VALIDATION REPORT OF "JARÍ/PARÁ REDD+ PROJECT"

RINA Services S.p.A.

Project Title	Jari/Pará REDD+ Project
Version	03 Aa
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Report Title	Validation Report of the Jari/Pará REDD+ Project
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Summary:

RINA Services S.p.A. (RINA) was commissioned by Biofílica Investimentos Ambientais S.A., to validate the project activity "Jarí/Pará REDD+ Project" in Brazil.
The purpose of the Validation is to confirm that the Jarí/Pará REDD+ Project and all related project documentation are in accordance with all rules and requirements of the VCS and CCB.
The VCS Standard v3.7, VCS AFOLU v3.6, the applied GHG methodology "Methodology for Avoided Unplanned Deforestation (VM0015)" version 1.1 and its associated tools as well as the VCS Non-Permanence Risk, the VT0001 "Tool for the demonstration and assessment of additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities" v3 and the CCB Standard v3.1 are the criteria used to validate the Project.
The Jarí/Pará REDD+ Project primary objective is to promote forest conservation and reduce potential greenhouse gas emissions (GHG) based on a model of local economic development that values the "standing forest" through the integration of Multiple Use Forest Management (timber and non-timber) and the commercialization of carbon. The project area, of 496.988ha, is located within a private property named "Gleba Jarí I", which is situated in the municipality of Almeirim, in the State of Pará, Brazil.
During the validation process 10 clarifications, 11 corrective actions and 1 forward action request concerning CCB validation were raised.
In conclusion, it is RINA's opinion that the project activity "Jarí/Pará REDD+" in Brazil, meets all relevant requirements for VCS standard and guidelines, and correctly applies the methodology VCS VM0015 Methodology for Avoided Unplanned Deforestation v1.1 of 03/12/2012 for the calculation of baseline, for determining additionality and to monitor emission reductions through its entire crediting period between 08/07/2014 to 07/07/2044. It is also RINA's opinion that the Project "Jarí/Pará REDD+" meets all relevant CCB requirements and Gold Level requirement for Biodiversity specifically.

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Abreviations

AFOLU	Agriculture, Forestry and Other Land Use
APU	Annual Productive Unit
AUD	Avoided Unplanned Deforestation
AUTEX	Authorisation for the Exploration of Sustainable Forest Management Plan (from the Portuguese Autorização para Exploração de Plano de Manejo Florestal Sustentado)
CAR	Corrective Action Request
CL	Clarification Request
CO2	Carbon Dioxide
CO2e	Carbon dioxide equivalent
GHG	Greenhouse Gas
I	Interview
INCRA	Instituto Nacional de Colonização e Reforma Agrária (from the Portuguese National Institue of Colonisation and Land Reform)
INPE	National Institute of Space Research (from the Portuguese Instituto Nacional de Pesquisas Espaciais)
IPCC	Intergovernmental Panel on Climate Change
ITERPA	Institute of Land of the State of Pará (from the Portuguese Instituto de Terras do Pará)
PA	Project Area
PD	Project Description
PP	Project Proponent
NTFPs	Non-Timber Forest Products
LKB	Leakage Belt
PRA	Participatory Rural Appraisal
PRODES	Forestry Satellite Monitoring Project
REDD	Reduced Emissions from Deforestation and Degradation
RR	Reference Region
SFMP	Sustainable Forest Management Plan
UPA	Annual Production Unit (from the Portuguese Unidade de Produção Annual)
VCS	Verified Carbon Standard
VCUs	Voluntary Carbon Units

1 INTRODUCTION

1.1 Objective

The validation is a requirement for all VCS projects.

The objective of the Validation is to have an independent evaluation of a project activity by a VVB against the requirements of the VCS, on the basis of the project design. In particular, the project's baseline, monitoring plan, and the project's compliance with relevant VCS requirements and host Party criteria are validated in order to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria. Validation is a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of Verified Carbon Units (VCUs).

1.2 Scope and Criteria

The Project activity falls under Sector Scope 14 - Agriculture, Forestry and Other Uses of Land (AFOLU).

In accordance with Section 5.3.1 of the VCS Standard v3.7, the criteria for validation include:

- VCS Standard v3.7
- VCS Validation and Verification Manual v3.2
- VCS Program Guide v3.7
- VCS AFOLU Requirements v3.6
- VCS AFOLU Additionality Tool v3.0_0
- VCS AFOLU Non-Permanence Risk Tool v3.3
- CCB Programe Rules v3.1
- CCB Climate, Community and Biodiversity Standards v3.1

These are the most recent versions of the relevant VCS and CCB guidance documents at the time of issuance of this report.

1.3 Summary Description of the Project

The Jarí/Pará REDD+ Project primary objective is to promote forest conservation and reduce potential greenhouse gas emissions (GHG) based on a model of local economic development that values the "standing forest" through the integration of Multiple Use Forest Management (timber and non-timber) and the commercialization of carbon. The project area, of 496.988ha, is located within a private property named "Gleba Jarí I", which is situated in the municipality of Almeirim, in the State of Pará, Brazil.

The project proponents are Biofílica Investimentos Ambientais S.A., Jari Celulose S.A. and Fundação Jari.

There are several activities in the project, all described in table 10 of the PD v.5.1 /11/. The main ones can be organized in xx main themes:

1 – Forest monitoring intelligence, with activities like use of satellite images to identify risk areas and improve ground patrolling.

2 – Technical assistance and rural extension, with activities like diversification of family production through introduction of agroforestry systems;

3 – Social organization, with activities to strengthen cooperatives and associations, access to government and direct access to markets (without the middle man);

4 – Strengthening of Fundação Jarí, with actions like increasing the team and training in order to provide better technical assistance to communities involved in the Project;

5 – Infrastructure, with actions like installation of electricity and communication infrastructure;

6- Environmental monitoring and scientific research, with actions like monitoring of HCVA important for communities and biodiversity.

2 VALIDATION PROCESS

2.1 Audit Team Composition (*Rules* 4.3.1)

Talita C. BECK is the team leader and technical expert in the scope 14 with competency confirmed through the qualification process and related documentation in accordance with the UNFCCC CDM Accreditation Standard requirements.

The team leader speaks Portuguese, the local language in Brazil.

The team leader participated in the validation and verification of Agrocortex REDD Project in the Amazon forest, in the State of Acre, Brazil, in 2017; the validation of the CDM project AES Tietê Afforestation /Reforestation Project in the State of São Paulo, Brazil, in 2010 and worked as a consultant in other forestry projects in Brazil. Relevant social and cultural expertise was the validation of the Social Carbon for the Agrocortex REDD Project and as a consultant in other forestry and climate change mitigation and adaptation projects for The Nature Conservancy. The team leader has an Environmental Science degree, a MSc. in Environmental Technology with a specialisation in Ecological Management (more specifically the mathematical modelling of ecological resources) with a thesis in forest biodiversity conservation practices, and a specialisation in Terrestrial Carbon Accounting.

Rekha MEMON (Independent Technical Reviewer). She is a senior with over 14 years of experience in GHG validation and verification and GHG management. She is qualified in forestry sector and her competency is confirmed through the qualification process and related documentation in accordance with the UNFCCC CDM Accreditation Standard requirements.

2.2 Method and Criteria

Validation was conducted using RINA procedures in line with the requirements specified in the VCS Standard v3.7 /2/, VCS AFOLU v3.6 /6/, the applied GHG methodology “Methodology for Avoided Unplanned Deforestation (VM0015)”, version 1.1 /4/ and its associated tools as well as applying standard auditing techniques.

The validation consisted of the following three phases:

- Document review;
- Follow-up actions like site inspections and interviews;
- The resolution of outstanding issues and the issuance of the final validation report.

2.3 Document Review

The VCS Project Description /11/ submitted by Biofílica Investimentos Ambientais and additional background documents related to the project design and baseline (i.e. VCS Project Description

Template, Approved VCS methodology, Validation Requirements) as well as scientific literature and country law were reviewed in the light of VCS Standard v3.7 and CCB Climate, Community and Biodiversity Standards v3.1 rules.

All documents reviewed are referenced throughout the validation report as well as in Validation Findings in Appendix A.

Below is a list of documents that were reviewed during the validation:

/1/	VCS Program Guide – Requirement documents v3.7 of 21/06/2017
/2/	VCS Standard Version 3.7 of 21/07/2017
/3/	VCS Validation and Verification Manual v3.2 of 19/10/2016;
/4/	VCS VM0015 Methodology for Avoided Unplanned Deforestation v1.1 of 03/12/2012
/5/	VCS VT0001 "Tool for the demonstration and assessment of additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities" v3.6 of 21/06/2017
/6/	AFOLU Requirements, v3.6 of 21/06/2017
/7/	AFOLU_Non-Permanence_Risk_Tool_v3.3 of 16/10/2016
/8/	CCB-Program-Rules-v3.1 of 21/06/2017
/9/	CCB-Standards-v3.1 of 21/06/2017
/10/	CCB_VCS_Project_Description_Template_CCBv3.0_VCSv3.3
/11/	PD_JariPara_VCS_CCB_v3.0_eng_2.0 dated 09/11/2018
	PD_JariPara_VCS_CCB_v.3.0_eng_3.0 dated 28/05/2019
	PD_JariPara_VCS_CCB_v.3.0_eng_4.0 dated 01/07/2019

	PD_JariPara_VCS_CCB_v.3.0_eng_4.1 dated 01/07/2019
	PD_JariPara_VCS_CCB_v.3.0_eng_5.1 dated 07/10/2019
/12/	VM0015_planilha de calculo_JariPara_4.3
	VM0015_planilha de calculo_JariPara_5.1
	VM0015_planilha de calculo_JariPara_5.2
/13/	Modelo_economico_JariPara_2.1
	Modelo_economico_JariPara_2.2
	Modelo_economico_JariPara_2.3
/14/	Jari Para - VCS-Non-Permanence-Risk-Report_2.0
	Jari Para - VCS-Non-Permanence-Risk-Report_3.0
	Jari Para - VCS-Non-Permanence-Risk-Report_4.0
/15/	Jari Para - VCS-Risk-Report-Calculation-Tool-v3.2
/16/	First addendum to the private service, commissions, investments and other covenants contract between Biofílica Investimentos Ambientais S.A., Jarí Celulose, Papel e Embalagens S.A. e Jarí Florestal S.A. dated 08/07/2014
/17/	Post exploratory reports of 2008, 2010, 2011, 2013
/18/	Casa da Floresta "Final Report Characterization of the Physical Environment - REDD+ Jarí Pará Project" 2016
/19/	Casa da Floresta "Final Report Biodiversity Assessment - REDD+ Jarí Pará Project" 2016

/20/	Vertices_Glebas_Para.shp
/21/	FRM "Estudo para determinação do estoque de carbono florestal" 2016
/22/	VERRA webpage with global consultation https://www.vcsprojectdatabase.org/#/pipeline_details/PL1811
/23/	LEI No 12.727, DE 17 DE OUTUBRO DE 2012
/24/	DECRETO Nº 5.051, DE 19 DE ABRIL DE 2004
/25/	IBAMA Queimada controlada 13 december 2016
/26/	ITERPA and Jari - signed Term of Adjustment of Conduct 2016
/27/	Conflict Management Procedure
/28/	Communication with stakeholders
/29/	Procedure for Systematic of recruitment and selection
/30/	Land property certificate Alzira Antunes Martins 4538 of 2019
	Land property certificate Ayres Julio da Fonseca 4521 of 2019
	Land property certificate Benedito de Oliveira Feitosa 4529 of 2019
	Land property certificate Cajueiro Serra de Almeirim 375 of 2016
	Land property certificate Campo Saracura 4532 of 2019
	Land property certificate Castanhal do Urucurituba Transc nº 829, lv 3-E, fl 9 à 11 of 2019
	Land property certificate Crispim Joaquim de Almeida 4530 of 2019

	Land property certificate Fazenda Saracura 2259 of 2016
	Land property certificate Flávia Freitas de Almeida Maia 4518 of 2019
	Land property certificate José Fernandes Fonseca 4520 of 2019
	Land property certificate Maria de Nazare de Almeida Guedes 4539 of 2019
	Land property certificate Panama ou Mapau Transc nº 829, lv 3-E, fl 7 à 11 of 2019
	Land property certificate Pau Grande 2253 of 2019
	Land property certificate Santo Antonio da Cachoeira 360 of 2019
	Land property certificate Santo Antônio do Urucurituba Transc nº 829, lv 3-E, fl. 9 à 11 of 2019
	Land property certificate Serra Grande 2247 of 2019
	Land property certificate Terra Preta do Castanhal 2254 of 2019
/31/	INCRA (National Institute pf Colonisation and Agrarian Reform) land memorials/descriptions
/32/	Contract Rina Oct. 2018
/33/	Iterpa Protocol dated 07/11/2016 of the Request for the legitimisation of Jari's holdings and redeeming of areas "aforadas" of 3/11/2016 (ITERPA_docs_primeiro bloco 7.pdf)
/34/	Iterpa Protocol dated 21/02/2017 of the Submition of georeferencing data of the Santo Antônio da Cachoeira (ITERPA_docs_segundo bloco 1.pdf)
/35/	Iterpa Protocol dated 21/02/2017 of the Submition of georeferencing data of the Cajueiro e Serra de Almeirim (ITERPA_docs_segundo bloco 5.pdf)
/36/	RS Advogados - Consulting Report on Ownership dated 28th of May 2019.

/37/	Análise_Desmat_Veget_10anos.xlsx
/38/	Vegetação_NãoFlorestal_Savana
/39/	FormaçãoPioneiras_fluvial
/40/	IBGE 2003 - Shapefiles with the types of vegetation within the Legal Amazon. Scale: 1:250,000 http://geoftp.ibge.gov.br/informacoes_ambientais/vegetacao/vetores/escala_250_mil/amazonia_legal_ano_2003/BDG_VEGETACAO_AmazoniaLegal_2003.zip
/41/	Manoa REDD+ Project (2017) - https://www.vcsprojectdatabase.org/#/project_details/1571
/42/	Casa da Floresta "Regional contextualisation and work plan - socioeconomic module - REDD+ Project Jari Pará" 2016.
/43/	Harmonia "Product 3 - Referent to the final report of the social consultation which complemented the social and economic and environmental diagnosis of the Jari/Pará REDD+ Project" June 2018.
/44/	Brandão Jr e Sales "REDD Jari/Pará: Baseline Report" 2016
/45/	Brandão Jr "Final Report: REDD+ Jari Pará Project - Baseline of deforestation" 2018
/46/	Shape files "estradas_biomas_2012_geo_shp" https://imazongeo.org.br last accessed 07/06/2019
/47/	Shape files with navigable rivers Rios_Navegaveis_cut.shp
/48/	UHE Santo Antônio do Jari http://www.cesbe.com.br/obras/uhe-santo-antonio-do-jari/ last accessed
/49/	Eco - News about the issuance of Operational License for Tucuruí transmition line https://www.oeco.org.br/blogs/salada-verde/27008-linhao-do-tucurui-recebe-licenca-de-operacao

	last accessed 07/06/2019
/50/	IBGE 2003 - Shapefiles with the types of vegetation within the Legal Amazon. Scale: 1:250,000 http://geoftp.ibge.gov.br/informacoes_ambientais/vegetacao/vetores/escala_250_mil/amazonia_legal_ano_2003/BDG_VEGETACAO_AmazoniaLegal_2003.zip last accessed 07/06/2019
/51/	NASA Elevation and slope data source https://www2.jpl.nasa.gov/srtm/dataprod.htm last accessed 07/06/2019
/52/	SIGEF_particular_RR_cut.shp
/53/	www.SIGEF.incra.gov.br last accessed december 2018
/54/	PDigital2014_RR_classes.shp
/55/	Soil cover tif file coberturaSolo2044.tif
/56/	referenceRegion.shp
/57/	final_projectArea.shp
/58/	Mailing_04062019
/59/	Consulta pública local do Projeto REDD+ Jari Pará_outlook
/60/	Mensagex mailling Report 04.06.2019
/61/	Biofílica e Fundação Jarí "Report on strengthening and expanding the public consultation process for the dissemination of the redd + jari / pará project with local residents." 2019
/62/	Photographs Fotos.rar
/63/	CAR1_Videos

/64/	WANDERLLI & FEARNSIDE, 2015
/65/	POEMA "Socio-environmental Diagnosis of the Rural Communities of Vale do Jarí" 2005
/66/	DadosGeo2
/67/	Fase "Socioeconomic and Environmental Diagnosis of the Communities Surrounding the ABC Farm, Portel-Pará" 2009
/68/	Cikel & AMF & Agropecuária Brasil Norte "Plan of Sustainable Forest Management of Multiple Use Business of the ABC Farm" 2003
/69/	Varela "Rules of use of nuts of the Avança nuts area in operating areas of the Jari Group Bananal Community" 2018
/70/	Jarí declaration to the Rural Workers and Association of Producers of the Nova Vida region 2003
/71/	Biofílica - Jarí Pará REDD+ Project Monitoring Bulletin 2015, 2016 and 2017.
/72/	Jari Group principles and general rules of conduct
/73/	Integrated policy of the management system
/74/	SISCAR Propriedades_RR_cut.shp
/75/	Step3e_Analise_desmat_usodosolo.xlsx
/76/	ART. Análise de Riscos da Tarefa. rev 0.005
/77/	Diálogo de Segurança rev 0.003
/78/	IS - Inspeção de Segurança rev 0.004
/79/	OPAI - Observação Planejada de Atos Inseguros rev 0.003

/80/	PS Acidente rev 0.002
/81/	pwc Reports on Fundação Jarí financial status 2015, 2016 and 2017
/82/	pwc Reports on Jarí Celulose financial status 2015 and 2016
/83/	Nº Processo: 0000205-84.2015.8.14.0051
/84/	Rural Activity License N°651 of July 2009
/85/	Rural Activity License N°3152 of October 2014
/86/	Amazônia socioambiental. Sustentabilidade ecológica e diversidade social http://www.scielo.br/scielo.php?pid=S0103-40142005000200004&script=sci_arttext&tlng=es
/87/	PRODES (Forestry Satellite Monitoring Project) http://www.dpi.inpe.br/prodesdigital/prodes.php last accessed 03/04/2019
/88/	Landholds_descriptive memorials
/89/	transitionPotential_tiff
/90/	Leakage_belt maps from 2015 to 2044
/91/	leakage_manag_area.shp
/92/	comunid_participantesprojeto.shp
/93/	Tabela 6_VegGlebaJaril_IBGE_2012_fig5table6ofPD
/95/	Jari/Amapa REDD project PD
/96/	421_Factor_maps

/97/	Orsa Florestal (former Jarí Florestal) Demonstration of Financial Results 2012 Orsa Florestal (former Jarí Florestal) Demonstration of Financial Results 2013 Orsa Florestal (former Jarí Florestal) Demonstration of Financial Results 2014
/98/	Biofílica - Analytical balance sheet by cost center for Jarí Pará December 2018
/99/	calculo_esforçoamostral_testes
/100/	analises_FINAL_um_estrato_AGB
/101/	analises_FINAL_um_estrato_BGB
/102/	analises_FINAL_um_estrato
/103/	FRMBr_MonitoramentoREDD_VFinal_11012016
/104/	2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4, Agriculture, Forestry and Other Land Use
/105/	Nogueira et Al 2008
/106/	Relatorios pos exploratorios
/107/	data_completa_wd.csv
/108/	Audit_Plots_CBH.xlsx
/109/	Biofílica's Proposal of an Investment Plan for the Jarí/Amapá and Jarí/Pará REDD+ Projects for the years of 2019 to 2024, dated August 2018
/110/	Casa da Floresta Contract with Biofílica June 2015
/111/	Contract Harmonia and Biofílica 2018

/112/	Proposal QVP Translation of PD September 2018
/113/	RP Ambiental Contract January 2018
/114/	Proposal Federal University of Pará 2018
/115/	Jari Foundation Work Plan for the Project REDD+ Jarí/Amapá for the period of April 2018 to December 2019
/116/	FRMBr contract for the estimation of carbon stocks of 05.05.2015
/117/	MHR Sales Consulting Contract (statistical) dated 15.05.2014
/118/	BRGeo Consulting (modelling baseline) dated 22/01/2017
/119/	Land Management and Security Operational Costs for Jarí in 2015, 2016, 2017 and 2018
/120/	High Resolution satellite monitoring quote for the Jari Pará area - outlook file (email)
/121/	HIGUCHI, N., PEREIRA, H. S., DOS SANTOS, J., LIMA, A.J.N. Local amazonian government and the global environmental issues (from the Portuguese Governos locais amazônicos e as questões climáticas globais). Manaus: Edição dos Autores, 86 P. 2009.
/122/	SCHROEDER, W. et al. The Spatial Distribution and Interannual Variability of Fire in Amazonia. Amazonia and Global Change, v. 186, p. 43-60, 2013.
/123/	REDD+ Jarí/Amapá Report of Activities in 2018
/124/	Jarí Procedure - Systematic of training and staff development dated 13.04.2018
/125/	Sustainable Forest Management Plan dated 2016
/126/	Brazilian Forest Code (Law nº 12.651 of 2012)

/127/	KAUFMANN, D.; KRAAY, A., The Worldwide Governance Indicators (WGI). Available on: <http://www.govindicators.org>. Access in: Dec 30th 2018
/128/	Governance Indicator_BR.xlsx
/130/	IUCN - International Union for Conservation of Nature Red List Species and Trends https://www.iucnredlist.org/search?taxonLevel=Amazing&searchType=species last accessed 30/06/2019
/131/	Ministry of Environment - of conservation units in Brazil http://www.mma.gov.br/areas-protegidas/cadastro-nacional-de-ucs/dados-georreferenciados.html
132	Minutes from the first workshop Jarí Pará 28th and 29th May 2015.
133	Brazilian Law on traditional knowledge No. 13123 of 2015 http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2015/lei/l13123.htm
134	GRUPO ORSA, CEATS e POEMA (2006) Socioenvironmental Diagnosis of the Rural Communities of Jarí Valley (from the Portuguese Diagnóstico Socioambiental das Comunidades Rurais do Vale do Jarí).

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2.4 Interviews

The interviews were carried out with communities in the visit to the Project Zone and Fundação Jari in the State of Pará in December 2018. In February 2019 to the offices of Biofílica and Jarí Celulose in São Paulo were also visited. Below is a list of people interviewed.

Date	Name and Role	Organization	Topic
10/12/2018	Caio Gallego Project Coordinator	Biofílica	PD , Presentation of Roles and responsibilities in the Project.
11/12/2018 and 12/12/2018	Arnaldo Santos Agronomist	Fundação Jarí	History of Jari Celulose and Fundação Jari, Relationship

			Jari and local communities.
10/12/2018	Luana Cordeiro Analist	Biofílica	Project Boundary, Carbon stock estimates, levels of accuracy and calculations of biomass with Software R
10/12/2018	Alexandre Ferreira Legal Department	Jarí Celulose	Property Rights, Rights of Use
10/12/2018	Miranda GIS	Jarí Celulose	Project area vectors from INCRA (official) website.
11/12/2018	José Jussian	Fundação Jarí and local resident	Survey of potential areas of Brazil nut
11/12/2018	Otacílio França Alves Community leader and Brazil Nuts collector	Cafezal (community in the PA directly involved in the activities of the Jarí Para REDD+ Project)	Community activities and views regarding the Jarí Para REDD+ Project
11/12/2018	Sidiana Paixão Teacher	Cafezal (community in the PA directly involved in the activities of the Jarí Para REDD+ Project)	Views regarding the Jarí Para REDD+ Project
11/12/2018	Maria Zilda Resident	Cafezal (community in the PA directly involved in the activities of the Jarí Para REDD+ Project)	Views regarding the Jarí Para REDD+ Project
11/12/2018	Edson Fonseca Santos Community leader	Recreio (community in the PA directly involved in the activities of the Jarí Para REDD+ Project)	Expectations of Recreio community with regards to REDD
11/12/2018	Iderlio G da Silva President of the Amoruré Association	Recreio (community in the PA directly involved in the activities of the Jarí Para REDD+ Project)	Expectations of Recreio community with regards to REDD
11/12/2018	Group meeting	Pimental	Types of production, Community associations and

	Farmers	(community in the PA not directly involved in the activities of the Jarí Para REDD+ Project)	Jarí Para REDD+ Project knowledge
12/12/2018	Camilo	São Miguel (community in the PA not directly involved in the activities of the Jarí Para REDD+ Project)	Community associations
12/12/2018	José Erivam Monteiro and Mercedes do Carmo Farmers and Açai extractors	São Miguel (community in the PA not directly involved in the activities of the Jarí Para REDD+ Project)	Types of production, Community associations, community necessities and Jarí Para REDD+ Project knowledge
12/12/2018	Josenildo dos Santos Farmers and Açai extractors	São Miguel (community in the PA not directly involved in the activities of the Jarí Para REDD+ Project)	Types of production, Community associations, community necessities and Jarí Para REDD+ Project knowledge
12/12/2018	Maria José Campelo Açai extractor	São Miguel (community in the PA not directly involved in the activities of the Jarí Para REDD+ Project)	Types of production, Community associations, community necessities and Jarí Para REDD+ Project knowledge
12/12/2018	Davi Environmental Department	Jarí Celulose	Environmental Licenses for the SFMP
12/02/2019	Amintas Brandão	BRGeo	Baseline estimates and modelling
13/02/2019	Luana Cordeiro	Biofílica	Applicability Conditions Non-permanence risk assessment Monitoring Plan
14/02/2019	Allan	FRMBr	Carbon stock estimates: Sampling strategy (classes/types of forest) and level of accuracy used for carbon stock estimates in the PD

15/02/2019	João Marins	Jarí Celulose	Property Rights
15/02/2019	Caio Gallego	Biofílica	Financial Spreadsheet
	Vinícius Garcia	Jarí Celulose	

2.5 Site Inspections

The site inspection of the Project Zone was carried out between 10/12/2018 and 19/12/2018.

The onsite visit was performed in order to understand and evaluate the project area and the region of reference as well as the leakage belt area. In the project area managed and unmanaged of the two main forest typologies were visited and DBH rechecked for a sample of sites randomly distributed among these two typologies that according to PDv 2 /11/ corresponded to 80% of the Project Area.

During the visit to the Project Zone, three communities in the project zone directly involved in the activities of the Jarí Para REDD+ Project: Cafezal e Recreio (which includes the 3rd community, Serra Grande, considered a member of Recreio) and 2 communities in the Project Zone but not involved in the activities of the Jarí Para REDD+ Projec: Pimental and São Miguel were visited. Thus, it was possible to assess the condition of the forest areas of the project and the socioeconomic dynamics of the reference region.

2.6 Public Comments (*Rules* 4.6)

This project was posted for Global Public Comment from 16 October to 15 November 2018 on the VCS website https://www.vcsprojectdatabase.org/#/pipeline_details/PL1811 and as can be seen from it, no comments were received during that period.

The PP also carried out a Participatory Rural Appraisal from 04 to 07 April 2018 with three community nuclei, representing 8 communities. The main results were validated by the audit team in the Harmonia report /43/. The main needs identified in the report are summarised below:

1 – Social organisation; 2 – Technical assistance; 3 – Communication and electricity; 4 – Access to government; 5 – Direct access to markets (without the middle man); 6 – Control of predatory fishing and logging.

The VVB checked that this were reflected in table 10 of the PDv4.1. In summary the Project translated these needs identified into the following aims:

- 1. Involvement of local actors in participatory management models to assist them in the empowerment of local management, through the participation of local technical chambers' meetings;
- 2. Facilitate the aggregation of community social capital. in the quest for social organization, based on the search for collective commitments with a view to guaranteeing essential basic rights;
- 3. Facilitate access to public policies in order to guarantee public goods and services in the context of the strengthening of social and third sector organizations, trade unions, companies, and communities;
- 4. Opportunity to develop business chains of social impact, through rural technical assistance, training and research and facilitation of access to markets;
- 5. Improve community energy and communication systems by bringing them into contact with the world

As a result of CAR1, Biofílica and Fundação Jarí strengthened their local public consultation to communities not directly involved in the project activity but in the Project Zone. These took place on 18/04/2019 in the municipality of Almeirim and on the 25/04/2019 in Monte Dourado. According to the PPs report to the audit team these events gathered 46 communities' representatives /61/. The VVB checked the list of participation published in the same report /61/ and the photos of the consultations /62/ as well as the videos of testimonies after consultation from a representant of the community Vila Nova and another from the community Repartimento /63/, both representants showed interest in participating in the project in the future. A FAR was opened to make sure the process of communication with these communities not directly involved in the project activities but interested in participating, and with use rights in the Project Zone, continued until the first CCB verification and throughout the Project lifetime.

Also as a result of CAR 1, on 4th of June 2019 Biofílica e Fundação Jarí re-sent invitations for public comments to local stakeholders. The VVB checked that an email /59/ was re-sent on

04/06/2019, with a link to the PD in Portuguese /58/. The email had the following main institutions amongst others:

Chambers of Councilors of Almeirim, SEMAS (state environmental regulators), SEMA (municipal environmental regulators), Forum of Brazilian NGOs, STR (rural workers syndicate) of Gurupá and Almeirim, State Public Prosecutors and Federal Public Prosecutors. The VVB also checked the report generated by Mensagex which stated that 223 emails were delivered.

Until 01/07/2019 no comments had been received from this local stakeholder consultation.

2.7 Resolution of Findings

Appendix I of this report presents all findings (CARs, CLs and FAR) raised during the process of validation.

All CAR/CLs have been resolved by PPs via provision of additional supporting evidence and appropriate changes to the VCS PD v2 /11/.

2.7.1 Forward Action Requests

FAR1 is listed in Appendix I of this report too.

3 VALIDATION FINDINGS

3.1 Summary of Project Benefits

Benefits of the Jarí Pará REDD+ Project are summarised in table 1 of the PD v4.1 /11/.

The climate benefit described is that the Project aims to assist mitigation of climate change with total avoided emissions of 15,491,971 tCO2e throughout the project lifetime. The audit team confirms that this estimate was validated in the ER spreadsheet v5.2 /12/.

The benefits to the local community and other actors will be focused on the aspects of associative strengthening, improvement of family farming, provision of technical assistance and improvement in energy and communication systems. With this, it is intended to influence the social issues and the living conditions of the communities around the Project Area, reducing social vulnerability and rural exodus, increasing the level of socioeconomic conditions and the life quality of the families,

helping to obtain goods and services that promote economic and social well-being. The VVB confirms that during validation it has seen that Fundação Jarí and Biofílica have the know how and strong experience with the community areas to be able to do so.

The benefits to biodiversity is expected to be the maintenance and monitoring of the forest cover in the Project Area, ensuring the protection and conservation of habitats and local biodiversity, including species with some degree of threat according to IUCN. In addition, the Project Area plays an "ecological corridor" role, which connects several Conservation Units and assists in the generation of knowledge through the development of scientific research related to the theme. As an experienced environmental scientist and ecologist the auditor saw during the validation of the Project that if well carried out it will certainly maintain important areas in good conservation.

3.2 General

3.2.1 Summary Description of the Project (G1.2)

The Jari/Pará REDD+ Project is a project which will invest in the Multiple Use of Forest Management (timber and non-timber forest products) and commercialization of environmental services, with the objective of generating income and further local development, increasing the value of standing forest to preserve it and consequently reducing emission from greenhouse.

The main components of the Project relate to forest protection and monitoring; activities aimed at reducing the risks of deforestation and conserving biodiversity; the promotion of applied scientific research focused on biodiversity and the efficient use of natural resources; and the inclusion of communities in the Project, seeking greater integrity among the parties involved as well as focusing on sustainable business chains and generating income and well-being for local communities. All of these activities will become economically viable by combining the activities of Multiple Use Forest Management with the commercialization of carbon credits through REDD+ mechanisms.

The Project is located in the municipality of Almeirim, in the State of Pará, and has as its Project Proponents (PPs) Biofílica Investimentos Ambientais S.A., Jari Celulose S.A and Fundação Jari.

The project starting date is 08/07/2014 when Biofílica e Jarí Celulose signed an addendum /16/ to the contract previously signed between the parts to introduce the project which was already being carried out in Amapá (Jari/Amapá REDD+ Project, Brazil)..

The estimated total GHG emission reductions or removals by the Project Activity in 30 years is 15,491,971 tCO2e, which represents an average of 516,399 tCO2e per year. This is considered by section 3.9.1 of the VCS Standard v3.7 a large scale project.

The scenario prior to the implementation of the project activity is of a forest, mainly Dense Ombrophylous Forest, which has several variations according to its location on the ground, and areas of non-forest formations as reported in the inventory carried out by FRMBr in 2016 /21/. In addition to species of extreme ecological importance there are also species of flora and fauna with some degree of threat according to the IUCN Red List, and a mix of social farming and extracti vist communities as per asa da Floresta "Final Report Biodiversity Assessment - REDD+ Jarí Pará Project" 2016 /19/.

Furthermore, Jari Florestal had a SFMP as evidenced by the post exploratory reports of 2008, 2010, 2011 and 2013 /17/ and Fundação Jarí working with local communities in a more informal way to organize the use of resources as evidenced by the “Declaration to the Rural Workers and Association of Producers of the Nova Vida region” 2003 /70/.

According to the PD v3 /11/ the projects climate, community and biodiversity objectives are:

“forest protection and monitoring; activities aimed at reducing the risks of deforestation and conserving biodiversity; the promotion of applied scientific research focused on biodiversity and the efficient use of natural resources; and the inclusion of communities in the Project, seeking greater integrity among the parties involved as well as focusing on sustainable business chains and generating income and well-being for local communities”.

This was checked through the initial report prepared by Harmonia with the results of the PRA /43/ and throughout the validation process.

According to the VVB the project description is accurate, complete, and provides an understanding of the nature of the project.

3.2.2 Physical Parameters (G1.3)

The Jari/Pará REDD+ Project is located in the northern region of the state of Pará, on the right bank of the Jari river, and left bank of the Amazon River as observed over flight in the area and as shown in figure 6 of the PD v3 /11/. The Project Zone comprises the entire area of Pará property, Gleba Jari I, totaling an area of 909,461 hectares (figure 1 of the PD v4.1). The Project Zone is a huge area and the coordinates for the area were checked as described below in section 3.2.4.

The geological, geomorphological, pedological, climatological, hydrological characteristics of the area as well as the types as well as the distribution of the flora and fauna description in the PD v3 were validated from the Casa da Floresta Physical Environment Report /18/ and Biodiversity Assessment Report /19/.

3.2.3 Social Parameters (G1.3)

The social parameters described in the PD v3 have been validated against the report by Casa da Floresta Regional contextualisation and work plan - socioeconomic module - REDD+ Project Jari Pará /42/ and the Report on the social consultation which complemented the social and economic and environmental carried out by Harmonia /43/.

3.2.4 Project Zone Map (G1.4-7, G1.13, CM1.2, B1.2)

The accuracy of the project zone map was validated from the vertices in the file Vertices_Glebas_Para.shp /20/, downloaded from the INCRA (National Institue of Colonisation and Land Reform) website (www.SIGEF.incra.gov.br) during site visit for the properties under the Jari Celulose land descriptions documents /88/ issued by INCRA itself.

The boundaries of the PA are validated in section 3.3.3.

Positioning of communities were checked by visiting a sample of these during site visit.

The areas of high conservation value were validated against reports by Harmonia /43/ and Casa da Floresta /42/.

3.2.5 Stakeholder Identification (G1.5)

The 98 communities in the Project Zone, shown in table 7 of the PD v4.1 /11/ were identified by a study carried out by Grupo Orsa, POEMA (Poverty and Environment in the Amazon Program – Federal University of Pará) and CEATS (Center for Social Entrepreneurship and Administration in the Third Sector) in 2006 /134/ and complemented by Fundação Jarí's more recent knowledge in 2018 and Casa da Floresta Report /42/.

The stakeholders and communities identified and described in the PD were also validated against the Report written by Harmonia /43/ and are deemed appropriate for the project. However, it is necessary to expand participation of the project to communities not initially involved in the project as already mentioned earlier in section 2.6 above (for more details see also CAR1 and FAR 1).

As can be seen from table in section 2.4 above, the VVB also met with 3 communities in the project zone directly involved in the activities of the Jarí Para REDD+ Project: Cafezal e Recreio (which includes the 3rd community, Serra Grande, considered a member of Recreio) and 2 communities in the Project Zone but not involved in the activities of the Jarí Para REDD+ Projec: Pimental and São Miguel.

The conclusions after meeting them is that reports by Harmonia /43/ written after the PRAs correctly captured their main needs which have already been summarised in section 2.6 above.

3.2.6 Stakeholder Descriptions (G1.6, G1.13)

The 98 communities in the Project Zone, shown in table 7 of the PD v4.1 /11/ were identified by a study carried out by Grupo Orsa, POEMA and CEATS in 2006 /65/ and complemented by Fundação Jarí's more recent knowledge in 2008.

The stakeholders and communities identified and described in the PD were also validated against the Report written by Harmonia /43/ and are deemed appropriate for the project. However, it is necessary to expand participation of the project to communities not initially involved in the project as already mentioned earlier in section 2.6 above (for more details see also CAR1 and FAR 1).

The stakeholders description of the community groups in the PD v3 were validated against the report by Casa da Floresta Regional contextualisation and work plan - socioeconomic module - REDD+ Project Jari Pará /42/ as well as the report on the social consultation which complemented the Casa da Floresta Report, carried out by Harmonia /43/.

Furthermore, the VVB carried out interviews with Fundação Jari and did its own research on stakeholders.

3.2.7 Sectoral Scope and Project Type

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he project is correctly identified in the PD v3 as Sector Scope: 14 Agriculture, Forestry and Other Uses of the Land (AFOLU) and a REDD type project as its objective is to reduce emissions form deforestation and degradation of forests through engagement of the communities and development of institutions that will make it feasible. For this the PP correctly chose as the methodology the VM0015 Methodology for avoided unplanned deforestation /4/

The Jari/Pará REDD+ Project is a project of integration of Multiple Use of Forest Management (timber and non-timber forest products) and commercialization of environmental services, with the objective of reducing emission from greenhouse gas while preserving and valuing the standing forest by generating income and further development locally.

The main components of the Project relate to forest protection and monitoring; activities aimed at reducing the risks of deforestation and conserving biodiversity; the promotion of applied scientific research focused on biodiversity and the efficient use of natural resources; and the inclusion of communities in the Project, seeking greater integrity among the parties involved as well as focusing on sustainable business chains and generating income and well-being for local communities. All of these activities will become economically viable by combining the activities of Multiple Use Forest Management with the commercialization of carbon credits through REDD+ mechanisms.

This is not a clustered project.

3.2.8 Project Activities and Theory of Change (G1.8)

The climate benefits (GHG emission reductions) have a causal relationship with the reduction in unplanned deforestation of an estimated 50,480 ha. The validation of the baseline scenario, which supports the deforestations of such an area, is discussed in session 3.3.4 of this report. Amongst the actions described in table 10 of the PD v5.1 /11/, which will be implemented to reduce unplanned deforestation are:

- Initial articulation and studies: the contract signed between Biofílica and Jarí in July 2014 /16/ is seen as the starting point of reduction of unplanned deforestation as the agreement consolidated the territorial management model, dedicated to conservation of forest areas by promoting sustainable development of the communities, and gave rise to various workshops with initial research contractors in 2015 /132/ to actually contracting studies in the same year /110/ and carrying studies and communities consultations from 2016 to 2018 /42//43/.
- the ones to do with forest monitoring intelligence: monitoring of deforestation through satellite images, which has as one of its outcomes the bulletins to the field patrolling team, to help them understand the areas of risk of illegal settlers or new comers, already being done from 2015 as verified during the validation site visit /71/; the future acquisition of high resolution satellite imagery to make this even more efficient; the increase of the patrolling by the patrimonial surveillance team of the Jari Celulose to halt any forest degrading illegal activities.
- the ones related to technical assistance and social organization and very basic infrastructure: strengthening family agriculture, by for example diversifying productivity to reduce opening of new land, and sustainable extractivism; strengthening of associations and cooperatives; increasing access to credits and markets of the families products; providing environmental education which will all also result in financial benefits to communities.

The community activities suggested in table 10 and described in section 2.1.11 of the PD v5.1 /11/ are all feasible within the structure of the Fundação Jari, which was seen from site visit to count with experienced social managers, agronomists and other staff with high level of knowledge of the communities' needs, and the experience of Biofílica. The activities have been validated as being activities

that will supply the needs from the communities. These needs and demands were validated against the Participatory Rural Appraisal (PRA) carried out by Harmonia /43/, and during site visit by the VVB. The without project community scenario have also been validated during the site visit by the VVB as being one of average to low income and low level of education as shown by the report of Casa da Floresta /42/.

The resulting conservation of forests, from all the activities described in table 10 of the PD version 5.1 /11/ coupled with communities benefits of the same activities as well as the biodiversity monitoring plan in table 5.4.1 of the PD v3 are a strong link to the projects predicted positive impact on conservation of species diagnosed in the area as per biodiversity assessment carried out by Casa da Floresta /19/.

It is the opinion of the VVB that the theory of change described in the PD is accurate, complete, and provides an understanding of the nature of the project and how it will achieve its climate, community, and biodiversity objectives.

3.2.9 Sustainable Development

The project intends to foster activities that allow the generation of additional income for Grupo Jari and for the communities, as well as improving the management of the territory and the protection of the forest in the long term. These activities are aimed at the exploitation of low impact of forest resources which can lead to the maintenance of biodiversity, socio-environmental responsibility and improve economic-financial efficiency. The exploitation of multiple forest resources, seek, among other objectives, to develop scientific knowledge based on the traditional uses of the forest, to identify markets for these products, and to establish economically viable, environmentally correct and socially fair productivity.

As mentioned before, all these is feasible within the structure of the Fundação Jari, who has agronomists and subcontractor that have shown high level of knowledge of the biodiversity and communities needs. Biofílica also has vast experience with such projects and thus the Project has great potential to leverage sustainable development in the region.

The VVB confirms that through the validation process it became confident that the PP correctly chose the Contribution to the UN Sustainable Development Goals it will help to achieve. These are listed in table 11 of the PD v4.1 /11/.

3.2.10 Implementation Schedule (G1.9)

In table 11 of the PD the PP identifies the key milestones for the project activity. Below are some of the mile stones considered by the VVB and the most important and how they have been validated to have happened:

When	Milestone	Validated against
1 to 1.5 years before validation	Realisation of Socio Economic and Environmental Diagnosis	Casa da Floresta "Regional contextualisation and work plan - socioeconomic module - REDD+ Project Jari Pará" 2016 /42/
	Estimate of carbon stocks	FRM "Estudo para determinação do estoque de carbono florestal" 2016 /21/
	Determination of baseline and potential for generating credits	Brandão Jr e Sales "REDD Jari/Pará: Baseline Report" 2016
	Initial stakeholder consultations through PRA	Harmonia "Product 3 - Referent to the final report of the social consultation which complemented the social and economic and environmental

		diagnosis of the Jari/Pará REDD+ Project" June 2018. /43/
	Drafting of the PD	Published in VERRA's website in October 2018 /22/
	Production of MR	Sent to VVB end of 2018
In the year of validation and first verification	Selecting and contracting of VVB	Contract with Rina signed on 29th October 2018 /32/
	Project and Credits Registration	Still to do
Years 2 to 30 after first verification	Monitoring of deforestation and emissions	This has actually started before the validation and carries on as seen during site visit.
	Developing and monitoring of environmental and social management activities	Still to do
	Monitoring of Biodiversity (fauna and flora) and HCVA	Still to do
	Development of scientific research	Still to do
	Other VCS verifications and initial CCB verification	Still to do
	Credit Marketing processes	Still to do

3.2.11 Benefits Assessment and Crediting Period (G1.9)

The starting date of the Project crediting period is the same as the starting date of the project activity July 8th 2014. The end of the crediting period will be July 7th 2044 (30 years crediting period). The crediting periods for VCS and CCB are the same.

3.2.12 Risks to the Project (G1.10)

A comprehensive risk assessment to the climate aspect of the Project is validated in section 3.3.10 of this report.

Besides the above, table 15 of the PD v3 lists 2 main risks and what will be done to mitigate it. The first risk is to do with the lack of interest from communities to participate. This will be mitigated with increased efforts to bring communities involvement as funding comes in from the credits. The initial PRA has been carried out /43/ but the work will continue with the formation of technical boards and further PRA (see FAR1 in appendix I).

The other risk identified difficulty in marketing verified carbon credits, however Biofílica has extensive experience on this and so it can be concluded that mitigation of risks are covered by the Project.

3.2.13 Benefit Permanence (G1.11)

In order to maintain and improve the benefits for the climate, community and biodiversity for the duration of the Project, the PP will introduce the following:

Improvement in patrimonial surveillance procedures: the PP intends to improve monitoring intelligence with the use of satellite monitoring and thus reduce costs of monitoring in the long term.

Sustainable socioeconomic development and social organization: through actions aimed at strengthening associations and cooperatives, it is expected that they will reach a higher level of organization, enabling the adequate intensification of the marketing of agricultural and extractive products. The VVB checked during site visits that not all the communities in the Project Zone have culture of association and cooperativism. This will be a very important legacy of the project as it is a need identified by the early social and environmental diagnosis carried out by Harmonia /43/ and POEMA /65/.

Technical assistance and rural extension service (ATER), workshops and training in agroforestry and agricultural techniques and environmental education actions: through technical training and qualification in rural production, agricultural and forestry techniques according to family interest, the rural producer is able to implement adequate agricultural and forestry techniques, enabling constant production and revenue generation. This was actually a need identified by the early social and environmental diagnosis carried out by Harmonia /43/ and POEMA /65/

Strengthening of the Fundação Jari: based on the consolidation of Fundação Jarí's activities, with the application of partnerships and lines of action aiming at their financial sustainability it is expected that at the end of the Project it will consolidate itself as a business-promoting institution based on sustainable productive chains. From the site visit the VVB evidenced that the Fundação Jarí is of pivotal importance in the relations in the area and its strengthening is very positive for all stakeholders and communities involved.

Greater scientific knowledge on Biodiversity and Maintenance of High Conservation Value Attributes: In table 10 of the PD v3 the PP states that it will monitor project impacts and forest management in regional biodiversity and build partnerships with local universities. This is still too early to validate but learning is a legacy which will stay.

3.2.14 Financial Sustainability (G1.12)

Fundação Jarí is an important and well established part of the Grupo Jari. Furthermore, the Project has projected revenues from GHG emissions reductions and/or removals. This has been validated in detail in section 3.3.5 of this report.

3.2.15 Grouped Projects

This is not a grouped project.

3.2.16 Land-Use Scenarios without the Project (G2.1)

This has been validated in depth in section 3.3.4 of this report.

3.2.17 Most-Likely Scenario Justification (G2.1)

This has been validated in depth in sections 3.3.4, 3.3.5, 3.4.4, 3.5.4 of this report.

The most likely land-use scenario described on those sections, with continued loss of forest cover even in lands which are supposedly protected by laws, of biodiversity including protected species and of loss of communities rights are likely to continue as has been in the public domain specially this year.

3.2.18 Community and Biodiversity Additionality (G2.2)

The validation of the additionality analysis of the Project's climate component was carried out in detail in section 3.3.5 of this report. This additionality analysis also serves for the community and biodiversity since it shows that in the absence of the project activity the scenario would be one with continued forest loss. The PP showed during the development of the baseline scenario (validated in detail in section 3.3.4 of this report), which is the scenario where the Project activity does no take place, that most deforestation happens in small plots of land (see figure 23 of the PD v3) as a result of the lack of investment and technology to increase productivity in the same plot of land /65/. These in turn results in biodiversity loss. Biodiversity loss in turn means reduced food security and income from extraction of resources for communities living in project area, composed mainly of subsistence farmers and extractivists. Income from these activities complement one another /42/ /43/ /65/.

Existing laws in Brazil oblige land owners who have property rights in the legal Amazon to preserve 80% of the properties /23/. It also guarantees traditional populations with customary rights to resource use, which includes itinerary farming with some degree of controlled burning for subsistence farming /24/ /25/ many times in the same private properties. It is in the public domain that in the north of Brazil many areas with traditional populations have not been regularized by the governments due to vastness and remoteness of territories, it thus becomes difficult to distinguish them from illegal squatters (many times the difference is dim) and governance is hindered by legislative and juridical dilemmas inevitably resulting in deforestation. The project in this way is an opportunity not only to carry on bringing consensus in the area about resource use (as shown by the evidence sent by PP that Jari is already doing /69/ and /70/)

but also to develop this into a profitable business to Jari and local communities in the process of recognition by ITERPA and Jari /26/, while protecting biodiversity.

Other laws like the ones that protect local communities knowledge (or in other words intellectual property rights of local communities) /133/ are also more likely to be implemented with the VCS/CCB Project and not without .

The carbon credits are likely to bring this change about not only because of the extra funding for Fundação Jarí but also because it can bring about opportunity to change behavior (if people are earning to preserve, we want to do it too).

3.2.19 Stakeholder Access to Project Documents (G3.1)

The stakeholder and community engagement plans are described in the PD v3 /11/ section 2.3.1.

Oral communication had already been carried out, at the time of the validation visit, in a PRA with 8 of the communities in the Project Zone. This communication has been validated from Harmonia' report of June 2018 /43/.

The Project (after the PD was completed) has been further disseminated in two other meetings held on 18/04/2019 and 25/04/2019 where a total of 32 communities participated /61/ (17 of which are listed in PD, the others explained the PP are "dissident" communities from those listed in PD, and 6 of this 17 communities had participated of the initial PRA). The VVB checked the list of participation contained in the report of these two meetings /61/, the photos of the consultations /62/ as well as the videos of testimonies after consultation from a representant of the community Vila Nova and another from Repartimento /63/, both showing interest in the project.

The PD and other documentation explaining the Project have been made accessible in Portuguese in Fundação Jarí. This was seen during site visit.

The PP also made available the PD in the internet, and an invitation for local consultation was sent to relevant stakeholders. The VVB checked that an email /59/ was sent on 04/06/2019, with a link to the PD

in Portuguese http://www.biofilica.com.br/docs/redd/jari-para/PD_ProjectDescription_pt_preliminar.pdf to a list handed in by the PPs /58/ which had the following institutions amongst others: Chambers of Councilors of Almeirim, SEMAS (state environmental regulators), SEMA (municipal environmental regulators), Forum of Brazilian NGOs, STR (rural workers syndicate) of Gurupá and Almeirim, State Public Prosecutors and Federal Public Prosecutors. The VVB also checked the report generated by Mensagex /60/ which stated that 223 emails were delivered.

In future the PP also intends to have meetings REDD+ Technical Board Events which will be an opportunity for agricultural community/communities councils (of communities directly participating of the project activities) and rural technicians to meet.

The VVB concludes that the project has made project documentation accessible to communities and other stakeholders but opened a FAR for this to be expanded to more of the communities in the Project Zone listed in the PD, until the next CCB verification.

3.2.20 Community Costs, Risks and Benefits (G3.2)

The costs, risks and benefits were analysed through a SWOT analysis during the PRA /43/. This information was later passed on to more communities in the two other meetings carried out by the PP in April 2019. The ability of the community to understand the information after the PRA was very good as seen during site visit. The ability of the community to understand the presentations varies as seen in videos of testimonies after consultation from a representative of the community Vila Nova and another from the community Repartimento /63/. FAR1 was opened to address this too.

3.2.21 Information to Stakeholders on Validation and Verification Process (G3.3)

Already validated in 3.2.19.

3.2.22 Site Visit Information and Opportunities to Communicate with Auditor (G3.3)

The communities were informed of the visit in advance and the VVB had the opportunity to communicate with them freely during site visit.

3.2.23 Stakeholder Consultations (G3.4)

The PP carried out a local stakeholder consultation in September 2018. Videos with comments from community members were provided to the VVB. All community members interviewed in the videos gave positive feedback about the Project.

The PP also presented the Jarí Pará REDD+ Project and carried out a PRA with to 8 of the 98 communities reported to be within the Project Zone in April 2018. The results of this PRA, the SWOT matrices and communities' maps developed by the communities themselves were checked by the VVB /43/. The VVB has already described the results of these PRAs in section 2.6 of this report. The VVB checked that these results (the needs and requests of the communities) are translated into the activities of table 10 of the PD v5.1. The VVB also checked the information of the main communities requirements during the site visit with the communities of Cafezal and Recreio (which participated of the PRA) and Pimental and São Miguel (which did not participate of the PRA).

However, CAR1 was raised as the VVB concluded that there were neither evidence of invitation for comments sent to some relevant officials in the state of Para, nor the municipality of Almeirim, nor institutions representing the other 90 communities informed by the client to be in the Project Zone.

The PP then expanded the consultation to other communities representatives and syndicate of rural workers and CAR1 was closed (for more details see Appendix I of these report). The validation of the complete consultation which was found to be in accordance with the CCB section G.3.4 was already detailed in section 3.2.19. Because of the number of communities and the vast territory involved the VVB requested the PP to continue with the expansion of efforts to involve all communities in the Project Zone through representatives or institutions recognised by themselves. A FAR that should be checked in the first verification of the CCB was opened with this purpose.

3.2.24 Stakeholder Consultation Channels (G3.5)

The consultation channels described in the PD are appropriate. However, as mentioned in the previous section, it needs to be disseminated more widely to other communities representative institutions (see FAR1 appendix II of this report) in the Project Zone listed in table 7 of the PD.

3.2.25 Stakeholder Participation in Decision-Making and Implementation (G3.6)

The PP carried out a PRA /43/ in order to understand the main communities needs and these are reflected in the PD /11/. The planning has been further disseminated and will be further disseminated as discussed in previous sections.

3.2.26 Anti-Discrimination Assurance (G3.7)

The VVB checked the commitment of Grupo Jari with policy of human rights and social responsibility, in internal norms such as the Integrated policy of the management system /73/ and the Jari Group principles and general rules of conduct /72/. The latter is intended to guide and direct the attitude of all employees of the Grupo Jari in relation to contact with internal, external and community audiences.

During site visit in December 2008 to Pará and to the offices in São Paulo the VVB had a good impression of Fundação Jari e Jari Celulose in relation to anti-discrimination. Also in communities the participation of woman in meetings during the validation site visit was significant.

3.2.27 Feedback and Grievance Redress Procedure (G3.8)

The VVB checked the procedures mentioned in section 2.3.12 and 2.3.13 of the PD v3, Conflict Management Procedure /27/ and Communication with Stakeholders /28/ and confirms that the description in the PD is correct /11/. During site visit it also saw the “Speak with us” forms and boxes around Fundação Jari.

3.2.28 Worker Training (G3.9)

Currently, orientation for project’s workers is done through Biofílica staff and Fundação Jari.

Section 2.3.14 of the PD v.5.1 /11/ identified the training needed by Fundação Jarí’s staff that ensures local capacity will not be lost through Fundação Jarí’s staff turnover and to communities in order to increase their participation in the implementation of the project. These training needs were validated against table 10 of the PD v.5.1. and against the report of the PRA carried out with the communities,

where one can see the SWOT matrices and community mapping. It is the opinion of the VVB that the training described in the PD (for both communities and Fundação Jarí's staff) and the activities in table 10 of the PD match the needs identified in the PRA carried out with communities /43/.

The PD also states future measures needed to provide orientation and training for those employed through project activities and to relevant people from communities such as the need to carry out a survey of the best technics and procedures to drive the trainings for the technicians' team. It also identified internal procedures as a way not to lose acquired capacity through staff turnover in Fundação Jarí.

Furthermore, the creation of technical meetings, also mentioned in the PD v5.1. /11/ are a good way of orientating Fundação Jarí's staff and communities too.

3.2.29 Community Employment Opportunities (G3.10)

The recruitment policy of the company /29/ is very clear in terms of what conditions to follow and that initially HR must seek candidates inside the company with the correct abilities to the position. The VVB also checked that the company has a very clear code of conduct Jari Group principles and general rules of conduct /72/ against discrimination.

3.2.30 Relevant Laws and Regulations Related to Worker's Rights (G3.11)

The VVB checked that Jarí has a complete set of procedures covering all aspects of security at work and legislation /76/ to /80/.

3.2.31 Occupational Safety Assessment (G3.12)

The VVB checked that Jarí has a safety inspection procedure in place /78/.

3.2.32 Project Governance Structures (G4.1)

The structure for Project Governance has been checked during site visit in Pará and São Paulo. Fundação Jarí counts with social managers and field agronomists and other staff with many years of experience within the communities in Almeirim, as well as strong GIS and surveillance departments. Biofílica has strong forest engineers and a history of REDD+ Projects with many associate experienced consultants. Both of these companies have experience with another REDD project, the Jarí Amapá

REDD Project (https://www.vcsprojectdatabase.org/#/project_details/1115). It is the opinion of the VVB that governance of the project is robust and technical skills are met.

3.2.33 Required Technical Skills (G4.2)

Same as above.

3.2.34 Management Team Experience (G4.2)

Same as above.

3.2.35 Project Management Partnerships/Team Development (G4.2)

Not applicable, Biofílica and Jarí manage the Project alone.

3.2.36 Financial Health of Implementing Organization(s) (G4.3)

The VVB checked a series of financial audit reports for Jarí Celulose and Fundação Jarí and confirms financial health for financial support over the project lifetime. Furthermore, Biofílica Investimentos Ambientais is a Brazilian company with 10 years of experience in the environmental assets market, has a diversified line of business, and investors who support the company's business.

3.2.37 Avoidance of Corruption and Other Unethical Behavior (G4.3)

Biofílica Investimentos Ambientais supports annual financial auditing processes ensuring that its resources are allocated responsibly and free of corruption. The financial statements and minutes of meetings related to the company are published on JusBrasil's website (https://www.jusbrasil.com.br), the largest open and legal community in Latin America.

Jari Group has a strong code of conduct ./72/ and also provides an internal ombudsman communication channel, mentioned above, which, among other functions, facilitates complaints of corruption. The complaints and claims are forwarded and correctly resolved. It should be noted that the channel is stealthy and works free through a 0800-telephone number.

3.2.38 Commercially Sensitive Information (*Rules* 3.5.13 – 3.5.14)

Commercially sensitive information have been listed in the PD v3 and provided to the VVB. The VVB does not see a problem with this being classified as sensitive information.

3.2.39 Statutory and Customary Property Rights (G5.1)

Jari Group is working with ITERPA in the recognition and mapping of the traditional communities of the region /26/ which have customary access to territory and resource use rights.

3.2.40 Recognition of Property Rights (G5.1)

All property rights are recognized, respected and supported. As mentioned above, Jari Group is working with ITERPA in the recognition and mapping of the traditional communities of the region /26/ which have customary access to territory and resource use rights. The validation of Jarí's legal ownership of the land is extensively discussed in section 3.2.47 of this report.

3.2.41 Free, Prior and Informed Consent (G5.2)

The process by which free, prior, and informed consent is being sought from traditional communities which have rights of access to territories and resource use has been discussed in section 3.2.12, 3.2.19, 3.2.20, 3.2.23, CAR1 and FAR1.

3.2.42 Property Rights Protection (G5.3)

The project activities do not lead to involuntary removal or relocation of property rights holders from their lands or territories as Jarí is the main legal property right holder (see section 3.2.47 below), and as mentioned is in the process of recognizing and mapping traditional communities of the region /26/ which have customary access to territory and resource use rights. During site visit the VVB checked that the project also does not force rights holders (customary rights of access to territories and resource use) to relocate activities important to their culture or livelihood. On the contrary, Fundação Jarí seems to work with the communities to straighten the relationship between them and the Jarí Group.

A few documents have been shared by PPs showing that the Jari Group respects this rights of the local communities, one of them being "Jarí declaration to the Rural Workers and Association of Producers of

the Nova Vida region" from 2003 /70/ and some actually show that Jarí actually work to resolve conflicts between communities /69/, these was a fact also observed during site visit to the São Miguel community (which is not involved in project activities as yet). The statements made on video by the community members of Vila Nova e Repartimento /63/ and all documents sited in sections 3.2.12, 3.2.19, 3.2.20, 3.2.23, CAR1 and FAR1, also indicate that.

3.2.43 Illegal Activity Identification (G5.4)

No illegal activities were identified during this validation by PPs.

3.2.44 Ongoing Disputes (G5.5)

The VVB came across one judicial decision in favour of Jarí from 2015 /83/ to do with land dispute. The group of juridical consultants helping the VVB also found other judicial processes moved against Jarí to do with land disputes. However, the VVB juridical consultants informed that Jarí Celulose is the holder of all land certificates of the properties listed in table 16 of the PD and with a history of business in the region with at least 50 years.

Brazil has a public prosecution system that can be approached by anyone in the advent of a dispute free of charge. Therefore, the project activity can not prejudice the outcome of an unresolved dispute relevant to the project.

Furthermore, it has already been said in section 3.2.27 that procedures are in place in the company to resolve conflicts or disputes with external stakeholders (Conflict Management Procedure /27/ and Communication with Stakeholders /28/). This procedure states that any complaints or conflicts reported should be resolved in a friendly manner and if not resolved it is eventually direct to judicial level.

3.2.45 National and Local Laws (G5.6)

All laws are listed in PD v3 section 2.5.7. /11/. The licenses validated below demonstrate compliance with all these laws and regulations.

3.2.46 Approvals (G5.7)

Project proponents have achieved recognition and approval of Jari/Pará REDD+ Project implementation through meetings between proponents, community consultation, as well as consultation and submission meetings with the formal and traditional authorities mentioned in the section 2.3 – Stakeholder Engagement.

With regards to environmental licenses for the SFMP, the PP has provided the following licenses issued by the Government of Pará:

License N°651 of July 2009 valid until July 2014 / 84/.

License N°3152 of October 2014 valid until October 2019 /85/.

3.2.47 Project Ownership (G5.8)

Considering the area effectively impacted by the Jarí/Pará REDD+ Project, the focus is within the landholdings described in table 16 of the PD, also presented below:

Property	Certificate	State
Alzira Antunes Martins	4538	PA
Ayres Julio da Fonseca	4521	PA
Benedito de Oliveira Feitosa	4529	PA
Cajueiro Serra de Almeirim	375	PA
Campo Saracura	4532	PA
Castanhal do Urucurituba	Transc nº 829, lv 3-E, fl 9 à 11	PA
Crispim Joaquim de Almeida	4530	PA
Fazenda Saracura	2259	PA
Flávia Freitas de Almeida Maia	4518	PA
José Fernandes Fonseca	4520	PA

Maria de Nazare de Almeida Guedes	4539	PA
Panama ou Mapau	Transc nº 829, lv 3-E, fl 7 à 11	PA
Pau Grande	2253	PA
Santo Antonio da Cachoeira	360	PA
Santo Antônio do Urucurituba	Transc nº 829, lv 3-E, fl. 9 à 11	PA
Serra Grande	2247	PA
Terra Preta do Castanhal	2254	PA

The VVB legal consultants informed that these certificates /30/ indicate that Jarí Celulose is the proprietor of the landholds named above even if the certificates are under the generic cancelation by the state of Pará, as mentioned in the PD v3. After examining documentation sent by the PPs the VVB's juridical consultants came to the conclusion that the blockades/cancelations of the land certificates do no imply automatic loss of ownership of Jari's areas as the decision of the state of Pará was generic, temporary and reversible /36/. The reversibility aspect refers the lifting of the blockades /cancellations of the certificates which in turn depend of revalidation of the lands from ITERPA (from the Portuguese, Institute of Lands of the State of Pará). These requires the opening of individual proceedings within ITERPA. In practice these proceedings take a long time.

The VVB checked the protocols for the documentation handed at ITERPA, that is: the requests for revalidation of land certificates and also the reopening of old processes and delivery of georeferencing of the corresponding areas /33//34/35/. From the documentation presented, it is the conclusion of the VVB that the respective proceedings with ITERPA for the administrative revalidation of the land titles were carried out and that ITERPA acted to open a working group for the revalidation (for more details see CL1).

3.2.48 Management of Double Counting Risk (G5.9)

The Jari/Pará REDD+ Project generates benefits to the climate, communities and biodiversity, but only net reductions and removals of greenhouse gases will be marketed after being properly registered on a market platform.

3.2.49 Emissions Trading Programs and Other Binding Limits

The PP declared in the PD v3 that it does not apply.

3.2.50 Other Forms of Environmental Credit

The Jari/Pará REDD+ Project is not intended to generate any other form of environmental credits related to the reductions and removals of GHG emissions which are claimed under the VCS (Verified Carbon Standard) program..

3.2.51 Participation under Other GHG Programs

The Jari/Pará REDD+ Project did not receive or sought to be registered in any other GHG program, in addition to submitting the Project to validation and verification in the VCS (Verified Carbon Standard) and CCBS (Climate, Community and Biodiversity Standard).

3.2.52 Projects Rejected by Other GHG Programs

The Jari/Pará REDD+ Project has not undergone validation/verification of any other GHG program and is therefore not rejected by any other GHG program.

3.2.53 Double Counting (G5.9)

To date, the State of Pará does not have a defined State REDD+ Strategy and Pará's Forum for Climate Change (FPMC), that would be the main organization to lead discussions on the subject, is currently inactive.In addition, the State Government does not provide formal procedures for registering or recognizing private voluntary projects.

3.3 Climate

3.3.1 Title and Reference

The project has applied the VCS methodology named “Methodology for Avoided Unplanned Deforestation (VM0015)”, version 1.1 /4/.

VCS VT0001 “Tool for the demonstration and assessment of additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities” v3.6 of 21/06/2017 /5/.

3.3.2 Applicability

Applicability Criteria	Description of how the project meets these criteria
(a) Baseline activities may include planned or unplanned logging, firewood collection, charcoal production, agricultural and pasture activities, provided that the category is unplanned deforestation, according to the most recent version of VCS AFOLU Requirements.	The baseline activities include unplanned deforestation motivated by agricultural and pasture activities /11/ /86/
(b) The Project activities may be included in a category or a combination thereof defined in the description of the scope of the methodology.	The activities of the Project include controlled logging /84//85/, firewood collection and non-forest timber production (Brazil nuts, açai etc) /11/ /69/ /70/ and spoken during site visit.
(c) The Project Area may include different types of forest including, but not limited to, primary forests, degraded forests, secondary forests, planted forests and agroforestry systems, as per the definition of "forest".	The Jari/Pará REDD+ Project presents different types of forests, mainly old forests, obeying the definition of "forest" of the Brazilian National Designated Agency (SNIF, 2018), which is also used by PRODES Project of INPE - National Institute of Space Research, since it is a Brazilian governmental body, and is also accepted by the methodology VCS VM0015 – APPENDIX 1.
d) At the beginning of the Project, the Project Area should only include areas qualified as "forest" for a minimum of 10 years before the start date of the Project.	The Jari/Pará REDD+ Project presents different types of forests, mainly old forests, obeying the definition of "forest" of the Brazilian National Designated Agency (SNIF, 2018), which is also used by PRODES Project of INPE - National Institute of Space Research, since it is a Brazilian governmental body, and is also accepted by the methodology VCS VM0015 – APPENDIX 1.
(e) The Project Area may include floodplain areas (such as lowland forests, floodplain forests, mangroves) as long as they do not develop in peat. Peat should be defined as organic soils with at least 65% organic matter and minimum thickness of 50 cm. If the Project Area includes floodplain forests that develop in	Some formations characterized as floodplain forests with fluvial influences were identified. The collection of primary data through forest inventory for the REDD+ Project (FRM, 2016) /103/ and for the Sustainable Forest Management Plan (FRM, 2016) /125/ also

peat (e.g., peat forests), this methodology is not applicable.	evidenced the presence of these formations. However, no forest formations were identified in the Project area classified as forested wetlands or peat swamp forests. This information is reinforced by the survey of the pedological aspects of the Project Area in CASA DA FLORESTA report /18/.

3.3.3 Project Boundary

The shapefile final_projectArea.shp with the limits of the Project Area shown in figure 10 of the PD, version dated 09/11/2018, was provided by the PP. The shape for this map was built from the outer limits of the SFMP's UPAs, shapefile PMFS_area.shp provided by Jari Celulose GIS department, excluding deforested areas of the land classification for 2014, carried out by the PRODES (Forestry Satellite Monitoring Project) available at http://www.dpi.inpe.br/prodesdigital/prodes.php /87/. The PRODES is a project coordinated by INPE (National Institute of Space Research) and used by the Brazilian government to monitor deforestation in the Legal Amazon. The website provides results of the monitoring done since 1988 with Landsat images http://www.obt.inpe.br/OBT/assuntos/programas/amazonia/prodes.

The results include digital data in shapefiles of different areas of the Legal Amazon. The land classification uses 4 classes: water, forest, non-forest and deforested. For this project scenes 226/60, 226/61, 227/60, 227/61, 228/60 and 228/61 were used and cut into the PA area shape with the use of GIS software.

The VVB confirmed that deforested area of the shapefile downloaded from PRODES named desmatamento_ate_2014.shp were excluded from the area of the shapefile PMFS_area.shp originally with an area of 545.030ha. The resulting area of the file final_projectArea.shp is of 496.988ha. This was then crosschecked with the shapes Vertices_Glebas_Para.shp containing vertices downloaded from INCRA website during site visit (www.SIGEF.incra.gov.br) for the properties under the Jari Celulose land descriptions documents.

A land description document (from the Portuguese Memorial Descritivo) indicates that a land survey has been carried out, completed and approved by INCRA. INCRA is the official organization inside the Ministry of Land Development responsible for the land management system in the country. The

coordinates in the land descriptions documents issued by INCRA /88/ were crosschecked with the final_projctArea.shp /57/ and Vertices_Glebas_Para.shp /20/ by selecting a number of corner points (as indicated in the document) and comparing to the shape files. The VVB confirms that the PA falls within the vertices of the Jari Celulose land descriptions documents (Memorial Descritivo) issued by INCRA.

Above-ground biomass (Tree and Non-tree), below-ground biomass of forest were correctly included as pools of GHG emissions that should be accounted for (see table 23 of the PD v3 /11/) according to the applied methodology /4/. The PP have conservatively excluded harvested wood products (this is only existent with the Project scenario), dead wood, litter and soil organic carbon.

Table 24 of the PD correctly excludes biomass burning as a source of GHG included in the proposed Project Activity as any CO2 emissions from burning will be accounted as changes in carbon stocks and non-CO2 emissions are considered insignificant (CH4 as per evidence cited in the PD /122/ and N2O by table 4 of the VM0015 itself /4/). The article mentioned in the PD, SCHROEDER et al, 2009 /122/, states that accidental forest fires in the Amazon are an infrequent event, the main reason being that the climate is very humid and rains are very frequent. Livestock emissions are confirmed not to be a significant source too.

3.3.4 Baseline Scenario

The baseline scenarios determined for the project are:

a) Continuation of land use activities prior to Project scenario (modelled scenario) and;

b) Project scenario (multiple use of the forest, including the possibility of a comeback of low impact forest management, and extra monitoring activities) which is the project activity on the land within the project boundary performed without being registered as the VCS AFOLU project.

The baseline scenario (continuation of land use activities prior to the Project scenario) was developed by the PP following instructions from methodology VM0015.

Step 1 of Part 2 of methodology (spatial boundaries and pools):

A specific project baseline was developed.

The validation of the delimitation of the Project Area was explained in section 3.3.3 Project Boundary.

The Reference Region (RR), as explained in the REDD Jari/Pará: Baseline Report /44/, was delimited as 2,522,426 ha which is 5.1 times the PA as required by the applied methodology (between 5 to 7 times the PA for projects >100,000 ha /4/. The area of the reference region was adjusted with the use of the software GIS and assessing environmental characteristics such as drainage basin areas, deforestation dynamics, and land tenure to ensure the following points (a) to c) below) were similar or expected to be similar to those found in the project area in the reference period (the reference period is stipulated by the applied methodology /4/ to be no longer than 10-15 years in the past and the end date as close as possible to the project start date, in this case July 2014. The reference period is therefore defined as 2000 through to 2014).

a) Agents and drivers of deforestation:

The agent groups identified are small farmers / squatters. The validation of this is detailed below when describing the process to check compliance to step 3 of section 2 of the applied methodology.

The infrastructure drivers of deforestation were found to be roads, navigable stretches of the Jari and Paru Rivers /47/, smaller rivers and the construction of the Santo Antonio Hydroeletric Power Plant /48/, Jurupari-Oriximiná Energy Transmission Lines /49/, BR156 and PA 254 roads as well as the smaller roads branching out from these two /11//44//45//46/. This will also be further detailed below in the validation description of step 3 of the applied methodology.

b) Landscape configuration and ecological conditions:

Forest types: The PP informed that the shapes from IBGE 2003 /50/ with the types of vegetation within the Legal Amazon were used to determine the vegetation types in RR and PA (table 12 of the PD v3). Tables 19 and 20 in version 3 of the PD respectively /11/ show that the 9 typologies which form 100% of the project area form 100 % of the reference region too.

Elevation: Table 21 and map in Figure 13 of the PD v3, showing results for elevation, show that 91% of the project area is within the range of 301 to 350 m and 93% of the RR is within that range. Source of data website, informed by PP in CAR 4 (for details see appendix I of this report) was checked /51/.

Slope: Website, source of the data for calculations of results in the table below (presented in the answer to CAR 4 in appendix I of this report) was checked /51/. The table shows that average slope of the project area is within + or – 10% of the average slope in the rest of the reference region.

Table 1 Summary statistics presented by PP for SLOPE based on Project area and Reference Region (excluding the Project Area).

Information	**Average slope (degrees)**
Project Area	12.00
Reference region – excluding the project area	13.30
Variation from the Reference Region (-10%)	11.97
Variation from the Reference Region (+10%)	14.63

c) Socio-economic and cultural conditions:

Legal status of the land: The map in figure 11 of the PD v3 shows that the legal status of the land in the PA exists elsewhere in the RR in the baseline case. The VVB checked the shape with the areas of private property sent by PP /52/. PP informed that this shape is from INCRA's SIGEF /53/. The VVB was able to access this site during site visit when the boundaries of the Jari/Pará REDD+ Project were being assessed. The SIGEF system is a government agency responsible for carrying out the description of the land before it can be registered in a registry office in Brazil.

Land tenure: same as above. Furthermore, all of the reference region is in the same country and state.

Land use: The VVB checked the shapes with land classes of the reference region in 2014 /54/, prepared with the digital data from PRODES, and projection maps Year 2044 /55/ and final RR shape file /56/ as well as final PA shape file /57/ (see also maps figure 32 of the PD v3) that current and projected land classes of land use in the project area are found elsewhere in the reference region.

Enforced policies and regulations: The VVB confirms that PA is governed by the same policies, legislation and regulations that apply elsewhere in the reference region.

The leakage belt area was defined with Option II (mobility analysis) of the applied methodology. As will be discussed in detail below in the validation of the analysis of agents, drivers and underlying causes of deforestation (step 3 of part 2 of the methodology), the VVB validated that, in the 10 years prior to the

project start date, most deforestation happens in small areas (characteristic of subsistence farming) not large (which would be characteristic of profit oriented deforestation). This is therefore in accordance with the applied methodology.

To determine the leakage belt the PP used the Geospatial Modelling System Terrset (the same one used for the modelling of future deforestation as will be seen later) and the following multicriteria equation:

$$S = \sum_{i=1}^{n} WiXi \prod Cj$$

Where:

S= score ranging from 0 to 1, where values close to one are more favourable to occur in leakage belt;

W = weight of the factor variable;

X = value of the variable factor I within a scale of 0 to 1;

C = value of the limiting variable.

The factor variables used were distance from project area and deforestation risk /44/ /45/. The assumption used for the former variable was that regions near the project area would be more prone to being deforested, which the VVB agrees since according to the applied methodology the leakage belt area is area (or areas) surrounding or adjacent to the project area in which baseline activities could be displaced to, due to the project activities implemented in the project area /4/. The assumption for the latter factor used was that deforestation avoided in the project area would be displaced to areas with the most accurate high deforestation risk. Both factors were given a 50% weight /44//45/.

The limiting variables used were Jari's property boundary (or the Project Zone) and the Project Area limits. The validation of which have already been detailed before in sections 3.2.4 and earlier in this section. The assumption used is that these will have similar conditions to the Project Area which is a sound assumption to make.

The maps generated for the factor variables /89/ and the limiting variables (i.e. Jari private area) were then used to calculate and generate a Leakage Belt area maps /90/ from 2015 to 2044 which summed up an area of 402,265 ha.

Leakage Management area regions deforested until 2014 that were within the zone of influence of the communities participating in the Jari/Pará REDD+ Project and its neighboring communities within a radius of up to 13 km, this distance was adopted because of the proximity between the communities in the deforested perimeter. The VVB confirmed this checking the shapes of the 8 communities involved in the project activities and the shape of the leakage management areas /91//92/. The leakage management area has a total of 10,756 ha. The validation of the RR and Forests are described below in section 3.3.4.

The forest area for the year of 2014 was identified based on results of PRODES /54/. As explained in the previous section (3.3.3. Project Boundary), PRODES is a project coordinated by INPE (The National Institute for Space Research) and the data produced by this project is used by the Brazilian government to monitor deforestation in the Legal Amazon. This data is also reported by the Ministry of Science Technology and Inovation in the Brazilian National Communications to the UNFCCC.

STEP2 of Part 2 of methodology (Analysis of the historical reference period LU/LC).

In order to determine land use and land cover (LU/LC) prior to project initiation, remote sensing and GIS analysis were carried out. The data used were vector format data (shapefiles) from PRODES, for the years 2000 through to 2014. The data already comes classified into 4 classes: water, forest, non-forest (i.e. savanna areas) and deforested (i.e. anthropic vegetation). For this project spatial 30m resolution scenes (226/60, 226/61, 227/60, 227/61, 228/60 and 228/61) – downloaded from the site http://www.dpi.inpe.br/prodesdigital/prodes.php) were used. The scenes were then cut into the RR area shape and converted in GIS (using Polygon to Raster function, CELL_CENTER method) into raster with pixels of 1ha (100 x 100m).

The VVB confirms that the data from PRODES is used for official purposes in Brazil and that it checked the calculations of the confusion matrix, constructed by the PP in order to calibrate the digital data obtained from PRODES, against visual classifications using high spatial resolution images for the year 2014. The PP used 170 randomly chosen points. The accuracy the PRODES classification obtained with the confusion matrix calibration was 91% /DataBase_REDD_JARI_PA_relatorioFinal/.

One forest class was used. The PP explained that this is because approximately 70% of the area classified as forest by PRODES in the Project + Leakage Belt area (or Project Zone) is covered by Dense Ombrophilous Forest. This percentage was checked in the calculation provided by the PPs, carried out with data taken from shapefiles from IBGE 2012 and made available to the VVB /93/.

Step 3 of Part 2 of methodology (Analysis of agents, drivers and underlying causes of deforestation and their likely future development)

Identification of agents: The PP identified that the main agents of deforestation during the reference period, between 2000 and 2014, are squatters. It is very important, at this point, to remember that the reference period is stipulated by the applied methodology /4/ to be no longer than 10-15 years in the past and the end date as close as possible to the project start date, in this case July 2014.

To validate this, the VVB checked all the main literature mentioned by the PP and also overlaid PRODES land use classes images until 2014 /54/ and the shape with properties in the SISCAR shape files /74/. Checked the analysis in spreadsheets built with these data and reading further explanations and analysis in PD v3 (introduced after CL7 was opened), concluded that the argumentation seems reasonable.

Identification of drivers:

The PP identified 2 drivers of deforestation, population growth in the region and demand for new areas for agriculture and small pasture lands /11/. The identification of the population growth is based in the fact that this is a very new frontier of expansion and that building infrastructure attracts man power to the area. Furthermore, in the 10 years preceding the project start date, analysis (for the step 4 of the applied methodology) have shown that proximity to roads, to these new infrastructures and areas already deforested represent a major impact on behavior of deforestation agents. This can be observed for example graph 32 of the PD (showing data used to calibrate the model predicting location of deforestation). The opening of new areas for agriculture are supported by the evidence analysed above in the identification of agents and POEMA 2005 /65/ cited in the PD.

Step 4 of Part 2 of methodology (Projection of future deforestation)

The annual areas of deforestation in the baseline in the reference region were estimated using historical average approach and data from PRODES 2014 /87/. First data from 2000 to 2014 was corrected for cloud cover. From the forest areas the rate of deforestation of 0,37% per year was calculated. The calculated rate was than applied to the forested area of 2014 to project deforestation from 2015 to 2044 using formula 3, option 1, of the VCS Methodology VM0015 /4/.

The projection of location of future deforestation was modelled using the Geospatial Modelling System Terrset. First PRODES data from 2000 to 2007 were used to project future areas of deforestation in 2014. The model predicts location of deforestation into the future by calculating the influence of 9 variables on the occurrence of deforestation in the past (in this case from 2000 and 2007) using Euclidean distances. The 9 variables measured were chosen based on the Jari/Amapa REDD project PD /95/ /45/. The variables are: distance of deforestation increment, distance from settlements, distance from old deforestation, distance from roads, geology, slope, elevation, hydrography and distance from Grupo Jari roads. Factor maps created for the process were checked /96/. The resulting weight of different variables on deforestation can be seen in figure 32 of the PDv3.

The projection of 2014 by Terrset was than compared with real 2014 deforestation digital data from PRODES to find out if the model was representative of the real scenario. The Figure of Merit Method was then used to assess the accuracy of the model.

According to the methodology the FOM should be higher than the historical Net Change deforestation. The historical Net Change was calculated by dividing the cells deforested between 2000-2007 (60,053) by the size of the reference region (2,522,426), resulting in 2% /12/. As the FOM calculated was 10%, the FOM is following what the VM0015 recommends.

The projections were then carried out for the years 2015 to 2044 using data from 2000 to 2014. The baseline scenario was found to be well justified and it is credible for the region.

3.3.5 Additionality

Step 1. Identification of alternative land use scenarios to those proposed VCS AFOLU project activity

Sub-step 1a. of the Tool for the demonstration and assessment of additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities v3.6 of 21/06/2017 /5/ states that credible alternative land use scenarios to the proposed VCS AFOLU 2.1.1 project activity must be defined.

The PP chose 3 scenarios: i) continuation of the land use scenario prior to the project activity (private properties, with the advancement of illegal burning from new settlements - the business as usual scenario), ii) private properties with timber forest management plan (TFMP) and iii) private property with multiple use of forest management plan (MUFMP), which includes non-timber forest products (NTFP), the project scenario without being registered as a VCS project. This is in accordance with the VCS AFOLU Tool /5/ and are all credible scenarios from the experience of the audit team.

Sub-step 1b of the VCS AFOLU Tool /5/ states that all scenarios must be consistent with laws and regulations, and that if one of them is not, that it must be shown that this land use scenario is a result of systematic lack of enforcement of applicable laws and regulations.

Scenarios (ii) TFMP and (iii) MUFMP are in accordance with mandatory laws and regulations. Scenario (i), the continuation of the land use scenario prior to the project activity (properties, with the advancement of small illegal burning/deforestation), was validated in section 3.3.4 as the baseline (or business as usual). Furthermore, according to the reference of Higuchi et al (2009) /121/, from 1997 to 2003, 81% of the deforestation identified in the region were not authorized by the responsible government agencies. From this data one can conclude that there is a lack of enforcement of applicable laws in that scenario.

Sub-step 1c. of the VCS AFOLU Tool /5/ states that the baseline methodology that would use the Tool shall provide for a stepwise approach justifying the selection and determination of the most plausible baseline scenario. The VCS methodology VM0015 /4/ does give a stepwise approach for the selection of the baseline scenario. This approach, as already mentioned above, was validated in section 3.3.4 of this

report and indicates that the baseline is scenario i), continuation of the land use scenario prior to the project activity.

Sub-step 2a requires PP to determine appropriate financial analysis. Since the Project scenario without being registered as a VCS Project activity generates income with the sales of wood the simple cost analysis was discarded. The Tool /5/ states that the PP can then chose benchmark or investment comparison analysis.

Because scenario i) continuation of the land use scenario prior to the project activity is not an investment choice for the profile of environmental investors such as Biofilica, that is, they would not invest in the production of crops without proper authorisation from the government agencies as shown in sub-step 1b to happen, the investment analysis was carried out with the alternatives which are types of investments which would be a choice for environmental investors option ii) private land with TFMP and option iii) private land with MUFMP (SFMP + NTFPs).

Since there are two options both with income, the comparative investment analysis, option II of the Tool /5/ (sub-step 2 b) was correctly chosen.

Sub-step 2b and Sub-step 2 c of the Tool /5/ requires that the PP to apply the investment comparison analysis and calculate the financial indicator. According to the Tool /5/, these steps have to demonstrate that the proposed project activity, without the revenue from the sale of GHG credits, is economically or financially less attractive than at least one of the other land use scenarios.

The Net Present Value (NPV) was selected as a financial indicator for investment comparison analysis of the 2 alternative scenarios. From experience in the forestry sector, the audit team confirms that the NPV is a common method of benchmarking the minimum investment return rate in the forestry sector. The discount rate used by the PP was 25%. This, informed the PP, is the discount rate normally used by the company in the decision to invest or not in projects. The VVB validated that the discount rate of 25% has been used in another project assessed by the PP, and validated by the VCS, which also used NPV for comparing 2 types of investment /41/.

To compare the scenario of the project activity without the income of REDD+ credits and the scenario of the private property with SFMP, the PP considered income from the sale of wood from timber management in both scenarios. The evidences checked for the income and costs in both scenarios were validated as follows against the financial spreadsheet /13/.

	Scenario I Sustainable Timber Forest Management, without complementary activities to contain/monitor unplanned deforestation and without additional activities to benefit the climate, communities and biodiversity. Totals (in R$)	Scenario II Multiple Use Forest Management, that is SFMP with complementary activities to contain/monitor unplanned deforestation and with additional activities to benefit the climate, communities and biodiversity (i.e. NTFP plan for traditional communities). Totals (in R$)	Evidence checked Scenario I	Evidence checked Scenario II
Income	1,527,660,000	1,527,660,000	All income with sales of wood (tab "Avaliação Manejo") of the financial spreadsheet /13/, was crosschecked with Orsa Florestal S/A (former Jari Florestal) financial results demonstrations for 2012, 2013 and 2014 /97/	All income with sales of wood (tab "Avaliação Manejo") of the financial spreadsheet /13/ was crosschecked with Orsa Florestal S/A (former Jari Florestal) financial results demonstrations for 2012, 2013 and 2014 /97/
Expenses	(1,870,530,000)	(1,870,530,000) + (36,947,815) (1,907,477,815)	All administrative and operational expenses of the forest management as well as costs for sales of wood shown in the tab "Avaliação Manejo" of the financial spreadsheet /13/ was crosschecked with Orsa Florestal S/A (former Jari Florestal) financial results demonstrations for the years of 2012, 2013 and 2014 /97/	All administrative and operational expenses of the forest management as well as costs for sales of wood shown in the tab "Avaliação Manejo" of the financial spreadsheet /13/ was crosschecked with Orsa Florestal S/A (former Jari Florestal) financial results demonstrations for the years of 2012, 2013 and 2014 /97/. The remaining R$36,947,815 are the conservation and non-wood products management costs in the tab "Avaliação Carbono" which were checked against the following evidences: 1) Expenses with management: the costs in the spreadsheet for 2018 were checked against Biofílica - Analytical balance sheet by cost center for Jarí Pará Project, December 2018 /98/; 2) Initial expenses: Contract with Casa da Floresta of 2015 (Inicial Social, Economic and Environmental Diagnosis) /110/, Contract with Harmonia 2018 (for PRA) /111/, RP Ambiental contract (initial PD development) /113/, QVP Translations contract (translation of PD) /112/; 3) Expenses with Biodiversity: . Proposal 2018 – Federal University of Pará /114/; 4) Expenses with the social activities of Fundação Jarí during the project: projections based on Jari Foundation

				Work Plan for the Project REDD+ Jarí/Amapá for the period of April 2018 to December 2019 /115/; and 5) Expenses with climate change: Contract with FRMBr for the estimation of carbon stocks dated 05/05/2015 /116/, baseline development contracts with MHR Sales Consulting (statistical) dated 15.05.2014 /117/ and BRGeo Consulting (modelling) dated 22/01/2017 /118/, contract with Validators and Verifications of October 2018 /32/, area patrolling costs were estimated from Land Management and Security company records for 2015, 2016, 2017 and 2018 /119/, email with high resolution satellite monitoring quote /120/.

The financial analysis spreadsheets v2.3 /13/ was checked and the NPV calculated for the Project Activity (MUFMP) without the income from the sales of carbon credits came to -48,246,809 and the NPV of the scenario of the private land with SFMP only, came to -45,659,406. Therefore, it is concluded the project scenario is financially less attractive than at least one of the other land use scenarios. The VCS AFOLU Tool for additionality /4/ also states that if one of the other land use scenarios has the better indicator, then the VCS AFOLU project cannot be considered as financially attractive and therefore can not be considered the baseline scenario and therefore it is additional.

Sub-step 2d. Sensitivity analysis

In the PD v4 /11/ and in the financial spreadsheet v2.3 /13/ the PP shows that to reach the breakeven point the Project Activity (MUFMP), without being registered in the VCS, would need to either: 1) increase sales of the wood from the SFMP, as this would be the only source of income in the project scenario to the PP (the increase in income from other products such as NTFPs will be of the communities with access and resource use rights), by more than 20% or 2) reduce costs of the operations by more than 18%.

Taking into account the efforts described in the PD to increase sustainable forest management revenues by more than 20% (access to new markets through additional certifications for example, generations of energy or commercial use of forest residues, increase in the diversity of exploited species,

implementation of tools to improve the transparency and traceability of the chain of custody, amongst other possible alternatives) or reduce costs by about 20% (increasing maintenance of equipment and improvement of operational management procedures, such as in strategic logistics planning, increased training etc), and considering the fact that the PP's source of income would be from sales of wood only in the Project Scenario (NTFPs benefits are for the communities which hold the access and use of resource rights), it is not likely that the PP would implement the Project Activity and carry out investments for such improvements. It is more likely that in the Project Activity without it being registered as a VCS scenario the PP would actually end up opting for the SFMP alone and stopping investments in the communities and biodiversity conservation to increase its income.

Step 4. Common practice analysis

The common practice analysis was carried in the RR which according to the VM0015 /4/ is the region where rates, agents, drivers, and patterns of land use and land cover change are similar to the project activity. Another requirement of the reference region is that it needs to be under the same regulatory requirements as the PA. This is a perfect boundary to apply the common practice analysis since the VCS AFOLU Tool for additionality /4/ requires the common practice analysis to be carried out in a comparable environment, inter alia, with respect to the regulatory framework in the relevant geographical area.

Furthermore the area where the REDD+ project was implemented has differentiated characteristics when compared to other regions of the state of Pará. As mentioned before in section 3.3.4 when validating the baseline development, the area to the South of the Amazon River is an old expansion frontier while the North is still quite a recent expansion frontier and thus these regions have very different land occupation and land use change patterns as well as the physical barrier of the Amazon River,

On the other hand to the North of the RR, as can be seen from the map in figure 39 of the PD v4.1 /11/ you have many conservation units, some of which are Integral Protection, which means not even the sustainable use of resources are allowed.

The PP carried out the research of all private properties in the RR using vector data from the Land Management System of the National Institute of Colonisation and Land Reform information (INCRA's

SIGEF) /53/ and vector data of the conservation areas from the Brazilian Ministry of Environment /131/. The VVB also checked such data against the analysis of the PP.

The analysis in the PD v4.1 /11/ shows that all the SFMP existing in the RR in private properties are in much smaller areas so according to the Tool /4/ they are not similar to the project activity and the PP also informed they have no social activities as intended by the Jarí/Pará REDD+ Project.

The other areas which are known to have multiple use of forest, that is that contemplate social improvements and preservation of historical use of resources are in the conservation units (or in other words Government Owned lands).

The only multiple use forest project found in the RR is Jarí/Amapá which is already registered as VCS.

The VVB therefore concludes that the project activity is not common practice according to the analysis carried out which was in accordance with the AFOLU Tool for additionality /4/. From the evidence provided it is concluded that the additionality of the project is justified.

3.3.6 Methodology Deviations

Some areas of pioneer formations with fluvial and/or lacustrine influence - herbaceous without palms and of Non-Forest Vegetation - Savana were included in the projections of the baseline emission in the project area. The PP worked out the error which came to < 1% of the total emission projected for the project area (see CL5 for more details). This error was considered insignificant by the VVB.

3.3.7 Quantification of GHG Emission Reductions and Removals

Step 5 and Step 6 of VM0015

- **Quantification of baseline emissions.**

For the estimation of carbon stock in the Project and Leakage Belt areas the PP used a total of 61 plots (from the 70 which were initially distributed according to its % area from the total) from 7 typologies out of the 10 shown in table 6 of the PD p.23. These were: Lowland Dense Ombrophilous Forest, Submontane Dense Ombrophilous Forest, Montane Dense Ombrophilous Forest, Vegetation with Fluvial Influence, Ecotone of Dense Ombrophilous Forest, Meadow Forest, Submontane Open Ombrophilous Forest with

Vines. The 61 plots were evenly distributed between managed and non-managed areas. The area of Submontane Open Ombrophilous Forest with Palm Trees was not sampled as this represented only 0,009% of the area. Savanna and anthropized areas were initially sampled but the plots were not included in the calculation of the carbon stocks, this is acceptable as PRODES recognizes these areas as non-forest and deforested areas respectively.

The PP initially worked out the number of samples using formula A3-1 of the methodology using a t-student value of 2, allowable sample error of 10% and CV of 50% which returned a sample size of 100 /99/. However, with 61 samples the PP reached an error of 6.46% /100//101//102/ for below and above ground biomass and thus stopped sampling.

Initially the VVB worked out the number of permanent plots that should be re-sampled for a 90% confidence level and 10% relative precision to be 33. Distances to travel and road conditions did not allow that number of plots to be re-sampled though. Eight plots were then planned to be re-sampled in 4 days in order to gain a reasonable level of assurance as to the quality of the dataset used to quantify baseline carbon stocks. The auditor chose to re-sample from 2 typologies: Lowland Dense Ombrophilous Forest and Submontane Dense Ombrophilous Forest, which according to the PD v2 /11/ represented 86% of the area. A stratified random sampling was then planned to cover managed and unmanaged areas. As approximately 2/5 of the permanent plots used to estimate carbon stocks in the baseline were laid in managed forests as described in the FRMBr Report /21/, the audit team chose to sample 3/8 of the permanent plots laid in managed sites and 5/8 of the permanent plots in unmanaged sites. They were then chosen at a random.

The audit team was not able to access 2 of the sites though. The first because of a fallen tree in one of the access roads, as distances are great and “road” conditions not good, there was no time to cover another area. The second road was actually accessed and the team made its way into the forest. However, a storm began and the team of local guides advised the audit team to return as it was getting very dark to see the trail.

In the end 6 of the permanent plots were revisited: 3 in Lowland Dense Ombrophilous Forest and 3 in Submontane Dense Ombrophilous Forest (the 2 predominant typologies), 2 of these plots were in managed and 4 in unmaged forests.

The VVB together with the PP's staff remeasured the circumference of the trees in half of the 1ha plots. The results were then crosschecked with the circumference in the spreadsheets FRMBr_MonitoramentoREDD_VFinal_11012016 /103/ which is where the PP organized the data collected in the field and which was later fed into the program used to calculate the carbon stocks for the baseline emissions.

The graphs in figures 1 and 2 below show the results found in the comparison made between circumferences audited and circumferences used in the calculation of the carbon stocks in the baseline. The graphs on the righthand side, of figures 1 and 2, show that the correlation coefficients between the cumulative circumferences at breast height measured during the validation audit site visit are highly correlated with the ones used to calculate carbon stocks, all R2 > 0,999. Therefore, one can conclude, with reasonable level of assurance, that the circumferences used to calculate carbon stocks in the baseline are correctly estimated. Small differences are due to tree growth in the time between the first estimates and the validation audit site visit (see graphs on the left).

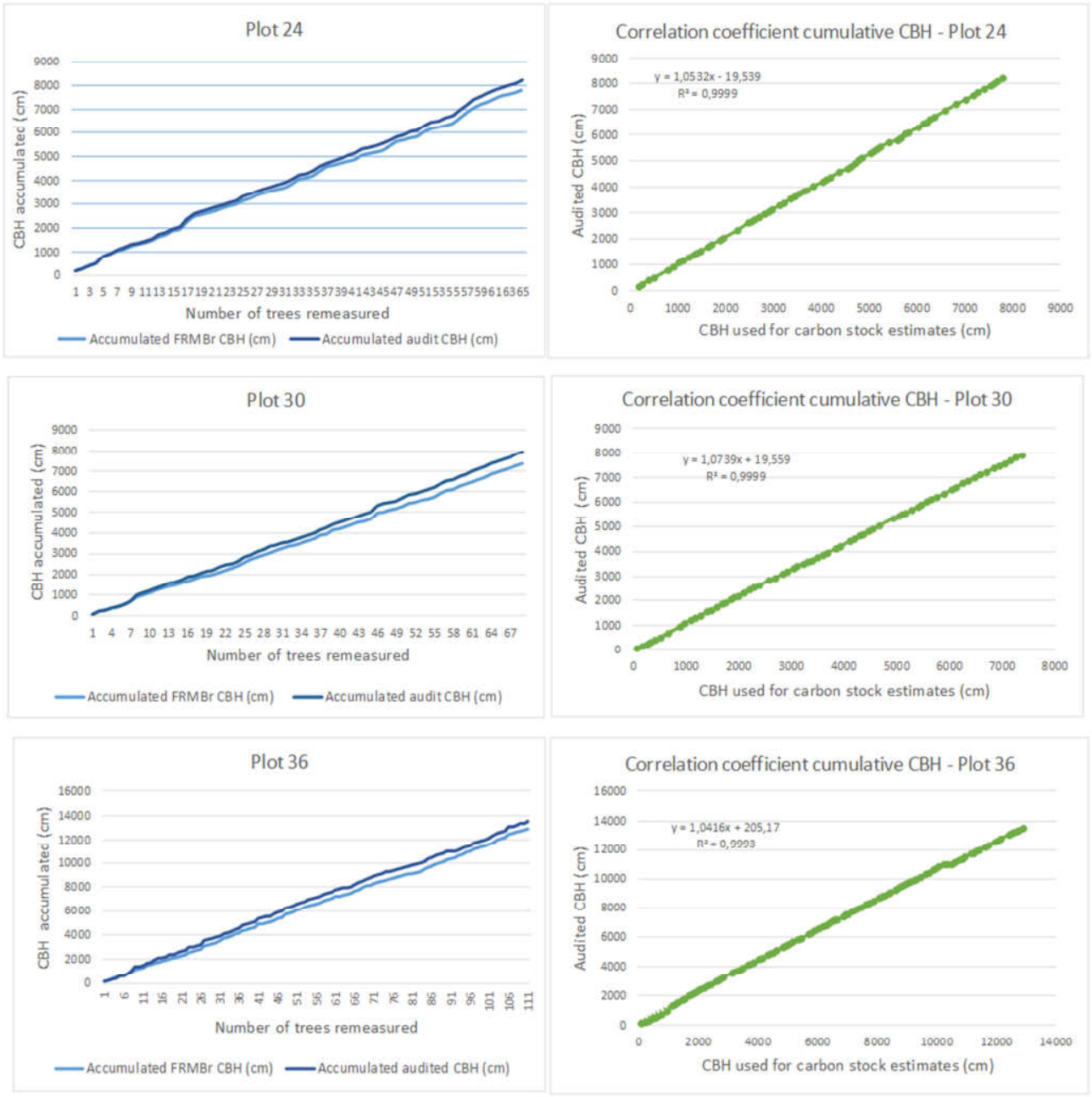


Figure 1 Crosschecks between cumulative CBH audited and cumulative CBH used to estimate carbon stocks in the baseline.

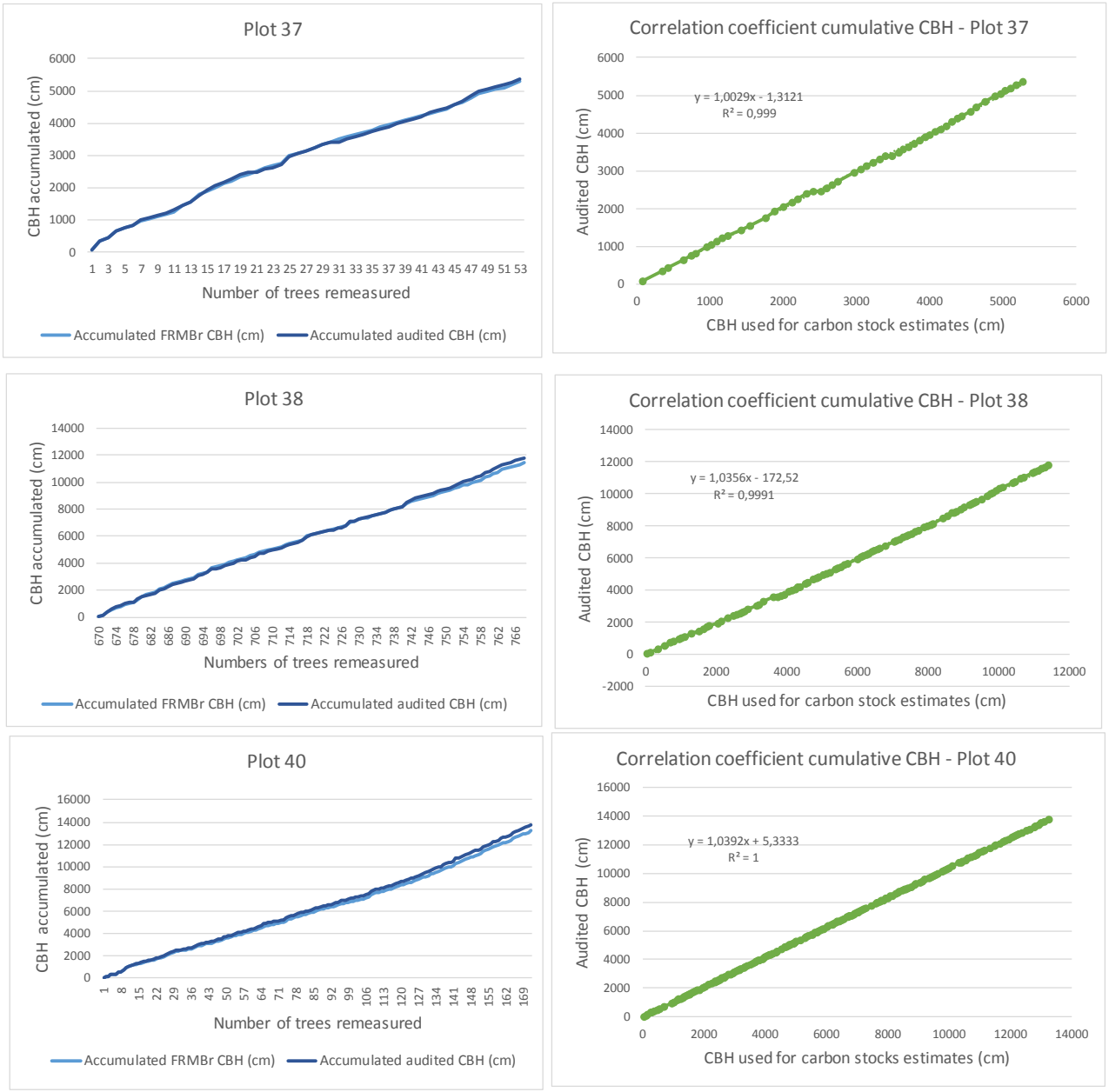


Figure 2 Crosschecks between cumulative CBH audited and cumulative CBH used to estimate carbon stocks in the baseline.

The program used to calculate carbon stock was a program called R. The audit team has used this program in the past and can confirm that it is a very robust program used to calculate biomass and other statistics. The VVB checked the R scripts with the PP and can confirm that the circumferences in the spreadsheets FRMBr_MonitoramentoREDD_VFinal_11012016 /103/ were transformed to a csv file /107/ and fed to the R system to calculate the carbon stocks for the baseline emissions. The VVB also checked the R system scripts and checked that the resulting stock of carbon for above ground biomass was calculated using Nogueira *et al.* (2008) /105/ allometric equation and IPCC default values of 0.5 for Biomass to Carbon ratio, and 44/12 Carbon to CO_2 ratio /104/. Furthermore the PP used a root to shoot ratio of 0.26, from Nogueira *et al.* 2008 /105/, to calculate below ground biomass. This is in line with the range for tropical forests in table 2 of appendix 3 of the applied methodology /4/.

The VVB confirms that the PP produced carbon stock results with 10 different allometric equations developed for the Amazon region and that Nogueira et al 2008 /105/ was the most conservative one. The value came to the average number of 413,7 tCO2/ ha. The uncertainty of the PP's estimates from the R results (mean and standard deviation) and the number of plots /21/ and this came to 10% and thus the value of 413,7tCO2/ha can be used for baseline estimates as per VM0015 /12/.

The PP carried out the estimates on 2016, which is 2 years after the year of start of baseline deforestation. Methodology requires it to be carried out prior to the year of baseline deforestation. As this is a deviation from a procedure relating to measurement set out in the methodology, and it does not impact on the conservativeness of the baseline estimates it is understood by the VVB that it is permitted.

Also in accordance with the methodology, carbon stock change factors for initial forest classes (icl) used method 1. That is, for the above-ground biomass 100% release of the carbon stock in the same year deforestation occurred, and for below ground biomass 10% of the initial carbon stock released in each year starting from the year of deforestation (10 years decay in total).

After calculation of carbon stock, which came to the average number of 413,7 tCO2/ ha, this was then used to calculate baseline emissions with the projected deforestation for the PA and Leakage Belt /66/ as

seen in table 13, 15, 20 and 21 of the ER spreadsheets /12/. Results are shown on tables 45 and 46 of the PD /11/ too.

For post forest classes both below and above ground assumed that 100% of the long term average carbon stock of 60.1tCO2/ha /64/ were regenerated in 10 years starting 1 year after deforestation happened.

Non-CO2 emissions from forest fires were not considered and accounted for the Jari/Pará REDD+ Project since, as justified in table 24 of the PD and validated in section 3.3.3 of this report, forest fires in the Amazon region have historically low frequency since the climate in the region is very humid and with a high frequency of rainfall /122/. Therefore, CH4 emissions can be considered insignificant and, as stated in table 4 of the VM0015 /4/, N2O emissions from biomass burning in the project can also be considered insignificante. CO2 emissions are being accounted as carbon stock changes.

Step 7 of VM0015

- **Quantification of project emissions**

Non-CO2 emissions were not considered and accounted for the Jari/Pará REDD+ Project.

Based on the Gleba Jari I post-exploratory reports /106/, estimates of the ex ante project emissions were calculated as the average annually opened areas, reaching an average area of 67.1 hectares per year, or 0.73% of an open area, for the installation of these management infrastructures.

These areas as shown in table 25 of the ER spreadsheet calculations /12/ and Table 47 of the PD v3 /11/ were then multiplied

Step 8 of VM0015

- **Quantification of leakage.**

The PP does not expect to develop any activity that could lead to the reduction of carbon stocks or the increase of GHG emissions compared to the baseline scenario. Initially, it is expected that leakage prevention measures will be employed within the limits of Gleba Jari I, conducting courses and training related to sustainable development and conservation and environmental awareness. Subsequently, outside the limits of the Project, through assistance to associations of small farmers in the environment.

These initiatives will focus not only on training and guidance for farmers in the region but also on raising people's awareness of environmental issues and preserving the forest.

Nevertheless, a displacement factor of 10% was adopted for the first five years. Then the reduction of the leakage displacement factor is gradual, already considering the influence of the Project in this context. Thus, the leakage displacement factor tends to approach to zero during the 30 years of project implementation.

The ex ante estimate of the leakage due to activity shift for the first fixed baseline period is found in Table 34 of the ER spreadsheet /12/and Table 51 and the total ex ante net increase due to leakage is shown in Table 52 of the PD v3.

Carbon stock changes due to activities implemented in Leakage Management Areas are also not expected.

Step 9 of VM0015

Table 36 of the ER Spreadsheets /12/ and table 53 of the PD v3 /11/ show the GHG emission reductions summary. All of the calculations have been checked and found to be correct. All relevant assumptions are written in the PD v3. Below are the results of the total ERs for the 30 year period.

	Ex ante net anthropogenic GHG emission reductions tCO2e	Ex ante VCUs tradable tCO2e	Ex ante buffer credits tCO2e
Total	15.491.971	13.708.280	1.783.691
Average	516.399	456.943	61.507

All data and parameter values used in the project description are considered reasonable in the context of the project.

All estimates of the baseline emissions can be replicated using the data and parameter values provided in the project description.

All formulae used were in accordance with the applied approved VCS methodology VM0015 Methodology for Avoided Unplanned Deforestation v1.1 /4/.

3.3.8 Monitoring Plan

The monitoring plan is described in details in sections 3.3.1 to 3.3.2 of the PD v3 /11/, where the parameters available at the time of validation, the parameters that will be monitored, recording frequency and QA/QC procedures are deemed reasonable and appropriate.

Data and parameters available at validation and fixed for the baseline period:

Data/Parameter	**Ctot**
Data Unit	tCO2e ha-1
Description	Average carbon stock per hectare in all carbon pools in the forest class used in the baseline scenario
Source of data	Calculated by allometric equations, literature expansion factors, and field-measured data
Value applied	413,67 tCO2e ha-1
Justification of choice of data or description of measurement methods and procedures applied	The biomass estimates above and below the ground were made using forest inventory data and allometric equations executed in areas similar to the Project area (Nogueira et al., 2008)
Purpose of data	- Determination of baseline scenario - Calculation of baseline emissions - Calculation of project emissions - Calculation of leakage
Assessment	Validated against CBH data acquired during the audit field visit /108/ and data entered into the R program to calculate DBH /103//107/. Validation of biomass calculations were carried by checking formula in the R scripts against IPCC literature /104/ for carbon mass conversion factor, Nogueira *et al.* (2008) /105/ for formula used and root to shoot ratio, by checking biomass results in R outputs /100//101/102/ and finally carbon stock per ha used in ER calculations /12/. Validation steps already detailed in section 3.3.7.

Data/Parameter	**DCH (or DBH)**
Data Unit	cm
Description	Diameter at chest height (130 cm) for each tree with DCH equal to or greater than 15 cm in each portion of the forest inventory
Source of data	Measured in the field by FRM Brasil
Value applied	Various

Justification of choice of data or description of measurement methods and procedures applied	Requirement demanded by Methodology VCS VM0015. Forest inventory data collected less than 10 years ago in multiple plots located in wide spatial distribution.
Purpose of Data	- Determination of baseline scenario - Calculation of baseline emissions - Calculation of project emissions - Calculation of leakage
Comments	Main variable for the carbon stock estimation of the Jari/Pará REDD+ Project
Assessment	Validated against CBH data acquired during the audit field visit /108/ and data entered into the R program to calculate DBH /103//107/. DBHs calculated by R and by the audit team with sampled CBH were compared. Same results attained see graphs of CBH on section 3.3.7 of this report. These are used to calculate Ctot above.

Data/Parameter	**B= exp (-1.716+2.413*ln(DBH))**
Data Unit	Kg (weight)
Description	Equation to convert DCH to biomass
Source of data	Nogueira et al. (2008). Estimates of forest biomass in the Brazilian Amazon: New allometric equations and biomass adjustments of wood volume inventories. Forest Ecology and Management, v. 256, n. 11, p. 1853-1867, 2008
Value applied	**B= exp (-1.716+2.413*ln(DBH))**
Justification of choice of data or description of measurement methods and procedures applied	Equation developed for forests with forest-like characteristics in the reference region
Purpose of Data	- Baseline scenario determination (for AFOLU projects only) - Calculation of baseline emissions - Calculation of project emissions - Calculation of leakage
Assessment	Assessed against Nogueira et al (2008) article /105/.

Data/Parameter	**CF**
Data Unit	tC/tdm
Description	Carbon contained in dry biomass
Source of data	Nogueira et al. (2008). Estimates of forest biomass in the Brazilian Amazon: New allometric equations and biomass adjustments of wood volume inventories. Forest Ecology and Management, v. 256, n. 11, p. 1853-1867, 2008
Value applied	0.485
Justification of choice of data or description of measurement methods and procedures applied	Value found in scientific literature
Purpose of Data	- Determination of baseline scenario

	- Calculation of baseline emissions - Calculation of project emissions - Calculation of leakage
Assessment	Assessed against Nogueira et al (2008) article /105/.

Data/Parameter	**44/12**
Data Unit	Dimensionless
Description	CO2 to carbon ration
Source of data	Scientific literature: 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 4 AFOLU
Value applied	44/12
Justification of choice of data or description of measurement methods and procedures applied	Standard IPCC value
Purpose of Data	- Determination of baseline scenario (AFOLU projects only) - Calculation of baseline emissions - Calculation of project emissions - Calculation of leakage
Comments	Checked with IPCC 2006 /104/

Monitored parameters:

Data/Parameter	**$ABSLPA_{icl,t}$**
Data Unit	Hectare (ha)
Description	Areas of forest cover converted into non-forest cover areas within the Project area of the Jari/Pará REDD+ Project
Source of data	Calculated by means of remote sensing imagery together with GPS data collected in the field
Description of measurement methods and procedures to be applied	Monitoring of forest cover in the Project area will be performed through satellite imagery analysis. When PRODES system data are not available, monitoring of forest cover will be by automatic classification and visual interpretation of images from other optical sensors or SAR data
Frequency of monitoring/recording	Annual
Value applied	Annual average deforestation in the project area during the crediting period: 1,683 ha.
Monitoring equipment	Images if remote sensing of digital processing program, geographic information system and navigational GPS
QA/QC procedures to be applied	Images with special resolution of 30 m or more will be used in the mapping and the minimum mapping unit is 1 ha. Classifications will be assessed through data collected in the field using GPS navigation. The

	minimum accuracy of use classification map and ground cover is 80%
Purpose of Data	- Ex ante estimation of baseline emissions - Ex post calculation of project emissions
Calculation method	If unplanned deforestation areas are detected, the Forest Cover BenchMark Map will be updated by map algebra
Comments	- PRODES Digital Project: http://www.dpi.inpe.br/prodesdigital/prodes.php - More information on quality assurance and control available at: Câmara et al. 2006. Methodology for the calculation of the annual rate of deforestation in the Legal Amazon
Assessment	Various values applied to PA (table 13 of the ER spreadsheets /12/ and table 38 of the PDv4.1 /11/). The value of 0.37%/year on average (2000-2014) for the reference region, came to an annual average deforestation in the PA of 1,683ha during the crediting period for the single forest class. These were validated against /44//45//87//96/12/. Validation already detailed in section 3.3.7. of this report.

Data/Parameter	**$ABSLLK_{icl,t}$**
Data Unit	Hectare (ha)
Description	Areas of forest cover converted into non-forest cover areas within the leakage belt of the Jari/Pará REDD+ Project
Source of data	Calculated by means of remote sensing imagery together with GPS data collected in the field
Description of measurement methods and procedures to be applied	Monitoring of forest cover in the leakage belt will be performed through satellite imagery analysis. When PRODES system data are not available, monitoring of forest cover will be by automatic classification and visual interpretation of images from other optical sensors or SAR data
Frequency of monitoring/recording	Annual
Value applied	Annual average deforestation in the leakage belt during the crediting period: 1,739 ha
Monitoring equipment	Images if remote sensing of digital processing program, geographic information system and navigational GPS
QA/QC procedures to be applied	Images with special resolution of 30 m or more will be used in the mapping and the minimum mapping unit is 1 ha. Classifications will be assessed through data collected in the field using GPS navigation. The minimum accuracy of use classification map and ground cover is 80%
Purpose of Data	- Ex ante estimation of leakage - Ex post calculation of leakage
Calculation method	If unplanned deforestation areas are detected, the Forest Cover BenchMark Map will be updated by map algebra
Comments	- PRODES Digital Project: http://www.dpi.inpe.br/prodesdigital/prodes.php - More information on quality assurance and control available at: Câmara et al. 2006. Methodology for the calculation of the annual rate of deforestation in the Legal Amazon

Assessment	Various values applied to Leakage Belt (table 13 of the ER spreadsheets /12/ and table 39 of the PDv4.1 /11/). The value of 0.37%/year on average (2000-2014) for the reference region, came to an annual average deforestation in the Leakage Belt of 1,739ha during the crediting period for the single forest class. These were validated against /44//45//87//96/12/. Validation already detailed in section 3.3.7.

Data/Parameter	**$APDPA_{icl,t}$**
Data Unit	Hectare (ha)
Description	Survey and mapping of areas of forest cover converted into non-forest cover areas due to the construction of forest management infrastructures
Source of data	Remote sensing images, technical maps, and field maps to monitor the construction of roads, trails, and yards for sustainable forest management activities
Description of measurement methods and procedures to be applied	The monitoring of forest cover areas in the area of sustainable forest management will be done by satellite imagery analysis, road construction maps, forest trails and yards, and field verification. The Forest Cover Benchmark Map will be updated by map algebra in case of planned deforestation. The verification processes will report the reduction in carbon stock in the Project area
Frequency of monitoring/recording	During the management year of each UPA
Value applied	Annual average areas of planned deforestation during the crediting period: 67.1 ha
Monitoring equipment	Field card, post-exploratory reports and geographic information system
QA/QC procedures to be applied	The mapping of deforestation areas planned for the implementation of Sustainable Forest Management infrastructures will be carried out through high resolution images and field check
Purpose of Data	- Ex ante calculation of Project Emissions - Ex post calculation of Project Emissions
Calculation method	If unplanned deforestation areas are detected, the Forest Cover BenchMark Map will be updated by map algebra
Assessment	The average area of 67 ha per year was used, in baseline estimates in table 25 of the ER calculations spreadsheets /12/. These was validated against post-exploratory reports /106/, Details given in section 3.3.7. This value corresponds to an average 0.73% of the yearly managed areas and was extrapolated to the whole project period.

Data/Parameter	**$\Delta CabBSLLKt$**
Data Unit	tCO_2-e
Description	Changes in total carbon stock in the leakage belt area

Source of data	Calculated
Description of measurement methods and procedures to be applied	- Leakage prevention activities will be listed; - A map will be prepared showing the areas of intervention and the type of intervention; - Areas where leakage prevention activities impact the carbon stock will be identified; - Non-forest classes existing in these areas in the baseline case will be identified; - Carbon stocks will be measured in the identified classes or conservative estimates of the literature will be used; - Changes in the carbon stock in the leakage management areas under the project scenario will be reported using Table 30.b of Methodology VM0015; - Changes in the net carbon stock caused by the prevention measures during the baseline fixed period and optionally in the project crediting period will be calculated; - The results of the calculations will be reported in Table 30.c of Methodology VM0015.
Frequency of monitoring/recording	To be determined depending on the activity
Value applied	Does not apply
Monitoring equipment	To be determined depending on the activity
QA/QC procedures to be applied	To be determined depending on the activity
Purpose of Data	- Calculation of leakage
Calculation method	To be determined depending on the activity
Comments	Does not apply
Assessment	To be implemented

x

Data/Parameter	**Frequency of surveillance and patrol operations**
Data Unit	Number of operations per year
Description	Record of the number of surveillance operations carried out in the design area and leakage belt during the monitoring period
Source of data	Patrimonial Surveillance Reports
Description of measurement methods and procedures to be applied	To be established
Frequency of monitoring/recording	To be established
Value applied	This was not used in the baseline emissions estimates.
Monitoring equipment	Does not apply
QA/QC procedures to be applied	To be established
Calculation method	Does not apply
Assessment	The Patrimonial Surveillance Reports will be implemented from the Project validation onwards

Data/Parameter	**Monitoring of forest cover by high-resolution satellite imagery**

Data Unit	Number of operations per year
Description	Presentation of monitoring reports on land cover and land cover changes through high resolution satellite images
Source of data	Monitoring Reports
Description of measurement methods and procedures to be applied	The forest coverage monitoring data in the Project area and leakage belt will be surveyed through analysis of high resolution satellite images obtained through the Planet Platform. The images of the analyzed periods will be classified automatically, and through the visual interpretation of the images in order to identify changes in land use in the monitored area.
Frequency of monitoring/recording	To be established
Value applied	Does not apply
Monitoring equipment	Images of the Planet Monitoring System processed in data cloud and later in digital processing program, geographic information system and conventional GPS
QA/QC procedures to be applied	Images with a special resolution of 3,125 m (Planet) and 5 m (RapidEye) will be used in the mapping, with a Ground Sample Distance (GSD) better than 4.5 m and 6.5 m respectively, with the minimum mapping unit of 1 ha. The evaluation and validation of the classifications will be done through data collected in the field using GPS navigation. The minimum accuracy of the classification map of use and ground cover is 80%
Calculation method	If unplanned deforestation areas are detected, the Forest Cover Benchmark Map will be updated by map algebra
Assessment	The monitoring by high resolution satellite imagery will be implemented after the Project validation to complement Prodes.

Community parameters to be monitored:

Data/Parameter	**Number of courses and training**
Data Unit	Number/year
Description	Number of performed courses and training
Source of data	Monitoring Report and Activity Report
Description of measurement methods and procedures to be applied	Questionnaires and attendance list applied to participants
Frequency of monitoring/recording	Annual
Value applied	Does not apply
Monitoring equipment	Does not apply
QA/QC procedures to be applied	Validation of the systematized information in the draft of the Project Monitoring Report with the proponents before the official publication of the report
Calculation method	Does not apply
Assessment	The number of courses will be monitored after the first VCS verification and sales of carbon credits.

Data/Parameter	**Number of persons trained**

Data Unit	Number/year
Description	Number of persons trained per year
Source of data	Structured interviews and supporting documents (attendance list)
Description of measurement methods and procedures to be applied	List of presence applied with those involved in activities
Frequency of monitoring/recording	Annual
Value applied	Does not apply
Monitoring equipment	Does not apply
QA/QC procedures to be applied	Validation of the systematized information in the draft of the Project Monitoring Report with the proponents before the official publication of the report
Calculation method	Does not apply
Assessment	The number of persons trained will be monitored after the first VCS verification and sales of carbon credits.

Data/Parameter	**Number of producers benefited by the REDD+ Project**
Data Unit	Number of families involved with the project
Description	Number of families participating in REDD+ Project activities receiving technical follow-up after the training phase
Source of data	Activity and interview reports
Description of measurement methods and procedures to be applied	Reports generated by the designated technical officer to advise the associations participating in the social activities of the Project
Frequency of monitoring/recording	Annual
Value applied	Does not apply
Monitoring equipment	Does not apply
QA/QC procedures to be applied	Validation of the systematized information in the draft of the Project Monitoring Report with the proponents before the official publication of the report
Calculation method	Does not apply
Assessment	The number of producers benefited by the REDD+ Project will be monitored after the first VCS verification and sales of carbon credits.

Data/Parameter	**Number of associations/cooperatives benefited by the REDD+**
Data Unit	Number of associations**/cooperatives**
Description	Number of associations / cooperatives directly involved with the Project and benefited by technical assistance.
Source of data	Technical Activities Report
Description of measurement methods and procedures to be applied	Reports generated by the designated technical officer to advise the associations participating in the social activities of the Project
Frequency of monitoring/recording	Annual
Value applied	Does not apply
Monitoring equipment	Does not apply
QA/QC procedures to be applied	Validation of the systematized information in the draft of the Project Monitoring Report with the proponents before the official publication of the report

Calculation method	Does not apply
Assessment	The number os associations/cooperatives benefited by the REDD+ Project will be monitored after the first VCS verification and sales of carbon credits.

Data/Parameter	**Number of youth and women involved in the associations/cooperatives benefited by the REDD+**
Data Unit	Number of youth and women involved
Description	Number of youth and women participating in the associations/cooperatives directly involved with the Project
Source of data	Technical Activities Report
Description of measurement methods and procedures to be applied	Reports generated by the designated technical officer to advise the associations participating in the social activities of the Project
Frequency of monitoring/recording	Annual
Value applied	Does not apply
Monitoring equipment	Does not apply
QA/QC procedures to be applied	Validation of the systematized information in the draft of the Project Monitoring Report with the proponents before the official publication of the report
Calculation method	Does not apply
Assessment	The number of youth and women participating in the associations/cooperatives directly involved with the REDD+ Project after the first VCS verification and sales of carbon credits.

Data/Parameter	**Gross revenue from new activities implemented after the beginning of training courses and technical assistance**
Data Unit	Reais (R$)/ha
Description	Additional total gross revenue generated for the participants through new activities, agricultural and/or extractive activities fostered by the Project.
Source of data	Project Monitoring and Activity Report
Description of measurement methods and procedures to be applied	Structured interviews with the families directly involved with the Project.
Frequency of monitoring/recording	Every 3 years
Value applied	Does not apply
Monitoring equipment	Does not apply
QA/QC procedures to be applied	Validation of the systematized information in the draft of the Project Monitoring Report with the proponents before the official publication of the report
Calculation method	Does not apply
Assessment	It will be measured for the first time 3 years after the validation of the Project

Data/Parameter	**Number of productive chains implemented and/or encouraged by the Project**
Data Unit	Quantity of products promoted by the project

Description	Listing of new production chains implemented by the producers involved in the project
Source of data	Monitoring Report and Activity Report
Description of measurement methods and procedures to be applied	Reports generated by the designated technical officer to advise the associations participating in the social activities of the Project
Frequency of monitoring/recording	Annual
Value applied	Does not apply
Monitoring equipment	Does not apply
QA/QC procedures to be applied	Validation of the systematized information in the draft of the Project Monitoring Report with the proponents before the official publication of the report
Calculation method	Does not apply
Assessment	The number of productive chains implemented and/or encouraged by the REDD+ Project after the first VCS verification and sales of carbon credits.

Data/Parameter	**Total funds raised from other sources for investment in the Project region**
Data Unit	Reais (R$)/year
Description	Additional resource captured by the REDD Project through new partnerships or lines of credit with the purpose of making possible additional investments for the region
Source of data	Monitoring Report and Activity Report
Description of measurement methods and procedures to be applied	Reports generated by the designated technical officer to advise the associations participating in the social activities of the Project
Frequency of monitoring/recording	Annual
Value applied	Does not apply
Monitoring equipment	Does not apply
QA/QC procedures to be applied	Validation of the systematized information in the draft of the Project Monitoring Report with the proponents before the official publication of the report
Calculation method	Does not apply
Assessment	Total funds raised from other sources for investment in the Project region as a result of the REDD+ Project after the first VCS verification and sales of carbon credits.

Data/Parameter	**Growth of the annual resource available for the Fundação Jari activities**
Data Unit	Reais (R$)/year
Description	Additional value of funds raised by Fundação Jari, either through the REDD+ Project or through other sources of investment and partnerships.
Source of data	Annual Fundação Jari activity report
Description of measurement methods and procedures to be applied	Annual evaluation of the financial flow of the Socio-environmental Agreement REDD+ Jari to be implemented by the Project.
Frequency of monitoring/recording	Annual
Value applied	Does not apply
Monitoring equipment	Does not apply

QA/QC procedures to be applied	Validation of the systematized information in the draft of the Project Monitoring Report with the proponents before the official publication of the report
Calculation method	Does not apply
Assessment	Growth of the annual resource available for Fundação Jari activities as a result of the REDD+ Project after the first VCS verification and sales of carbon credits.

Data/Parameter	**Frequency of publication of Activity Reports**
Data Unit	Verification number/event
Description	Time interval between publications and evaluations of activity reports
Source of data	Monitoring Report and Activity Report
Description of measurement methods and procedures to be applied	Interviews and structured questionnaires
Frequency of monitoring/recording	Annual
Value applied	Does not apply
Monitoring equipment	Does not apply
QA/QC procedures to be applied	Evaluation of data compiled and systematized in a meeting with stakeholders to support the future activities planning
Calculation method	Does not apply
Assessment	Frequency of publications of Activity Reports will be monitored after the first VCS verification and sales of carbon credits.

Biodiversity:

Data/Parameter	**Number of animals species monitored**
Data Unit	Number
Description	Quantity of animal species monitored
Source of data	Field Data Sheets, Data Sheet and Fauna Monitoring Report
Description of measurement methods and procedures to be applied	To be established
Frequency of monitoring/recording	2 times a year
Value applied	Does not apply
Monitoring equipment	Does not apply
QA/QC procedures to be applied	To be established
Calculation method	Data sheet
Assessment	To be monitored after the first VCS verification and sales of carbon credits.

Data/Parameter	**Diversity of the vegetation community in permanent plots**
Data Unit	Does not apply
Description	Variety of species found in the vegetation community within

	the permanent plots
Source of data	Field Data Sheets, Data Sheet and Post-Exploratory Report
Description of measurement methods and procedures to be applied	To be established
Frequency of monitoring/recording	One year before harvest. At intervals of one, three and five years after the UPA harvest
Value applied	To be established
Monitoring equipment	To be established
QA/QC procedures to be applied	To be established
Calculation method	Data sheet
Assessment	To be monitored after the first VCS verification and sales of carbon credits.

Data/Parameter	**Wealth of the monitored fauna taxon**
Data Unit	Number
Description	Abundance of the species number identified by the study in the same taxon
Source of data	Field Data Sheets, Data Sheet and Fauna Monitoring Report
Description of measurement methods and procedures to be applied	To be established
Frequency of monitoring/recording	Annual
Value applied	When the used methodology is compatible and comparable with those adopted in the initial diagnoses, use the values raised by group as reference
Monitoring equipment	Does not apply
QA/QC procedures to be applied	To be established
Calculation method	Digital data sheet
Assessment	To be monitored after the first VCS verification and sales of carbon credits.

Parameter	**Status of relevant species in the IUCN Red List of Endangered Species**
Data Unit	Does not apply
Description	Continuous monitoring of relevant species to the Project in relation to its status in the IUCN Endangered Species List, with emphasis on the species referred to as Critically Endangered (CR) or Endangered (E)
Source of data	Field Data Sheets, Data Sheet and Fauna Monitoring Report
Description of measurement methods and procedures to be applied	Systematization and comparison of data and information collected in fauna surveys and ethnozoological interviews with the Official IUCN List, available at: http://www.iucnredlist.org
Frequency of monitoring/recording	Annual
Value applied	Does not apply
Monitoring equipment	Does not apply
QA/QC procedures to be applied	Comparison of different information sources (empirical survey and traditional knowledge)

Calculation method	Does not apply
Assessment	To be monitored after the first VCS verification and sales of carbon credits.

Data/Parameter	**HCVA of Savanna**
Data Unit	Number of species present
Description	-
Source of data	Field survey
Description of measurement methods and procedures to be applied	Data collection should be performed periodically by specialist staff
Frequency of monitoring/recording	Once every 5 years (flora) and 2 times per year (fauna)
Value applied	Does not apply
Monitoring equipment	To be established
QA/QC procedures to be applied	To be established
Calculation method	To be established
Assessment	To be monitored after the first VCS verification and sales of carbon credits.

Data/Parameter	**Use of genetically modified organisms (GMOs)**
Data Unit	Number
Description	Monitoring for the type of seeds or seedlings provided to the communities for the implementation of project activities, making sure that they are not genetically modified organisms (GMOs).
Source of data	Field survey
Description of measurement methods and procedures to be applied	Monitoring Report, Activity Report and Fauna Monitoring Report
Frequency of monitoring/recording	Anual
Value applied	0
Monitoring equipment	N/A
QA/QC procedures to be applied	To be established
Calculation method	To be established
Assessment	To be monitored after the first VCS verification and sales of carbon credits.

Data/Parameter	**Use of chemical pesticide, biological control agent or other types of inputs**
Data Unit	Number
Description	Monitoring for the type of inputs used in the activities of project, making sure that they are not chemical pesticide, biological control agent or other types of inputs
Source of data	Monitoring Report, Activity Report and Fauna Monitoring Report
Description of measurement methods and procedures to be applied	To be established
Frequency of monitoring/recording	Annual

Value applied	0
Monitoring equipment	N/A
QA/QC procedures to be applied	To be established
Calculation method	To be established
Assessment	To be monitored after the first VCS verification and sales of carbon credits.

3.3.9 Dissemination of Monitoring Plan and Results (CL4.2)

It will be through the website of Biofílica Investimentos Ambientais that the monitoring plan, as well as its results obtained will be available to the public. Statements of relevant and summary information addressed to communities and stakeholders will be transmitted through the REDD+ Technical Chamber and visits by Foundation technicians to rural communities.

3.3.10 Non-Permanence Risk Analysis

The validation team assessed each of the risks and scores given by PP against the AFOLU non-permanence risk tool as follows:

Internal Risk = 0		
Risk factor from the Non-Permanence Risk Report	Risk Rating given by PP	Assessment
Project Management	**-2**	**Correct**
a)	0	Not applicable as described in the PD /11/ the project involves the maintenance of carbon stocks already in the project area;
b)	2	Ongoing enforcement is required to protect more than 50% of stocks on which GHG credits have previously been issued;
c)	0	The audit tema confirms that met or spoke to most of the management team and that it includes individuals with significant experience in all skills necessary to successfully undertake all project activities. Description of team members' experience are in pages 4 to 6 of the Non-permanence risk report. The audit team would still add add to the list a very important member of the team from Fundação Jarí: Arnaldo Santos, the agronomist who has been interviewed and visited communities with the audit team while in Pará site visit. From the site visit it was observed that this member of the team has thorough knowledge of the resources in the area, receives great respect from communities and showed great respect towards communities.
d)	0	The audit team confirms from the site visit that Grupo Jari maintains a physical presence in the project site.
e)	-2	Management team includes individuals with significant experience in AFOLU project design and implementation, and in carbon accounting, under approved GHG programs. Description of team members' experience already validated above.
f)	-2	The VVB checked the following evidences of adaptive management plans: 1) Fundaçao Jari's Activities report for the project Jarí/Amapá /123/, which the PD states will be implemented in the Jarí/Pará project too. This report has the outcomes of the regular stakeholders meeting with the Technical Chamber created and which is mentioned in the PD will happen in the Jarí/Pará Project too; 2) Systematic of staff training and development procedure /124/; 3) Management Team experience as validated above.
Risk factor from the Non-Permanence Risk Report	Risk Rating given by PP	Assessment
Financial Viability	**1**	**Correct**
a)	1	The VVB confirms from financial analysis spreadsheet /13/ that the breakeven point is within 4 to 7 years of the Project start date.
b)		
c)		
d)		
e)	0	The VVB checked the proposal of an Investment Plan for Jarí/Amapá and Jarí/Pará REDD+ Projects for the years of 2019 to 2024 dated August 2018 /109/, addressed to the Jarí Group. This proposal had values already spent in the project Jarí/Pará from 2015 until 2018 and he VVB checked in this document that more than 80% of the initial investment for the project (seen in financial analysis /13/) until breakeven in 2019 was executed.
f)		
g)		
h)		
i)	0	No mitigation report so nothing to validated

Risk factor from the Non-Permanence Risk Report	Risk Rating given by PP	Assessment
Opportunity Cost	**-8**	**Correct**
a)		VVB checked tab "FC_Projeto", cell B11 in the financial analysis spreadsheets/13/ that the most profitable alternative scenario is 5% more than the Project activity.
b)		
c)		
d)		
e)		
f)	0	
g)	0	All project proponents are for-profit organizations.
h)		The entire project area is protected by the Brazilian Forest Code (Law nº 12.651 of 25/05/2012) /126/ as seen in the sustainable forest management plan (SFMP) dated 2016 /125/
i)	-8	
Risk factor from the Non-Permanence Risk Report	Risk Rating given by PP	Assessment
Project Longevity	**0**	**Correct**
a)	0	The entire project area is protected by the Brazilian Forest Code (Law nº 12.651 of 25/05/2012) /126/ as seen in the sustainable forest management plan (SFMP) dated 2016 /125/
b)	15	
External Risk = 10		
Risk factor from the Non-Permanence Risk Report	Risk Rating given by PP	Assessment
Land Tenure and Resource Access/Impacts	**0**	**Correct**
a)		Jari Group is the sole proprietorship of the land as seen from the land certificates /30/, they do not lease the land and they hold the rights to use of resources. There are no disputes over access and use rights in the Jari/Pará Project area as the Group formally recognises access and use rights to local extractive groups and acts directly in the mediation of conflicts with these actors as seen from the document "Rules of use of nuts of the Avança nuts area in operating areas of the Jari Group Bananal Community" 2018 /69/ for example.
b)		
c)		
d)	0	
e)	0	Not applicable
f)		The entire project area is protected by the Brazilian Forest Code (Law nº 12.651 of 25/05/2012) /126/ as seen in the sustainable forest management plan (SFMP) dated 2016 /125/
g)	-2	
Risk factor from the Non-Permanence Risk Report	Risk Rating given by PP	Assessment
Community Engagement	**10**	**Correct**
a)	10	Less than 50 percent of households living within the project area who are reliant on the project area representatives have been consulted
b)	5	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
c)	-5	The project generates net positive impacts on the social and economic well-being of the local communities who derive livelihoods from the project area

Risk factor from the Non-Permanence Risk Report	Risk Rating given by PP	Assessment
Political Risk	**-2**	**Correct**
a)		The VVB checked the calculations in the Governance Indicator_BR.xlsx /128/ against The Worldwide Governance Indicators (WGI). Available on: http://www.govindicators.org /128/ and confirms the score of 0,05 is calculated correctly.
b)		
c)		
d)		
e)	2	
f)	-2	The audit team can confirm that the country has an established DNA under the CDM and has at least one registered CDM A/R project as the auditor has worked in its validation (CDM project AES Tietê Afforestation /Reforestation Project in the State of São Paulo, Brazil).
Natural Risk = 1		
Risk factor from the Non-Permanence Risk Report	Risk Rating given by PP	Assessment
Natural Risk	1	It was already validated that the risk of fire is low in the Amazon forest /122/ and as na experienced environmental scientist and ecologist the auditor confirms that pests outbreaks happen in environments that area normally umbalanced (usually by havy anthropic ativity) which the auditor confirms is not the case for the Project Area. In the same way, extreme local weather and geological risks (like plate techtonic movement) or other natural risks are not characteristic of the region.

Risk Category		Rating
a)	Internal risk	0,00
b)	External risk	10,00
c)	Natural Risk	1,00
Overall risk rating (a + b + c)		**11**

3.3.11 Optional Gold Level: Regional Climate Change Scenarios (GL1.1)

Not applicable.

3.3.12 Optional Gold Level: Climate Change Impacts (GL1.2)

Not applicable.

3.3.13 Optional Gold Level: Measures Needed and Designed for Adaptation (GL1.3)

Not applicable.

3.4 Community

3.4.1 Descriptions of Communities at Project Start (CM1.1)

The assessment of the communities at the Project start was carried out by Casa da Floresta /42/ and Harmonia /43/.

Community characteristics: as per section 4.1.1 of the PD /11/ there are two main towns near the Project Zone in the State of Pará, Almeirim and Monte Dourado, but many communities spread in the whole of the Project Zone. One of the main characteristics noticed during the site visit to the communities of the Project Zone, is that the culture of extraction of Brazil Nuts and Açaí is very conspicuous, and lives alongside agriculture (specially manioc) of subsistence with some sales for tourists and towns.

The extractivism culture was more obvious in the more remote areas where one could buy the artefacts used for the extraction of nuts as souvenirs. In the Cafezal community, for example, the audit team was informed that the community desired to find ways to preserve the nut but also find ways to aggregate value to it. This information is also presented in the Harmonia report /43/. The communities closer to Monte Dourado seem to yearn for practices more related to agriculture and fisheries and processing of these products (like flower production) but also practice extractivism as heard in the communities of São Miguel e Pimental. These two latter communities raised conversations about improving efficiency of Açaí processing for example.

With regards to wellbeing: According to Harmonia /43/ wellbeing in the communities directly involved in the Project Activity are directly related to public services like electricity, health, education and transportation. Figure 56 of the PD shows that most of the producers of the communities directly involved in the project consider that they receive public health agent visits. Figures 44 and figure 62 indicates that fundamental school levels are quite high. During the visit to the communities the major demand with regards to these 4 services were to do with electricity, communication (internet), outflow of production and the necessity of secondary schools, which corroborates the information on figures 44 and 62 of the PD /11/ that fundamental or primary schools meets demand.

With regards to diversity: Figure 41 of the PD shows that the population has an even distribution by gender. Woman were well represented in the meetings with the auditor.

3.4.2 Interactions between Communities and Community Groups (CM1.1)

The assessment of the interaction between the communities and community groups presented in section 4.1.2 of the PD /11/ at the Project start was carried out by Casa da Floresta /42/ and Harmonia /43/. The VVB confirms that what is reported in the PD /11/ is in the Harmonia report /43/.

3.4.3 High Conservation Values (CM1.2)

Community well-being high conservation value areas identified in section 4.1.3 of the PD v3 /11/ were validated against the Casa da Floresta report /42/ and Harmonia /43/.

3.4.4 Without-Project Scenario: Community (CM1.3)

The without project community scenario has been defined based on Casa da Floresta /42/ and Harmonia /43/.

3.4.5 Expected Community Impacts (CM2.1)

The expected community impacts were validated against the Harmonia report /43/.

3.4.6 Negative Community Impact Mitigation (CM2.2)

The Jarí Pará REDD+ project is not expected to cause a negative community impact to the well being of local communities. Section 4.4.4 of the PD states that one possible risk is the lack of interest by some communities and migration from other areas to the PA. In order to mitigate this risk the PP states that some measures can be taken to consolidate the involvement of all parties involved in the decision making process of the Project activities in the Technical Chambers and PRA workshops as well as well as improving already existing communication tools. The VVB agrees and FAR1 was opened for that reason.

3.4.7 Net Positive Community Well-Being (CM2.3, GL1.4)

The anticipated net well-being impacts of the project are predicted to be positive for all identified community groups compared with their anticipated well-being conditions under the without-project land use scenario. This was assessed against Harmonia report /43/.

3.4.8 High Conservation Values Protected (CM2.4)

It is the opinion of the VVB that the Project activities represent an opportunity to better protect the HCVs identified in step 3.4.3 of this report by implementing the activities described in section 4.2.4 of the PD v3 /11/ as for example the mapping of trees important for the subsistence of the communities and studies on the management of these.

3.4.9 Impacts on Other Stakeholders (CM3.1)

Negative impacts are not expected on other stakeholders according to section 4.3.1 of the PD v3 /11/, but states also that one possible negative impact may be possible conflicts amongst communities arising from the implementation of activities.

3.4.10 Mitigation of Negative Impacts on Other Stakeholders (CM3.2)

As mentioned above, negative impacts on other stakeholders in this Project are not expected. However for the possible conflict which may arise a mitigating measure is the implementation of participatory strategies in the design of the activities. The VVB agrees and to check that FAR1 was opened.

3.4.11 Net Impacts on Other Stakeholders (CM3.3)

As stated earlier, other negative impacts on the well-being of other groups of local actors are unlikely, since the project does not limit access to natural resources in the Project Area of any agent originally dependent on these resources, and the activities to be carried out in relation to the surrounding communities are based mainly on articulation with government agencies and other local institutions precisely to promote improvement in living conditions, greater access to public policies, and rural

extension and technical assistance. The activities outlined and proposed for this Project aim at impacts that promote inclusion and well-being to communities and other stakeholders.

3.4.12 Community Monitoring Plan (CM4.1, CM4.2, GL1.4, GL2.2, GL2.3, GL2.5)

The community monitoring plan is described in sections 3.3.2, 3.3.5 and 4.4.1 of the PD v3 /11/. The monitoring planned is deemed reasonable and appropriate and when reviewed as stated in section 4.4.1 should take into consideration FAR1.

3.4.13 Monitoring Plan Dissemination (CM4.3)

As specified above an Initial Monitoring Plan for Community Impacts was demonstrated, and the complete monitoring plan should be finalized in the future. This information will be disseminated on the internet and communicated to the communities, project proponents, partners and other stakeholders.

3.4.14 Optional Gold Level: Exceptional Community Criteria (GL2.1)

Not applicable.

3.4.15 Optional Gold Level: Short-term and Long-term Community Benefits (GL2.2)

Not applicable.

3.4.16 Optional Gold Level: Community Participation Risks (GL2.3)

Not applicable.

3.4.17 Optional Gold Level: Marginalized and/or Vulnerable Community Groups (GL2.4)

Not applicable.

3.4.18 Optional Gold Level: Net Impacts on Women (GL2.5)

Not applicable.

3.4.19 Optional Gold Level: Benefit Sharing Mechanisms (GL2.6)

Not applicable.

3.4.20 Optional Gold Level: Benefits, Costs, and Risks Communication (GL2.7)

Not applicable.

3.4.21 Optional Gold Level: Governance and Implementation Structures (GL2.8)

Not applicable.

3.4.22 Optional Gold Level: Smallholders/Community Members Capacity Development (GL2.9)

Not applicable.

3.5 Biodiversity

3.5.1 Existing Conditions (B1.1)

Existing conditions of biodiversity identified in section 5.1.1 of the PD v3 /11/ were validated through the Casa da Floresta Report /19/.

3.5.2 High Conservation Values (B1.2)

The biodiversity HCVs identified in the project description were assessed against the Casa da Floresta Report /19/.

3.5.3 Without-project Scenario: Biodiversity (B1.3)

The validation of how the without-project land use scenario would affect biodiversity conditions in the project zone was done against the Casa da Floresta Report /19/ and the validation of the climate baseline scenario in section 3.3.4 of this report.

3.5.4 Expected Biodiversity Changes (B2.1)

The validation of the key assumptions, rationale and methodological choices used to anticipate changes in biodiversity resulting from project activities under the with-project scenario were validated against the Casa da Floresta Report /19/. The expected biodiversity impacts identified in the project description are reasonable.

There are 2 expected impacts described in section 5.2.1 of the PD: 1) the reduction of deforestation and forest degradation; and 2) habitat and therefore biodiversity conservation. These 2 expected impacts are very credible considering the list of activities planned for the Project Activity described on table 10 of the PD /11/ and the experience of the management team validated in section 3.3.10 of this report. It is the opinion of the audit team that if implemented as described the Project Activity will lead to reduction of deforestation and forest degradation and consequently a reduction of habitat loss and biodiversity conservation.

It is the opinion of the validation team that these impacts have an obvious positive effect on every single species of the flora, fauna and IUCN Red List of critically endangered, endangered and vulnerable species listed in sections 5.1.1 of the PD /11/. The listed species were all validated against Casa da Floresta Report /19/ which present the results of the survey carried out in the Project Zone. The impacts also have a positive effect on the biodiversity high conservation value aspects of the area (the Savanna region and the spring) identified in section 5.1.2 of the PD /11/.

3.5.5 Mitigation Measures (B2.3)

The main source of impact to biodiversity identified in the PD section 5.2.2 is the forest management in the Project Area. Nevertheless, when compared to baseline scenario these impacts are potentially much reduced and it is the opinion of the VVB that with the monitoring of biodiversity described in section 3.3.2 of the PD /11/ the PP will be able to mitigate any negative impact observed.

The measures needed and designed to mitigate negative impacts on biodiversity and measures needed and designed for maintenance or enhancement of the HCV attributes were validated against the Casa da Floresta Report /19/. Measures are consistent with the precautionary principle.

3.5.6 Net Positive Biodiversity Impacts (B2.2, GL1.4)

From the PD v3 /11/ and the Casa da Floresta Report /19/ the VVB concludes that project's anticipated net impacts on biodiversity in the project zone will be positive compared with conditions under the without-project land use scenario.

3.5.7 High Conservation Values Protected (B2.4)

According to PD v3 /11/ and the Casa da Floresta Report /19/ the project will not negatively affect any biodiversity-related HCVs.

3.5.8 Species Used (B2.5)

The species used and described in the PD v3 /11/ were validated during site visit in interviews with communities. The Jari/Pará REDD+ Project encourages the use of native species by local rural communities, such as Brazil nut, açai berry, cassava, cupuaçu, among others. The VVB confirms that some non-native species are used by the communities because they have been introduced in the region already.

3.5.9 Impacts of Non-native Species (B2.6)

As specified above, the Jari/Pará REDD+ Project encourages the use of native species by local communities. In addition, approximately 75% of the main crops and sources of income of the producers assisted by the Project are based on the development and production of native species (Brazil nut, açai berry, flour, cassava, cupuaçu, among others)

The VVB confirms that a few non-native species are however used by local communities mainly for subsistence. Again, these species have been cultivated for years, being part of the cultural history of the region and serving as a source of subsistence for these communities. During site visit no evidence was seen that their use is being encouraged by the Jari/Pará REDD+ Project.

3.5.10 GMO Exclusion (B2.7)

The PD v3 /11/ states Through the Jari/Pará REDD+ Project it is guaranteed that no genetically modified organisms (GMOs) will be used. It is also ensured that the seeds and seedlings of forest and agricultural species provided to communities are not GMOs. The non-use of GMO will be guaranteed by the fact that the monitoring for the type of seeds or seedlings if used by communities for the implementation of project activities is included in the monitoring plan of section 3.3.2 of the PD /11/. However, it is important to notice that the reduction or removal of greenhouse gas emissions will be achieved through reduction of

deforestation and forest degradation and thus it is expected that the source of seeds and seedlings are the forest itself and that purchase is unlikely.

3.5.11 Inputs Justification (B2.8)

For the Jari/Pará REDD+ Project region there is no intention to use any chemical pesticide, biological control agent or other types of inputs. In order to avoid possible harmful effects such as contamination of water bodies causing emission of greenhouse gases, chemical fertilizers are used in extreme cases.Table 68 of the PD actually states that the main fertilizer used will be organic compost.

The use of fertilizers will however be monitored throughout the implementation of the Project (see section 3.3.2 of the PD /11/) and, if any chemical compound is applied, or the use of biological control agents or any other type of input by the responsible parties, they will be reported in the monitoring report.

3.5.12 Waste Products (B2.9)

A series of documents establish standards and criteria for the identification, classification and management of waste in the area of the Jari/Pará REDD+ Project carried out by the Grupo Jari. The criteria for classification, disposal and transportation of the waste generated by the Grupo Jari are determined according to NBR 10.004, called the environmental procedure "Waste management", which establishes conditions for classification in relation to dangerousness, adequate disposal, transportation, operation of the intermediate disposal area and waste conditioning.

All records are checked and verified through a waste control worksheet, which facilitates the handling and management of information. The forest residue has economic interest, being fundamental for the viability of the enterprise. The standards and measures of transportation and use of these services are determined by various procedures, as well as the monitoring of activities. Residues of agricultural production from communities are transformed into organic compost and reused as fertilizer.

3.5.13 Negative Offsite Biodiversity Impacts (B3.1) and Mitigation Measures (B3.2)

No negative impacts are expected outside the Project zone.

3.5.14 Net Offsite Biodiversity Benefits (B3.3)

No negative impacts are expected outside the Project zone.

3.5.15 Biodiversity Monitoring Plan (B4.1, B4.2, GL1.4, GL3.4)

The biodiversity monitoring plan used to track the project's objectives is outlined in sections 3.3.2, 3.3.6 and 5.4.1 of the PD v3 /11/. It is of the opinion of the VVB that it meets the requirements of B4.1 and B4.2 of the CCB standard.

The biodiversity monitoring plan is appropriate.

3.5.16 Biodiversity Monitoring Plan Dissemination (B4.3)

The monitoring plan and any monitoring results obtained will be disseminated and communicated in the REDD+ Technical Chamber held by the Jari/Pará REDD+ Project. Information is also available to communities, stakeholders and the public through virtual channels, such as the website (http://www.biofilica.com.br).

3.5.17 Optional Gold Level: High Biodiversity Conservation Priority Status (GL3.1)

The VVB validated the of list Critically Endangered, Endangered and Vulnerable species listed in section 5.5.1 of the PD v3 /11/ and confirms that the presence of these species in the PA are listed in the Casa da Floresta Report /19/ and that they are classified by the same report as CE, E and V. These were checked against the IUCN – International Union for Conservation of Nature, species red list in the following link https://www.iucnredlist.org /130/.

3.5.18 Optional Gold Level: Trigger Species Population Trends (GL3.2, GL3.3)

The projected trends in trigger species populations were validated on IUCN (2018) /130/.

4 VALIDATION CONCLUSION

The validation team of RINA has performed a Validation for the Jarí/Pará REDD+ Project in Brazil on the basis of VCS Standard Version 3.7 /2/ and CCB-Standards-v3.1 /9/, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The review of the project design documentation and the subsequent follow-up interviews have provided RINA with sufficient evidence to determine the fulfillment of stated criteria. The project correctly applies the methodology "VCS:VM0015 Methodology for Avoided Unplanned Deforestation" v1.1. /4/

The estimated Emission Reductions during the crediting period (08-July-2014 until 7-July-2044) by the Jarí/Pará REDD+ Project in Brazil are expected to be 15,491,971 tCO2e over the 30 year project lifetime.

The monitoring plan is in accordance with the applied methodology "VCS:VM0015 Methodology for Avoided Unplanned Deforestation" v1.1. /4/.

The validation team concluded that the Jarí/Pará REDD+ Project is established as described in the VCS CCB PD (v. 5.1) /11/ (dated October 7th 2019) and meets all relevant requirements of the above-defined criteria.

RINA therefore issues a positive Validation opinion to Jarí/Pará REDD+ Project.

APPENDIX 1: TABLE OF CORRECTIVE ACTION REQUESTS, CLARIFICATIONS REQUESTS AND FORWARD ACTION REQUEST.

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
CAR1 The VCS Standard v3.7, paragraph 3.17.2. requires the PP to "conduct a local stakeholder consultation prior to validation as a way to inform the design of the project and maximize participation from stakeholders. Such consultations allow stakeholders to evaluate impacts, raise concerns about potential negative impacts and provide input on the project design." At the same time, the CCB standard v3.1. G3 requirement states "Communities and other stakeholders are involved in the project through full and effective participation,[39] including access to information, consultation, participation in decision-making and implementation, and free, prior and informed consent (requirements for free, prior and informed consent are included in G5.2). Timely and adequate information is accessible in a	An extra effort was made to expand consultation with the communities in the region. The work was focused on the mobilization of community leaders to participate in two events. The first event was held on April 18 in Almerim, and was attended by community leaders from the region of Almerim and Parú river. The second event was held at the headquarters of the Jari Foundation at Monte Dourado and was attended by community leaders from the region of Monte Dourado (2). The purpose of the meetings was to present the project and opening place to the participants ask questions and make suggestions. In addition, all of them received the Project folders to distribute in their respective communities. The communication channels of the project, through "fale conosco", were widely disclosed during the meetings. The "Communities_consulted" (1) worksheet makes a quantitative analysis of the work done, counting the communities that were mobilized for the events, and who actually attended the meetings. The data demonstrate the increase of the representativeness of the communities in the region, previously 8 communities had been consulted, in the current actions this value changed to 53, unfortunately it was not possible to consult the other communities present in the area of the Jari Group due to limitations of resources and logistics, but the REDD + project follows the important role of strengthening the actions of Fundação Jari and cause them to be enlarged reaching a growing audience (4). Another initiative carried out with the purpose of increasing the dissemination of the project to the public in the region was the publication of an article in the regional newspaper announcing the holding of the meetings. The material is included in the evidence folder (8) (9). In addition to these events, the expansion of the public consultation was reinforced by sending of informative submission to the relevant local institutions in the states of Pará and Amapá, such as trade unions, State Public Prosecution and other government agencies, complementing delivery to the SEMAS and Public Federal Ministry carried in the first consultation. Copies of the official papers were	With regards to the consultation of stakeholders: The VVB checked that an email /59/ was re-sent on 04/06/2019, with a link to the PD in Portuguese http://www.biofilica.com.br/docs/redd/jari-para/PD_ProjectDescription_pt_preliminar.pdf to a list handed in by the PPs /58/ which had the following institutions amongst others: Chambers of Councilors of Almeirim, SEMAS (state environmental regulators), SEMA (municipal environmental regulators), Forum of Brazilian NGOs, STR (rural workers syndicate) of Gurupá and Almeirim, State Public Prosecutors and Federal Public Prosecutors. The VVB also checked the report generated by Mensagex which stated that 223 emails were delivered. According to Fundação Jarí e Biofílica's Report /61/ the PP extended invitations for local consultation to communities' representatives of other 46 communities /61/ carried out on 18/04 and 25/04/2019. The VVB checked the list of participation published in the same report /61/ and the photos of the consultations /62/ as well as the videos of testimonies after consultation from a representant of the community Vila Nova and another from Repartimento /63/, both showing interest in the project. The VVB checked that 13 of the communities invited were in the list published as communities recognised by the PPs as communities established in the Jari/Pará Project zone (Table 7 of the PD v3 /11/). The PP explained that the other 36 were communities connected to these.

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
language and manner understood by the communities and other stakeholders. Effective and timely consultations are conducted with all relevant stakeholders and participation is ensured, as appropriate, of those that want to be involved. [39] Full and effective participation means meaningful influence of all relevant rights holder and stakeholder groups who want to be involved throughout the process, and includes access to information, consultation, participation in decision-making and implementation and free, prior and informed consent. " Considering the fact that in September 2018 the PP presented the Jarí Pará REDD+ Project to 6 of the 98 communities reported to be within the Project Area, and provided the video with comments from community members; Considering the TAC signed by Jari and ITERPA in 2016 where Jari committed with the regularisation of the	made available in the respective folder of evidence as well as the list of all institutions covered by the first consultation of the project via e-mail (3) (5) (6) (7). Regarding the rules of free, prior and informed consent to indigenous and traditional peoples who hold rights to the territory where the Project is being developed (in this case the right of access to natural resources), as defined by item G5 of the CCB standard, the PPs demonstrate through the evidence already presented that all due procedures have been applied with the local actors. The first stage of the consultation with the local communities had a broad participatory process that involved the construction of action plans based on the theory of change and subsequently feedbacks safeguarding all the rights of free, prior and informed consent. In this stage, were selected those actors (communities or individuals) who were predisposed to participate of the project in an active and direct manner. For the expanding process of the consult, it was also sought to guarantee such rights to the actors involved. The meetings were attended by leaders from other communities, being conducted through a broad information process, with openings for feedback and testimonials. At these meetings, we sought to ensure broad transparency regarding the proposed action plan and its overall objectives. Information materials and the other channels of communication established by the PPs were widely reinforced so that the leaders could transmit the information collected to the other members of the respective represented communities (2). Through the evidence presented, PPs demonstrate that the issues related to the responsible management of natural resources and access to such resources, which are rights of local traditional peoples, are being treated in a broad and transparent way with all the stakeholders. The Jari Group, through the Jari Foundation, has worked extensively in the conflict mediation, transparency, communication and in the guaranteeing of rights to local communities. The evidence presented demonstrates how this work has been conducted, where local communities determine the Jari	The VVB checked that from the ones that attended 11 are listed in table 7 of the PD v3 and other 6 had already participated in the initial PRA. The PP informed have provided information about the project and the planning which were carried out with the first 8 communities to the representatives of these new communities, explained to them grievance procedures and received feedback as shown in videos mentioned above. The VVB is satisfied that the PP is committed to expand even further the participation to institutions recognised by all communities identified in the Project Zone, as reported in the PD v3, according to G3 and G5.2 of the CCB Standard and so, a FAR will be open in order for this further expansion to be checked in the first verification of the CCB. CAR1 is closed.

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
communities identified and mapped by them together with ITERPA; Considering that Diario Oficial of 07/11/2018 states that the work on regularisation of the communities in public areas and the regularisation of the communities rights in Jarí property is still ongoing; Considering also the principle of conservativeness of the VCS Standard v3.7 and all the International Conventions mentioned in the CCB standard, particularly items G3 and G5 and related National and State laws on those; The VVB requests from PPs to carry out a comprehensive local stakeholder consultation inviting comments from, as a minimum, the list included in resolution Nº7 of March 2008 of the Brasilian DNA for the state of Pará and representatives of all relevant communities including those indirectly impacted by Jari - Pará REDD+ Project activities. Please take note of the envidences required by	Foundation as a mediating institution in the participatory and consensual construction of the Rules of Use and access to the natural resources of the area, such as brazil nuts and açaí berry (10) (11) (12) (13) (14) (15) (16) (17) (18) (19). It were also demonstrated in this process, the procedures adopted by the Jari Group to formally recognize these rights and authorize extractivists individually or collectively to access these areas. In addition, the terms of cooperation of the Jari Group with the Government of the State of Pará also show the initiative to guarantee closely with the State the customary rights acquired by these communities. With regard to the containment of deforestation and surveillance actions in the area, considering the relationship built and the work method adopted with the traditional communities, it is important to point out that there is a great difference in the treatment between the traditional communities legitimately established in the area and invaders that enter on the property very often. The Jari Foundation, has developed an educational work of raising awareness and training among these communities, aiming at promoting good practices in land use and forest resources management, offering alternatives that guarantee the subsistence and socioeconomic development of these actors. With regard to the invaders who enter the areas of the Group seeking to establish illegitimate land tenure, in some cases based on fraudulent documents, the modus operandi is conducted through dialogue and complaints to public inspection and control agencies, as already highlighted by the Patrimonial Surveillance Procedures of the Group. The project strategies for the monitoring of illegal activities of natural resources exploration and deforestation are all listed and duly evidenced in the PD. In this sense, even considering that the PPs did not conduct a consultation with 100% of the traditional communities in the area, it is evidenced that there is no kind of restraint, impediment or conflict over access to resources between the Jari Group and the communities. In this way we understand that community rights are widely guaranteed (and demonstrated). The REDD+ Project aims to strengthen communication channels with traditional populations, seeking to involve all stakeholders in the process, guarantee social	

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
resolution N°7 mutatis mutandis with regards to evidences of invitations sent to official stakeholders as well as guidelines of resolution N°10 of May 22nd 2013. In carrying out such comprehensive stakeholder consultation also note that guidelines for G3 and G5 item 2) of the CCB must be followed and this means that relevant communities in the project area must not only be invited to provide comments but also that they must provide free, prior and informed consent. The areas where communities potentially hold any kind of rights (i.e. property, occupation, resource use) and which no free, prior and informed consent can be obtained must not be included in the baseline of the Project Activity (PA). This is not going to be of great loss to the project as the deforested areas have already been discounted from PA and most of the communities occupy such areas. The PP can try to include the areas which stayed outside	rights and mitigate possible impacts caused by the project. It is part of the REDD+ project's action plan to continue and strengthen the work already developed by the Jari Foundation, ensuring that all requirements related to REDD+ safeguards, in respect of traditional peoples, are met in the process of efficient management of the territory. The project design document (PD) describes the tools planned to mitigate risks and impacts, and strengthen communication channels among stakeholders. With regard to communities, the main communication channel that will be implemented is the technical chamber, a meeting place for leaders and other stakeholders to present and discuss project proposals and evaluate actions taken. P.S.: “Considering the fact that in September 2018 the PP presented the Jari Pará REDD+ Project to 6 of the 98 communities reported to be within the Project Area, and provided the video with comments from community members;” The initial consultation carried out by the project included 8 communities directly impacted. However, of these communities, Area 127/Area 60 and Recreio/Serra Grande due to the close proximity between them, were considered as only two localities for the purpose of logistic organization, adding, therefore, 6 localities. (1) Communities_consulted.xlsx (2) Relatório consulta pública REDD+Jari Pará 2019_v2.pdf (3) Mailing_consulta publica_atualizado20190225.xlsx (4) MOBILIZAÇÃO COMUNIDADES - REDD+ PA.xls (5) documentos entregue.pdf	

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
the baseline when free, prior and informed consent is obtained from them and when next updating the baseline and if in accordance with VCS rules then.	(6) ofícios entregues.pdf (7) RES Processo de certificação e consulta pública do Projeto REDD+ Jarí Pará.msg (8) p1.pdf (9) p6.pdf (10)CCF10072017_00000DOC Castanhal (11)declaracao arumanduba (12)Declaração de reconhecimento_Indalércio (13)declaracao jari ateaepa (14)declaracao nova vida (15)Declarações_extrativistas (16)Desenvolvimento Comunitario_Mediação de Conflitos (17)Doc Hermogenes (18)REGRAS DE USO_BANANAL REVISÃO DAS REGRAS USO_BANDEIRA_20.10.	
CAR2 Coordinates PA as per INCRA land description (from the Portuguese INCRA memorial descritivo) should be placed in an Appendix of the PD.	The Project Area is composed of parts of 50 lands of the 108 that make up the Gleba Jari I, all these lands have their information available on the SIGEF website (https://sigef.incra.gov.br/). Due to the extension of the areas and the complexity of the land design in the region, it is not possible to add the coordinates of each land in the Appendix of the PDD, just as it is not possible to add the	Project area now clearly presented in the PD v3 with validated coordinates. CAR2 is closed.

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
	coordinates of the Project Area, because were generated over two thousand points, which would make the document extremely extensive physically and virtually. Therefore, this information was made available to the VVB in individual files with the appropriate identification by land and total (1) (2). In the case of Project Area coordinates had already been made available to the VVB by the following shared drive path: Data Base_Jari_Pará REDD+ Project\Validação\Dados GEO\Coordenadas, but follows for further consultation. Also, in the session "2.5 legal status and Property Rights" were updated information from lands covered by Project Area containing its total size, the representation of each in relation to the project area and the hiperlink to the SIGEF site with detail information (3). Also, the session "3.1.3 Project Boundary" was complemented in the item that refers to the description of the PA with a map (4) of the location of the PA that presents a squared grid with the coordinates covering its limits. Evidence files contemplated by CAR: (1) Coord_VerticesPA.xls (2) Coord_SIGEF_GlebasPA_total.xlsx (3) Table_RuralpropertiescoveredbytheJariParáREDDProject.xlsx (4) Fig14_PA_Coord.png	
CAR3 please provide reference for the carbon stock used in the calculation of post deforestation areas regeneration WANDERLLI & FEARNSIDE, 2015 and note that regeneration should start 1 year after deforestation as per VCS VM0015 Methodology for Avoided	The article by WANDERLLI & FEARNSIDE, 2015 (3) is available to the VVB in the evidence folder. The Errata recently published by the VCS with updates to the Methodology VM0015 regarding the inventory increase in the post-deforestation class was reviewed and changes were made in the Project documents (1) (2). Evidence can be verified in the VM0015 spreadsheets (ex-ante and ex-post) and in the new version of the documents Project Description (2) and Monitoring Report. Evidence files contemplated by CAR:	Reference of Wanderlli & Fearnside (2015) /64/ checked for values of biomass used to calculated carbon stocks for post deforestation areas regeneration and are correct. Also checked that ER calculations version 5.1 /12/ have been corrected according to VCS VM0015 Methodology for Avoided Unplanned Deforestation, v1.1 Errata and Clarifications. CAR3 is closed.

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
Unplanned Deforestation, v1.1 Errata and Clarifications which says "The text in sections 6.1.2 (a), (b), (c) and (d) regarding the increase of post-deforestation classes shall read as follows (with text in strikethrough deleted and text in red added):"Post-deforestation classes (fcl) (or their area weighted average per zone z): linear increase from 0 tCO2-e/ha in year t = t* to 100% of the long-term (20-years) average carbon stock (as estimated in Table 17) in year t = t*+~~9~~10 is assumed to happen in the 10 years period following deforestation (i.e. 1/10th of the final carbon stock is accumulated each year)."	(1) VM0015_planilha de calculo_JariPara_5.1 (2) PD_JariPara_VCS_CCB_v.3.0_eng_3.0_limpa.pdf (3) wandelli_fearnside_2015.pdf	
CAR4 With regards to definitions of RR write in step 1 of the PD and provide the following: **Infrastructure drivers:** Information regarding source of roads and river raster images used to create the RR and evidence of when the construction of Santo Antonio Hydroeletric Power Plant, Jurupari-Oriximiná Energy Transmission Lines, BR156 and PA 254 roads will start. Also please provide a	In Table 1 we provide the source and description of the and Infrastructure drivers. In Table 2 we show the source of the Forest Types and in Table 3 and 4 more explicitly information on comparing the vegetation types between the reference region and the project area. On Table 5 we show the information on slope. All of the images and shapes for the factor maps used in the baseline construction had already been made available to VBB, but are still being checked again (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13). Table 3 shows the vegetation types in the Reference Region sorted in order from the Largest to the Smallest area in hectares. We highlighted in bold the classes that occupied up to 100% of the projected area (n=9). The following Table 4 presents the vegetation types found in the Project Area, who ended up presenting the nine most representative typologies similar to what is presented in Table 3. The nine classes of vegetation type found in the project area	Infrastructure drivers: The VVB checked the source of the shapes of roads used to create the factor maps, to define the reference region and to analyse the dynamics of drivers variables and the location of deforestation, as the shapefiles that can be downloaded from Imazon (a site of geoinformation of the Amazon region). The VVB confirms that these shape files present official and unofficial roads up to 2012 mapped by Imazon. /46/. Rivers were checked in the shape files informed by PP to have already been provided "Rios_Navegaveis_cut.shp" /47/ and the dates for Santo Antônio do Jari validated against the website of the hydroeletric power station /48/.

<table>
<tr><th>Corrective action and/ or clarification requests</th><th>Response by project participants</th><th>Validation Conclusion</th></tr>
<tr>
<td>shape/map with the location of these planned infrastructure;
Forest types: source, date and maps with areas of each type of forest/vegetation in RR compared to areas of veg in PA. Furthermore, it is not possible to see from table 18 in the PD how the project complies with the meth requirement “At least 90% of the project area must have forest classes or vegetation types that exist in at least 90% of the rest of the reference region”;
Elevation: Information regarding sources of images used;
Slope: Information on source of images used and new analysis in PD as it is not possible to see from the map in figure 13 or from the data on table 20 of the PD whether “the average slope of at least 90% of the project area is within +or - 10% of the average slope of at least 90% of the rest of the reference region” as required by the methodology VM0015;
Legal Status: map in fig. 21 shows that the legal status of the land in the baseline case within the project area exists elsewhere in the baseline</td>
<td>occupied 100% of the Reference Region. Based on these results, it is believed that the requirement that at least 90% of the project area have forest classes found in at least 90% of the reference region is met.

Table 2. Source and description of the data required on the CAR4
<table>
<tr><th>Layer</th><th>Source</th><th>Description</th></tr>
<tr><td>**Roads**</td><td>https://imazongeo.org.br</td><td>Shapefile with the official and unofficial roads up to 2012 mapped by Imazon. Imazon used a visual interpretation method to identify and digitalize roads as seen on Landsat images.</td></tr>
<tr><td>**Rivers**</td><td>https://downloads.ibge.gov.br/downloads_geociencias.htm#</td><td>This shapefile shows the navigable rivers located within the reference region</td></tr>
<tr><td>**Santo Antônio Hydroelectric Power Plant**</td><td>http://www.cesbe.com.br/obras/uhe-santo-antonio-do-jari/</td><td>Here you will find a full description of the UHE Santo Antonio do Jari. The construction of the plant was initiated on August 1st, 2011 and concluded in 2014. The project was expected to attract 2,600 direct jobs, which is known as a proxy for deforestation in this type of projects.</td></tr>
<tr><td>**Jurupari-Oriximiná Energy Transmission Lines**</td><td>http://www2.aneel.gov.br/aplicacoes/editais_transmissao/documentos/LOTE%20B%20-%20Anexo_T%C3%A9cnico_Interliga%C3%A7%C3%A3o_Tucuru%C3%AD_Macap%C3%A1_Manaus_FINAL.pdf</td><td>This document has a full description of the powerline between Oriximina and Macapa.</td></tr>
<tr><td>**BR156**</td><td>http://g1.globo.com/ap/amapa/eleicoes/2014/noticia/2014/09/em-obras-ha-40-anos-br-156-ganha-atencao-de-candidatos-ao-governo.html</td><td>This website has a new informing about the paving of 150 km of the BR 156, south section between Macapa and Laranjal do Jari (243 km).</td></tr>
<tr><td>**PA 254**</td><td>https://caminhosdopara.com.br/mobile/mapas/pdf/2018/nr/NR10-2018.pdf</td><td>This link has a map with the planned section of the PA 254 between Laranjal do Jari and</td></tr>
</table>
</td>
<td>The VVB also checked that the Jurupari-Oriximiná Energy Transmission Lines operation license was issued in 2013 /49/.

Forest types:
Source of vegetation shapes informed by PP to be the shapes used for the definition of the RR were checked /50/. Tables 3 and 4 (19 and 20 in version 3 of the PD respectively /11) show that the 9 typologies which form 100% of the project area form 100 % of the reference region too.

Elevation and Slope:
Source of data website checked /51/. Confirmed from table 5 of the PPs answer that average slope of the project area is within + or – 10% of the average slope in the rest of the reference region.

Legal Status:

The VVB checked the shape sent by PP from the INCRA’s SIGEF (Land Management System of the National Institue of Colonisation and Land Reform) with the areas of private property in the reference region /52/. This shape is represents reasonable evidence that other private property have been registered in the SIGEF system (it is a government agency responsible for carrying out the description of the land before it can be registered in a registry office in Brazil).

The VVB checked the PD v3 of 28/05/2019 and confirm that the PP inserted most of the information requested in the PD.
CAR4 is closed.</td>
</tr>
</table>

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion

case. Please provide shapes for the map in fig. 21 of the PD and the attribute tables showing the areas so that data in table 28 of the PD can also be validated.

		Cupim, going through the reference region.

Table 3. Source, date, and map of the vegetation type

Source	Date	Maps
IBGE [http://geoftp.ibge.gov.br/informacoes_ambientais/vegetacao/vetores/escala_250_mil/amazonia_legal_ano_2003/BDG_VEGETACAO_AmazoniaLegal_2003.zip]	2003	Shapefile with the types of vegetation within the Legal Amazon. Scale: 1:250,000

Table 4. Vegetation types in the Reference Region

Vegetation type	Reference region - HA	Reference region - %	Reference region - % cumulative	Reference region - Rank
Emergent Canopy Lowland Dense Ombrophilous Forest	**614,883**	**24%**	**24%**	**1**
Non-forest classes	**461,166**	**18%**	**43%**	**2**
Submontane Open Ombrophilous Forest with Vines	**330,948**	**13%**	**56%**	**3**
Emergent Canopy Submontane Dense Ombrophilous Forest	**302,225**	**12%**	**68%**	**4**
Uniform Canopy Submontane Dense Ombrophilous Forest	**274,855**	**11%**	**79%**	**5**
Pioneering Formations with fluvial and / or lacustrine influence - herbaceous without palms	**239,114**	**9%**	**88%**	**6**
Lowland Dense Ombrophilous Forest	**164,688**	**7%**	**95%**	**7**
Submontane Dense Ombrophilous Forest	**76,579**	**3%**	**98%**	**8**
Uniforme Canopy Alluvial Dense Ombrophilous Forest	**56,618**	**2%**	**100%**	**9**
Alluvial Dense Ombrophilous Forest	1,350	0%	100%	10
Total	**2,522,426**	**100%**		

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion

Table 5. Vegetation types within the projected area

Vegetation type	Projected Area - HA	Projected Area - %	Projected Area - % cumulative	Projected Area - Rank
Emergent Canopy Submontane Dense Ombrophilous Forest	**134,491**	**27%**	**27%**	**1**
Emergent Canopy Lowland Dense Ombrophilous Forest	**125,470**	**25%**	**52%**	**2**
Uniform Canopy Submontane Dense Ombrophilous Forest	**103,479**	**21%**	**73%**	**3**
Lowland Dense Ombrophilous Forest	**60,229**	**12%**	**85%**	**4**
Submontane Open Ombrophilous Forest with Vines	**44,282**	**9%**	**94%**	**5**
Non-forest classes	**13,037**	**3%**	**97%**	**6**
Uniforme Canopy Alluvial Dense Ombrophilous Forest	**10,256**	**2%**	**99%**	**7**
Pioneering Formations with fluvial and / or lacustrine influence - herbaceous without palms	**3,480**	**1%**	**100%**	**8**
Submontane Dense Ombrophilous Forest	**2,251**	**0%**	**100%**	**9**
Alluvial Dense Ombrophilous Forest	14	0%	100%	10
Total	**496,988**	**100%**		

The elevation (9) and slope (13) data were produced based on the Shuttle Radar Topography Mission (SRTM) from NASA (Source: https://www2.jpl.nasa.gov/srtm/). This data contains the average elevation (in meters) per 90 by 90 meters of pixel size, above the sea level collected during the 2000s using radar sensors.

The slope map was produced using the module SURFACE available in TerrSet (13). Under this module, we selected the option Slope and calculated the unit in degrees. To better follow the VM0015 methodology we first overlaid the slope map with the project area binary mask and selected the top 90% of the pixels using the TOPRANK module. Then, using the module EXTRACT, we calculated the average slope within the project area. For the reference region, we first excluded from the reference region the area occupied by the project area. Next, we multiplied the slope map with this new reference region mask (that has values zeros where the project area is located), and calculated the average slope, using the EXTRACT module. Table 5 shows the result of this approach. The average slope with the 90% top slope value found in the region was 13.30 degrees. The down and up-limits of 10% from the average

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion

were 11.97 and 14.63 degrees, respectively. The average slope found of the project area was 12 degrees, which is within the down/up-limits calculated for the reference region.

Table 6. Summary statistics from SLOPE based on Project area, and Reference Region (excluding the Project Area)

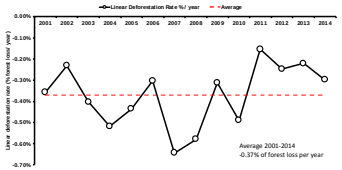
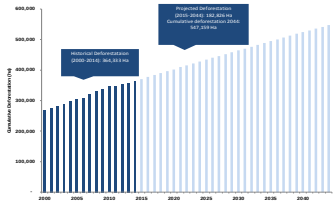
Information	Average slope (degree)
Project Area	12.00
Reference region – excluding the project area	13.30
Variation from the Reference Region (-10%)	11.97
Variation from the Reference Region (+10%)	14.63

The Figure 21 does not represent the Legal Status of the land, since as explained in Step 3 of the PDD the CAR is a self-declaratory tool which means that it is not because this property was demarcated in the system that it actually exists or is possession of the declarant. Thus Figure 21 only served to demonstrate the existence of a pattern areas deforested between 2000 and 2014 with the size of the self-declared properties in the CAR. Analyzing the action of the identified agents of deforestation, the CAR data aim to demonstrate the context of land speculation and land squatting in the region, which corroborates with the description of Step 3, this information is complemented by the CL7 response.
The declaration of Legal Status of the land, which defines the socioeconomic conditions of the RR is in Figure 11 (20), which was reformulated by adding the SIGEF information (INCRA) of the private properties RR beyond Gleba Jari I (15), the settlement areas (14) and conservation units (16) (17) (18) (19), demonstrating that in RR there are properties in situations similar to PA, as required by VM0015 (Pg.19).

Evidence files contemplated by CAR:
(1) dst_change.tif

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
	(2) dst_deforestation00.tif (3) dst_jariNavRivers.tif (4) dst_jariRoads.tif (5) dst_NavRivers.tif (6) dst_roadsImazon.tif (7) dst_roadsJari.tif (8) dst_settlements.tif (9) elevation.tif (10)ev_geology0014.tif (11)INPE_Prodes2014.shp (12)mask_incentive_UHE_StoAntonio.rst (13)slope.tif (14)assentamentos_incra.shp (15)SIGEF_particular_RR_cut.shp (16)UC_estadual_PI.shp (17)UC_estadual_US.shp (18)UC_federal_PI.shp	

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
	(19)UC_federal_US.shp (20)Figure11_v2.png	
CAR5 The leakage belt area was defined with Option II of the applied methodology. The applied methodology states that Option I is applicable where "economic profit is an important driver of deforestation" in the reference period. It also says that Option II "Mobility analysis can always be used but must be used where Option I is not applicable i.e. when less than 80% of the area deforested in the reference region (or some of its strata) during the historical reference period has occurred at locations where deforesting was profitable." Better evidence that Option I is not applicable to the project needs to be included in the PD and provided to the VVB. The VVB can not judge the requirement of the applied methodology regarding the non applicability of option I from alleged lack of data. Better evidence could be evidence that shows that most of the area is farmed for	The justification for the use of Option 2 has been reinforced with references and will be updated in the new version of the PDD (1) (2). The changes have been included in the evidence folder, all references have already been shared on the drive, but are still in the same folder again (3) (4) (5) (6) (7) (8) (9) (10). Evidence files contemplated by CAR: (1) PD_JariPara_VCS_CCB_v.3.0_eng_3.0_limpa.pdf (2) Leakage Belt_mobility analysis.docx (3) ArimaBarreto&Brito_2005.pdf (4) Diagnóstico Ambiental da Região do Projeto Jari - Biofílica, IPE, Arvorar e GO.pdf (5) Diagnostico IFT.pdf (6) Diagnóstico Socioambiental das Comunidades Rurais do Vale do Jari - POEMA e CEATS.pdf (7) Diagnóstico Socioeconômico e Ambiental 2010 - BOP e ICCO1.pdf (8) DSEA_Poema.pdf (9) FO Vale do Jari - Plano de Desenvolvimento Humano e Sustentável 2010 – 2014.pdf	VVB checked the new description of choice of option II in PD v3 /11/ and confirms it has been reinforced with evidence of the motivation for deforestation in the region being mainly for subsistence /65/. CAR5 is closed.

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
subsistence and or for income generation but not for profit.	(10)Relatorio_final_REDD+Jari_Pará_Sócio_VersãoFinal.pdf	
CAR6 During the audit it was pointed out that there are two lines with calculations of deforestation rates and the value of the rate of deforestation used comes from 6 years. It was informed to be a mistake. For clarity purposes correct this small mistake. Also the calculated remaining forest in 2000 is lower than 2014. The spreadsheet needs to have coherent values.	We recognized the mistake in the Excel spreadsheet sent for the auditing process. We fixed the mistake in the Excel file and recalculated the historical deforestation rate (1) (2). Based on the new calculation the historical deforestation rate was -0.37% of forest loss per year, and not -0.40% as calculated previously. Based on this new historical deforestation rate we projected 182,826 ha of new deforestation between 2015 and 2044. The deforestation projected within the projected area was 50,478 hectares.  Figure 1. Historical deforestation rate  Figure 2. Projected deforestation in the Reference Region based on the new historical deforestation rate Attached we are sending a new Excel file with all the deforestation re-calculated (1) (2). All the GIS data containing the projection of the deforestation model was also updated (3). Evidence files contemplated by CAR: (1) VM0015_planilha de calculo_JariPara_5.1.xlsx	The spreadsheet with the ER calculations v5.1 /12/ was checked and the VVB confirms that the error was fixed. PD /11/. CAR6 is closed.

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
	(2) 2018_REDD_JARI_PA_relatorioFinal_May2019.xlsx (3) File Folder: DadosGeo	
CAR7 Page 147 of the PD show values for Carbon stock in tCO2e of above ground and below ground biomass, and 95% CI seem different from the ones observed in R despite total carbon stock being correct. Reported tC also seem incorrect.	Table 15.a of VM0015 (Table 40 in the PDD) was updated (2) with the values of the carbon stock calculated by software R, where the CAB was 328.8 tCO2e/ha, CBB was 84.8 tCO2e/ha and Ctotal was 413.7 tCO2e/ha. The calculations performed by R set the confidence interval to 95%, so for a 5% error the IC values were 16.4 tCO2e/ha for CAB, 4.2 tCO2e/ha for CBB and 20.7 tCO2e/ha to Ctotal. These updated data are reflected in the VM0015_planilha de calculo_JariPara_5.1 (1) spreadsheet delivered to the VVB. Evidence files contemplated by CAR: (1) PD_JariPara_VCS_CCB_v.3.0_eng_3.0_limpa.pdf (2) Table_15_VCS.xlsx	Tab 15 of the ER calculations spreadsheet v5.1 /12/ corrected. CAR7 is closed.
CAR8 According to the applied Additionality Tool, the identified land use scenarios shall at least include: “ii) Project activity on the land within the project boundary performed without being registered as the VCS AFOLU project” During the site visit the PP informed that the project activity was the sustainable, multiple use of the forest, and that this could or not include sustainable forest management. In the additionality section of the PD (pages 130 to 139) the PD uses only low forest	The Item 3.1.5 Additionality was revised (2) to contemplate the approach related to Multiple Use Forest Management. The revised item can be found in the new PDD version presented to the VVB (1). Regarding the financial analysis, the PP revised this item in order to make clear the fact that the only economic activity developed by Jari Group in the Project Area up to the project start date is the timber management. The management of other products with regard to Multiple Use Forest Management is foreseen to the REDD+ Project and is intended to benefit only the local communities. Such investments/activities are included in scenario (ii) only as cost, with no perspective of revenue for the proponents. Therefore, these activities has been already included in the economic analysis (4) (5) (6) (7) (8) (9) (10) (11) (12) (13). In the economic model of the Project, the investments related to the incentive of Multiple Use Forest Management to the communities are included in the scope of social investments designated to the Jari Foundation, item "Despesas com atividades sociais" in the "Avaliação Carbono" tab (3).	The VVB checked the PD v3 and confirms the modifications have been made and it now clearly states that the multiple use of the forest is one of the alternative scenarios, so that it transparently states now that the project activity without being registered as a VCS AFOLU project is an alternative scenario. Furthermore, the VVB confirms that traditional communities hold legal rights to the use of resources (i.e. Brasil nuts and açai) in the project area even though the area it self is property of Jari. It also confirms that Fundação Jari has demonstrated during site visit its commitment to the development of technology and institutions in order to benefit the communities recognised to have tradition in the area. CAR8 is closed.

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
management impact as the project scenario without being registered as a VCS AFOLU project. For transparency purposes, correct in the PD, wherever necessary, to reflect that multiple forest use is the project scenario without being registered as a VCS AFOLU (as informed during site visit). Correct the impact of this change in the financial spreadsheet when applicable (i.e. any difference in assumptions, projected costs and income). Also justify in the answer to this CAR how the changes in costs, investments and cashflow (from the starting date of the project activity to the time of validation) impact or not in the initial additionality analysis prepared in v2 of 09/11/2018 of the PD when only forest management scenario was planned.	Evidence files contemplated by CAR: (1) PD_JariPara_VCS_CCB_v.3.0_eng_3.0_limpa.pdf (2) Adicionalidade_revisado_eng.docx (3) Modelo_economico_JariPara_2.2.xlsx (4) Proposta orçamentária 2018 – UFPA.pdf (5) Orçamento_PROJETOREDD+ JARI_AP_Plano de Trabalho 2018.pdf (6) Orcamento_PLANET_Monitoramento_ParaAmapa.eml (7) Rel.ativ.janeiro.2002.pdf (8) Rel_ativ_OUT_rubens1_2005.pdf (9) Rel_ativ_SET_rubens_2005.pdf (10) Relat_Ativ_dezembro_02.pdf (11) Relat_Ativ_outubro_2002.pdf (12) Relat_Ativ_setembro_2002.pdf (13) Relat_novembro_2002.pdf	
CAR9 Include in the common practice analysis the following: a) Justification of the geographical boundary chosen for	a) Besides the fact that both properties are located in the state of Pará in nearby municipalities, as explained in the PDD (1), Fazenda Pacajá property has historical and regional similarities with the Jari/Pará REDD+ Project Area. Both properties have a history of occupation by families who migrated to the region in the beginning of the XX century in search of opportunities and improvement in the	The VVB understands from the answer to this CAR that the justification for common practice analysis being carried out in 2 separate private properties is that they area both in the State of Pará in nearby municipalities and with similar history of occupation.

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
common practice; b) If other projects with multiple use of forests (not only SFMP) are found in the geographical area of the common practice analysis without being registered as a VCS CCB project. As per Additionality Tool, "Provide documented evidence and, where relevant, quantitative information. Considerations shall be limited to the period beginning 10 years prior to the project start date".	quality of life, especially due to the extraction of the rubber. The process of occupation of the lands inside the properties if gave through possessions by these migrants, which resulted in constant land conflicts over the years, mainly because of the overlapping areas and arguments about the right to remain on the land by the communities and its priority in land regularization processes. This added to the fact that the communities do not have a well-structured social organization, has made the scenarios in the two fragile sites, enhancing the ability of these individuals to become agents of deforestation. In the case of Project Area this process has been attenuated over the years with the presence of Fundação Jari that works to improve the quality of life of the community, facilitating their access to public policies and improving the relationship between the parties, and the intention of implementation of the REDD+ Project is these actions will be strengthened. With this, the Fundação became a reference throughout the region and this can be demonstrated during the VVB's visit to the area, when it was commented that those in charge of Fazenda Pacajá visited the areas of Jari to better understand the work of the Fundação and to identify ways how to mirror their actions in the reality of Pacajá, mainly from the point of view of mitigation of socioeconomic impacts and the work with communities. b) Considering the Scenario 1 outlined referring to the continuation of land use precedent to the REDD Project in which the deforestation agents are defined as squatters who settle in rural areas, executing deforestation through the construction of improvements, subsistence plantations or even the creation of animals in degraded pastures, and through these practices seek to legitimize their occupation, and Scenario 1 of the financial analysis in which timber forest management occurs without complementary activities to monitor this unplanned deforestation and without additional activities to benefit the climate, communities and biodiversity , it is possible to find out by analyzing the information contained in the "Diagnóstico Socioeconômico e Ambiental das Comunidades Limítrofes da Fazenda ABC, Portel-Pará" (2) and "Plano de Manejo Florestal Sustentável de Uso Múltiplo Empresarial da Fazenda ABC" (3), available to VVB, the existence of similarity between the Fazenda	The VVB confirms that looked at the evidences sent /67//68/ and that the other farm has a SFMP but does not seem to have funding in multiple use of forests involving community. CAR9 is closed.

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
	Pacajá area and the Jari property. This because like the Jari area in a scenario without the project, Fazenda Pacajá does not carry out the exploration of other products of the forest unless wood, what happens only is the permission to the communities of the property to harvest the so-called "Regional products" that mainly include medicinal plants and brazilian nuts, but there is no clear methodology or support to make these activities formal and planned. It is then up to these communities to diversify their production systems by working primarily with logging, fishing and agriculture. The main factor that differentiated the areas in this context is that Jari encourages in a more organic and informal way the Multiple Use Management, through the Jari Foundation mainly, with this the communities can collect forest products to sell on account itself, but without elaborate planning of exploitation. The role of the REDD + Project in this sense is to support and assist in the formalization of these activities already encouraged, so that they are carried out in a planned way. As shown in the socioeconomic diagnosis, Fazenda Pacajá has such a high potential when the Jari property for Multiple Use Management, because it has products such as açaí berry, palm hearts, andiroba, copaiba, piquiá, bacuri and even brazilian nut, what is lacking in this scenario is an incentive that leverages the optimal exploitation of these products. Evidence files contemplated by CAR: (1) PD_JariPara_VCS_CCB_v.3.0_eng_3.0_limpa.pdf (2) Diagnostico Socio Economico - FASE_Pacaja.pdf (3) Plano de Manejo - Fazenda ABC – 2003.pdf	
CAR10 With regards to the non-permanence risk analysis: 1) Project Management: Ongoing	1) The PP identified the error in this item and corrected including the score for "Ongoing enforcement to prevent encroachment by outside actors" (1) (2). 2) The PP has identified that there was an error in this item, the correct answer is letter h), since the project contract has security more than 80% of the found needed to cover the total cash out before the project reaches breakeven. This information can be	1) Ok score corrected to 2 on risk report v4 /14/ 2) The PP presented Biofílica's proposal of an Investment Plan for Jarí/Amapá and Jarí/Pará REDD+ Projects for the years of 2019 to 2024 dated August 2018 /109/, addressed to the

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
enforcement to prevent encroachment by outside actors is required to protect more than 50% of stocks on which GHG credits will have been issued; 2) Financial viability, risk factor e), the PP stated “Supporting documents, such as contracts sales and purchase of trees, contracts of land leasing and Project’s General Management Spreadsheet, were made available to validation/verification body.” Please explain what contrats of purchase of trees and land leasing are these; 3) Opportunity cost, risk factor a) you are supposed to	verified in the image below the project contract (8), which demonstrates the initial investment of the PP, and the cash out information that is found in the "Avaliação Carbono" worksheet (3) where the cited cost references show that the PP financed the initial activities of the project. 3) The PP recognized that there was an error on the interpretation of this item. The correct answer is letter d) because the NPV from the most profitable land use scenario is expected to be between 20% more than and up to 20% less than from project activities. In this case the NPV from the most profitable alternative scenario is 5% more than from project activities. The calculation of the NPV relation between the scenarios is demonstrated in the economic-financial model (3), tab "FC_Projeto", cell B11. 4) There are no disputes over access/use rights (or overlapping rights) in the Project Area. As demonstrated in the documents available in the evidence folder, the Jari Group recognizes the right of access of traditional communities for extractive purposes and acts directly with the communities conducting processes of conflict mediation among them (4) (5) (6) (7). The changes made are inserted in the document "Jari Para - VCS Non -Permanence-Risk-Report_4.0" (1), all the references used are available to the VVB in the respective evidence folder. Evidence files contemplated by CAR: (1) Jari Para - VCS-Non-Permanence-Risk-Report_4.0.docx (2) Jari Para - VCS-Risk-Report-Calculation-Tool-v3.2.xls (3) Modelo_economico_JariPara_2.2.xlsx (4) Desenvolvimento Comunitario_Mediação de Conflitos.pdf (5) REGRAS DE USO_BANANAL.pdf (6) REVISÃO DAS REGRAS USO_BANDEIRA_20.10.18.pdf (7) Declarações_extrativistas.pdf (8) Anexo IV Plano de Investimentos.pdf	Jarí Group. This proposal had values already spent in the project Jarí/Pará from 2015 until 2018 and he VVB checked in this document that more than 80% of the initial investment for the project (seen in financial analysis /13/) until breakeven in 2019 was executed. 3) Ok the VVB checked tab "FC_Projeto", cell B11 in the financial analysis spreadsheets/13/ that the most profitable alternative scenario is 5% more than the Project activity. 4) Ok documents evidencing that Jari recognizes use rights to local traditional communities checked /69//70/. CAR10 is closed.

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
demonstrate that "where baseline activities are subsistence-driven, net positive community impacts are not demonstrated" (in the baseline) and not net positive impacts in the project are demonstrated. 4) Land tenure and resource access, risk factor a), "Ownership and resource access/use rights are held by same entity(s)". It is possible that amongst the communities occupying the project area, some are traditional communities so it is possible that they have use rights even if property belongs to Jari and the score		

<table>
<tr><th>Corrective action and/ or clarification requests</th><th>Response by project participants</th><th>Validation Conclusion</th></tr>
<tr><td>should reflect that.</td><td></td><td></td></tr>
<tr><td>CAR11 Include in the PD how the PP made sure that there are no areas of peat in the project area.</td><td>The justification for adequacy of the project in this applicability criterion was reviewed and included in the updated version of the PDD (1) (2). All references used are available to the VVB (3) (4) (5).

Evidence files contemplated by CAR:
(1) PD_JariPara_VCS_CCB_v.3.0_eng_3.0_limpa.pdf

(2) Table_Criteriafortheapplicability.docx

(3) FRMBr_Relatorio Final UNIDO_TDR48 e 52 Biofílica_Vfinal13.pdf

(4) FRMBrasil_PMFS_2015_Vfinal_dEZEMBRO 2016.pdf

(5) SiBCS-2018-ISBN-9788570358219-english.epub</td><td>The VVB checked the study forest study for the REDD+ Project /21/ and confirms that floodplain forests with fluvial influences are present in the area. Some formations characterized as floodplain forests with fluvial influences were identified. The collection of primary data through forest inventory for the REDD+ Project (FRM, 2016) /103/ and for the Sustainable Forest Management Plan (FRM, 2016) /125/ also evidenced the presence of these formations. However, no forest formations were identified in the Project area classified as forested wetlands or peat swamp forests.
This information is reinforced by the survey of the pedological aspects of the Project Area in CASA DA FLORESTA report /18/.
CAR11 is closed.</td></tr>
<tr><td>CL1 Section 3.11.1 of the VCS Standard v3.7 states that “The project description shall be accompanied by one or more of the following types of evidence establishing project ownership accorded to the project proponent(s)…:

…4) Project ownership arising by virtue of a statutory, property or contractual right in the land, vegetation or conservational or management process that</td><td>1) The properties of Jari located in the State of Pará and Amapá were acquired through Public Deed of Purchase and Sale as it is possible to verify in the own deeds of 1948 and 1949 (1) (2) (3) as well as in the Notifications (4) (5) (6) (7) (8) (9) that mention the same available ones to the VVB. The NOTs (4) (5) (6) (7) (8) (9) attest to the process of buying and selling the properties and the location of the notarial offices where the deeds of the respective properties were drawn up, proving legitimate ownership. In addition, the NOTs (4) (5) (6) (7) (8) (9) requests the Certification of ownership on behalf of Jari Celulose.

P.S.: The notifications presented do not correspond to all NOTs between Grupo Jari and ITERPA, these represent only one sample for the purpose of evidence.

2) The legal department of the Jari Group clarified that if the company did not have control of these properties, in other words, if it had been divested of the area due to blockages and cancellations,</td><td>1) Considering the área efectively impacted by the Jarí/Pará REDD+, the focus is within the following landholdings:

<table><tr><th>Gleba</th><th>Matrícula</th><th>Estad</th></tr><tr><td>Alzira Antunes Martins</td><td>4538</td><td>PA</td></tr><tr><td>Ayres Julio da Fonseca</td><td>4521</td><td>PA</td></tr><tr><td>Benedito de Oliveira Feitosa</td><td>4529</td><td>PA</td></tr><tr><td>Cajueiro Serra de Almeirim</td><td>375</td><td>PA</td></tr><tr><td>Campo Saracura</td><td>4532</td><td>PA</td></tr></table></td></tr>
</table>

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<tr><th>Corrective action and/ or clarification requests</th><th>Response by project participants</th><th>Validation Conclusion</th></tr>
<tr>
<td>generates GHG emission reductions and/or removals (where the project proponent has not been divested of such project ownership).”

In page 70 of the PD the PP states that “the Right of Use of the Area is respected according to the criteria of VCS Standard v3.2.(page 17)…”

And in page 71 of the PD the PP states that “Currently, the land situation of rural properties of Jari Celusose faces an administrative blockade, which is provisional and fully reversible. “

Please clarify the following considering the statements above in the PD:

1) whether the project ownership is claimed via statutory (i.e. uso capião) or proprietorship (certificates of</td>
<td>the registration certificates would not be in its name. As pointed out in the previous item is not what happens.
Reinforcing that such blockades and cancellations constitute a preventive measure of the Corregedoria of the State of Pará with the purpose of enabling the regularization of the public records of the State. This strategy was based on evidence of fraud in the Government system and, due to the impossibility of carrying out an individualized analysis, a general (statewide) blockade was chosen for each applicant to make the appropriate proofs with the competent bodies. In addition, several real estate registrations of Jari were improperly blocked/canceled by the official of the Monte Alegre Registry Office, as already contextualized in the pendency (10).

3) The documents provided to the VVB: Administrative Proceedings (11) (12) (13) (14) (15) (16) (17) and Notifications (4) (5) (6) (7) (8) (9) cited above show that the Jari Group together with ITERPA, the body responsible for land regularization in the state, are working to fulfill the obligations established in the Term of Commitment (TAC) established between the parties. This process demonstrates the progress towards the administrative unblocking and certification of enrollments on behalf of Jari Celulose.

Evidence files contemplated by CAR:
(1) SUCESSAO SOCIETARIA JARI (ITERPA).v-2.docx

(2) Escritura Pública de Venda e Compra de 1948.pdf

(3) Escritura Pública de Venda e Compra de 1949.pdf

(4) NOT Nº 024_2018DJ.pdf

(5) NOT Nº 047_2018DJ.pdf

(6) NOT Nº 081_2018DJ.pdf

(7) NOT Nº 082_2018DJ.pdf</td>
<td>
<table>
<tr><td>Castanhal do Urucurituba</td><td>Transc nº 829, lv 3-E, fl 9 à 11</td><td>PA</td></tr>
<tr><td>Crispim Joaquim de Almeida</td><td>4530</td><td>PA</td></tr>
<tr><td>Fazenda Saracura</td><td>2259</td><td>PA</td></tr>
<tr><td>Flávia Freitas de Almeida Maia</td><td>4518</td><td>PA</td></tr>
<tr><td>José Fernandes Fonseca</td><td>4520</td><td>PA</td></tr>
<tr><td>Maria de Nazare de Almeida Guedes</td><td>4539</td><td>PA</td></tr>
<tr><td>Panama ou Mapau</td><td>Transc nº 829, lv 3-E, fl 7 à 11</td><td>PA</td></tr>
<tr><td>Pau Grande</td><td>2253</td><td>PA</td></tr>
<tr><td>Santo Antonio da Cachoeira</td><td>360</td><td>PA</td></tr>
<tr><td>Santo Antônio do Urucurituba</td><td>Transc nº 829, lv 3-E, fl. 9 à 11</td><td>PA</td></tr>
<tr><td>Serra Grande</td><td>2247</td><td>PA</td></tr>
<tr><td>Terra Preta do Castanhal</td><td>2254</td><td>PA</td></tr>
</table>
All landholds listed above possess domain chain certificates. Through the analysis of these domain chain certificates of the properties that have within them the Project Area, and of the current situation of blockade/cancelling determined by the Pará State Judiciary, it is the opnion of the VVBs juridical consultants /36/ that the documentation have Jari Celulose as the owner of the lands.
</td>
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</table>

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
domain chain) or even both due to complexities of land recognitions by the state of property rights in the region; 2) provide evidence that the project proponent has not been divested of the project ownership despite the blockades mentioned in page 71 of the PD. 3) provide the protocol for handing in documentation at ITERPA for the request of revalidation of certificates of all the properties in the project area. Please make sure that it is possible for the audit team to check that it refers to all of the properties in the project area and that is related to the	(8) NOT Nº 083_2018DJ.pdf (9) NOT Nº 084_2018DJ.pdf (10)1 - RESPOSTA BIOFÍLICA_07-03-2019.pdf (11)ITERPA_docs.pdf (all files) (12)PROCESSO 2016_394519.pdf (13)PROCESSO 2016_394540.pdf (14)PROCESSO 2016_395396.pdf (15)protocol iterpa (1).pdf (16)protoloco iterpa (3).pdf (17)protocol iterpa.pdf	2) It is also of the opinion of the VVB's juridical consultant /36/ that the blockades/cancelations of the land certificates do no imply automatic loss of ownership of Jari's areas as the decision of the state of Pará was generic, temporary and reversible. The reversibility aspect refers the lifting of the blockades /cancellations of the certificates which in turn depend of revalidation of the lands from ITERPA (from the Portuguese, Institute of Lands of the State of Pará). These requires the opening of individual proceedings within ITERPA. In practice these proceedings take a long time. 3) The VVB checked the protocols for the documentation handed at ITERPA, that is: the requests for revalidation of land certificates and also the reopening of old processes and delivery of georeferencing of the corresponding areas /33//34/35/. From the documentation presented, it is the conclusion of the VVB that the respective proceedings with ITERPA for the administrative revalidation of the land titles were carried out and that ITERPA acted to open a working group for the revalidation. On a different note, the research carried out by Rina's juridical consultants showed that there are

<table>
<tr><th>Corrective action and/ or clarification requests</th><th>Response by project participants</th><th>Validation Conclusion</th></tr>
<tr><td>validation of the blocked/cancelled certificates.</td><td></td><td>some judicial proceedings being moved against Jari related to ownership of land. These are listed below:
<table>
<tr><th>Processo</th><th>Assunto</th><th>Vara</th></tr>
<tr><td>0000196-
010.8.14.0004</td><td>Imissão</td><td>Vara distrital de Mor
Dourado - Almeirin</td></tr>
<tr><td>0000283-
011.8.14.0004</td><td>Esbulho/Turbação/Ameaça</td><td>Vara distrital de Mor
Dourado - Almeirin</td></tr>
<tr><td>0000284-
011.8.14.0004</td><td>Esbulho/Turbação/Ameaça</td><td>Vara distrital de Mor
Dourado - Almeirin</td></tr>
<tr><td>0000285-
011.8.14.0004</td><td>Esbulho/Turbação/Ameaça</td><td>Vara distrital de Mor
Dourado - Almeirin</td></tr>
<tr><td>0000417-
)10.8.14.0004</td><td>Reintegração</td><td>Vara distrital de Mor
Dourado - Almeirin</td></tr>
<tr><td>0000573-
006.8.14.0004</td><td>Esbulho/Turbação/Ameaça</td><td>Vara distrital de Mor
Dourado - Almeirin</td></tr>
<tr><td>0000600-
006.8.14.0004</td><td>Esbulho/Turbação/Ameaça</td><td>Vara distrital de Mor
Dourado - Almeirin</td></tr>
<tr><td>0000602-
008.8.14.0004</td><td>Esbulho/Turbação/Ameaça</td><td>Vara distrital de Mor
Dourado - Almeirin</td></tr>
<tr><td>0000603-
008.8.14.0004</td><td>Esbulho/Turbação/Ameaça</td><td>Vara distrital de Mor
Dourado - Almeirin</td></tr>
<tr><td>0000901-
008.8.14.0004</td><td>Esbulho/Turbação/Ameaça</td><td>Vara distrital de Mor
Dourado - Almeirin</td></tr>
<tr><td>0000914-
008.8.14.0004</td><td>Esbulho/Turbação/Ameaça</td><td>Vara distrital de Mor
Dourado - Almeirin</td></tr>
<tr><td>0000987-
010.8.14.0004</td><td>Reintegração/Manutenção de Posse</td><td>Vara distrital de Mor
Dourado - Almeirin</td></tr>
<tr><td>0003764-
005.8.14.0051</td><td>Esbulho/Turbação/Ameaça</td><td>Vara Agrária de Santa</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Corrective action and/ or clarification requests</th><th>Response by project participants</th><th>Validation Conclusion</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>94.2</td><td>0005428-
016.8.14.9100</td><td>Esbulho/Turbação/Ameaça</td><td>Vara distrital de Monte Dourado - Almeirim</td></tr>
<tr><td>40.2</td><td>0010358-
011.8.14.0051</td><td>Terras Devolutas</td><td>Vara Agrária de Santarém</td></tr>
<tr><td>84.2</td><td>0000205-
015.8.14.0051</td><td>Interdito Proibitório</td><td>Vara Agrária de Santarém</td></tr>
</table>

Rina’s juridical consultants were not able to assess the landholds these proceedings apply to. In any case, these proceedings are all ongoing (have no definite decision by the courts) and since the VVB juridical consultants agree with Jari’s juridical department that the loss of ownership or possession of the land would only occur with a definite sentence from a court, “until definite judicial decision they stay under direct possession and property of Jari.” /36/.

The VVB has therefore assessed the evidence provided by the project proponent and concludes, as well as the long business history of Jari in the region and concludes that the PP can claim project ownership for the landholds above listed with a reasonable level of assurance at the time of this validation.

CL1 is closed.</td></tr>
<tr><td>CL2 Provide Jari´s Human Rights and Social Responsibility Policy mentioned in section 2.3.11 of the PD</td><td>Section 2.3.11 of the PDD (1) mentions the fact that Grupo Jari has a solid culture with regard to policy of human rights and social responsibility, being a group that respects, protects and supporting human rights. The description of this position is found in its internal norms such as the “Política Integrada do Grupo Jari” (2) and the “Código de Conduta - Princípios e Normas de Gerais de Conduta” (3) already made available to the VVB, but for further investigation, the documents will be forwarded again.</td><td>Checked Jari Group “Principles and general rules of conduct”/72/ with statement about its commitment with Human rights declaration and the International Labour Organization conventions, as well as “Integrated policy of the management system” /73/ with statement about social responsibility with local communities.
CL2 is closed.</td></tr>
</table>

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
	Location of files (shared drive): Data Base_Jari_Pará REDD+ Project\Validação\Procedimentos Grupo Jari\Política Integrada Grupo Jari - Rev-08.pdf; Princípios e Normas de Gerais de Conduta.jpg Evidence files contemplated by CL: (1) PD_JariPara_VCS_CCB_v.3.0_eng_3.0_limpa.pdf (2) Política Integrada Grupo Jari - Rev-08.pdf (3) Princípios e Normas de Gerais de Conduta.jpg	
CL3 Updated domain chain certificate for Fazenda Saracura	The domain chain certificate for Fazenda Saracura has already been made available (1), follow the path (shared drive): Data Base_Jari_Pará REDD+ Project\Validação\Fundiário\Jari I – PMFS\Matriculas\Certdão de Inteiro Teor - Fazenda Saracura - 2259.pdf Remembering that any and all domain chain certificate has legal validity of 30 days and as this information is not used frequently there is no need to keep monthly registrations updated. Mainly because of the difficulties such as the distance from the Registry Offices where the real domain chain certificate is registered and because they are old and all the registrations are in books and sheets, what makes the search and issuance of these registrations more delayed. On average a certificate takes around 5-10 days to be ready and the mailing takes about 15 to 20 days to receive. In any case, the information of the property can be consulted by the SIGEF website (link: https://sigef.incra.gov.br/geo/parcela/detalhe/9c29345b-dd97-4946-b27e-c16ba264dd70/) or following the path: Open the website (https://sigef.incra.gov.br/) > Search the property with the number of domain chain certificate of property (Fazenda Saracura: 2259) or with name of its holder (Jari Celulose Papel e Embalagens S.A.).	The VVB wished to see if there were no changes to the domain chain, and there was enough time from the issuing of this finding till the answers were sent to acquire a new certificate in order to show this. Nevertheless, it is the opinion of the juridical consultants /36/ that the documentation provided by PPs show that Jari Celulose as the owner of the lands. CL3 is closed.

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
	The HTML file of the Fazenda Saracura website on the SIGEF website was made available to the VVB together with the Certificate (2). Evidence files contemplated by CL: (1) Certdão de Inteiro Teor - Fazenda Saracura – 2259.pdf (2) SIGEF - Sistema de Gestão Fundiária_Fazenda Saracura.html	
CL4 Section 1.1.1 of the VCS methodology VM0015 states that: "1. If sub-national or national baselines exist, that meet VCS specific guidance on applicability of existing baselines, such baselines must be used. Any pre-existing baseline should be analyzed and if it meets the criteria listed in table 2, it should be used. In both cases, the existing baseline will determine the boundary of the reference region. 2. If no such applicable sub-national or national baseline is available, the national and, where applicable, sub-national government shall be consulted to determine whether the country or sub-national region has been divided in spatial units for which deforestation	In view of the publication of the Third National Communication of Brazil to the UNFCCC of 2016 (3) with emission factors for different sectors and regions, please comment whether it meets applicability criteria of table 2, part 2, step1 of the applied Methodology. Also explain how it was checked that no subnational baselines and spatial units are available. The Brazilian Government, represented by the Ministry of the Environment (MMA) and Ministry of Science, Technology and Innovation (MCTI), published in September 2014 the FREL (Brazil's submission of a Forest Reference Emission Level) (1), the reference level is a historical survey of deforestation added to a monitoring system throughout the Brazilian Amazon. This level of reference has the objective of making possible payments by result for the Brazilian Government in the model of donations by other countries. It is important to note that these payments are not intended to offset donor emissions, unlike voluntary market credits such as VCS. The system is based on the PRODES Project, implemented by INPE in an uninterrupted manner since 2000. PRODES is considered a robust and reliable system for the dissemination of mapping of changes in land use in the Amazonian biome (2). Despite the high reliability and quality of MRV of the PRODES system, the FREL is only a projection of the mean deforestation within a reference period (1996-2005) for the entire Amazon biome, and does not advance to a deeper analysis of the subnational level and with regard to the projection of the location of future deforestation. In this way, it would not be possible to use the FREL as the baseline of the Jari Project, not even to define the boundaries	Ok CL4 is closed.

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
baselines will be developed. If such divisions exist and are endorsed by the national or sub-national government, they must be used to determine the boundary of the reference region." In view of the publication of the Third National Communication of Brazil to the UNFCCC of 2016 with emission factors for different sectors and regions, please comment whether it meets applicability criteria of table 2, part 2, step1 of the applied Methodology. Also explain how it was checked that no subnational baselines and spatial units are available.	of the Reference Region. On the other hand, it can be affirmed that the Jari Pará REDD+ Project uses the same FREL reference base for the analysis of deforestation in the Reference Region, since the Jari Pará Project also uses PRODES as the basis for the construction of its own baseline. In this way the Jari Pará REDD+ Project uses the same data source and data processing methodology for the land use mapping as the Brazilian FREL. This fact makes the project transparent and easily verifiable, that can be monitored and used by other stakeholders involved in the design of subnational baselines. All cited references were shared in the evidence folder. Evidence files contemplated by CL: (1) FREL-Complete-October31-FINAL.pdf (2) metodologia_PRODES.pdf (3) PNUD - 3rd National Communication of Brazil to the UN.pdf	
CL5 The methodology VM0015 states that "Forest land will in most cases include strata representing different carbon stocks. Forest-land must therefore be further stratified in forest classes having different average carbon densities within each class." The VCS Standard v3.7, paragraph 3.5.1. states "Methodology deviations shall not negatively impact the conservativeness of the quantification of GHG	About Fig. 5 and Fig. 6: Figure 5 of the PDD submitted previously to the VVB represents the typologies of vegetation raised based on IBGE data and consolidated with field survey, performed by the FRMB only in Gleba Jari I (Project Zone). By the fact that information contained in Table 6 of the PDD submitted previously to the VVB refer only to the Project Area, it was updated in order to reflect the information in Figure 5. In this way, information extracted from the attribute table of the shape of vegetation of the Project Zone shown in Figure 5 (1) (5). After this update it was possible to verify that the Dense Ombrophylous Forest typology still remains the most representative of the Project Zone, being present in about 70% of the area. Typologies of vegetation for Baseline Calculation: For the calculation of the baseline, vegetation data covering the entire Reference Region (IBGE official data) were considered. In this case, the data presented in Figure 5 and Table 6 were not used,	The VVB checked that the PP calculated the error for the areas projected to be deforested in the savanna and vegetation with fluvial influence existing in the Project Area in the spreadsheet Análise_Desmat_Veget_10anos.xlsx /37/. These calculations, were carried out in the first 10 years (from 2015 to 2024) since, informed the PP, it corresponds to the first fixed baseline period. Only the projections of deforestation in the areas of savanna and vegetation with fluvial influence were checked (files adf for savanna and vegetation with fluvial influence for the years 2015 to 2024 /38//39/), since according to IBGE 2003 /40/ the areas classified as Ecotone were a mixture of these two vegetation types as well as DOF Submontane and DOF Lowlands. The calculations show that the error that the projection

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
emission reductions or removals, except where they result in increased accuracy of such quantification." A single forest class was used. The PP explained that this is because 86% of the area classified as forest by PRODES in the Project + Leakage Belt area (what the PP called in the PD the Project Zone, see figure 5 of the PD) is covered by Dense Ombrophilous Forest (see table 6 of the PD). The VVB checked, comparing the maps of figure 5 of the PD and figure 10 in ArcGis, that the remaining areas with less dense types of forest subclasses (Meadow Forest and Vegetation with Fluvial Influence) are in its great majority found in the leakage belt area. For the areas in the leakage belt one class forest would be conservative. However, there are areas of Ecotone in the PA, as well as areas of Meadow Forest and Vegetation with Fluvial Influence, which, if it was modelled to be completely deforested in the baseline, could lead to an overestimation of the	since this information are specific and consolidated for Gleba Jari I, and it is not possible to replicate in the same way for the entire RR. Thus, it was considered only the 2003 IBGE survey to the entire region, used to calculate the baseline and shown in the PDD (1) (3). According to this survey, some typologies are named in a different way from that shown in figure 5 and table 6, but checking the description of typologies in the "Manual técnico da vegetação brasileira sistema fitogeográfico" (4) of 2012 IBGE , it is possible to verify the similarities of characteristics between the typologies identified and relate to its location, being explained as follows: - Ecotone of Meadow Forest: located in a mixture of savanna sites, pioneer formations with fluvial influence, DOF Submontane and DOF Lowlands; - Meadow Forest: located in the same place as the Alluvial Dense Tropical Rainforest / Uniform Canopy; - Vegetation with Fluvial Influence: located in the same area as the Pioneer Formations with fluvial and/or lacustrine influence - herbaceous without palms. Verification calculation baseline: Based on vegetation data from the Reference Region used in the calculation of baseline, and on deforestation projections (which had already been made available to the VVB on the way: Data Base_Jari_Pará REDD+ Project \Validação\ Dados GEO\ PDD\ STEP_4\ STEP_4_2\ 2018_LandCoverProjections) the PPs assessed the first 10 years of the Project and found that the total error calculated for areas of Pioneer Formations with fluvial and/or lacustrine influence - herbaceous without palms and of Non-Forest Vegetation - Savana can be considered insignificant, since they represent 0.16 % and 0.59%, respectively, of the total estimated emissions at baseline. All the evidences with the shapes of typologies of vegetation, deforestation projected by typologies and the calculations verifying this information were made available to the VVB (2). Choice of single forest class: Although the difference between the mean values of carbon stock in the "managed" and "unmanaged" areas within the Project Area was	of deforestation in those areas represent for baseline emissions the project area for those 10 years, come to <1% of the total emissions for that period. The VVB concludes that the error is therefore insignificant. With regards to using one forest class for both managed and unmanaged forests, the VVB agrees that stock variation will be very dynamic because of the different intensity of the management activities (which from now on may include more of multiple forest uses) and regrowth in the forest management areas. A random sampling strategy, including managed and unmanaged areas was thus accepted for the estimation of stocks in the Project Area. The VVB checked that this has been accepted in other projects such as Manoa REDD+ Project /41/. CL5 is closed.

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
baseline CO2 emissions in a material way. The VVB did not receive the shapes with the land cover change presented in figure 32 of the PD in order to check whether these areas, of Ecotone, Meadow Forest and Vegetation with Fluvial Influence, were included in the deforestation modelling. Provide the shapes with the areas projected deforestation up to 2044 and the size of the areas projected to be deforested in each of those classes till 2044 so that the VVB can check that. If these areas were included in projections of deforestation provide an explanation of how that would be conservative and calculations to show that the emissions of those areas are not greater than 1% of the total emission reductions of the Project activity. If you can not provide an explanation whether the inclusion of these areas in the PA baseline emissions is conservative (and if coherent with your carbon stock estimates and sampling strategy) provide a different baseline calculation with subclasses of forest. If you	considered a single class of LU/LC (Forest), because as the logging activity occurs the stocks will vary in the Project Area due to the intensity of the management activities, and therefore these two classes will not be fixed during the duration of the project. The methodology determines, in its items 2.2 a) and 2.2 b) (pages 30 and 31), that the limits and parameters for the delimitation of classes of land use are clear, homogeneous and transparent. Thus, was not identified a clear definition for division of stock classes in Project Area, since the carbon stock in the area is dynamic and influenced by different variables such as slope, altitude, soil class and management method. In addition, the project does not consider any stock increment premise in managed areas, therefore the use of the average stock aims to reflect conservatively the natural variation of stocks during the logging. Additionally, there is no way to accurately predict which UPAs will be managed over the course of the 30 years of the Project, and in the same way, there is no way to predict the intensity of exploration because it often depends on external factors, such as economic and legal factors. For this reason it was considered an average stock value (managed forest and unmanaged forest) in a single forest class. Evidence files contemplated by CL: (1) PD_JariPara_VCS_CCB_v.3.0_eng_3.0_limpa.pdf (2) Análise_Desmat_Veget_10anos.xlsx (3) FigurevegRR.png (4) ManualTecVegBras_IBGE.pdf (5) Tabela 6_VegGlebaJariI_IBGE.xls	

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
can not do any of these, a different alternative must be found or (for conservativeness of the baseline estimates purpose) these areas referred to must be taken out of the baseline estimates for the project area. Furthermore, please provide explanation and evidence that considering managed and unmanaged forests as a single class does not negatively impact the conservativeness of the quantification of GHG emission reductions or removals.		
CL6 Please provide further evidence that supports that the growth in deforestation from 2011 to 2014 seen in graph of fig.18 is caused by return of population growth to rural areas in those years.	As described in step 3 of the PDD (Analysis of agents, drivers and underlying causes of deforestation and their likely future development), it was possible to find conclusive evidence explaining the relationships among the agents, drivers and underlying causes of deforestation in the reference region. However, as demonstrated in step 4 (baseline approach selection), the deforestation rate in the reference region does not show a clear trend, and no variables with a significant correlation with deforestation have been identified. For this reason, the PP develop theses in step 3 that demonstrate trends for future deforestation but do not have necessarily a direct relationship with the cause of deforestation, since this phenomenon occurs in an "unplanned" way. Therefore, the possible growth of the rural population in the years preceding the beginning of the project is a thesis presented by the PP based on the increase in the pressure for deforestation in the same period, however, there is no clear data so far that prove a direct relation to this, therefore, we chose to use the historical average (a) to project deforestation in the future. P.S.: IBGE has not yet released data post 2010 for rural and urban population.	Ok CL6 is closed.

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
CL7 Please provide shapes of the figure 21 of the PD so that the VVB can check statement in PD that "In the medium to large properties,… they are demarcated by polygons with no correlation with the use of the ground, being the forest intact…In the most of the cases a small plot has already been occupied, and this is visualised by the presence of deforestation in the place (Figure 21). Deforestation located within declared properties of SISCAR represents 98% of all deforestation in the reference region…"	Fig. 21 was modified with adding the complete information of PRODES until 2014 with forest areas (2), to support analysis the location of large properties in areas of intact forest and reinforcing the existence of small deforested areas within its demarcations. In addition, item "e" of Step 3 has been reformulated to clarify the understanding of the context of land speculation and land squatting occurring in the region (1) (4) (6). The tables (5) and shapes (3) of the deforested areas and the proprieties had already been made available to VVB team on shared drive paths below, but to verify the documents will be forwarded again: (Please review the two worksheets in the file) Data Base_Jari_Pará REDD+ Project\Validação\Dados GEO\PDD\STEP_3\Step3e_Analise_desmat_usodosolo.xlxs Data Base_Jari_Pará REDD+ Project\Validação\Dados GEO\Degradação\PRODES_2014\PDigital2014_RR_classes.shp Data Base_Jari_Pará REDD+ Project\Validação\Dados GEO\Localidades\Propriedades_CAR\Propriedades_RR_cut.shp Evidence files contemplated by CL: (1) PD_JariPara_VCS_CCB_v.3.0_eng_3.0_limpa.pdf (2) Análise STEP_3 - Propriedades_EN_v2.bmp (3) File Folder: Shapes (4) guia_aplicao_nova_lei_florestal.pdf (5) Step3e_Analise_desmat_usodosolo.xlsx (6) Step3VM0015_itemE_rev_EN.docx	Ok read explanation in PD v3 and it is clearer now. Also overlaid PRODES land use classes images until 2014 /54/ and the shape with properties in the SISCAR shape files /74/ with a better view of the map. Checked the analysis in spreasheets built with these data and confirm analysis in PD v3 seems reasonable. CL7 closed.
CL8 Evidences of the assumptions, costs, and incomes of the forest	The evidence for the cost premises inserted in the financial-economic model was organized in the CL8 evidence folder in their respective categories, as well as in the spreadsheet. A spreadsheet	All evidences of Carbon Project costs checked against financial analysis spreadsheet. CL8 closed.

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
management were seen at site visit but of assumptions, costs and income of the tab "Avaliação Carbono" were sent to the VVB after the audit. In order for the VVB to check the evidences against the financial spreadsheet, provide a spreadsheet with the composition of costs and incomes inserted in the financial spreadsheet and the references used to come to such costs and incomes. Also provide any evidences of the premises of the sensibility analysis variations.	was also created with the details of the values used and their references (1) (2) (3). Some assumptions inserted in the model such as those related to the carbon market and operational management costs are results of the company's internal intelligence, and it is not possible to present direct evidence for such values. With regard to the sensitivity analysis, the timber forest management was taken as a basis, which shows a long-term deficit. Based on the premise that costs for REDD activities will be fixed, was applied a variation in revenue and operational costs of the timber activity. The inputs for this analysis are the results obtained in the financial-economic model itself. Evidence files contemplated by CL: (1) Modelo_economico_JariPara_2.2.xlsx (2) File Folder: Demonstração Financeira (3) File Folder: Modelo economico financeiro	
CL9 Provide SIDRA/IBGE, 2014 (cited on p.110 of PD) link to data in spreadsheet "AreaplantadaIBGE" and explain trail to get to it (i.e. any codes to sectors used etc) so that the VVB can crosscheck data provided in the spreadsheet with source	All the IBGE data used to compose the PDD are available for download in the following address: https://sidra.ibge.gov.br. To download the data the VVB need to access the links above and select the filters and variables used for the PPs. (6) (7) "Population": https://sidra.ibge.gov.br/Tabela/200 Variável: População residente (Pessoas) > Sexo: Total > Situação do Domicílio: Rural/Urbana > Grupo de Idade: Total > Ano: 2000/2010 > Unidade Territorial: Município/Amazônia Legal (1) "Area used for agriculture": https://sidra.ibge.gov.br/Tabela/5457 Variável: Área plantada ou destinada à colheita (Hectares) > Produto das lavouras temporárias e permanentes (Total) > Ano (2014)* > Unidade Territorial: Município/Amazônia Legal (2) (3) "Cattle herd": https://sidra.ibge.gov.br/Tabela/3939 Variável: Efetivo de Rebanho (Cabeças) > Tipo de rebanho (bovino)	Ok CL9 closed.

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
	> Ano (2014)* > Unidade Territorial: Município/Amazônia Legal (4) "Timber production": https://sidra.ibge.gov.br/Tabela/289 Variável: Quantidade produzida na extração vegetal (unidade de medida: vide classificação "tipo de produto extrativo") > Tipo de produto extrativo (7.3 - Madeira em tora) > Ano (2014)* > Unidade Territorial: Município/Amazônia Legal (5) "Area for planting cassava": https://sidra.ibge.gov.br/Tabela/1612 Variável: Área plantada (Hectares) > Produto das lavouras temporárias (Mandioca) > Ano (2014)* > Unidade Territorial: Município/Amazônia Legal * Period used for project analysis Evidence files contemplated by CL: (1) Areaplantada_IBGE.xlsx (2) CensoAgropecAmazLegal2017.xlsx (3) CensoAgropecuario2000_14.xlsx (4) MadeiraMunicipio.xlsx (5) MandiocaMunicipio.xlsx (6) PopulacaoIBGE.xlsx (7) PopulacaoIBGE1991.xlsx	
CL10 It is not clear how the PP came to the conclusion on the accuracy of the model from the data on tab FOM – step 4.2.3 presented on the REDD spreadsheet calculations. Please clarify.	Here is the table used to calculate the Figure of Merit (FOM). According to the methodology the FOM should be higher than the historical Net Change. The historical Net Change was calculated by dividing the cells deforested between 2000-2007 (60,053) by the size of the reference region (2,522,426), resulting in 2% (2). As the FOM was 10%, we understand that the FOM is following what the VM0015 recommends. In addition, the item "Selection of the most accurate	Ok understood. CL10 is closed.

Corrective action and/ or clarification requests	Response by project participants	Validation Conclusion
	deforestation risk map" on PDD (1) explains in detail the FOM calculation methodology and how the values are analyzed.	

	2000	2007	2014	
Floresta	1,827,782	1,767,729	1,732,970	
Não Floresta	389,916	389,916	389,916	
Agua	35,207	35,207	35,207	
Desmatamento	269,521	329,574	364,333	
Total	**2,522,426**	**2,522,426**	**2,522,426**	
Historical Net change	Number of cells	Reference Region	Floresta	Deforestation rate
2000-2007	60,053	2%	3%	
2007-2014	34,759	1%	2%	0.14%
2000-2014	94,812	4%	5%	0.37%
Figure of Metir (FOM)				
Misses (A)	28,673			
False Alarms (C)	28,673			
Hits (B)	6,086			
FOM (B / (A+B+C))	10%	accept model		

Evidence files contemplated by CL:
(1) PD_JariPara_VCS_CCB_v.3.0_eng_3.0_limpa.pdf

(2) VM0015_planilha de calculo_JariPara_5

FORWARD ACTION REQUEST		Validation Conclusion
FAR1	The PP to continue with the expansion of efforts to involve all communities in the Project Zone listed on table 7 of the PD versions 3 according to CCB standard v3.1., G3 and G.5.2 requirements (including FPIC of resource use and territorial access rights holder) through institutions recognised by themselves. To be completed by next verification of CCB.	This is to be checked in the first verification of the CCB.

RINA SERVICES
classification, certification, inspection & testing

CERTIFICATO DI QUALIFICA PER GLI SCHEMI VOLONTARI*
*QUALIFICATION CERTIFICATE FOR VOLUNTARY SCHEMES**

Si attesta che il sig./sig.ra: **Talita Carvalho Beck**
We declare that Mr/Mrs/Ms:

è qualificato come: **TEC, VAL, VER, TL**
is qualified as: **LOCAL EXPERT**

per le seguenti aree tecniche:
for the following technical areas:

AREE TECNICHE *TECHNICAL AREAS*	**DESCRIZIONE DELL'AREA TECNICA** *TECHNICAL AREA DESCRIPTION*	**SCOPO SETTORIALE** *SECTORAL SCOPE*
1.1	Thermal energy generation	1
1.2	Renewables	1
13.1	Solid waste and wastewater	13
14.1	Forestry	14

REVISIONE *REVISION*	**DATA** *DATE*	**MOTIVAZIONI PER LA REVISIONE** *REASON FOR THE REVISION*
0	19/07/2016	First issue with new template (this certificate is linked to CDM qualification)
1	14/06/2017	Update qualification in TA 14.1 and Local expert

Responsabile di schema
Scheme Leader
Laura Severino

*SCHEMI VOLONTARI/ VOLUNTARY SCHEMES: ACR American Carbon Registry, CCB The Climate, Community & Biodiversity Alliance, GS Gold Standard, JI Joint Implementation, SCS Social Carbon Standard, VCS Verified Carbon Standard.

TEC: Technical expert; VAL: Validator; VER: Verifier; TL: Team leader; FIN EXP: Financial Expert; ITRP: Independent technical reviewer

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UNFCCC	quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM *as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects*
VCSA	per condurre la Validazione e la Verifica di Progetti VCS *to carry out Validation and Verification of VCS Projects*
GS Foundation	per condurre la Validazione e la Verifica di Progetti GS *to carry out Validation and Verification of GS Projects*
Ecologica Institute	per condurre la Validazione e la Verifica di rapporti SCS *to carry out Validation and Verification of SCS Reports*
American Carbon Registry ACR	per condurre la Validazione e la Verifica di Progetti ACR *to carry out Validation and Verification of ACR projects*
The Climate, Community & Biodiversity Alliance CCB	per condurre la Validazione e la Verifica di Progetti co-benefit CCB *to carry out Validation and Verification of co-benefit CCB projects*

RINA SERVICES
classification, certification, inspection & testing

CERTIFICATO DI QUALIFICA PER GLI SCHEMI VOLONTARI*
*QUALIFICATION CERTIFICATE FOR VOLUNTARY SCHEMES**

Si attesta che il sig./sig.ra: **Rekha Menon**
We declare that Mr/Mrs/Ms:

è qualificato come: **TEC, VAL, VER, TL, ITRP**
is qualified as:

per le seguenti aree tecniche:
for the following technical areas:

AREE TECNICHE *TECHNICAL AREAS*	**DESCRIZIONE DELL'AREA TECNICA** *TECHNICAL AREA DESCRIPTION*	**SCOPO SETTORIALE** *SECTORAL SCOPE*
1.2	Renewables	1
2.1	Electricity distribution	2
13.1	Solid waste and wastewater	13
13.2	Manure	13
14.1	Afforestation and reforestation	14

REVISIONE *REVISION*	**DATA** *DATE*	**MOTIVAZIONI PER LA REVISIONE** *REASON FOR THE REVISION*
0	19/07/2016	First issue with new template (this certificate is linked to CDM qualification)

Responsabile di schema
Scheme Leader
Rita Valoroso

*SCHEMI VOLONTARI/ VOLUNTARY SCHEMES: ACR American Carbon Registry, CCB The Climate, Community & Biodiversity Alliance, GS Gold Standard, JI Joint Implementation, SCS Social Carbon Standard, VCS Verified Carbon Standard.

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GS Foundation	per condurre la Validazione e la Verifica di Progetti GS *to carry out Validation and Verification of GS Projects*
Ecologica Institute	per condurre la Validazione e la Verifica di rapporti SCS *to carry out Validation and Verification of SCS Reports*
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The Climate, Community & Biodiversity Alliance CCB	per condurre la Validazione e la Verifica di Progetti co-benefit CCB *to carry out Validation and Verification of co-benefit CCB projects*