricardo Stope	*Certidão de inteiro teor* (available for VVB during the field audit and printed over the PD); CCIR – Certificado de Cadastro de Imóvel Rural.pdl
28	West et al. 2014. Forest Ecology and Management 314 (2014) 59–63.	West_2014.pdf
29	SCHNEIDER et al. Amazônia Sustentável: limitantes e oportunidades para o desenvolvimento rural. Brasília: World Bank; Belém: Imazon, 2000. 58 pp	SCHNEIDER_2000.pdf
30	Project Financial documents, Carbonext	!!FINANCEIRO SENSITIVITY_20_08_2018.xlx
31	Instituto Matogrossense de Economia Agropecuária	IMEA.pdf
32	Spatial Modeling, GeoWiki	REDD_Ituxi_LB_rel_vs4_FINAL_08 062018
33	Cummings (2002), Abovegroung Biomass ans structure of rainforest in the southwestern Brazilian Amazon	Forest Ecology_CUMMINGS_revBS_pg7
34	Higuchi. 2006. A INFLUÊNCIA DO TAMANHO DA PARCELA NA PRECISÃO DA FUNÇÃO DE DISTRIBUIÇÃO DE DIÂMETRO DE WEIBULL DA FLORESTA PRIMÁRIA DA AMAZÔNIA CENTRAL	Higuchi. 2006. WEIBULL
35	IPCC Guidelines 2006	V4_04_Ch4_Forest_Land.pdf
36	MR v.1, FORTALEZA ITUXI REDD PROJECT, Janaína Dallan, 05/10/2018	!ITUXI_Monitoring Report_05_10_2018
37	Carbon Calculation spreadsheet, Ex-post estimates, Carbonext	!MR_CALCULATION_05_10_2018. xls
38	Forest management Post-exploratory reports and related analysis.	RESUMO_DOCS_EXPLORACAO. xls !relatorio 2014.pdf !relatorio 2017.pdf relatorio 2018.pdf

2.3 Interviews

Interviews covered government representatives such as the ICMBio Representatives, farmers settled in the project surrounding areas, project staff, forest management operators and employee and farm workers

Tab.03: Interviews

Interviewed	Community,	Date	Number of participants

	Instituton, Locality		
Abilio Alberto Silva Analista Ambiental	ICMBio Labrea	26/07/2017	01 (by phone)
Luiz Fernando de Oliveira Neto	Funai Labrea	26/07/2017	01 (by phone)
Francisco da CPT Agente	CPT Labrea	26/07/2017	01 (by phone)
Hamilton Condak de Oliveira Coordenador Presidente	Projeto RECA	31/07/2017	01
Alexandro Queiroz dos Santos Diretor Presidente	Projeto RECA	31/07/2017	01
Ganete Eloi da Silva Gerente ADM	Fortaleza do Ituxi	01/08/2017	01
Edivaldo Silva, Motorista	Fortaleza do Ituxi	01/08/2017	01
Silma Medeiros de Amorim, cozinheira	Fortaleza do Ituxi	01/08/2017	01
José Francisco Dos Santos Nascimento, motoserrista	Fortaleza do Ituxi	01/08/2017	01
Antônio Carlos do Nascimeno	Fortaleza do Ituxi	01/08/2017	01
Rose Faustino, Cozinheira; Francisco Lenildo, caseiro; José da Costa, motoserrista	Fortaleza do Ituxi	01/08/2017	03
Francisco Lima França, 2º tesoureiro APRASSA e fazendeiro da região.	Fortaleza do Ituxi	02/08/2017	01
Lindomar Gomes de Souza	Fazenda Vizinha	02/08/2017	01
Uadra Castelhane	Fazenda Vizinha	02/08/2017	01
Maicon Douglas Fidelix e Andriele Nunes Delgado, caseiros	Fazenda Onça Preta	02/08/2017	01
José batista da Silva, porteiro	Portaria Fortaleza do Ituxi	02/08/2017	01
Eng Florestal Emanoel Bento dos Santos, dofeiro exploração da	Fortaleza do Ituxi	03/08/2017	01

AMF 2			
José Adson freire Jucá, sócio do pp na exploração florestal.	Fortaleza do Ituxi	03/08/2017	01

2.4 Site Inspections

Tab.04: the table below summarizes the sites visited during the validation audit:

Location	Date
RECA project headquarters	31 June 2017
Fortaleza do Ituxi REDD+ Project headquarters	1 and 2 July 2017
Forest management camp lodgement 01	1 and 2 July 2017
Farms in the reference region (project boundaries)	3 July 2017
Forest management camp lodgement 01	3 July 2017
Forest management operation	1 to 3 July 2017
Forest Inventory practices at the project area	1 to 3 July 2017

2.5 Resolution of Findings

18 NCRs were raised and closed in the validation report. 01 NCR, 01 FAR and 01 OBSs were issued prior to the transfer of the accreditation to S&A. All issues were resolved after the accreditation transfer to S&A. A full description of the audit notes can be found in Annex 1.

2.5.1 Forward Action Requests

A forward action request was issued in order to signalize the necessity of the project proponent to be implementing the monitoring tasks related to the carbon stocks increase and decreasing, over the course of the subsequent monitoring periods, to the next VVB. In other words, the audit team point to the necessity of the project proponent to be conducting a forest inventory process in the project area. The project proponent has chosen to determine the carbon stocks and thus, the emission factors based on secondary data, which is permitted by VM0015 v1.1. Although, the project area encompasses potential different strata, considering that forest management operations are part of the project activities. The methodology chosen determines that carbon stocks should be monitored in situations where a change in carbon stocks is expected as a result of forest management activities.

2.6 Eligibility for Validation Activities

The validation and verification processes were performed at the same time by Imaflora under the accreditation of S&A Carbon. S&A Carbon is accredited by the American National Standards Institute (ANSI) for the verification of Land Use and Forestry projects (Accreditation ID# 1207). S&A has

submitted an application to expand its scope to include validation, and this application is being reviewed in connection with the validation audit of this project.

3 VALIDATION FINDINGS

The validation and verification processes were performed at the same time. In this sense, no gap validation were performed by the project proponent nor reported in this verification report. A methodology deviation adopted by the project proponent during the project design validation was also reported in this verification report. Fortaleza do Ituxi REDD+ project is not a grouped project, no new project instances were added during the project first verification period.

3.1 Participation under Other GHG Programs

The project does not seek other forms of environmental credit and does not make part of other GHG programs.

3.2 Methodology Deviations

The project proponent has adopted a methodology deviation regarding the usage of secondary data older than 10 years in the determination of the carbon stocks over the identified LU/LC. The project has collected existing carbon-stock data published studies (ref. #33) and analyzed the data according to the specific methodology eligibility criteria. The work of Cummings (2002) fits all eligibility criteria with the exception of its publication date, which is more than 10 years old from the project start date. Besides that, the data are derived from multiple measurement plots in the same project's geographical region and type of forest, in a way that the samples represents good coverage of the classes over which they will be extrapolated. Still, the author uses a minimum DBH for inventory. In a way of testing the conservativeness of the project proponent approach, the audit team has installed 32 inventory plots in the project area, counted all trees with DBH above 10cm found and distributed them in distinct diameter classes. The trees distribution among these classes was compared with the Weibull density probability function in order to estimate carbon stocks per hectare within the Project area (ref. 34, 27). Using the equation of Silva (2007) the audit team has found a total amount of 369 Mg ha-1 (ranged from 399 to 338 Mg ha-1), while Cummings has found a total amount of 313 Mg ha-1 (ranged from 346 to 288 Mg ha-1), concluding that both estimations are not significantly different, the use of Cummings (2002) and the proposed methodology deviation are acceptable. An uncertainty assessment was performed by the project proponent using different values found by Cummings. The standard error found was below 10% of variation from the mean average, allowing the use of average, and not the lower bound of the confidence interval. The audit team has assessed the project carbon calculation spreadsheet (ref. #22) in order to verify the correct use of all related equations, conversions and aggregations.

3.3 Project Description Deviations

The validation and verification processes were performed at the same time. In this sense, no project description deviations were performed by the project proponent nor reported in this verification report.

3.4 Grouped Project

NA. Fortaleza do Ituxi REDD+ project is not a grouped project.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The validation and verification processes were performed at the same time. In this sense, no material discrepancies between project implementation and the project description were found by the audit team during the course of the first verification event. In the same sense, no material discrepancies between the actual monitoring system, and the monitoring plan set out in the validated project description and the applied methodology were perceived.

The monitoring plan was implemented by the project proponent accordingly. During the first verification period the project proponent has implemented surveillance activities and started the forest management activities in the project area. It is the VB understanding that the forest management activities in the project area changes the land governance perception of the main groups of deforestation agents, thus being responsible for the avoidance of the unplanned deforestation at the project area. Besides this it remained characterized the implementation of other set of activities during the first monitoring period such as training on fire brigades, forest management and other REDD+ project related activities, security internal audits (related to labor conditions and the usage of individual protection equipment), health internal audits, advice in nutritional aspects, personal health care and nutritional aspects, among others. The audit team has verified the project implementation activity during the field audit through direct observations, interview with specific stakeholders and also through document analysis.

The monitoring of land-use and land-cover change within the project area and the leakage belt was made through the usage of classified satellite images (“Forest Land" and "Non-Forest Land".) provided by PRODES. The satellite images used were four scenes of satellite Landsat 8 TM (orbits 001/65, 001/66, 233/65, and 233/66) encompassing the total geographical scope of the project. No deforestation was monitored by the project proponent in the project area during the first monitoring period. The audit team has verified the LU/LC cover dynamics in the project area during the first verification period using PRODES data as part of its independent assessment and confirms the project proponent assessment in this regards. The project proponent has reported a total deforestation of 14,962.60 ha ha in the leakage belt, which represents a total emission of 29,438tCO2e, representing the total ex-ante estimated leakage minus ex-post monitored leakage per year.

The project proponent has estimated the total emissions of the forest management activities, using post-exploratory reports (ref. 38) from the forest manager operators and the emission factor

proposed by Brown (ref. 11), as part of the project emissions monitoring and according to the validated monitoring plan. This post-exploratory reports brings information about areas of forests that were subjected to planned logging and exploitation intensity under the project scenario. Emission estimates were made using field (total volume of wood exploited) and literature (ref. 11), thus being considered by the VVB team as credible and verifiable sources of information (ref. 37). The audit team has checked these post exploratory reports (ref. 38), Browns quoted paper (ref. 11) and the carbon calculation spreadsheet (ref. 37) and confirms the accuracy of the data and calculations involved.

No fires, natural disturbances and other catastrophic events were reported by the project proponent during the course of this first monitoring period. The audit team confirmed this information independently through the use of PRODES.

This is the first verification event of the project. The project proponent is aiming to include the GHG emission reduction generated by the project during this first verification period in VCS emission trading program. The project has not received or sought any other form of environmental credit, nor has become eligible to do so since validation. The project has not participated or been rejected under any other GHG programs since its validation.

Given its own nature, the project is directly linked with the UN sustainable development contributions #13 and #15. The project proponent discusses how the project activities helped federal and state governments in achieving these goals, by playing an important role in tackling deforestation in one of the currently highest pressure zones of the Amazon biome, known as the Brazilian deforestation arc.

The audit team understands that the project has been implemented as described in the project description.

4.2 Accuracy of GHG Emission Reduction and Removal Calculations

The VB team has assessed the accuracy of GHG emission reductions and removals, including accuracy of spreadsheet formulae, conversions and aggregations, and consistent use of the data and parameters.

The data and parameters used to calculate the GHG emission reductions were identified, described and analysed in the table below.

Parameter	Verification Findings
Deforestation in the project area and leakage belt: Forest cover areas converted into non-forest areas inside the Project Area and Leakage Belt (monitored)	The monitoring of the forest cover in the Project Area and Leakage Belt was done through satellite image analysis, using PRODES data according to the MR, ref.36. No land use change was monitored by the project proponent during the first monitoring period in the project area. 4,531.9 ha of deforestation were perceived in the leakage belt in 2014; 10,430.7 ha of deforestation were perceived in the leakage belt in 2015. The audit team have made an independent GIS analysis, also using PRODES, verifying the same monitoring period and

	reaching the same conclusions. The audit team attests a consistent use of the data and parameters and therefore the accuracy of GHG emission reductions (ref. 37, table 13).
ΔCUDdPA Total carbon stock decreases due to unavoided unplanned deforestation within the project area (calculated)	The project area did not have any deforestation during the first monitoring period. As this parameter depends on the deforestation in the project area, the total carbon stocks decreased due unavoided unplanned deforestation is equal to zero. The audit team attests the accuracy of spreadsheet formulae, conversions and aggregations and therefore, the accuracy of GHG emission reductions.
APDPAicl,t Areas of planned deforestation in forest class *icl* at year *t* in the project area (monitored)	No planned deforestation was perceived by the project proponent in project area during the first monitoring period. The project proponent converted a forested area into another land use within the project area during the year 2018, thereby resulting in planned deforestation of a portion of the project area after the project start date but outside the monitoring period covered by this verification. Such activity incurred emissions attributable to the project proponent and shall be accounted for in the future in ex-post estimates covered by subsequent verifications. The audit team evaluated this recent deforestation primarily through satellite imagery in the office (ref. 36) and then in the field, through direct observation and interviews with employees of the farm on location, in order to evaluate the history of the area (FAR#19-3).
ΔCPDdPAt Total carbon stock decrease due to planned deforestation (calculated)	The project proponent disregarded emissions due to planned deforestation in the first monitoring period as APDPAicl,t was set as zero. The VB team agrees with the proposed approach.
APLPAicl,t Areas of planned logging activities in forest class icl at year t in the project area (monitored)	The carbon calculation spreadsheet (ref. 37 table 25) shows this specific parameter. The project proponent attests that 777.9ha were impacted by logging operations during this first monitoring period, which is supported by post-exploratory reports from the forest management operations at the farm (ref. 38) The audit team has independently assessed and attests the accuracy of spreadsheet formulae, conversions and aggregations and therefore, the accuracy of GHG emission reductions.
ΔCPLdPAt Total decrease in carbon stock due to planned logging activities in	The carbon calculation spreadsheet (ref. 37, table 25) shows this specific parameter. The project proponent has estimated that 36.751 tCO2e were emitted due to planned logging

the Project Area (calculated)	activities during the first monitoring period. The audit team has independently assessed and attests the accuracy of spreadsheet formulae, and confirmed the calulations are correct. Ultimately this parameter is calculated considering APLPAicl,t and an emission factor proposed by Brown (Ref. 11). It
APFPAicl,t Areas of planned fuel-wood & charcoal activities	According to the project proponent there are no planned fuel wood and charcoal related activities in the project. This aspect was verified by the audit team through direct observations, and interviews with the project proponent staff.
ΔCPFdPAt Total carbon stock decrease due to planned fuel-wood and charcoal activities	As this parameter depends of the APFPAicl,t, the total carbon stocks decrease due to planned fuel-wood and charcoal activities will be equal a zero, because the project proponent doesn´t develop this kind of activity in the project area.
ΔCPAdPAt Total carbon stock decrease due to planned activities	The carbon calculation spreadsheet (ref. 37, table 29) shows this specific parameter. The audit team has independently assessed and attests the accuracy of spreadsheet formulae, conversions and aggregations and therefore, the accuracy of GHG emission reductions. As this parameter depends of the ΔCPFdPAt, ΔCPLdPAt and ΔCPDdPAt, the total carbon stocks decrease due to planned activities. Ultimately the project proponent has monitored and considered activity data only related to logging activities, which is related to ΔCPLdPAt. The audit team has assessed the project area and has not found evidence of the occurrence of planned deforestation nor fuel wood/charcoal activity during the first monitoring period. In this sense the VVB team agrees with the project proponent approach in this matter. The total carbon stock decrease due to planned activities is 36.751 tCO2e.
ACPAicl,t Annual area within the Project Area affected by catastrophic events in class *icl* at year	The project proponent presented in the MR document, ref. 36, section 4.2, that there are no emissions related to catastrophic events in the project area. The audit team made an independent checking using the Google Earth tool in a visual analysis of the project area using the newest images available and didn´t recognize any scars in the forest inside of the project area that would be due to catastrophic events. In this way, the VVB recognize the conformance of the project in the calculation of this parameter to the VCS requirements and to the VM0015.
ΔCUCdPAt	As this parameter depends of the ACPAicl,t, the total carbon stocks changes due to catastrophic events is equal a zero, as

Total carbon stock decreases due to catastrophic events at year t.	the MR, ref. 36, shows. The audit team has made an independent check using the INPE Fire Program data[1] and recognize the project conformance.
AUFPAicl,t Areas affected by forest fires at year t	The project proponent disregards emissions associated with forest fires in the project area (ref. 36, section 4.2). The audit team has made an independent check using the INPE Fire Program data[2] and recognize the project conformance.
ΔCUFdPAt Total carbon stock decrease due to forest fires at year t.	As this parameter depends of the AUFPAicl,t, the total carbon stocks changes due to forest fires is equal a zero, as the MR, ref. 36, showed. The audit team has independently assessed and attests the accuracy of spreadsheet formulae, conversions and aggregations and therefore, the accuracy of GHG emission reductions
ΔCFCiPAt Total carbon stock increase due to fires and catastrophic events at year t.	The project proponent disregard carbon stock increase due to fires and catastrophic events.
ΔCPSPAt Total ex post carbon stock change in the project case	The carbon calculation spreadsheet (ref. 37, table 23) shows this specific parameter. This parameter is calculated by the subtraction of the total carbon stock decrease due to planned logging activities (ΔCPLdPAt) and the total carbon stock increase due to planned logging activities (ΔCPLiPAt). The project proponent has estimated the total carbon stock increase due to planned activities, using annual operating plans (ref. 19) from the forest manager operators and the removal factor proposed by West (ref. 28), as part of the project emissions monitoring and according to the validated monitoring plan. This annual operating plans brings information about areas of forests that were subjected to planned logging and exploitation intensity under the project scenario. Removals estimates were made using field (total area managed) and literature (ref. 28), thus being considered by the VVB team as a conservative approach and aligned with the methodology requirements. The audit team has checked these annual operating plans (ref. 19), West quoted paper and the carbon calculation spreadsheet (ref. 37) and confirms the accuracy of the data and calculations involved. The project proponent has

[1] https://prodwww-queimadas.dgi.inpe.br/bdqueimadas

[2] https://prodwww-queimadas.dgi.inpe.br/bdqueimadas

	disregarded the total carbon stock decrease due to unavoided unplanned deforestation, as no deforestation was perceived in the project area during the first monitoring period. The audit team has independently assessed and attests the accuracy of spreadsheet formulae, conversions and aggregations and therefore, the accuracy of GHG emission reductions
ABSLLKct,t Area of unplanned deforestation in forest class ct at year t within the leakage belt area in the project scenario.	The project proponent has identified a deforestation area of 14,962.60 ha in the Leakage Belt during the first monitoring period (ref. 37) for which 47 ha were considered as actual leakage. Leakage was calculated as the difference between the *ex ante* and the *ex post* assessment, following the methodology criteria. The deforestation in the project case was higher than in the baseline scenario in the leakage belt in the year of 2015. The project proponent has applied a conversion factor, equivalent to the proportion between the project area and the leakage belt, to define the leakage surplus in 2015. The audit team agrees with the approach, considering that not all monitored deforestation in the leakage belt is attributable to the project area protection. The audit team assessed belt activity and leakage through direct observations and interviews with owners of neighboring farms. In this process two aspects were characterized in a qualitative way: 1) the occurrence of planned deforestation in own areas and carried out by the neighbors themselves and 2) the occurrence of unplanned deforestation resulting from invasions. The latter could be considered as a leakage effect which was calculated quantitatively according to the methodology requirements. The audit team have made an independent GIS analysis, also using PRODES, verifying the same monitoring period and reaching the same conclusions. The audit team attests a consistent use of the data and parameters and therefore the accuracy of GHG emission reductions (ref. 37, table 13).
ΔCabBSLLKt Total carbon stock changes in the leakage belt area (calculated)	The carbon calculation spreadsheet (ref. 37) shows this specific parameter. The audit team has independently assessed and attests the accuracy of spreadsheet formulae, conversions and aggregations and therefore, the accuracy of GHG emission reductions
EADLKt Total *ex post* increase in GHG emissions due to displaced forest fires	No emissions associated to forest fires events have occurred in the leakage belt during the monitoring period. The audit team has independently assessed and attests the accuracy of spreadsheet formulae, conversions and aggregations and

	therefore, the accuracy of GHG emission reductions
ΔCLPMLKt Carbon stock decrease due to leakage prevention measures	Emissions related to the leakage prevention measures were not considered by the project proponent given the nature of the project activities planned to be executed in LMAs, such as trainings, educational activities and tree seedlings distribution. The VVB team agrees with the project proponent rational on this matter but indicates the risk of trainings and rural extension related to cattle ranching changes the carbon emission profile in the neighbouringneighboring farms, due to the productivity increase (OBS#01/18).
ΔCLKt Total net carbon stock change due to leakage	The carbon calculation spreadsheet (ref. 37) shows this specific parameter. The audit team has independently assessed and attests the accuracy of spreadsheet formulae, conversions and aggregations and therefore, the accuracy of GHG emission reductions
ΔREDDt Ex post net anthropogenic GHG emission reductions	The carbon calculation spreadsheet (ref.37) shows this specific parameter. The audit team has independently assessed and attests the accuracy of spreadsheet formulae, conversions and aggregations and therefore, the accuracy of GHG emission reductions
VCUt Ex post VCUs tradable at year t	The carbon calculation spreadsheet (ref. 37) shows this specific parameter. The audit team has independently assessed and attests the accuracy of spreadsheet formulae, conversions and aggregations and therefore, the accuracy of GHG emission reductions
VCBt Ex post buffer credits at year t	The carbon calculation spreadsheet (ref. 38) shows this specific parameter. The audit team has independently assessed and attests the accuracy of spreadsheet formulae, conversions and aggregations and therefore, the accuracy of GHG emission reductions

4.3 Quality of Evidence to Determine GHG Emission Reductions and Removals

The project proponent used data from the Deforestation Monitoring System in the Amazon - PRODES, prepared by the National Institute for Space Research (INPE), to perform all relevant analysis over land-use and land cover change during the monitoring period. The audit team considers INPE as a reputable source and PRODES as a reliable source of information. PRODES is the official source of information for Brazilian federal government deforestation monitoring and it is used for researchers all over the world. The monitoring report shows how PRODES project deals with the information flow from satellite images to deforestation maps, passing through pre-processing, interpretation and image classification in a year to year basis. Pre-processing stage passes through the selection of images with less cloud coverage, shooting date closer to Amazon dry season and adequate radiometric quality and georeferencing of the images with spatial resolution of 30 meters with topographic charts in a 1:100,000 scale and NASA images in MrSID orthorectified format. Interpretation and classification stages passes the generation of a spectral mixture model in which vegetation, soil and shadow components are identified; this technique is known as spectral linear mixture model and aims to estimate the percentage of vegetation, soil and shadow component for each pixel of the image; the application of the segmentation technique which identifies in the satellite image the spatially adjacent regions (segments) with similar spectral characteristics; the individual classification of the segments to identify forest classes, non-forest vegetation and deforestation (anthropic vegetation); and the classified segmentation result is submitted to an editing process, or classification audit, carried out by a specialist and finalizing with the creation of state mosaics. This data is used for calculation of the annual deforestation at the project area at the monitoring period.

The project proponent has used Land Change Modeler, LCM (Eastman, 2009), available at 16.0 IDRISI Taiga Edition software for the projection of the location of future deforestation. IDRISI is widely used for deforestation models construction, also representing a reliable source of information. The project proponent has assessed the accuracy of the models created using ROC (Relative Operating Characteristic) analysis and selected the one with best potential to explain the future of deforestation dynamics using AUC indicator of 0.935. In addition the project proponent has developed vulnerability map histograms (ref. 32), which demonstrate the transition potential resulting from the selected model and provide a good picture of the class transition vulnerability, forest areas for deforestation, with high values of vulnerability (transition potential) in the areas that presented change and low values in the areas that did not change (persistence), in order to select the best model produced.

The estimation of the average carbon stocks over the identified LU/LC class was made using secondary data. The project has collected existing carbon-stock data published studies (ref. #33) and analyzed the data according to the specific methodology eligibility criteria. The work of Cummings (2002) fits all eligibility criteria with the exception of the publication date, which is more than 10 years old than the project start date. Besides that, the data are derived from multiple measurement plots in the same project's geographical region and type of forest, in a way that the samples are representative of the classes over which they will be extrapolated. Still, the author uses a minimum DBH for inventory. The project proponent has indicated the use of secondary data older than 10 years for the calculation of carbon stocks in the project area as a methodology deviation. In a way of testing the conservativeness of the project proponent approach, the VVB team has installed 32 inventory plots in the project area, counted all trees with DBH above 10cm found and distributed them in distinct diameter classes. The distribution of trees among these classes were compared with the Weibull density probability function in order to estimate carbon stocks per hectare within the Project area (ref. #22, #34). Using the equation of Silva (2007) the VVB team has found a total amount of 369 Mg ha-1 (ranged from 399 to 338 Mg ha-1),

while Cummings has found a total amount of 313 Mg ha-1 (ranged from 346 to 288 Mg ha-1), concluding that both estimations are not significantly different, the use of Cummings (2002) and the proposed methodology deviation are acceptable. An uncertainty assessment was performed by the project proponent using different values found by Cummings. The standard error found was below 10% of variation from the mean average, allowing the use of average, and not the lower bound of the confidence interval. The project proponent has also estimated carbon stocks in post-deforestation classes projected to exist in the baseline case using secondary data from IPCC (2006) and the proportion of LU/LC classes associated to pasture and anthropic vegetation (scrubland), finding a total amount of 101.6 tCO2eha-1. Carbon stock change factors were calculated by the project proponent accordingly, considering above ground biomass and below ground biomass. Baseline carbon stock change in the above-ground biomass and below-ground biomass in the project area and leakage belt were calculated by the project proponent accordingly, using VM0015 v1.1 tables 22a-c. The VVB team has assessed the project carbon calculation spreadsheet (ref. #22) in order to verify all the correct use of all related equations, conversions and aggregations.

The VB team understands the evidence used to determine the GHG reductions were sufficient of quantity and appropriated of quality.

4.4 Non-Permanence Risk Analysis

A non-permanence risk analysis was performed by the project proponent using the AFOLU Non-Permanence risk tool v3.3. The VVB team non-permanence risk analysis assessment and conformity are demonstrated in the table below:

Risk factor	Score	Findings	NCR/OBS
Internal risks			
Project management	-4	The project was developed in the area of native forests in the Brazilian Amazon, reforestation with non-native species is not part of the project activity (a=0). The project did not generate carbon credits previously (b=0). The project staff and associated technical consultants are 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.1, appendix 1) (d=0, e=-2). Project staff maintain a physical presence at the Nossa Senhora da Cachoeira do Ituxi farm, the project area. A risk mitigation and adaptive management plan (ref. 10) was	None

		presented by the project proponent. The document includes processes for monitoring progress over a set of activities related to the REDD+ project, such as fire prevention, surveillance protocols and revisions of the farm management plan (f=-2). The score of this risk component was correctly applied by the project proponent.	
Financial viability	0	The project financial worksheet (ref. 30) shows the breakeven point between is less than 4 years and the farm owner has secured the amount of funds needed to implement the project so far. The score of this risk component was correctly applied by the project proponent.	None
Opportunity costs	0	The project proponent considers NPV from the most profitable alternative land use activity as between 20% more than and up to 20% less than from project activities, justifying it with financial parameters taken from scientific articles (ref. 29) in comparison with the project own financial indicators (ref. 30) (d)=0)	None
Project longevity	15	The project area is located in an area with an approved forest management plan (ref. 23) that constitutes a legal agreement with the competent authorities to harvest the area in observation of reduced impact logging principles define by law, and the continuity of the management practices for 30 years (harvesting cycle), for the entire project longevity. Moreover, the project's legal reserve (80% of the farm) is registered with the relevant government offices. Brazilian Forest Code determines that, once allocated, legal reserve may not be changed even in cases of documentation transfer, land dismembering or area rectification. (b)=15)	None
Total internal risk	11	The score associated with the project internal risk was	None

		evaluated by the VVB team and considered to be correct according to the referred VCS tool.	
External Risks			
Land Tenure and Resource Access/Impacts	1	The rights to the land and its resources belong to Ricardo Stoppe Junior, the project proponent, as verified by the VVB team through document evaluation and proof of title to the land (a)=0). There are no ongoing disputes over land tenure or ownership in the project area, but overlapping rights remain characterized in the northern portion of the farm, where the Iquiri National forest is located. The project area is not overlapped with this area. (c)=0, d)=5). Project area is protected by legally binding commitment (f)=-2). The project proponent has earned a favourable legal opinion towards his property rights g)=-2).	None
Community Engagement	5	There are no households living within the project area (a)=0) The project proponent has conservatively considered that Less than 20 percent of households living within 20 km of the project boundary outside the project area, and who are reliant on the project area, have been consulted (b)=5).	None
Political Risk	0	The VVB team assessed the country's political risk independently using the World Bank tool and agrees with the score assigned by the project proponent (c)=2) as well as the associated mitigation measures (f=-2)).	None
Total External risk	6	Due to the above, the VVB team finds that the risk of loss in carbon stocks associated with aspects external to the project has been correctly considered by the proponent.	None
Natural risks			
Natural risks	4	Sufficiently supported by scientific literature and secondary data, the proponent considers the risk	None

		associated with the carbon loss in the project area due to natural effects as significant, which was considered plausible by the VVB team. The risk associated with fire was considered in function of the high frequency of hot spots, the low intensity of fires and the existence of an adaptive management plan focused in fire prevention measures. 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 VVB team. The risk of carbon stocks loss due to extreme weather was considered due to droughts caused in the amazon forest because La Nina effect. The risk of geological hazards such as landslides was considered as null acoording to Tominaga (2009). The risk of Blowdowns was considered as null according to Espirito Santo articles (2009). The VVB team reviewed the referenced scientific literature in order to confirm the proponent's conclusions regarding the significance and probability of the events in question.	
OVERALL NON-PERMANENCE RISK RATING AND BUFFER DETERMINATION: 21			

5 SAFEGUARDS

5.1 No Net Harm

The project proponent does not recognize negative environmental and socio-economic impacts caused by the project, which was considered plausible by the VVB team. This is a conservation project which is implemented in private areas and encompasses a set of social and environmental activities. The project proponent aims to achieve CCB validation/verification and has oriented the project design in this sense.

5.2 Local Stakeholder Consultation

The project has conducted a local stakeholder consultation considering twelve different organizations, including governmental agencies, universities, communities and workers from “Castanhal Fortaleza” company. Receipt notices of the PD summaries dispatched were presented to the VVB team. The PD summary allows the identified stakeholders to evaluate impacts, raise concerns about potential

negative impacts and to contact the project proponent to provide input on the project design. A communication channel (Carbonext phone and email) has been established with Communities and Other Stakeholders to better explain the project activities and to respond to stakeholders' doubts and concerns related to the project. The project proponent has adapted the project boundaries due to inputs received from ICMBio during the project development, considering the overlapping of the farm with the "Flona do Inqui limits". The VVB team understands the project proponent local stakeholder consultation as sufficient for determining the project conformance with the VCS requirements.

6 VERIFICATION CONCLUSION

Following the review of the monitoring report v2.0 and supporting documents, the audit team has concluded with a reasonable level of assurance that the project is in full conformance with the VCS standard requirements, validated project design document, and approved VCS methodology. Below is a description of the claimed verified emission reductions as still under revision by the audit team. Verification period: From 15 December 2013 to 14 December 2015.

Verified GHG emission reductions and removals in the above verification period:

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
2014	1,079,891	34,398	0	1,045,493
2015	163,324	-2,353	29,438	136,239
Total	1,243,215	32,045	29,438	1,181,732

Based on the verified risk assessment, the total number of buffer credits to be retained in the AFOLU pooled buffer account is 243,900.

APPENDIX 1: NON-CONFORMANCE REPORTS, FORWARD ACTION REQUESTS AND OBSERVATIONS (SEE COMPLEMENTARY DOCUMENT ATTACHED)