VCS VALIDATION REPORT

RMDLT PORTEL-PARÁ REDD PROJECT

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Summary:

Det Norske Veritas USA Inc. (DNV) has performed a validation of the project activity "RMDLT Portel-Pará REDD Project" in Brazil to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria. The validation was performed on the basis of VCSA requirements for the VCS project, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The validation was conducted by means of document review, follow-up interviews and site inspection, and the resolution of outstanding issues. The review of the project design documentation and the subsequent follow-up interviews and site inspection have provided DNV with sufficient evidence to determine the fulfilment of stated criteria.

The project activity is to avoid unplanned deforestation through a series of project activities that include monitoring, capacity building, and providing land ownership rights to local people. Through a combination of forest protection and sustainable development activities, this project is estimated to avoid the emission of approximately 44.6 million tonnes of CO_2e over the project lifetime, 9.5 million of which is predicted to be issued as tradable VCUs in the ten year baseline period to which this report applies. These emissions would have resulted from deforestation of approximately 27% of the project area in the baseline scenario over the next forty years. The project has applied the VCS methodology "Methodology for Avoided Unplanned Deforestation", version 1.1.

In summary, it is DNV's opinion that the project activity "RMDLT Portel-Pará REDD Project" as described in the VCS PD, version 5 dated 17 January 2013, meets all relevant VCSA requirements for the VCS project and correctly applies the VCS methodology "Methodology for Avoided Unplanned Deforestation", version 1.1. Hence, DNV recommends the registration of the project as a VCS project activity.

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1 INTRODUCTION

RMDLT, ALLCOT Group AG, and Ecosystem Services LLC has commissioned Det Norske Veritas USA Inc. (DNV) to perform a validation of the RMDLT Portel-Pará REDD Project in Brazil (the project). This report summarizes the findings of the validation of the project, performed on the basis of VCSA criteria for the VCS project, as well as criteria given to provide for consistent project operations, monitoring and reporting. VCSA criteria refer to VCS program documents and policy announcements.

1.1 Objective

The purpose of a validation is to have an independent third party assess the project design. In particular, the project's baseline, monitoring plan, and compliance with relevant VCSA 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 necessary to provide assurance to stakeholders of the quality of the project and its intended generation of the Verified Carbon Units (VCUs).

1.2 Scope and Criteria

The validation scope is defined as an independent and objective review of the VCS project document (VCS PD) /1/. The VCS PD is reviewed against the criteria stated in the VCS Version 3.3 and the relevant documents and policy announcements made by the VCSA /32/33/, including the VCS methodology VM0015 “Methodology for Avoided Unplanned Deforestation”, version 1.1/31/.

The validation does not include project consulting. However, requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

1.3 Level of assurance

DNV provides reasonable assurance that the "RMDLT Portel-Pará REDD Project" meets VCSA criteria /30/. To ensure complete transparency, a validation protocol check list is included in Appendix A. The validation protocol check list addresses all of the criteria that must be met for the VCS project. Any clarification or corrective actions raised have been included in the validation protocol.

In addition, because the estimated annual average GHG emission reductions or removals over the project lifetime are greater than 300,000 tonnes of CO2e per year, DNV applies materiality of 1 per cent in accordance with the requirements specified in the VCS Standard Version 3.3 /30/.

1.4 Summary Description of the Project

The project is a VCS Sectoral Scope 14 REDD Project employing VCS methodology VM0015 “Methodology for Avoided Unplanned Deforestation”/31/ located in the Pará Region of Brazil.
The region experiences deforestation threats in the form of illegal logging, land speculation, and cattle ranching facilitated by the expansion of unofficial roads. The project activity protects the

land within the project area as a private conservation reserve while implementing enforcement and community development activities in the area within and immediately surrounding the project area. The project can be summarized as follows:

Project Proponents (Parties):	RMDLT Property Group Ltd ("RMDLT") ALLCOT Group AG
Title of project activity:	RMDLT Portel-Para REDD Project
Baseline and monitoring methodology	VCS methodology VM0015 "Methodology for Avoided Unplanned Deforestation."/31/
Location of the project activity	Pará Region, Brazil
Project's crediting period:	1 January, 2009 to 31 December 2048
Project Type	Large Project
Average Annual VCUs	967,926 VCU/year over 40 years; 952,854 VCU/year over the 10 year baseline period validated in this report

2 VALIDATION PROCESS

2.1 Method and Criteria

The validation consisted of the following three phases:

- A desk review of the project documents.
- Follow-up interviews with project stakeholders and site inspection where necessary.
- The resolution of outstanding issues and the issuance of the validation report and opinion.

The following sections outline each step in more detail.

2.2 Validation Team

The validation team is in accordance with the internal qualification procedures of Det Norske Veritas USA Inc..

Role	Last Name	First Name	Country	Desk Review	Site Visit	Reporting	Supervision of Work	Technical Review
VCS Validator/Project Manager/Team Leader	Reed	Pablo	USA	√	√	√	√	
VCS Verifier	Anderson	Ryan	USA	√	√	√		
Technical Assistant	Salls	Wilson	USA		√			
Technical Reviewer	Aalders	Edwin	Norway					√

2.3 Document Review

The following tables list the documentation that was reviewed during the validation.

2.3.1 Documentation provided by the project participants

In many cases, the documents listed below underwent several revisions during the validation process. Except in the case of PDs, only the most recent revision of each is listed here.

/1/ Ecosystem services LLC: VCS PD for RMDLT Portel-Pará REDD Project. Version 5 dated 17 January 2013.

/2/ Ecosystem services LLC: VCS PD for RMDLT Portel-Pará REDD Project. Version 4 dated 19 November 2012.

/3/ Ecosystem services LLC: VCS PD for RMDLT Portel-Pará REDD Project. Version 1 dated 18 June 2012.

/4/ Ecosystem Services LLC: Non-Permanence Risk Assessment Version 1 dated 19 July 2012

/5/ Seta Ambiental LTDA: Carbon Stock Inventory Report Portel e Melgaço, Pará (English version of original document “Relatório do Inventário de Estoque de Carbono.” Version 1 dated July 2012

/6/ Ecosystem services LLC: Annex 1 to VCS PD: Simple Cost Analysis Simple Cost analysis V3 RMDLT.xlsx. version 1 dated August 2012.

/7/ Ecosystem services LLC: Annex 2 to VCS PD: RDD Validation Validacion_Detalle RRD_Av7.xlsx Version 7 dated January 2013

/8/ Ecosystem services LLC: Annex 3 to VCS PD: Classification and Modeling Explanation. Includes Sub-documents “Report_Modeling Deforestation RMDLT” version 4 dated January 2013 and “RMDLT Classification and Accuracy Assessment” version 1 dated September 2012.

/9/ Ecosystem services LLC: Annex 4 to VCS PD: Social Assessment Version 1 dated September 2012.

/10/ Ecosystem services LLC: Annex 5 to VCS PD: Carbon Inventory Version 1 dated September 2012.

/11/ Ecosystem services LLC: Annex 6 to VCS PD: Calculations from the carbon Inventory document. Final version dated January 2013. Previous versions reviewed in August, September, and December 2012.

/12/ Ecosystem services LLC: Annex 7 to VCS PD: Monitoring Reports 2005 to 2011 Inventory Documents collated August 2012 from original source documents dated 2005-2011.

/13/ Ecosystem Services LLC: Annex 8 to VCS PD: Adaptive Management Plan Version 1 dated November 2012.

/14/ Ecosystem Services LLC: Annex 9 to VCS PD: Wood Products version 1 dated January 2013

/15/ SETA Ambiental LTDA: Dados Carbono 18 Julho.xls Excel Spreadsheet dated July 2012.

/16/ Maps prepared by Ecosystem Services LLC(final versions dated January 2013, previous revisions reviewed in August 2012, September 2012 and December 2012):

- Sampling Plots
- Village Locations
- Project Area Coordinates
- Project Area Polygon Vertex Coordinates
- Forest/NonForest 1996
- Forest/NonForest 2008
- Forest Benchmark Maps (1996, 2004, 2008)
- Indigenous Lands
- Leakage Belt Boundaries
- Land Use (2004, 2008)
- Land Use Change 2004-2008
- Rainfall, Soils, Vegetation Type, Geology, Hydrology
- Primary, Seconday, and Tertiary Roads (1996 and 2008)

/17/ Ecosystem Services LLC: Opportunity Cost RMDLT V2.xlsx spreadsheet Version 2 dated August 2012.

/18/ Ecosystem Services LLC: Financial Analysis RMDLT Project _2013.xlsx Spreadsheet version 2 Dated January 2013 (version 1 dated September 2012 also reviewed)

/19/ RMDLT, Ltd and ALLCOT Group: Letter confirming secured finance, accompanied by account balance statements dated December 2012.

/20/ CVs of project management team (received September 2012)::

- Pablo Omar Castro Moreno
- Giancarlo Raschio
- Gonzalo Castro de la Mata
- Peter Schlesinger
- Christian Contreras Agosto
- Leonel Mello
- Pedro Ruiz
- Luis Ducassi

/21/ RMDLT Ltd and ALLCOT Group: Statement to re-invest a minimum portion of carbon credit sales to finance local activities Dated August 2012.

/22/ [Name withheld for confidentiality]: Letter conveying legal representation of the landowner to project proponents Dated August 2012..

/23/ Ecosystem Services LLC: Governance Score.xlsx Spreadsheet dated November 2012 (earlier version dated September 2012 also reviewed)

/24/ Big Lands Brazil: Monitoring Reports dated 2005-2011

/25/ Governo Do Estado do Pará: Cadastro Ambiental Rural Nos: 68480, 81281, 81464, 66264, 83886, 82938, 67008, 67391, 66530, 66260, 68927, 68049, 68051, 69028, 66256 dated February 2012

/26/ Title Documents Nos: 183, 167, 184, 203, 249, 186, 222, 188, 220, 246, 224 dated November 1988

/27/ Ecosystem Services LLC: Miscellaneous Spatial Data files (kml, shapefile and geotiff files) used in project mapping, modelling, and carbon stock quantification (final versions dated January 2013, previous revisions reviewed in August 2012, September 2012 and December 2012):

/28/ Ecosystem Services LLC: Final Tables RMDLT.xlsx Spreadsheet Spreadsheet dated January 2013 and previous versions dated September 2012 and November 2012

/29/ Ecosystem Services LLC: Medium lived wood products.xlsx Spreadsheet Dated January 2013.

2.3.2 Standards, methodologies, and other guidance by the VCSA

/30/ VCSA: VCS Standard version 3.3

/31/ VCSA: Methodology “VM0015 Methodology for Avoided Unplanned Deforestation” Version 1.1.

/32/ VCSA: Agriculture Forestry and Other Land Use (AFOLU) Requirements version 3.3

/33/ VCSA: AFOLU Non-Permanence Risk Tool, version 3.2

/34/ VCSA: Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities. Version 3.

2.3.3 Documentation used by DNV to validate / cross-check the information provided by the project participants

/35/ Margulis, S, World Bank.: Causes of Deforestation of the Brazilian Amazon. Working Paper 22. 2004

/36/ Fearnside, P. M, World Development 29(8): 1361-1372: "Land-Tenure Issues as Factors in Environmental Destruction in Brazilian Amazonia: The Case of Southern Pará." 2001

/37/ May, P., B. Millikan, et al, CIFOR.: The Context of REDD+ in Brazil: Drivers, agents and institutions. 2011.

/38/ Araujo, T. M., N. Higuchi, et al, Forest Ecology and Management: "Comparison of formulae for biomass content determination in a tropical rain forest site in the state of ParáÂ, Brazil." 1999

/39/ Barreto, P, IMAZON: Will cattle ranching continue to drive deforestation in the Brazilian Amazon? 2011

/40/ IPCC: Good Practice Guidance for Land Use, Land-Use Change and Forestry. 2006.

/41/ Overman, J. P. M., H. J. L. Witte, et al, Journal of Tropical Ecology: "Evaluation of regression models for above-ground biomass determination in Amazon rainforest." 1994.

/42/ Pfaff, A., Barbieri, A., Ludewigs, T., Merry, F. Perz and Reis, E, Manila Typesetting Company: "Road Impacts in BrazilianAmazonia." 2009.

/43/ Kirby, K. R., W. F. Laurance, et al., Futures 38(4): 432-453: "The future of deforestation in the Brazilian Amazon." 2006

/44/ Hecht, S. Bioscience vol 43 No 10: The logic of livestock and deforestation in

Amazonia. California, USA, American institute of biological sciences. 1993.

/45/ Araujo, C., C. A. Bonjean, et al. Ecological Economics 68(8-9): 2461-2468: "Property rights and deforestation in the Brazilian Amazon." 2009.

/46/ Mertens, B., R. Poccard-Chapuis, et al. Agricultural Economics 27(3): 269-294: "Crossing spatial analyses and livestock economics to understand deforestation processes in the Brazilian Amazon: the case of São Félix do Xingú in South Pará." 2002.

/47/ Asner, G. P., E. N. Broadbent, et al, Proceedings of the National Academy of Sciences 103(34): 12947-12950: "Condition and fate of logged forests in the Brazilian Amazon." 2006.

/48/ Uhl, C., P. Barreto, et al BioScience 47(3): 160-168: "Natural Resource Management in the Brazilian Amazon." 1997

/49/ Putz, F., P. Zuidema, et al Plos Biology: Improved Tropical Forest Management for Carbon Retention. 2008.

/50/ Conama, 2009: Resolução No. 411 de 06/05/2009. Available at: http://www.mma.gov.br/port/conama/legiabre.cfm?codlegi=604 – Retrieved August 18th, 2012

/51/ Point Carbon: REDD Price Report Q4 2012.

/52/ SEMA : Zoneamento ecologico- economico da zona leste e calha norte do estado do Pará 2010. Belem, 2010

/53/ J. P. Malingreau, H. D. Eva, E. E. de Miranda, AMBIO, 41:309–314:.Brazilian Amazon: A Significant Five Year Drop in Deforestation Rates but Figures are on the Rise Again. 2012.

/54/ Brazilian Ministry of Science and Technology: http://www.obt.inpe.br/prodes/index.php, accessed September 2012.

2.4 Interviews

	Date	Name	Organization	Topic
/55/	16 to 30 July-2012	Giancarlo Raschio. Project Manager	Ecosystem Services LLC	• Project Design • Additionality • VCS Compliance
/56/	16 to 30 July-2012	Christian Contreras. Senior Program Coordinator.	Ecosystem Services LLC	• Baseline Determination • Deforestation

				Modelling • Leakage Belt Design
/57/	16 to 30 July-2012	Leonel Mello. Senior Policy Advisor	Consultant for Ecosystem Services LLC	• Project Design • Environmental & Social aspects of projects • SOPs and Management
/58/	16 to 30 July-2012	Pablo Castro. Social Specialist	Ecosystem Services LLC	• FPIC • Community Relations • Community Benefit Monitoring.
/59/	16 to 30 July-2012	Yuri Jordy Nascimento Figueiredo	Legal Consultant	• Legal Compliance • Legal Tenure of Land
/60/	16 to 30 July-2012	Renial	SETA Ambiental	• Carbon/Forestry Inventory • Field SOPs
/61/	16 to 30 July-2012	Flavia	SETA Ambiental	• Carbon/Forestry Inventory • Field SOPs • Social Outreach
/62/	16 to 30 July-2012	Estela	Legal Consultant	• Legal Compliance of Project
/63/	16 to 30 July-2012	Derrick	SETA Ambiental	• Carbon/Forestry Inventory • Field SOPs
/64/	16 to 30 July-2012	Dra. Izildinha	University Ecology/ Forestry Professor, subcontracting for SETA	• Carbon/Forestry Inventory • Field SOPs
/65/	16 to 30 July-2012	Rosalina Coper de Preita	Local Villager/Commu	• Community relations/concerns

			nity leader	
/66/	16 to 30 July-2012	Nuesimar do Santos Monteiro	Local Villager/Community leader	• Community relations/concerns
/67/	16 to 30 July-2012	Benedito Gonzalez	Local Villager/Community leader	• Community relations/concerns
/68/	16 to 30 July-2012	Raymundo Flores	Local Villager/Community leader Controller	• Community relations/concerns

2.5 Site Inspections

A Site visit was conducted July 16 – July 31 with the objective of acquiring evidence to determine whether a positive validation opinion should be given. During the site visit, interviews were conducted with project stakeholders, government officials, legal counsel, and local community members to confirm statements by the project proponents and to identify potential misstatements. Carbon inventory plots were also visited and re-measured to confirm the accuracy of the project's carbon inventory. Observations of the site were made to confirm that the project boundary and leakage belt were consistent with the conditions described in the PD /1/. Observations of conditions in the area surrounding the project area and interviews with local people were used to confirm the baseline scenario and assumptions underlying the delineation of the leakage belt. Additionally, the technical aspects of the project were discussed in detail with the project developer.

2.6 Resolution of Any Material Discrepancy

The objective of this phase of the validation was to resolve any outstanding issues that needed be clarified prior to DNV's positive conclusion on the project design. In order to ensure transparency, a validation protocol was customized for the project. The protocol shows in a transparent manner the criteria (requirements), means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organizes, details and clarifies the requirements a VCS project is expected to meet.
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The completed validation protocol check list for the project "RMDLT Portel-Pará REDD Project" is enclosed in Appendix A to this report.

A corrective action request (CAR) is issued if one of the following occurs:

- The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions.
- The VCS requirements have not been met.
- There is a risk that emission reductions cannot be monitored or calculated.

A clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable VCS requirements have been met.

A forward action request (FAR) is raised during validation to highlight issues related to project implementation that require review during the first verification of the project activity. FARs do not relate to the VCS requirements for registration.

3 VALIDATION FINDINGS

3.1 Project Design

3.3.1 Project Proponent

The project proponent has been identified as RMLDT Property Group ("RMDLT") and the ALLCOT Group AG. Documentation was provided that this entity has overall control and responsibility for the project as evidenced by a letter from the landowner /22/ and associated title documents /26/, as well as interviews with legal counsel /62/. The project proponent's contact information is as follows:

RMDLT
1194 Sunnyside Road
Kelowna, BC V1Z 2N8

ALLCOT Group AG:
Dammstrasse 19 CH-6301
Zug Switzerland

The project developer is Ecosystem Services LLC. Ecosystem Services was DNV's main point of contact throughout the project assessment. Contact information is as follows:

Ecosystem Services LLC
1250 24th Street, NW Suite 300
Washington, DC, 20037, USA

3.3.2 Project Activity and Eligibility of the Project

The primary project activity is management of the project area as a private conservation reserve in order to avoid unplanned deforestation. Based on evidence collected during the audit, this type of management constitutes a modification from the baseline scenario expected to result in GHG emissions reductions or removals. Evidence includes interviews with project proponents and community members; examination of data collected by remote sensing /27/, and first hand field observation.

The project sectoral scope is 14 “Agriculture Forestry and Other Land Use” and the project type is Avoided Unplanned Deforestation. Technologies and measures implemented include the protection of forest lands threatened by conversion to agriculture and cattle ranching. The project is eligible for crediting as it is an AFLOU project with a project start date after 01 January 2002 and before 08 March 2008 and has completed validation before 8 March 2013 using an approved VCS methodology VM0015.

The project is located in the Pará district of Brazil. The geodetic coordinates provided for in section 2.3.2 of the VCS PD /1/ and the generalproject location has been confirmed during the site visit The project start date is 01 January 2008 as evidenced by /24/,

The project area is forested according to the definition of forest in Brazil as described by the UNFCCC, as observed during the site visit, and confirmed by inspecting remotely-sensed imagery /27/.

3.3.3 Project Scale and Crediting Period

Based on the definitions described in section 3.9.1 of the VCS standard version 3.3/30/, the project is categorized as a large project, as it has an estimated average annual GHG emissions reduction of greater than 300,00 tonnes of CO2e per year as evidenced spreadsheets in which the methodology’s quantitative elements are implemented /1/ and /28/ .

The project crediting period start date is 01 January 2009 and the end of the crediting period is 31 December 2048. The project crediting period start date corresponds to the commencement of the first monitoring period. The total estimated GHG emissions reductions or removals over the project crediting period before the VCS risk buffer is applied are estimated to be 38,717,044 tCO2e /1/.

3.3.4 Project compliance with applicable laws, statutes and other regulatory frameworks

DNV was able to confirm that the project complies with all applicable laws, statues and other regulatory frameworks. Evidence to this effect includes a review of all pertinent legislation identified in the VCS PD and of compliance with the same, then confirmed through interviews with project personnel and other relvant stakeholders and legal experts/59/. A list of the most pertinent legislature identified by the project proponents is as follows:

Relevant Law and/or Regulatory Framework	Description	Project Compliance

Law number 4771, September 15th 1965 (D.0.U of September 16th 1965)	The Brazilian forest code of 1965 – Brazilian Forest Code – provides for example: II – area of permanent preservation: protected area in the terms of article 20 and 30 of this law, covered or not by native vegetation, with the role of protecting the water resources, landscape, geological stability, biodiversity, flux of genes of plants and animals, protect de soil and secure a good environment for the human population; III – Legal Reserve Areas: Area located in the property or "*posse rural*" excluding the areas of permanent preservation, for the sustainable use of the natural resources, conservation and restoration of the ecological process, biodiversity conservation and refugee and protection of native animals and plants; Art. 150 – It is prohibited under empirical form the exploration of primitive forest of the Amazon watershed, but only can be explored in accordance of technical management plans approved by act of Public authorities, to be issued in one year term.	DNV can confirm, through its review of the legal land tenure and titles documentation /26/, that all of the project properties are in accordance to the environmental rural registry and the Environmental State Institute.
Normative Instruction number 003 of May 23th 2007 – Executive office of environment , science and technology - SECTAM	Regulatory of the Environmental Rural Registry -CAR in the state of Pará and providence of other requirements. Art 1 – establish criteria and procedures for implementation of the CAR – PA as an instrument for identification of the rural properties in the state of Pará that must be issued by SECTAM-PA in accordance with this Normative Instruction. Art 2 – It is necessary for all rural properties in the state of Pará to be registered in the CAR-PA, even the properties that have no production activity. Art 3 – The issuance of the CAR-PA, as toll for identification of the property will be done only once for each property. It will be a registry number with a sequential number. This number will be in all licenses, authorizations, and other documents issued for the environmental regularization of the rural property. This registry number will be linked to the land, independent if the land is sold, transferred or taken possession by other person. Single Parágraph – There will be no concession of any license for the land that has no registry at CAR-PA. Art 4 – In the CAR-PA it will be mentioned all the basic data of the rural property, Total area- AT, Area of permanent preservation – APP, legal reserve areas – ARL, and area of alternative use of the soil – AUAS , in addition the name and profession of the land owner, geographic coordinates and other information required by complementary laws.	DNV can confirm that the project is in compliance with this normative instruction through the review of land tenure documentation /26/ that confirms the development of Environmental Rural Registries for each of the properties.
Federal Decree number 5.975/2006	Art. 10 – Forest exploration and succession formations that require shallow harvest of the forest only will be permitted under specific authorization for alternative land uses issued by SISNAMA. # 1o By alternative land use is understood any conversion of the forest to other land cover, such as settlements, agriculture, pasture, industry, energy generation, mining and transportation.	Through documentation review /26/, DNV can confirm that all of the properties within the project area have legal reserve areas and APPs defined.

3.3.5 Ownership and other programs

Proof of title is evidenced by a letter from the landowner /22/ and official title documents /26/, DNV verified that the project proponent has exclusive right to sell carbon credits generated by the project through a review of these documents and interviews with legal counsel /25/26//62/. No evidence was observed to suggest the project is affected by other emissions trading programs or other binding limits. An internet search did not provide any suggestion that the project is participating in other GHG programs. The project proponents have stated in the PD /1/ that the project is not registered or seeking registration in any other GHG programs; that the project does not intend to generate any other form of GHG-related environmental credit; and that the project has not been rejected by other GHG programs.

3.3.6 Additional information relevant to the project

The project is not a grouped project.

The project establishes leakage management areas as required by the selected methodology. Under VM0015 /31/, these consist of non-forest areas that are within the boundaries of the project area. These areas consist of approximately 7000 hectares, and constitute the areas where the majority of project activities will take place. The leakage management areas were confirmed by examination of remote sensing imagery provided by the project proponent /27/. The project describes leakage prevention and leakage quantification techniques measures in detail in sections 1.13.2; 2.3.1.3; and 3.3 of the PD /1/.

The project has considered the proof of ownership, land titles, and name and contact information of the current landowner as commercially sensitive information. This information has been shared with the validation team in compliance with the requirements of the VCS standard.

3.2 Application of Methodology

3.3.1 Title and Reference

The project has applied VCS methodology VM0015 “Methodology for Unplanned Deforestation”, version 1.1 /31/.

3.3.2 Applicability

Table 4 in the PD addresses the applicability conditions of the methodology. Based on evidence observed during the audit, these conditions have been satisfied. Evidence includes interviews with project proponents, local community members, supplemental data (including remotely sensed images, and supplemental documentation as described below.

Applicability Condition	***DNV Assessment***
Baseline activities may include planned or unplanned logging for timber, fuel-wood collection, charcoal production, agricultural and grazing activities as long as the category is unplanned deforestation according to the most recent VCS AFOLU requirements.	Unplanned deforestation activities, specifically unplanned logging for timber and agricultural and grazing activities were observed during the site visit, and are clearly visible in remote sensing imagery /27/. Project meets requirement.
Project activities may include one or a combination of the eligible categories defined in the description of the scope of the methodology (table 1 and figure 2).	The project falls in category E: Avoided deforestation of degrading Forest with carbon stock Increase. Forest degradation was readily visible during the site visit and through observation of remote sensing imagery /27/ .
The project area can include different types of forest, such as, but not limited to, old-growth forest, degraded forest, secondary forests, planted forests and agro-forestry systems meeting the definition of “forest”.	Remote sensing /27/ imagery was provided to confirm that all areas within the project area constitute forest according to the definition applied in Brazil.
At project commencement, the project area shall include only land qualifying as “forest” for a minimum of 10 years prior to the project start date.	Remote sensing imagery /27/ was provided to confirm that all areas within the project area have been forest for a minimum of ten years.
The project area can include forested wetlands (such as bottomland forests, floodplain forests, mangrove forests) as long as they do not grow on peat. Peat shall be defined as organic soils with at least 65% organic matter and a minimum thickness of 50 cm. If the project area includes a forested wetlands growing on peat (e.g. peat swamp forests), this methodology is not applicable.	The project proponent has stated that the project area does not include forested wetlands. No forested wetlands were observed during the onsite inspection, nor from review of the satellite imagery /27/.

Based on DNV’s findings, the project meets all of the applicability criteria of the methodology.

3.3.3 Project Boundary

The project’ geographical boundary was validated using Governo Do Estado do Pará: Cadastro Ambiental Rural Documents /25/, as well as remote sensing imagery /27/. Boundaries on emissions sources and

carbon pools are presented in the following tables. These boundaries have been validated by review of the selected methodology, by documentation supplied by the project proponent, and by physical field observations. It is DNV's opinion that the selected boundaries are consistent with the requirements of the VCS standard and selected methodology and appropriately justified.

The project's temporal boundaries are described in sections 3.3.2 and 3.3.3 of this report.

The project's selected carbon pools are defined as follows:

Carbon Pool	Included/Excluded	Justification
Above Ground Biomass	Included	Carbon stock change in this pool is always significant
Belowground Biomass	Included	Included as recommended by the methodology
Dead Wood	Excluded	This pool is less present in the baseline scenario than in the Project scenario, thus is conservatively excluded.
Harvested Wood Products	Excluded	Determined to be insignificant. See /29/ and /14/ for evidence
Litter	Included	Allowed by methodology and recommended when significant. Significance was determined by the project proponents proving that this source accounted for more than 5% of the total GHG emissions reductions generated, in accordance to the "Tool for testing significance of GHG emissions in A/R CDM project activities /31/
Soil Organic Carbon	Excluded	Not to be measure when forest is converted to pastures in the baseline scenario according to VCS VM0015 methodology /31/.

The project's selected emissions sources are defined as follows:

Sources	Gas	Included/Excluded	Justification
Biomass Burning	CO_2	Excluded	Counted as Carbon Stock Change
	CH_4	Included	Fires are the main technology used in land

			clearing
	N_20	Excluded	Excluded as insignificant by the methodology
Livestock Emissions	CO_2	Excluded	Excluded as insignificant by the methodology
	CH_4	Excluded	Conservatively excluded – expected to be greater under the baseline scenario as compared to the project scenario
	N_20	Excluded	Conservatively excluded – expected to be greater under the baseline scenario as compared to the project scenario

3.3.4 Baseline Scenario

The identified baseline scenario of the project is unplanned deforestation for agriculture and cattle ranching facilitated by land speculation and increasing access to the forest resulting from illegal logging. Evidence of this baseline scenario was observed during the site visit: pioneer roads in the forest were clearly visible to the audit team, and evidence of logging (stumps, road construction, transport of logs by river) was seen firsthand. In addition, the project proponent provided scientific literature describing the process of deforestation prevalent in the region (/35/,/36/,/37/,/39/,/41/,/42/,/43/,/44/,/45/,/46/,/47/,/48/). Finally, spatial data including remote sensing images clearly shows the expansion of unplanned deforestation near the project area. Interviews with local community members were consistent with the baseline scenario described. The project's baseline is defined in accordance to the selected methodology, and includes a model of the projected deforestation rate and a spatial model of the expected deforestation location.

3.3.5 Additionality

The project has applied VCS Tool VT0001 /34/ to demonstrate additionality. Section 2.5 of the PD /1/ includes the details of the project proponent's application of the tool. The application included the identification of alternative scenarios, documentation of baseline determination, and comparison of the potential baseline scenarios against applicable laws, a simple cost analysis, and a common practice

analysis. The additionality assessment concluded that the project is additional. Evidence reviewed in the course of the validation of this assessment included /1/, /6/, /17/, /18/, /35/, /39/, /42/, /43/, /44/ and /46/.

In line with the methodology, the PD /1/ has identified that the most likely land use scenario is the continuation and proliferation forest encroachment by pioneer activities, eventually leading to an expansion of deforestation. In this scenario, deforestation would be initiated by increased access to the forest by expansion of unofficial roads constructed by illegal selective loggers , followed by land clearing to support activities such as cattle ranching by agents who are facilitated by the access resulting from the loggers' actions.

In order to demonstrate additionality the project uses the VCS Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities (Version 3.0) /34/. As a first check, the audit team made sure that the project complied with the applicability conditions in order to use the aforementioned tool. These applicability conditions are as follows:

a) AFOLU activities the same or similar to the proposed project activity on the land within the proposed project boundary performed with or without being registered as the VCS AFOLU project shall not lead to violation of any applicable law even if the law is not enforced;

b) The use of this tool to determine additionality requires the baseline methodology to provide for a stepwise approach justifying the determination of the most plausible baseline scenario. Project proponent(s) proposing new baseline methodologies shall ensure consistency between the determination of a baseline scenario and the determination of additionality of a project activity.

DNV can confirm that no similar project, without being registered as a VCS AFOLU project, will lead to violation of any applicable law, even if not enforced. This was further confirmed through interviews conducted with project stakeholders and project personnel during on-site inspection, as well as through an analysis of all applicable laws similar to the one conducted in section 3.3.4 of this report. In addition, as is evidenced in sections 3.1 and 3.5 of the methodology /31/ and the sections 2.4.6 – 2.5.5 of the PD/1/, a stepwise approach is used in justifying the determination of the most plausible baseline scenario. It was thus determined that the applicability conditions for the employment of the pertinent additionality tool were met.

The tool next requires the project proponents to carry out the following four steps to determine if their project is additional:

a) STEP 1. Identification of alternative land use scenarios to the AFOLU project activity;

b) STEP 2. Investment analysis to determine that the proposed project activity is not the most economically or financially attractive of the identified land use scenarios; or

c) STEP 3. Barriers analysis; and

d) STEP 4. Common practice analysis.

As part of the methodology and step 1 of the aforementioned tool, the VCS PD has identified three alternative land use scenarios. These scenarios include forest encroachment by pioneer activities followed by deforestation to implement pastures, timber extraction by the landowner, and implementation of the project activities without registration as a REDD project. The patterns of deforestation described in the analysis were supported as common in this region of this region of Brazil by published scientific literature /31/, and were consistent with interviews with local stakeholders described during the site visit.

As part of step 2, the project proponents were able to justify that the costs associated with the VCS AFOLU project demonstrate that the activity produces no financial benefits other than VCS related income /17/ /18/. According to the tool in use, these arguments thus also allowed the project proponents to apply a simple cost analysis (Option I) and to conclude that the proposed VCS AFOLU project produces no financial benefits other than VCS related income. This information was confirmed through on-site inspection, interviews with local stakeholders, as well as review off financial documents provided for by the project proponents, /6/, /18/.

Step 3, the barriers analysis, was not applicable to the project because the additionality tool /34/ allows for the application of either STEP 2 or STEP 3 and does not require that both be applied.

Lastly, as part of the common practice analysis, the project proponent provided a list of other similar projects in the state of Para. Three other projects were identified. The project proponent demonstrated that all differ significantly in scale (two are much larger than the project, the third is much smaller), funding (all are government funded, wheras the project is privately funded), legal land status (two are on government land, a third is on National Institute of Colonization and Agrarian Reform land settlement program areas), and project activities from the existing project (the projects for which information on activities were available utilize direct payment to potential deforestation agents for avoiding deforestation, a strategy that is not employed in this project). DNV concurs with the project proponent's assertion that the project is not common practice.

In conclusion, DNV can verify that the project proponents have employed the correct use of the VCS Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities /34/), that they have followed all of its respective steps correctly, and that thus the project can be considered to be additional.

3.3.6 Quantification of GHG Emission Reductions and Removals

Under methodology VM0015 /31/, GHG Emissions Reductions and Removals are quantified using a series of several steps: an analysis of historical land cover change, an analysis of agents, drivers and causes of deforestation and their likely future development, projection of future deforestation, calculation of baseline land cover changes, and estimation of baseline carbon stock changes. A summary of the steps involved and their validation is provided here. The project proponent has documented the steps in detail in section 2 of the PD and in associated appendices. All of the data and analyses described here were reviewed in detail during the audit process.

The first step in the baseline methodology is the identification of key spatial and temporal project boundaries, which has been described above in section 3.3.3.

The second step requires an analysis of remote sensing imagery for historical land cover change analysis. For this step, the project proponent used a combination of Landsat 5, Alos, Spot 5, and Geoeye images from the historical reference period to prepare maps and tables describing past land cover change in the reference region. The project developer details the steps of this classification in an annex 3 to the PD /8/. The audit team reviewed the methodologies applied in this analysis to confirm that they conform to methodology requirements and best practices in the field of remote sensing and are in conformance with the methodology.

The third step in the baseline methodology is the identification of agents and drivers of deforestation. To do this, the project developer used a combination of literature, interviews with local experts, and participatory rural appraisals. The analysis identified Riberinhos, Cattle Ranchers, and Illegal loggers as agents of deforestation, with a number of drivers and driver variables identified for each. Evidence used to validate these identifications included interviews in local communities, examination of remote sensing data, and review of literature, including (/35/,/36/,/37/,/39/,/41/,/42/,/43/,/44/,/45/,/46/,/47/,/48/). The details of this analysis are presented in section 2.4.6 of the PD.

The fourth step of the baseline deforestation methodology is the projection of the quantity and location of future deforestation. Methodology VM0015 allows for three approaches to predicting future deforestation. The project developers have selected option (a) as outlined in the methodology, in which the rate of baseline deforestation is estimated by using the historical average rate as calculated from imagery analysis conducted in the second step. The selection of this method was justified according the procedures of section 4.1.1 of VM0015, and is the most conservative of the modelling approaches allowed by the methodology. The audit team carefully reviewed all calculations made in the calculation of historic average rate to ensure that they were consistent with VM0015 /31/. The analysis produced a rate of deforestation of 1.77% per year across the entire reference region. The audit team concludes that this rate is consistent with the data presented and the analysis methods prescribed by the selected.

The fifth step in the application of the methodology requires a spatial model be used to predict the location of baseline deforestation. The audit team reviewed the steps performed in this analysis in order to ensure they were conducted in a way that was consistent with the methodology. These steps include the preparation of factor maps, preparation of deforestation risk maps, selection of a deforestation model, and mapping of the location of future deforestation. These steps were conducted using the “Land Change Modeler” from the Idrisi Selva software package. The audit team used interviews with project developers and review of data /1/,/8/,/16/,/27/,/28/ to determine that the modelling of the location of future deforestation had been conducted in compliance with the requirements of VM0015 /31/.

The sixth step in the application of the methodology requires the estimation of carbon stocks in each land use class. The project proponent used an on the ground inventory to estimate these stocks. The assessment team visited several plots that were part of this inventory to confirm that field methods accurately reflected conditions seen on the ground. In subjectively comparing the data, the assessment team saw no indication that there were systematic errors made during field measurement. Due to

accessibility constraints, the project proponents inventoried only a subset of the project area that was most accessible as described in /10/. The audit team found this consistent with the requirements of VM0015, which includes the provision "However, remote areas and areas with poor accessibility (either because of physical or social barriers such as unsafe areas) may be excluded for the location of sampling plots, using a transparent and conservative procedure, such as creating a buffer zone along roads, paths or navigable rivers that may be used for reaching the sampling plots (pg 135)." After all findings were closed, the audit team concluded that the carbon stock estimates were made in a way that is free from material error and consistent with the requirements of the methodology.

In addition to field assessment of the biomass inventory, the audit team reviewed all spreadsheets, and equations used to calculate the carbon stock of each stratum and its associated uncertainty. The project used allometric equations and root to shoot ratios selected from the literature that are appropriate to the project area. The audit team also traced a subset of data sheets from their initial field recording through the full calculation process. After all findings were closed, the audit team concluded that the carbon stock estimates were made in a way that is free from material error and consistent with the requirements of the methodology.

Steps seven through nine in the application of the baseline methodology consist of manipulation of the data discussed above through a series of tables and equations to estimate the *ex ante* changes in carbon stocks in the project and leakage areas as well as the *ex ante* estimation of project GHG gas benefits. The audit team traced the data in the excel worksheets used by the project developer to conduct this analysis to ensure that it was conducted in accordance with the methodology and is free from material errors. DNV concludes that the project will not generate any displacement leakage (discussed further in findings CL12 and CL13) and that it has quantified greenhouse gas emissions reductions and removals in a way that is consistent with the requirements of the VCS standard and selected methodology. The estimated *ex ante* net GHG emissions reductions for the ten year baseline period validated in this report are as follows:

Years	Estimated baseline emissions or removals (tCO2e)	Estimated project emissions or removals (tCO2e)	Estimated leakage emissions (tCO2e)	Estimated net GHG emission reductions or removals (tCO2e) (prior to buffer contribution)
2009	787,725	39,386	0	748,339
2010	1,058,746	52,937	0	1,005,809
2011	1,228,124	61,406	0	1,166,718
2012	1,197,168	59,858	0	1,137,310

2013	1,124,384	56,219	0	1,068,165
2014	984,386	49,219	0	935,166
2015	1,016,916	50,846	0	966,071
2016	927,170	46,358	0	880,811
2017	876,330	43,816	0	832,513
2018	816,739	29,099	0	787,640

Note: This table summarizes table 65 from the PD /1/, where the baseline and project emissions here are the sum of carbon stock changes and non-CO2 GHG emissions. Only the 10 years for which the baseline validated in this report applies are reported here, though all calculations reported in the PD were checked in the validation process.

3.3.7 Methodology Deviations

The project does not involve any deviations from the VM0015 methodology.

3.3.8 Monitoring Plan

The monitoring plan is presented in section 4.3 of the PD. All of the required data and Parameters relevant to the validation as of the date of this report and verification as of 31 December 2010 are available and provided in section 4.3 of the PD. All of the monitoring equipment and procedures specified in the monitoring plan are applicable and eligible per VCS requirements and the requirements of the methodology.

Parameters available at the time of validation:

- Forest benchmark maps of the reference region, project area, and leakage belt and factor maps were derived from GIS files and remote sensing imagery prepared by the project developer /27/. DNV validated these maps by comparison with the imagery they were digitized from. These maps were used to derive the parameters related to the quantity of land use and Land cover change observed.
- Annual area of baseline deforestation in the reference region, project region, and leakage belt at year t; (parameters ABSLRR, ABSLPA, ABSLLK) DNV reviewed remote sensing data /27/ to confirm that classification had been carried out appropriately. Inputs to spatial models /27/ and resulting maps /16/ were reviewed to ensure that modeling was carried as described by the methodology. Land title documents /25/ were reviewed to ensure that the project area was appropriately represented in GIS models. Spreadsheets implementing methodology equations /28/ were reviewed to check for computational errors.
- Carbon stocks in each forest class in the project area (Parameters $Ctot_{ic,}$ C_{pl}) and allometric equations (parameter $f_{j((}$DBH) were validated by visiting a subset of carbon inventory plots in the

field to ensure that conditions in the field were consistent with data reported, reviewing spreadsheet calculations made by the project proponents in compiling the inventory /11/; and reviewing technical literature describing the allometric equations applied /38/ /41/.

- Parameters $C_{tot,}$ *CF,* D_j, ER_{CH4}, GWP_{CH4} were taken from the IPCC good practice guidance. DNV cross checked this document /40/ to ensure the correct values had been applied.
- The parameters F_{burnt} and P_{burnt} were derived from the forest inventory in the document /14/. DNV checked the calculations used to derive these parameters.
- The parameters DLF and EI are *ex-ante* assumptions made by the project developer. DNV cannot verify that these assumptions are correct as they relate to future conditions in the absence of the project and are thus counter factual. The parameters do not impact the validated baseline, but do impact the *ex ante* estimates of project greenhouse gas emissions. The parameters will not impact *ex post* numbers of credits to be issued that result from project monitoring. The *ex ante* estimates of project benefits will only be correct if these assumptions turn out to be accurate. DNV judged the specific values applied in these assumptions to be immaterial. See discussion in CL12 and CL 13.
- Logging intensity in the region was taken from peer reviewed literature /49/, which was reviewed by DNV to ensure it was applicable to the project area. Additionally, analysis of the carbon inventory showed that the intensity was reasonable /29/ /14/.
- The Coefficient of Volumetric Efficiency was taken from a government report relevant to the area, which was reviewed by DNV.

The following data and Parameters are determined ex-ante accordance with VM0015 (Version 1.1) /31/

Parameters monitored ex-post:

The following data and Parameters will be monitored ex-post in accordance with VM0015 (Version 1.1) /31/

- Future maps of forest cover in the reference region, project area, and leakage belt will be derived from analysis of remote sensing. DNV has reviewed the procedures described in the monitoring plan and can confirm that they are consistent with the requirements of the methodology and best practices in the field of remote sensing.
- Areas of observed deforestation and LULC change will be derived from the maps described above. The methodology and monitoring plan provide clear steps for calculating these values.
- The risk factor is derived from the application of the VCS AFOLU Non permanence Risk tool /33/, which will be assessed at each verification event.

3.3 Environmental Impact

Expected environmental impacts are described in section 5 of the PD. The project does not appear to have a negative environmental impact as compared to the baseline, as evidenced by the project activities designed to prevent future deforestation through securing land tenure, preventing the encroachment of

unauthorized deforestation agents, and promote the development of sustainable incomes in local communities.

3.4 Comments by stakeholders

Stakeholder comments are described in section 6.1 of the PD. DNV can verify that the project proponents developed and completed a Participatory Rural Appraisal (PRA) /9/ in September of 2012 with villages located in the project areas and within a 15 Km buffer from the project areas. The PRA was developed through a series of field visits, observations, surveys, workshops and interviews to local leaders and experts. To complement field information, the team used secondary information from the IBGE's 2010 Census. Through revision of this PRA and confirmation of the same conducted in interviews with local villagers, DNV can verify that comments recieved about the needs and expectations of local villagers in terms of how they envision their communities in the future and project objectives was gathered and taken into consideration in the project design.In addition, DNV also conducted an assessment of the project against the community, climate and biodiversity standards in parallel to the assessment described in this report. Details of the project's stakeholder consultation process are detailed in that report. The project has met all requirements of the VCS standard with regard to stakeholder comments.

4 VALIDATION CONCLUSION

Det Norske Veritas USA Inc (DNV) has performed a validation of the project activity "RMDLT Portel-Pará REDD Project" in Brazil. The validation was performed on the basis of VCSA criteria for the VCS project 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 DNV with sufficient evidence to determine the fulfilment of stated criteria.

The project correctly applies the methodology VM0015: Methodology for Avoided Unplanned Deforestation, version 1.1 /31/. The primary project activity is protection of forest from unplanned deforestation by management as a private conservation reserve. As a result, the project results in reductions of CO_2 emissions which are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the project is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity.

The total emission reductions from the project are estimated to be on the average 967,926 tCO_2e per year over the project lifetime, prior to buffer contributions. The project will reassess its baseline every 10 years in accordance with VCS requirements. Over the 10 year baseline period to which this report is relevant, the total emission reductions from the project are estimated to be on the average 952,854 tCO_2e per year, prior to buffer contributions. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achieved subject to the risks of *ex-ante* prediction stemming from assumptions made about project effectiveness and leakage displacement (discussed in findings CL12 and CL13).

The monitoring plan provides for the monitoring of the project's emission reductions. The monitoring arrangements described in the monitoring plan are feasible within the project design and it is DNV's opinion that the project participants are able to implement the monitoring plan.

In summary, it is DNV's opinion that the project RMDLT Portel-Pará REDD Project in Brazil, as described in the VCS PD /1/ version 5 dated 17 January 2013, meets all relevant VCSA requirements for the VCS project and correctly applies VCS VM0015: Methodology for Avoided Unplanned Deforestation, version 1.1 Hence, DNV recommends the registration of the project as a VCS project activity.

Pablo Reed	Shruthi Poonacha
VCS Auditor	VCS/CDM Auditor
DNV KEMA	DNV KEMA

APPENDIX A

VCS VALIDATION PROTOCOL

Table 1 Requirements Checklist

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
1 DESCRIPTION OF PROJECT					
1.1 Project title					
1.1.1 Does Section 1.1 of the VCS PD include a clearly identifiable project title?	/1/	DR	Clearly identifiable title of the project activity	~~Yes~~	Yes
1.2 Type / Category of the project					
1.2.1 Is the project category clearly described? Is the project category part of a GHG program that has been approved by the VCS Bord?	/1/	DR	The project falls under sectoral scope 14, and is a REDD – Avoided unplanned deforestation project. This project category has been approved by the VCSA.	~~Yes~~	Yes
1.3 Estimated amount of emission reductions over the crediting period including project size					
1.3.1 How many tonnes CO_2 equivalent emissions reductions per year will be generated? Is the project size correctly defined?	/1/ /11/ /28/	DR	Section 1.7.1.1 of the VCS PD contains an estimate of the number of GHG emission reductions to be estimated. Based on version 5 of the PD, the project is estimated as a large-project.	~~No~~ ~~CL1~~	Yes
1.4 A brief description of the project					

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
1.4.1 Is the description of the project clear? What activities and facility are included in the project?	/1/	DR	The description is clear with respect to the project's goals. Project activities are cantered around monitoring, enforcement, providing land tenure rights, enhancing community organization and management capacity, and implementation of agroforestry and fuel efficient cookstoves.	~~Yes~~	Yes
1.5 Project location including geographic and physical information allowing the unique identification and delineation of the specific extent of the project					
1.5.1 Can the information provided in the VCS PD allow for the unique identification and delineation of the specific extent of the project? What is the GPS project boundary?	/1/ /23/	DR	The PDD includes suitable maps of the project area. The kmz file reviewed provides the detailed boundaries of the project area in the format required by the standard. The PD lists project boundary vertices as required.	~~Yes~~	Yes
1.6 Duration of the project activity/crediting period					
1.6.1 What is the project start date? Is the date correctly defined with supporting evidence? What is the duration of the project activity? Is the duration defined correctly with supporting evidence?	/1/ /22/	DR	The Project start date is January 1st 2008, while the start of its crediting period is January 2009 Supporting evidence is provided. The chosen 41 year project duration is consistent with VCS rules.	~~Yes~~	Yes
1.6.2 What is the crediting period start date? Is the date determined appropriately? What is the selected crediting period?	/1/	DR	The crediting period for the Project is 40 years starting on January 1st, 2009, and is consistent with VCS rules. The end day,	~~Yes~~	Yes

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			month, and year are not specified as required by the VCS project description template.		
1.7 Conditions prior to project initiation					
1.7.1 Are the conditions prior to project initiation clearly described in the VCS PD with supporting evidence?	/1/	DR	An appropriate description with references cited is in place.	~~Yes~~	Yes
1.7.2 What are the main events over the project initiation stage?	/1/	DR	The events of project initiation are appropriately summarized in section 1.8 of the PD.	~~Yes~~	Yes
1.8 A description of how the project will achieve GHG emission reductions and/or removal enhancements					
1.8.1 Is the description of how the project will achieve GHG emission reductions and/or removal enhancements clear? How will the emission reductions and/or removal enhancements be achieved?	/1/	DR	Section 1.8 clearly describes the activities that are intended to reduce deforestation pressure on the project area, therefore reducing emissions that would result from baseline deforestation.	~~Yes~~	Yes
1.9 Project technologies, products, services and the expected level of activity					
1.9.1 What products/services will be produced by the project? What technologies are used in the project? Are the technologies properly selected to provide the planned products/services?	/1/	DR	No specific products or technologies are identified. The project does not intend to produce timber products or similar forest products.	~~Yes~~	Yes
1.9.2 What is the expected level of activity? Is the expected level properly estimated with supporting evidence and assumption?	/1/ /24/	DR	The project activities are clearly described in section 1.8. Appropriate documentation of the implementation	~~Yes~~	Yes

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			of project activities is provided.		
1.10 Compliance with relevant local laws and regulations related to the project					
1.10.1 What relevant local laws and regulations related to the project are identified? What appropriate approaches are taken to ensure complete identification?	/1/ /59/ / 62/	DR I	All relevant laws were checked for compliance with the project. DNV found that four major laws affect the project directly. This was done in reviews with legal experts consulted during the site visit /59/ /62/.	~~Yes~~	Yes
1.10.2 Is the project in compliance with all the relevant local laws and regulations? How is this demonstrated?	/1/ /59/ / 62/	DR I	DNV reviewed the laws, its requirements, and how the PP was in compliance with the aid of legal experts /59/ /62/.	~~Yes~~	Yes
1.11 Identification of risks that may substantially affect the project's GHG emission reductions or removal enhancements					
1.11.1 Are the risks that may substantially affect the project's GHG emission reductions or removal enhancements appropriately identified? What risks are identified?	/4/	DR	The project has applied the VCS Non Permanence Risk tool to identify risks applicable to the project.	~~No~~ ~~CL 14~~ ~~CL 15~~ ~~CL 16~~ ~~CL 17~~ ~~CL 18~~ ~~CAR 15~~ ~~CAR 16~~ ~~CAR 17~~ ~~CAR 18~~	Yes

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
1.11.2 How are the risks evaluated to determine their potential effects to the project's GHG emission reductions or removal enhancements?	/4/	DR	The project has applied the VCS Non Permanence Risk tool to identify risks applicable to the project.	~~No~~ ~~CL 14~~ ~~CL 15~~ ~~CL 16~~ ~~CL 17~~ ~~CL 18~~ ~~CAR 15~~ ~~CAR 16~~ ~~CAR 17~~ ~~CAR 18~~	Yes
1.12 Demonstration to confirm that the project was not implemented to create GHG emissions primarily for the purpose of its subsequent removal or destruction					
1.12.1 What GHG emissions are to be created with the implementation of the project?	/1/	DR	The project boundary includes emissions from forest fires and loss of carbon stock due to land clearing.	~~Yes~~	Yes
1.12.2 Are these GHG emissions created by the implementation of the project the main sources for the emission reductions from the project?	/1/	DR	The same emissions are present in the baseline and project scenarios, but the activity level (amount of land clearing and biomass burning) is expected to be much higher under the baseline scenario.	~~Yes~~	Yes
1.13 Demonstration that the project has not created another form of environmental credit (for example renewable energy certificates)					
1.13.1 If the project has created another form of	/1/	DR	The project proponent has stated that	~~Yes~~	Yes

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
environmental credit, has the proponent provided a letter from the program operator that the credit has not been used and has been cancelled from the relevant program?			the project has not created another form of environmental credit.		
1.13.2 If it is stated that the project has not created another form of environmental credit, how has this statement properly demonstrated?	/1/	DR	The project proponent has stated that the project has not created another form of environmental credit and that they do not intend to do so. An internet search revealed no evidence to the contrary.	~~Yes~~	Yes
1.14 Project rejected under other GHG programs (if applicable)					
1.14.1 Has the project been rejected by other GHG programs, which have been accepted by the VCS Board? If yes, has the proponent clearly stated in the VCS PD the reason for the rejection? Have the actual rejection documents including explanation been provided by the proponent?	/1/	DR	The project has not been rejected.	~~Yes~~	Yes
1.15 Project proponents roles and responsibilities, including contact information of the project proponent, other project participants					
1.15.1 Who are the project proponents? Are their roles and responsibilities, including contact information, clearly described in the VCS PD?	/1/ /22/	DR	The project proponents areRMDLT and ALLCOT Group AG. The project developer is Ecosystem Services LLC. Roles and responsibilities and contact information has been provided for each group.	~~Yes~~	Yes

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
1.16 Any information relevant for the eligibility of the project and quantification of emission reductions or removal enhancements, including legislative, technical, economic, sectoral, social, environmental, geographic, site-specific and temporal information					
1.16.1 Is any relevant information identified? If yes, describe the consequence.	/1/		None is identified, apart from information that fits into other sections of the PD.	~~Yes~~	Yes
1.17 List of commercially sensitive information (if applicable)					
1.17.1 Has any commercially sensitive information been excluded from the public version of the VCS PD that will be displayed in the VCS Project Database? If yes, can the excluded information be justified as being commercially sensitive?	/1/ /22/	DR	Commercially sensitive information has been provided to the validation team, but excluded from the VCS PD in accordance with the VCS standard.	~~Yes~~	Yes
2 VCS METHODOLOGY					
2.1 Title and reference of the VCS methodology applied to the project activity and explanation of methodology choices					
2.1.1 Does the project apply a VCS program approved methodology and the correct version thereof?	/1/	DR	The version of the methodology initially applied was not valid, however, the methodology was revised during the validation process and the current version of the methodology is correctly applied as of the time of validation.	~~No CAR 1~~	Yes

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
2.1.2 Has any methodology deviation been applied? If yes, how has the deviation been determined acceptable?	NA	DR	No methodology deviations have been applied.	~~Yes~~	Yes
2.1.3 Has any methodology revision been applied? If yes, has the revision been approved through a double-approval process?	NA	DR	No methodology revisions have been applied.	~~Yes~~	Yes
2.2 Justification of the choice of the methodology and why it is applicable to the project activity					
2.2.1 Baseline activities may include planned or unplanned logging for timber, fuel-wood collection, charcoal production, agricultural and grazing activities as long as the category is unplanned deforestation according to the most recent VCS AFOLU requirements.	/1/	DR	Unplanned deforestation activites were observed during the site visit, and are clearly visible in remote sensing imagery. Project meets requirement.	~~Yes~~	Yes
2.2.2 *Project activities may include one or a combination of the eligible categories defined in the description of the scope of the methodology (table 1 and figure 2).*	/1/	DR	The project falls in category E: Avoided deforestation of degrading Forest with carbon stock Increase. Forest degradation was readily visible during the site visit.	~~Yes~~	Yes
2.2.3 *The project area can include different types of forest, such as, but not limited to, old-growth forest, degraded forest, secondary forests, planted forests and agro-forestry systems meeting the definition of "forest".*	/1/	DR	Field observations confirm that forests in the project area are consistent with the definition of forest applicable to the project area.	~~Yes~~	Yes
2.2.4 *At project commencement, the project area shall include only land qualifying as "forest" for a minimum of 10 years prior to the project start date.*	/1/	DR	Remote sensing imagery was provided to confirm that all areas within the project area have been forest for a minimum of ten years.	~~Yes~~	Yes
2.2.5 The project area can include forested wetlands (such as bottomland forests, floodplain forests,	/1/		The PD states that the project does not include forested wetlands. No	~~Yes~~	Yes

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
mangrove forests) as long as they do not grow on peat. Peat shall be defined as organic soils with at least 65% organic matter and a minimum thickness of 50 cm. If the project area includes a forested wetlands growing on peat (e.g. peat swamp forests), this methodology is not applicable.			forested wetlands were observed during the site visit.		
2.3 Identifying GHG sources, sinks and reservoirs for the baseline scenario and for the project					
2.3.1 What are the project's system boundaries (components and facilities used to mitigate GHGs)? Are they clearly defined and in accordance with the methodology?	/1/	DR	The project implements activities as described in section 1.8.2 to mitigate GHG emissions. They are clearly defined and are consistent with the methodology.	~~Yes~~	Yes
2.3.2 Which GHG sources, sinks and reservoirs are identified for the baseline scenario? Is the identification complete?	/1/ /14/	DR	These are defined as described in the methodology.	~~No~~ ~~CAR 2~~	Yes
2.3.3 Which GHG sources, sinks and reservoirs are identified for the project? Is the identification complete?	/1/ /14/	DR	The sources, sinks, and reservoirs identified for the project are the same as those identified from the baseline scenario. The same findings apply.	~~No~~ ~~CAR 2~~	Yes
2.4 Description of how the baseline scenario is identified and description of the identified baseline scenario					
2.4.1 What is the baseline scenario?	/1/	DR	Conversion to cattle ranching and agriculture	~~Yes~~	Yes
2.4.2 Which baseline scenarios have been identified? Is the list of baseline scenarios complete?	/1/	DR	Several have been identified in the PD and the list appears complete.	~~No~~	Yes

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
2.4.3 How have the other baseline scenarios been eliminated in order to determine the baseline? Is the determination of the baseline scenario in accordance with the guidance in the methodology?	/1/	DR	The first revision of the PD did not include baseline scenarios other than that selected as the most likely. Prior to issuance of findings, a revised PS was provided that included multiple scenarios in the application of the additionality tool. In this revised PD, other scenarios have been appropriately eliminated using the tool for additionality and evidence collected from observations, interviews, and published literature	~~No~~	Yes
2.4.4 Is the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced?	/1/	DR	The baseline scenario is compatible.	~~No~~ ~~CL 5~~ ~~CL 9~~ ~~CAR 5~~ ~~CAR 7~~	Yes
2.4.5 Is the baseline determination adequately documented in the VCS PD? • All assumptions and data used by the project participants are listed in the VCS PD. The data are properly referenced. • All documentation is relevant as well as correctly quoted and interpreted. • Assumptions and data can be deemed reasonable. • The methodology has been correctly applied to identify what would occurred in the absence of the proposed VCS project activity.	/1/	DR	The baseline scenario is adequately documented.	~~No~~ ~~CL 4~~ ~~CL 5~~ ~~CL 9~~ ~~CAR 5~~ ~~CAR 7~~ ~~CAR 12~~ ~~CAR 14~~	Yes

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
2.5 Description of how the emissions of GHG by source in baseline scenario are reduced below those that would have occurred in the absence of the project activity (assessment and demonstration of additionality)					
2.5.1 What approach does the project use to assess additionality? Is this in line with the methodology?	/1/	DR	The project applies approved VCS tool VT0001 as specified by the methodology.	~~Yes~~	Yes
Investment analysis					
2.5.2 Does the project activity or any of the remaining alternatives generate revenues apart from carbon revenues? Is this reflected in the VCS PD?	/1/	DR	No revenues apart from carbon revenues are generated. This is reflected in the PDD.	~~Yes~~	Yes
2.5.3 Do any of the alternatives to the project activity involve investment? Is this reflected in the VCS PD?	/1/	DR	No alternatives involve investment	~~Yes~~	Yes
2.5.4 Is the choice of benchmark analysis, investment comparison or simple cost analysis correct?	/1/	DR	Simple cost analysis is applied, as the project does not generate revenue apart from carbon revenue.	~~Yes~~	Yes
2.5.5 Is the benchmark/discount rate the latest available at the time of the decision?	/1/	DR	No discount rate is used	~~Yes~~	Yes
2.5.6 What is the financial indicator? Is it on equity/project basis? Before/after tax? Does the financial indicator correspond with the benchmark?	/1/	DR	Simple cost analysis is applied, as the project does not generate revenue apart from carbon revenue.	~~Yes~~	Yes
2.5.7 Are the underlying assumptions appropriate, e.g., what is considered as waste in the baseline and is this considered to have zero value?	/1/	DR	The underlying assumptions are appropriate.	~~Yes~~	Yes
2.5.8 Does the income tax calculation take depreciation into account? Is the depreciation year in	/1/	DR	NA	~~Yes~~	Yes

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
accordance with normal accounting practice in the host country?					
2.5.9 Is the time period of the investment analysis and operating time of the project realistic? Has salvage value been taken into account? Is working capital returned in the last year of operation?	/1/	DR	NA	~~Yes~~	Yes
2.5.10 How was the amount of output (e.g., sales methane) assessed?	/1/	DR	Simple cost analysis is applied, as the project does not generate revenue apart from carbon revenue.	~~Yes~~	Yes
2.5.11 How was the output price (e.g., methane) assessed? Were the data available and valid at the time of the decision?	/1/	DR	Simple cost analysis is applied, as the project does not generate revenue apart from carbon revenue.	~~Yes~~	Yes
2.5.12 How were the investment costs assessed? Were the data available and valid at the time of the decision?	/1/	DR	Simple cost analysis is applied, as the project does not generate revenue apart from carbon revenue.	~~Yes~~	Yes
2.5.13 How were the O&M costs assessed? Were the data available and valid at the time of decision?	/1/	DR	Simple cost analysis is applied, as the project does not generate revenue apart from carbon revenue.	~~Yes~~	Yes
2.5.14 Describe the assessment of the other input Parámeters. Were the data available and valid at the time of decision?	/1/ /18/ /6/	DR	Expenses were clearly documented by the project proponent	~~Yes~~	Yes
2.5.15 Was the financial calculation spreadsheet verified and found to be correct?	/6/	DR	The spreadsheet was found to be correct	~~Yes~~	Yes
2.5.16 Sensitivity analysis: Is the range of variations is reasonable in the project context?	/1/	DR	A reasonable range was used	~~Yes~~	Yes

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
Barrier analysis					
2.5.17 Are the barriers identified complimentary to a potential investment analysis? Does the barrier have a clear impact on the financial returns so that it can be assessed in an investment analysis? Each barrier is discussed seParátely.	NA	DR	NA	~~NA~~	NA
2.5.18 How were the investment barriers assessed to be real? Are the investment barriers substantiated by a source independent of the project participants?	NA	DR	NA	~~NA~~	NA
2.5.19 How does carbon revenue alleviate the investment barriers?	NA	DR	NA	~~NA~~	NA
2.5.20 Is the project activity prevented by the investment barriers and is at least one of the possible alternatives to the project activity feasible under the same circumstances?	NA	DR	NA	~~NA~~	NA
2.5.21 How were the technological barriers assessed to be real? Are the technological barriers substantiated by a source independent of the project participants?	NA	DR	NA	~~NA~~	NA
2.5.22 How does carbon revenue alleviate the technological barriers?	NA	DR	NA	~~NA~~	NA
2.5.23 Is the project activity prevented by the technological barriers and is at least one of the possible alternatives to the project activity feasible under the same circumstances?	NA	DR	NA	~~NA~~	NA
2.5.24 How were the regulatory and institutional barrier assessed to be real? Are the regulatory and institutional barrier substantiated by a source independent of the project participants?	NA	DR	NA	~~NA~~	NA

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
2.5.25 How does carbon revenue alleviate the barriers due to prevailing practice?	NA	DR	NA	~~NA~~	NA
2.5.26 Is the project activity prevented by the regulatory and institutional barrier and is at least one of the possible alternatives to the project activity feasible under the same circumstances?	NA	DR	NA	~~NA~~	NA
Common practice analysis					
2.5.27 What is the geographical scope of the common practice analysis? Is this justified?	/1/	DR	The geographical scope is the state of Pará, which is justified.	~~Yes~~	Yes
2.5.28 What is the scope of technology and size (e.g., capacity of power plant) for the common practice analysis and how has this been justified?	NA	DR	NA	~~NA~~	NA
2.5.29 What is the data source(s) used for the common practice analysis?	/1/	DR	Data is collected online	~~Yes~~	Yes
2.5.30 How many similar projects without carbon income exist in the region within the scope?	/1/	DR	Three other projects exist with differences in scale and approach. None appear to have secured carbon financing at the time of validation.	~~Yes~~	Yes
2.5.31 How were possible essential distinctions between the project activity and similar activities assessed?	/1/	DR	NA	~~Yes~~	Yes
2.5.32 What is the conclusion of the common practice analysis?	/1/	DR	The project is not common practice	~~Yes~~	Yes
Conclusion					
2.5.33 What is the conclusion with regard to the additionality of the project activity?	/1/	DR	The project is additional based on an appropriate application of the Tool for	~~Yes~~	Yes

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities		
3 MONITORING					
3.1 Title and reference of the VCS methodology (which includes the monitoring requirements) applied to the project activity and explanation of methodology choices					
3.1.1 Which VCS methodology is applied to the project activity? Is the choice justified properly?	/1/	DR	VM0015 is applied. The project meets all of the methodology's applicability conditions. The choice is justified.	~~No CAR 1~~	Yes
3.2 Monitoring, including estimation, modelling, measurement or calculation approaches					
3.2.1 What types of data and information need to be reported in order to estimate the emission reductions and provide other relevant information required by the VCS program? Is the identified data type and information complete, including units of measurement?	/1/	DR	The methodology provides a list of all data and information needed to estimate the emissions reductions in Appendix 5. The data required are listed in full in the PD	~~No CAR 4~~	Yes
3.2.2 Are monitoring roles and responsibilities clearly and properly defined?	/1/	DR	The monitoring roles are clearly defined.	~~Yes~~	Yes
3.2.3 Are Parámeters not monitored listed completely?	/1/	DR	A complete list has been provided	~~No CAR 4~~	Yes
3.3 Data and Parámeters monitored / Selecting relevant GHG sources, sinks and reservoirs for monitoring or estimating GHG emissions and removals					

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
3.3.1 For each data and Parámeter monitored, is the monitoring, including estimation, modelling, measurement or calculation approaches properly selected? What are they? Do they comply with the requirements of the methodology, including measurement accuracy?	/1/	DR	All monitored Parameters comply with the requirements of the methodology	~~No CAR 4~~	Yes
3.3.2 What QA/QC procedures will be applied to ensure the measurement quality, including installation, calibration and maintenance?	/1/	DR	The monitoring report includes procedures for accuracy assessment of remote sensing data in accordance with the requirements of the methodology.	~~No CAR 4~~	Yes
3.4 Description of the monitoring plan					
3.4.1 How has it been assessed that the monitoring arrangements described in the monitoring plan are feasible within the project design?	/1/	DR	The monitoring methods are consistent with the methodology and good practice in remote sensing. The project proponent has demonstrated a competence in field monitoring.	~~Yes~~	Yes
3.4.2 Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)?	/1/	I	Appropriate procedures are in place	~~Yes~~	Yes
3.4.3 Are the data management and quality assurance and quality control procedures sufficient to ensure that the emission reductions achieved by/resulting from the project can be reported ex-post and verified?	/1/	DR, I	Data management procedures appear to be sufficient	~~Yes~~	Yes
3.4.4 Will all monitored data required for verification and issuance be kept for two years after the end of the crediting period?	/1/	DR	Yes	~~Yes~~	Yes

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
4 GHG EMISSION REDUCTIONS					
4.1 Explanation of methodological choice					
4.1.1 Have equations and Parámeters been clearly and properly identified?	/1/	DR	Equations and Parámeters have been clearly identified.	~~No~~ ~~CAR 3~~ ~~CAR 4~~	Yes
4.2 Quantifying GHG emissions and/or removals for the baseline scenario					
4.2.1 Are the calculations documented according to the approved methodology and in a complete and transparent manner?	/1/ /5/ /10/ /11/ /28/	DR	Calculations are appropriately documents in the PD	~~No~~ ~~CL 7~~ ~~CL 8~~ ~~CAR 3~~ ~~CAR 4~~ ~~CAR 14~~	Yes
4.2.2 Have conservative assumptions been used when calculating the baseline emissions?	/1/	DR	Conservative assumptions have been used	~~No~~ ~~CL 9~~ ~~CL 12~~ ~~CL 13~~ ~~CAR 5~~ ~~CAR 7~~	Yes
4.2.3 Are uncertainties in the baseline emission	/1/	DR	Uncertainties are considered in	~~Yes~~	Yes

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
estimates properly addressed?	/5/ /10/ /11/ /28/		accordance with the methodology.		
4.3 Quantifying GHG emissions and/or removals for the project					
4.3.1 Are the calculations documented according to the approved methodology and in a complete and transparent manner?	/1/ /5/ /10/ /11/ /28/	DR	The calculations are appropriately documented.	~~Yes~~	Yes
4.3.2 Have conservative assumptions been used when calculating the project emissions?	/1/	DR	Conservative assumptions have been used, but see discussion of CL 12 and CL 13 for risks to the conservativeness of these projections	~~No~~ ~~CL 12~~ ~~CL 13~~	Yes
4.3.3 Are uncertainties in the project emission estimates properly addressed?	/1/ /5/ /10/ /11/ /28/	DR	Uncertainties are considered in accordance with the methodology.	~~Yes~~	Yes
4.4 Quantifying leakage					
4.4.1 Are the leakage calculations documented according to the approved methodology and in a	/1/	DR	Calculations are appropriately documents in the PD	~~No~~ ~~CL6~~	Yes

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
complete and transparent manner?	/5/ /10/ /11/ /28/				
4.4.2 Have conservative assumptions been used when calculating the leakage emissions?	/1/	DR	Conservative assumptions have been used	~~No~~ ~~CL6~~	Yes
4.4.3 Are uncertainties in the leakage emission estimates properly addressed?	/1/ /5/ /10/ /11/ /28/	DR	Uncertainties are considered in accordance with the methodology.	~~Yes~~	Yes
5 ENVIRONMENTAL IMPACT					
5.1.1 Are there any requirements for an Environmental Impact Assessment (EIA) by applicable legislation or regulation? And if yes, is an EIA approved? Does the approval contain any conditions that need monitoring?	/1/	DR	An EIA is not required /59/.	~~Yes~~	Yes
5.1.2 Is a summary of environmental impact assessment described in the VCS PD when such an assessment is required by applicable legislation or regulation?	/1/	DR	NA	~~NA~~	NA
5.1.3 Does the project comply with applicable environmental legislation?	/1/	DR	DNV reviewed the laws, its requirements, and how the PP was in compliance with the aid of legal experts /59/, /62/	~~Yes~~	Yes

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
5.1.4 Have identified environmental impacts been addressed in the project design?	/1/	DR	The project does not appear to have net negative environmental impacts based on it's status as an avoided deforestation project and its project activities designed to enforce conservation and incentivize reduction of forest clearing.	~~Yes~~	Yes
6 STAKEHOLDERS COMMENTS					
6.1.1 Have relevant stakeholders been consulted?	/1/	DR	Relevant stakeholders have been consulted. The project is currently seeking validation under the CCB standard, and is engaging in significant stakeholder consultations in support of that effort.	~~Yes~~	Yes
6.1.2 Is a summary of the stakeholder comments received provided?	/1/	DR	A summary of comments is provided	~~Yes~~	Yes
6.1.3 Has due account been taken of any stakeholder comments received?	/1/	DR	Comments have been accounted for	~~Yes~~	Yes
6.1.4 Have mechanisms been identified in the VCS PD for on-going communication with stakeholders?	/1/	DR	Appropriate mechanisms are identified	~~Yes~~	Yes
7 SCHEDULE					
7.1.1 Has the chronological plan for the date of initiating project activities, and the date of terminating	/1/	DR	A chronological plan is included in the	~~Yes~~	Yes

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
the project been described in the VCS PD?			PD.		
7.1.2 Has the chronological plan for frequency of monitoring and reporting and the project period, including relevant project activities in each step of the GHG project cycle been described in the VCS PD?	/1/	DR	A chronological plan is included in the PD.	~~Yes~~	Yes
8 OWNERSHIP					
8.1 Proof of Title					
8.1.1 Has evidence of proof of title been provided through one of the following: • A legislative right. • A right under local common law. • Ownership of the plant, equipment and/or process generating the reductions/removals. • A contractual arrangement with the owner of the plant, equipment or process that grants all reductions/removals to the proponent.	/1/ /25/ /26/	DR	Proof of title has been provided	~~Yes~~	Yes
8.2 Projects that reduce GHG emissions from activities that participate in an emissions trading program (if applicable)					
8.2.1 If the project reduces GHG emissions from activities that: • Are included in an emissions trading Program or • Take place in a jurisdiction or sector in which binding limits are established on GHG emissions. Have the project proponents provided evidence that the reductions or removals generated by the project have or will not be used in the Program or jurisdiction	/1/	DR	NA	~~NA~~	NA

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
for the purpose of demonstrating compliance? The evidence could include: • A letter from the Program operator or designated national authority that emissions allowances (or other GHG credits used in the Program) equivalent to the reductions/removals generated by the project have been cancelled from the Program; or national cap as applicable or • Purchase and cancellation of GHG allowances equivalent to the reductions/removals generated by the project related to the Program or national cap.					

Table 2 Resolution of Clarification Requests and Corrective Action Requests

CL1

Standard or Methodology Requirement: VCS standard v3.3 Section 3.9.1

Clarification Request: The VCS has recently replaced the term “mega project” with “large project”and redefined the thresholds by which projects qualify for these designations. Please update the VCS PD to reflect this change. Note that the VCSA has issued new template versions that reflect changes associated with the most recent program updates.

First Round Response

The Project is categorized as Large Project according to the VCS Standard v3.3

First Round validation Team Conclusion

The project has been appropriately classified according to the latest revision of the VCS standard. **Closed**.

CL2

Standard or Methodology Requirement: VM0015 Section 1.1.2

Clarification Request: Specify the coordinate system used for the points listed in tables 5 and 6

First Round Response

Spatial Reference: WGS84, UTM Zone 22 South

First Round validation Team Conclusion

The spatial reference has been appropriately clarified. **Closed**.

CL 3

Standard or Methodology Requirement VM0015 Section 2 (d)

Clarification Request: Provide copies of the imagery used in the analysis “Landsat TM images from more than 10 years before the Project start date have been analyzed to identify only forested areas according to Brazil’s definition of forest” for verification that the project area only includes forested areas. Similarly, please demonstrate that all areas of regenerating forest have been excluded from the project area as mapped and used in baseline analysis.

First Round Response

According to the UNFCCC, Brazil’s definition for forest is 1 hectare with 30% crown cover and 5 meters tree height. http://cdm.unfccc.int/DNA/index.html. The Project Area includes only forest land from more than 10 years before the Project Start date (2008), obtained from satellite imagery multitemporal analysis.

We used classified Landsat 5 TM images for three points in time: 1996, 2004 and 2008, with classes of Forest and Non-Forest. Areas of only forest in the three classified images within the project boundaries are considered as Project Area, this is, forest areas that have not experimented change over time. For this reason, all areas of regenerating forest have been excluded from the project area. Areas covered by clouds or shadows showing not verifiable information were also excluded from analysis.

First Round validation Team Conclusion

The requested images have been provided. **Closed**.

CL4

Standard or Methodology Requirement:VM0015 section 1.3

Clarification Request: The calculations used to estimate the significance of the long-lived wood products pool rely on logging intensity data from Putz et al 2008. These data are based on studies of selective logging. Given that the primary activities identified in the baseline scenario that lead to deforestation revolve around clearing land for agriculture and cattle ranching (complete deforestation), in addition to selective logging (degradation), please justify that the data selected are appropriate for estimating the wood products carbon that would result from the baseline scenario as a whole. We note that the total volume removed from the site clearly differs in the case of deforestation vs. selective logging, and that in some cases deforestation agents make use of wood products in the process of clearing land for purposes other than logging. The analysis should consider land clearing practices used by identified agents of deforestation and whether those agents make use of wood products originating in cleared areas at rates that differ from those of selective loggers.

First Round Response

Long-lived wood products (those that last more than 100 years according to the vm0015 methodology) are made from the commercial wood extracted by logging activities in the area. Logging activities selectively extract all the valuable (and in some cases also not so valuable) species that can be found per unit of area. As explained through this PD once logging activities deplete an area from valuable species, deforestation agents come into play. These deforestation agents either pioneer (squatters) or final land users (ranchers) clear the remaining trees by applying slash and burn. Although these agents may use wood to make fences these won't last more long given the harsh environment of the area, the lack of maintenance and the informality in the area. So, such products do not qualify as long-lived (more than a 100 years according to the definition in the vm0015 methodology).

The other deforestation agents, riberinhos, extract timber as construction materials (subsistence level). According to the PRA riberinhos extract this timber from areas they consider to be under control of the village, which happen to be the area accounted as non-forest or LMA. The LMA, although considered as non-forest, still has forested areas that are not included in the Project Area because either LULC for these areas changed within the past twelve years before the Project start date or because such forested areas do not qualify as forest by the Brazilian definition. Also in the case of wood products made by riberinhos, environmental factors and lack of maintenance create the necessity of often replacing the wood in constructions.

In conclusion, long-lived wood products will be estimated only for the volumes extracted by selective logging operations. As a result from the analysis, carbon stored in long-live wood products is not accounted for because this pool did not pass the 5% significance test (Table 44):

First Round validation Team Conclusion

Please provide additional verifiable evidence in support of the narrative provided about the land clearing practices of ranchers. Please provide a copy of the Imazon 2012 references cited in the response text. Confirmation that the cited figures are appropriate for the land clearing practice being modeled in the baseline will provide adequate evidence for the long-lived wood products aspect of the wood products assessment. However, the revised version of VM0015 also includes calculations for short lived and medium lived wood products (See Tables 15, 16, 20 and section 6.1.2 (e)). Please revise the wood products calculation to consider these classes of wood products as well as described by the methodology (if the calculation still results in an insignificant carbon stock, the pool may be excluded as described in the methodology).

Second Round Response

Literature indicates that the deforestation process (slash and burn) occurs once valuable timber species have been selectively removed. Timber extraction can be conducted by loggers or other agents acting as loggers (squatters or ranchers) (Margulis 2004).

Once valuable timber resources are extracted, Pastures for cattle are implemented (May, Millikan Et al. 2011). Regardless of Who extracts the timber, it Is sold and is destined to make long---lived wood products. The volume of extracted timber indicated by the literature is 30m3/ha for selective logging because of the low Density of valuable species per ha in Latin America (1---5 trees/ha) (Putz, Zuidema

Et al. 2008). Local official data indicates that in 2010 the total volume extracted per hectare was 31.4m3 whereas in 2011 was 29.38m3 (Imazon 2012), making an average of 30.4m3 which coincides with the values provided by The literature. Although There cannot be

Found site---specific information about the fencing practices of local Cattle ranching in the Portel municipality, default half---lives for “products in use” are 30 years for solid wood products, as presented in Table 3a.1.3 of the LULUCF report of the IPCC (IPCC 2003), or a less conservative value of 16 years for fences according to the EFI products use equation (Miner 2006). Given the lack of site—specific data and for the sake of conservativeness, the IPCC value increased in 30% could be used to estimate the half---life of wood fences being weatherized in a tropical area, which results in 39 years. Therefore fences made by ranchers do not qualify as long---lived wood products (wood products are considered permanent where carbon is stored for 100 years or more according to the vm0015 methodology).

Second Round Validation Team Conclusion

The statement that all extracted timber is assumed to end as long lived wood products seems to be inconsistent with the previous response to CL4, which argued that wood products extracted by ranchers and riberenos had shorter life spans than 100 years and therefore did not qualify as long-lived. It seems these uses would, however qualify as short and medium lived products, which are now included in the methodology.

Third Round Response

See document WOOD Products.pdf

Third Round Validation Team Conclusion

The project proponent has provided a quantitative analysis of wood products based on the species and diameters found in the carbon inventory. This analysis indicated that wood products comprise 4.7% of the total avoided GHG emissions and are thus considered insignificant according to the requirements of the VCS standard. **Closed.**

CL5

Standard or Methodology Requirement:VM0015 section 1.1.1

Clarification Request : Provide a more detailed narrative description, supported by supplementary references, statistics, or maps where appropriate, of how the selected reference region meets the criteria related to socio-economic and cultural conditions, similarity of agents and drivers of deforestation, and landscape configuration and ecological conditions.

First Round Response

The RRD encompasses the PB, PA, LMA and LK of the Project and it is just one single, continuous area. The RRD area is 21.6 times the PA thus it complies with the “rule of thumb” for size presented in the vm0015 methodology for projects larger than 100,00 ha (that states the RRD should be between 5-7 times larger than the PA).

In terms of landscape configuration and ecological conditions, these are uniform throughout the RRD. Although some areas may present slights variations in slope, elevation and precipitation fall within the same range in all the areas of the RRD. Vegetation is mostly Ombrophilous Forest with evidence of agricultural plots no further than 3Km from navigable rivers due to cassava crops implemented by riberinhos. The RRD complies with the requirements of the vm0015 methodology in terms of representativeness of the characteristics found in the PA by satisfying at least three out of four landscape configuration and ecological conditions (the PA has a gentler slope than the RRD).

As for agents and drivers of deforestation, the expected agent of deforestation (ranchers) as well as pioneer agents that start the deforestation dynamics (loggers and squatters) are found in the RRD.

In terms of socio-economic and cultural conditions, the RRD complies with all the requirements indicated in the vm0015 methodology. Firstly, the PB is privately owned land (legal tenure requirement) and will remain under the same legal status during the baseline case (legal status of the land requirement). In the RRD exist more privately owned lands (many of them belonging to the same landowner of the PB), which will also remain as private lands in the baseline case and because the PA belongs to the Portel municipality, which composes 39% of the RRD, municipal, regional and national regulations apply to both the PA and the RRD as well as the degree to which law is enforced. (Map XXX). Secondly, the final land-use class expected to occur in in the PA is cattle ranching while small-scale agriculture is already existing in the LMA . In the RRD cattle ranching is the dominant post-deforestation final land-use class but small-scale agriculture can also be found close to rivershores

First Round validation Team Conclusion

The requested clarifications have been made, but see response to CAR 5. CL5 is **closed**.

CL6

Standard or Methodology Requirement: VCS Standard Section 1.1.3

Clarification Request: Provide more detailed documentation and justification of the methods used in the mobility analysis that informs the delineation of the leakage belt. While section 2.3.1 of the PD describes criteria that impact mobility (step a of the analysis as described on pages 26-27 of the methodology), it was not clear how these criteria were used to generate GIS maps (step b) or how the criteria were weighted to determine the leakage belt (step c), and the methods were not clearly documented (step d).

First Round Response

The answer and images are found in a document in dropbox.

GIS layers (shapefiles) used to generate the leakage belt are found in dropbox.

First Round validation Team Conclusion

Additional documentation has better described how the mobility analysis was conducted. Based on the the additional information provided, the auditor has the following additional questions and concerns:

(1) Justify the basis for the assumption that local people will not move beyond 7 km (why not 6km or 8 or 10?). Verifiable sources of information must be used per item (a) of page 26 of the methodology.

(2) The leakage belt analysis is based on local people, but most of the deforestation in the baseline is claimed to be based on the result of the introduction of large scale ranching. The local people in the project area were not observed to conduct large scale cattle ranching. Agents of deforestation that conduct large scale cattle ranching were not observed within 7 km of the project area during the site visit, nor is evidence of this activity present within 7 km of most of the areas predicted to be deforested under the baseline model presented when remote sensing imagery is analyzed. Clearly these agents that conduct large scale ranching must move more than 7 km, as they do not appear to exist in sufficient numbers within 7 km of the project area to cause the degree of deforestation predicted by the baseline model. The leakage belt must be designed such that it considers these agents, which are the main deforestation agents identified.

Second Round Response

The LK for both projects will consider the full extension of the RRD to account for the mobility of the agents.

Second Round Validation Team Conclusion

Inclusion of the full RRD in the leakage belt adequately accounts for the mobility of agents of deforestation. **Closed**.

CL7

Standard or Methodology Requirement: VCS Standard Section 3.1.3

Clarification Request: All tables in the PDF versions of the classification and accuracy assessment documents provided are missing (appear as white space in the documents). Please provide the missing tables.

First Round Response

All tables in the PDF versions of the classification and accuracy assessment documents provided are included.

First Round validation Team Conclusion

The tables have been updated and now appear in the documents. **Closed**.

CL8

Standard or Methodology Requirement: VM0015 section 2.1

Clarification Request: Update table 9 in the PD to conform to the format required by table 5 of the methodology. Please include data detailing spatial and spectral resolution and coverage of each image as required by the table format provided by the methodology. Please update the table to include all images used, including those used for other purposes, such as the Alos Pulsar imagery and Geoeye – Spot imagery discussed in the classification and accuracy assessment documents.

First Round Response

Table 9 was already updated for both PDs.

First Round validation Team Conclusion

The tables have been appropriately updated and are now presented with all of the information specified by the methodology. **Closed**.

CL9

Standard or Methodology Requirement: VM0015 section 3.5

Clarification Request: Provide a more detailed justification for the conclusion that “There is conclusive evidence that future deforestation trends in the RRD and in the Project Area will increase over time.” While the literature referenced provides a convincing narrative about the overall process driving deforestation in the region as a whole, recent data also points to a trend toward decreasing deforestation rates in the Brazilian Amazon and in the state of Pará over the past five years. See, for example:

J. P. Malingreau, H. D. Eva, E. E. de Miranda. 2012.Brazilian Amazon: A Significant Five Year Drop in Deforestation Rates but Figures are on the Rise Again. AMBIO, 41:309–314

In addition, statistics cross-checked online by the validator, as reported by the Brazilian Ministry of Science and Technology indicate that deforestation rates as a whole have decreased in Pará between 2006-2011 (http://www.obt.inpe.br/prodes/index.php).

Based on the evidence provided and published deforestation trends in references cross checked by the validator (which have both decreased and increased in recent years) for the region, the validator concludes that the observed trend is increasing over the periods analyzed in the RRD, but future trends are inconclusive, as different literature sources suggest different conclusions about future rates. In such a scenario, the modeling approach required by the methodology is approach ‘A’ as described on page 50 of VM0015 v1.0.

In light of this, please justify the conclusion that an increasing trend is likely to continue, and that evidence is conclusive, considering the regionwide five year trends reported by national agencies. Additionally, please justify the selection of a baseline modeling approach in the context of the specific criteria provided by section 4.1.1 of the methodology.

First Round Response

There is conclusive evidence that future deforestation trends in the RRD and in the Project Area will increase over time.

Land speculation, lack of law enforcement, negative regulatory incentives, rural poverty and domestic market forces together with the evidence from the historical deforestation analysis show that deforestation rates are not going to slow down in the near-medium future but instead will tend to increase.

Not only it was identified that deforestation in the Legal Amazon had been increasing since August 2010 possibly because of the provisions in the old Forest Code (May, Millikan et al. 2011) but there was a concern about an increase in deforestation if a new version of the Forest Code would reduce forest protection (Barreto 2011). Such concerns have materialize with the approval of the new Forest Code in 2012 (Moran 2011; Adario 2012; BBC 2012).

Such conclusion is also based on the most update official data from INPE – PRODES from 2002 to 2011 we know that although the is a decreasing deforestation trend in Pará (State level and average of 144 municipalities), the is an increasing deforestation trend in Portel (Municipal level and it is also the smallest administrative unit that encompasses the Project). Data from INPE-PRODES is presented below in Table XXX and Figure XXX:

First Round validation Team Conclusion

The evidence provided does not rise to the level of "can be verified at hand of statistical tests, literature studies, or other verifiable sources of information" as specified by the methodology. The project proponents have made several assumptions about the response of deforestation agents to the regulatory and market environment in conclusing that that the deforestation rate will increase. While these assumptions are plausible, they are not conclusive. Statistical analysis conducted by the auditor of the data provided by the proponent does not support the assertion that evidence pointing to an increase in deforestation rates is conclusive. The auditor fit the regression pictured in figure 18 of the PD from the Portel municipality

data provided in Table 22 of the PD to assess the statistical significance of the reported trend. The fitted regression matched the image provided in figure 18 and had a positive slope, but has an R2 of only 0.035 (i.e. it explains 3.5% of the variance in annual deforestation) and a p value of 0.604 (f=0.2913 on 1 and 8 df) indicating there is not statistically significant evidence that there is a linearly increasing temporal trend in deforestation rates. The auditor therefore concludes the evidence about the future trend in deforestation rates is inconclusive. As specified on page 47 of VM0015, "If the historical deforestation trend has been increasing and the evidence is inconclusive, the deforestation rate to be used in the projections will be the average historical rate (see step 4.1.1)."

The validator additionally is concerned that consideration of the Portel municipality alone is not representative of the area from which the deforestation rate has been calculated, as based on the map shown in the PD (map 9), most of the observed deforestation in the RRD is outside of the boundary of the Portel municipality. If the RRD is a credible proxy for the deforestation rate in the project area, any evidence for the future trend in deforestation should be applicable to the RRD as well as the project area.

The project must apply the historical average approach to predicting the deforestation rate as specified by the methodology, or conduct additional analysis to justify the conclusiveness of the assertion that the deforestation rate will increase.

Second Round Response

There is an increase in the deforestation rate however no conclusive evidence emerges from the analysis of agents and drivers explaining the increasing trend thus Approach A “Historical Average” will be used to calculate the quantitative projection of future deforestation.

Although the fact that deforestation in the Legal Amazon had been increasing since August 2010 possibly because of the provisions in the old Forest Code (May, Millikan et al. 2011) and the fact that there is a concern about an increase in deforestation if a new version of the Forest Code would reduce forest protection (Barreto 2011) these assumpltions are plausible but not conclusive.

For the projection of future deforestation in the baseline scenario, approach “A” of the VM0015 methodology was selected, given that the rate of baseline deforestation is assumed to be a continuation of the average annual rate measured during the historical reference period (1996-2008) within the reference region. The past observed deforestation rate is calculated by comparing the area under forest cover in satellite imagery classifications for the reference region at two different times.

According to the VM0015 methodology, the annual rate of forest change must be calculated as follows (equation 4):

Where:

RBSLRRt = Deforestation rate within the reference region (Puyravaud, 2003)

ARRt1 = Area with forest cover at year 1996 (ha) = 1,799,492.8 ha

ARRt2 = Area with forest cover at year 2008 (ha) = 1,452,411.0 ha

t1 = Start date of the historical reference period (year=1996)

t2 = End date of the historical reference period (year=2008)

RBSLRRt = -1.77 %

Second Round Validation Team Conclusion

The project no longer makes the claim of conclusive evidence for an increase in deforestation rate. The project now applies a deforestation rate based on approach A as outlined in the methodology. The approach has been followed appropriately. **Closed.**

CL10

Standard or Methodology Requirement: VM0015 section 4.2

Clarification Request: Provide GIS output files from modeling (for example, files indicating the modeled area deforested in each year) to allow cross checking of areas reported in table 9.**First Round Response**GIS and raster files in the folder "Validation Evidence ADPML and RMDLT> Evidence to respond first round of Observations> CL10"First Round validation Team ConclusionThe files requested have been provided. **Closed**.

CL11

Standard or Methodology Requirement: VM0015 (throughout)

Clarification Request: All tables specified by the Methodology should appear in the PD. When numbers are finalized, please update the PD to include copies of each table requested by the methodology as they appear in the excel sheets “Final Tables RMDLT (or ADPML).”

First Round Response

All tables in the excel sheets are presented in the PD

First Round validation Team Conclusion

The PDs have been appropriately updated. **Closed**.

CL12

Standard or Methodology Requirement: VM0015 section 7.1.2

Clarification Request : Page 89 of the methodology requires that a conservative assumption be made about project effectiveness in estimating ex-ante project emissions. Please provide a justification for the conservativeness of an effectiveness index of one (perfect effectiveness), rather than the effectiveness indices originally provided in the first revision of the PD.

First Round Response

The Project has been effective in identifying illegal logging operations and invasion attempts since 2008 by undertaking on-site patrolling and reporting (refer to Annex 7_Monitoring Reports 2005 to 2011). As mentioned through the PD (particularly in Sections 1.10, 2.4.1, and 2.4.6.3) unplanned deforestation is a process that requires loggers to open roads and squatters to invade the land. For this to happen the management team should have left unspotted illegal logging operations and squattering in the PA to the point that significant extensions of forest are slashed and burned to implement pastures (because squatters will not invade small areas as they are driven by the expectation of selling the land to ranchers). Given the experience gained since 2008 on in-site monitoring and enforcement (which is proven by the fact that squattering initiatives have been stopped over the years as proved in the patrolling reports and no ranching operations can be spotted in the PA during field visits) plus the additional funding to scale-up these activities and involvement of local villagers (the Project has secured funding for implementation for the first three years), the Project is conservative in assuming that it will prevent at least 95% of the deforestation in the project area.

In conclusion, the Project assumes an Effectiveness Index (EI) of one. For that reason, ex ante estimated actual emissions of non-CO2 gasses due to forest fires in the project area is cero for each baseline year.

First Round validation Team Conclusion

While it is plausible that the project would actually prevent all deforestation in the project scenario, such an assumption does not appear to be conservative. The validator recommends applying a more conservative effectiveness index, as the amount of deforestation predicted in the baseline model is very large, the project area is very remote with long transport times between portions of the project area, and at the time of validation that project has not yet worked with local communities to the extent described in the CCB PD and therfore cannot know if such interactions will be effective. Because the ex-ante projections are counter-factual and therefore not verifiable and because ex-ante projections do not impact the actual quantity of baseline emissions or future verified emissions reductions , the validator does not consider this issue material and will not require changes prior to validation. However, there appears to be a risk that the project will not be able to meet the ex-ante projections if an effectiveness index of one is applied. **Closed.**

CL13

Standard or Methodology Requirement: VM0015 section 8.2

Clarification Request: The project description states that the Project's activities are designed to provide all the deforestation agents that arrive to the Project's Boundary with the opportunity to participate. Given the size and remoteness of the project area and the large amount of deforestation predicted in the baseline scenario as currently described, please describe in more detail how the project will detect all deforestation agents that arrive and have the capacity to involve them all in leakage prevention measures.

First Round Response

Since it started in 2008, the Project has been successful in identifying and removing illegal activities such as logging, squattering and attempts to implement pastures (as made evident by the patrolling reports made available to the validation team). A staff of guardians that continuously travel around the Project Boundary has performed monitoring and enforcement from 2008 to 2012, having just a few of them living in specific points of the Project Area. Although it was possible to cover and manage such a large area by using the aforementioned guardians, it will become more effective

and resource-efficient to have monitoring staff actually living within the Project's Boundary. For this reason, from 2012 onwards the Project will scale-up its monitoring activities by employing and properly training local villagers as monitoring staff.

To assure an appropriate coverage and to assure an effective identification of illegal activities and invasion attempts, the Project boundary will be divided in brigades to facilitate monitoring such a large area. Initially, brigades will be constituted by a technician specialized in forestry topics that will function as a manager (it is expected that technicians will not belong to the villages) and a group of villagers as a patrol. With time and as experience is gained, it is expected that brigades managers will be chosen from local villages. The actual size of a brigade and the numbers of villagers to be hired depends on the results from the census that will be conducted after validation. The area of a brigade will need to be a reasonable one to allow for an effective surveillance given available staff. If not enough local villagers are willing to work as monitoring staff; Ecosystem Services LLC will hire technicians from Portel or Breves.

Brigades will conduct regular visits made around the perimeter of the project area to neighboring invader origins to meet and invite participation in leakage preventive measure activities. Brigades will identify and report any illegal activities (invasions and timber extraction) to the brigade leader. If illegal activities are spotted, brigades should geo-reference the finding and make a short description of what was found. Brigades should approach squatters or loggers to let them know –in good terms- that this is private land, they cannot undertake such activities there and they should leave immediately.

With the information supplied by each patrol, brigade leaders will fill –up a monitoring report that will include at least the coordinates where the illegal activities are taking place, the date and a brief report of what was identified. Finally, each brigade leader will submit this information to the local police in Portel and to IBAMA in Portel and in Belem. The efforts of on-site monitoring and reporting will be complemented by monthly flights over the Project Area and by the use of free satellite imagery as it becomes available. Additionally, once a year the Project will use adequate satellite or radar imagery to conduct an assessment of the forest cover in the Project Area and Leakage Belt.

First Round validation Team Conclusion

The response provided addresses patrols, but does not address other project activities. In addition to patrols, the described project activities include community organization, granting of land ownership rights, coordination with local authorities, training and capacity building, implementation of agroforestry, providing capacity building for small business, cook stove pilot projects, and providing capacity building to cattle ranchers. In the description of leakage management activites, VM0015 states "To reduce the risk of activity displacement leakage, baseline deforestation agents should be given the opportunity to participate in activities within the project area and in specially designated leakage management areas (outside the project area) that together will replace baseline income, product generation and livelihood of the agents as much as possible, so that deforestation will be reduced and the risk of displacement minimized." In light of this description, and because patrols are inherently an enforcement activity designed to prevent deforestation within project boundary rather than an activity designed to replace income, product generation, or livelihood (except for the individuals who can be directly employed in patrols), the project activities other than patrols appear to be more relevant as leakage prevention activities. Given the widely dispersed population of currently unknown size in and around the project area, insufficient evidence has been provided that all deforestation agents will be given an opportunity to participate. Given that the validation site visit occurred in 2012, four years after the start date, and that at that time the population size in and around the project area was not known, it does not appear possible that all potential deforestation agents can be given opportunities to participate in project activities, at least in the project's initial four years. The project must further justify or revise the displacement leakage factor.

Second Round Response

The financial proof already approved by the auditor will demonstrate that the project has the ability to generate the monies that will replace the income generation of the ranchers taking advantage of the program activities. See Table 1 below that shows that the costs of replacing the net

income per ha from cattle in the Project Area is manageable as the maximum costs (US$ 95,507) are lower than the expected returns of the Project (refer to the financial evidence for the Project 'Validation Evidence ADPML and RMDLT> Non- Permanence Assessment_Both Projects> ADPML (or RMDLT)_Non Permanence'). A) First, the logic behind what the validator calls "the more conservative leakage displacement factors that were presented in the first revision of the project documents" are no longer relevant here because they are not supported by the methodology. B) Secondly, the agents who will approach the project area are doing so within the Brazilian Constitution of 1988 incentivizes squatters to invade and clear forested land. Under this provision, squatters have the right to claim public or private land that is not under productive use. The Constitution indicates that it is a legal activity to encroach private property if it is not currently being used, so a squatter can acquire land-use rights after one year of occupation and full-ownership after proving 5 years of continuous use, as long as the landowner does not manifest legal opposition (Araujo, Bonjean et al. 2009). So, any land-grabber that claims land and only deforests 20% of his land (following the Parámeters of Law number 4771, September 15th 1965 (D.0.U of September 16th 1965) that state each property must retain 80% of its forested area) will not be breaking the law. Under this reasoning, the Project cannot prevent this otherwise it would be preventing application of the law. However, because of widespread weak law enforcement (Larson 2008), landowners do not keep the required legal reserve and clear all the forest in their properties (May, Millikan et al. 2011). Addressing deforestation by illegal activities, such as deforestation via cattle ranching, is a responsibility of local and regional governments, who haven't been able to resolve this. For this reason, a single project with which funding is based on a voluntary market cannot be asked to solve such a large and complex problem, which requires a large amount of resources to be solved. Nevertheless, based on literature data (Margulis 2004) and projected future deforestation, it would be possible for the Project to address squatters and incorporate them into the activities of the Project.

Based on the baseline deforestation projected into the Project Area and literature values for area extent used by a single rancher, the maximum number of deforestation agents that will encroach the Project Area per year will be eleven (11) as presented in Table 1: Net income from cattle rancher was also obtained from literature and a range is presented in Table 2 where the maximum income per hectare is 102.98 Reais (about US$ 51.49 at current exchange rate) and the minimum is 65.83 Reais (about US$ 32.91 at current exchange rate). Using the values of baseline deforestation projected into the Project Area, the maximum total amount that the Project would need to pay to squatters/ranchers for not clearing the forest and implementing pastures would be US$ 93,507. Such costs are manageable as the costs are lower than the expected returns of the Project (refer to the financial evidence for the Project 'Validation Evidence ADPML and RMDLT> Non-Permanence Assessment_Both Projects> ADPML (or RMDLT)_Non Permanence'). However, it would not be sustainable to compensate each and every squatter that approaches the Project Area just to avoid them deforesting somewhere else because, as mentioned before, this is a problem that needs to be addressed by local authorities and not at a project level. For this reason, the Project will identify and approach squatters/ranchers and invite them to participate in the activities of the Project (a procedure thoroughly described in the answer provided for the second round of this observation).

Instead of offsetting the revenues from avoided cattle ranching it would be better to address squatters/ranchers and invite them to participate in the activities of the Project to provide opportunities to help to replace their baseline income, product generation and

livelihoods: According to the baseline scenario, the expected 11 squatters who will approach the PA each year will be intercepted by the existing patrols. We have already explained that the patrols have been successful thus far to intercept all potential agents on the project boundary to turn them away and keep them from settling and extracting forest resources. With the onset of the funded REDD+ project, the intercepted would-be squatter agents will not only be asked to take part in project activities see, but they also will be asked to become part of the PA patrol system (see Flowchart 1 next page). Starting with the blue box in the upper left, the agents will encroach the Project Area and have the project activity explained to them and be asked if they wish to work as forest monitors in the PA, or work in the social activities taking place in the LMA. Both the forest

monitors and social activity workers in the LMA will be offered an area in which to live in the LMA, applying agroforestry techniques, producing farinha with energy efficient cookstoves, and receive land-user rights in exchange for their conservation results. All participants (including those who choose not to become Project workers) will have the opportunity to gain from capacity building training about improved pasture management).

Those who wish to pursue conservation will assistance to obtain legal land titles. Those choose not to participate may decide to claim land outside the boundary and their locations and whereabouts will be reported to IBAMA. Since all of the projected squatters will be offered participation in work opportunities to offset and replace their income and program activities to live and pursue conservation, the Leakage Displacement Factor will be 0%.

Second Round Validation Team Conclusion

Additional justification for the leakage displacement factor has been provided. The validator cannot confirm, however, that is is conservative to assume that there will be no leakage displacement. However, because the ex-ante projections are counter-factual and therefore not verifiable and because ex-ante projections do not impact the actual quantity of baseline emissions or future verified emissions reductions , the validator does not consider this issue material and will not require changes prior to validation. There remains a risk that, should displacement leakage occur, the *ex-ante* estimated emissions reductions will not be achieved. **Closed**.

CL14

Standard or Methodology Requirement: AFOLU Non-Permanence Risk Tool section 2.2.1

Clarification Request: Describe how the experience of the management team is 'significant,' and equivalent to having successfully managed projects through validation, verification, and issuance of credits under an approved GHG program in order to qualify for the mitigation credit under the project management risk category (e). Evidence provided should include a list of other AFOLU projects that the management team has previously designed, implemented, and managed through validation, verification and credit issuance.

First Round Response

Refer to Validation Evidence ADPML and RMDLT> Non-Permanence Assessment_Both Projects> RMDLT_Non Permanence> RMDLT non-permanence.pdf

First Round validation Team Conclusion

The revised non permanence risk report contains a list of projects in which members of the current project development team has participated. Searching the project titles provided on the VCS database did not yield results. Please provide copies of the project design documents and validation and verification reports to verify that the projects have been managed through validation and verification as claimed and that the projects were implemented under an approved GHG program. The auditor contacted the VCS to determine which GHG programs are considered approved programs. The VCS indicated that the approved programs are the Climate Action Reserve and UN Clean Development Mechanism or Joint Implementation programs. To achieve the mitigation credit, please provide evidence that the projects listed have been validated and verified(or their equivalent) under one of these programs.

Second Round Response

The management team does include individuals with the adequate experience and skills to successfully undertake all project activities. However, the team does not have experience in verification and issuance.

Second Round Validation Team Conclusion

The risk score as been appropriately updated. **Closed.**

CL15

Standard or Methodology Requirement: AFOLU Non-Permanence Risk Tool section 2.2.2

Clarification Request: Provide supporting evidence to verify that funding has been secured as reported in the provided financial analysis spreadsheet. According to the AFOLU Non-Permanence Risk tool, "Projects may demonstrate that funding has been secured through, for example, financial statements, bank records, executed commodity purchase agreements, executed emission reduction purchase agreements, or other signed contractual agreements".

First Round Response

[The requested supporting financial documents were provided]

First Round validation Team Conclusion

The requested evidence has been provided. **Closed**

CL16

Standard or Methodology Requirement: AFOLU Non-Permanence Risk Tool section 2.2.2

Clarification Request: Provide supporting evidence to verify that the project has additional callable financial resources as reported in the risk assessment. According to the AFOLU Non-Permanence Risk tool "callable financial resources are those not included in secured funding, but that are readily available to the project. The availability of such resources may be indicated through letters of credit, revolving credit lines or other financial backing, as evidenced by signed agreements and which demonstrate the project's ability to access funding as needed."

First Round Response

[The requested supporting financial documents were provided]

First Round validation Team Conclusion

The requested evidence has been provided. **Closed**.

CL17

Standard or Methodology Requirement: AFOLU Non-Permanence Risk Tool section 2.2.1

Clarification Request: Provide a copy of the adaptive management plan described in the AFOLU non-permanence risk assessment for review.

First Round Response

Refer to Validation Evidence ADPML and RMDLT>Annexes Both Projects> Annex 8_Adaptative Management Plan

First Round validation Team Conclusion

A copy of the requested plan has been provided. **Closed**.

CL18

Standard or Methodology Requirement: AFOLU Non-Permanence Risk Tool section 2.2.4

Clarification Request: Provide a copy of all documents that establish a legally binding commitment to continue management practices that protect the credited carbon stocks over the length of the project crediting period and over 100 years. The validator notes that a conservation easement statement dated August 3, 2012 has been provided that states an intent to implement a "fully developed and legally binding conservation agreement upon the sale of the first verified carbon credit vintage," but that statement itself does not constitute a legally binding agreement. Should a legally binding agreement not currently exist, the risk scores applied must be adjusted to reflect this fact.

First Round Response

Refer to Validation Evidence ADPML and RMDLT> Evidence to respond first round of Observations> CL18 Conservation Easements

First Round validation Team Conclusion

A copy of the easement requested has been provided. **Closed**.

CAR1

Standard or Methodology Requirement: VCS Standard Section 3.1.3

Corrective Action Request: The project applies VM0015 V1. According to the VCS webpage for the methodology, As of 30 September 2012, VM0015, v1.0 is no longer valid. Projects that have not completed validation by 30 September can no longer apply VM0015, v1.0. The project must apply an approved methodology.

First Round Response

The project now applies version 1.1 of VM0015.

First Round validation Team Conclusion

The methodology has been updated and is now valid. **Closed**

CAR2

Standard or Methodology Requirement: VM0015 Section 1.3

Corrective Action Request: According to VM0015 V1, litter is to be excluded from the project boundary. The project presently includes the litter pool. The project's GHG calculations must be re-assessed to exclude this pool. (Note that the project proponent has indicated that this may be changed in version 2 of the methodology. This CAR will be withdrawn if, after V2 of the methodology is approved, it is shown to include the litter pool).

First Round Response

The project now applies version 1.1 of VM 0015. The revised methodology includes litter.

First Round validation Team Conclusion

The methodology has been updated and now includes litter. **Closed**

CAR3

Standard or Methodology Requirement: VCS Standard section 3.1.5; VM0015 appendix 5

Corrective Action Request: Section 4.1 of the VCS PD must include each of the data and Parámeters available at validation used that are relevant to the project, as listed in appendix 5 of the methodology. As currently provided, many Parámeters are not included and notation is not consistent with that given in the methodology. Please ensure that the description of each selected data source describes how it conforms with the rules of the VCS standard section 3.1.5 (which includes by reference the rules of sections 4.1.7 and 4.5.6(1-9) of the VCS standard version 3.3).

First Round Response

See Section 4.2 Data and Parámeters Available at Validation

First Round validation Team Conclusion

The required Parámeters are now described. **Closed.**

CAR4

Standard or Methodology Requirement: VCS Standard section 3.1.5; VM0015 appendix 5

Corrective Action Request: Section 4.2 of the VCS PD must include each of the data and Parámeters listed in appendix 5 of the methodology that are monitored and that are relevant to the project (i.e. those that are listed as 'annually' in column 7 of the table in appendix 5 of the methodology). As currently provided, many Parámeters are not included and notation is not consistent with that given in the methodology. For each Parámeter please ensure that appropriate monitoring protocols are included in the monitoring plan as described on page 107 of the methodology.

First Round Response

See Section 4.2 Data and Parámeters Monitored

First Round validation Team Conclusion

The required Parámeters are now described. **Closed.**

CAR5

Standard or Methodology Requirement: VCS Standard section 3.1.5; VM0015 section 1.1.1

Corrective Action Request: Section 1.1.1 of the methodology defines criteria for delineating a reference region. Among these criteria is "A geographic area is relevant for determining the baseline of the project area when agents, drivers and overall deforestation patterns observed in it during the 10-15 year period preceding the start date of the proposed AUD project activity represent a credible proxy for possible future deforestation patterns in the project area" (pg. 21). The reference region selected appears to differ from the project area in several fundamental ways that cast doubt upon the credibility of its use as a proxy for expected deforestation in the project area:

-nearly all of the deforestation observed in the reference region appears to have been carried out by cattle ranchers, a deforestation agent that does not appear to be currently present in or immediately surrounding the project area. Only evidence of pressure from small scale agriculture and selective logging was observed during the site visit. No evidence of large scale cattle ranching was observed.

-Spatial patterns of deforestation in the reference region are clearly primarily facilitated by access from primary and secondary roads. No primary and secondary roads are identified in or adjacent to the project area. Only pioneer roads, consistent with selective logging, were observed in the project area during the site visit.

-Access to the project area is by boat and requires upward of 20 hours of transport time, whereas areas deforested in the reference region were clearly accessed from highways.

The project must define a more credible reference region or provide additional evidence that the reference region selected provides a credible proxy for expected deforestation patterns in the project area.

First Round Response

See Section 2.3.1.1. Reference Region for Deforestation

First Round validation Team Conclusion

The project proponent has provided anecdotal evidence that at least some cattle ranchers have expressed interest in the project area in the form of reports from patrols carried out by representatives of the landowner. However, the project has not provided adequate evidence to address the validators' concerns about fundamental differences between access to the project area and access to the deforested portions of the reference area or the difference in the type of roads present in the reference area and the project area. The validator has not seen sufficient evidence to conclude that the reference region provides a credible proxy for expected deforestation patterns in the project area.

Second Round Response

Access to the area follows a multi-modal dynamic where transportation. Although public transportation to the area is by boat (which takes around 20 hours of travel), agents of deforestation also reach the area by road through a series of unofficial roads (secondary

and tertiary) already connected to the network of the Transamazonica. Multi-modal dynamics of transportation in the area have been identified by local literature as interfluvial terra firme logging where logging takes place in both varzea (estuary and along the main stems of the Amazon River) and terra firme (along government highways) zones (Uhl, Barreto et al. 1997). Although there is not an official map of this road network, agents of deforestation seemed to know and use these roads since 2005-2006 when monitoring reports indicate the presence of ranching initiatives in areas

as far as 100Km from official roads. The presence of such initiatives in such a distant area indicates that ranching products could be transported to the closest slaughterhouse that is in Altamira along the Transamazonica highway (Map 11). It is logical to expect that access to the Project Area will increase in the baseline scenario if by then end of the historical reference period (1996 to 2008) unofficial roads density in the RRD was 1,666 Km/104Km (an increase of 282% between 1996 to 2008) whereas site-specific literature indicates that average density of unofficial roads in 40% of the State of Pará is 591Km/104Km (da Silva Viana, Fonseca et al. 2009). For these reasons it can be conclude that the Project Area and the RRD share similar access and such is expected to increase in the baseline scenario.

2. Difference in the type of roads present in the reference area and the project area:

Although vicinity to primary roads initiated deforestation during the historical period, resource depletion and high mobility allowed loggers to encroach from new frontiers (May, Millikan et al. 2011). Such is made evident by the aggressive growth in the network of unofficial roads (Uhl, Barreto et al. 1997; Brandão Júnior, Souza Júnior et al. 2007) that expanded almost up to the junction of the Anapu and Pacaja rivers by merging with pioneer roads (map 16 of the PD). The development of pioneer roads and their expansion was also made evident by a Map of digitized roads based on Landsat TM imagery from 1996 and 2008 (see map 16 of the PD). This roads map shows how tertiary roads in the Project Area and its vicinity extend for kilometers, merging with secondary roads until eventually reaching the BR-230 and PA-167. This finding is also supported in the literature, which states that timber operations can expand road networks for hundreds of kilometers (Uhl, Barreto et al. 1997). Although the digitized road network does not appear to be continuous up to the BR-230 and PA-167 (some sections seem to be “cut” by the forest canopy); this is explained by the literature that says logging and deforestation agents would leave some trees with large canopy to hide their activities from airborne surveillance until at some point, when all the remaining forest has been cleared and their activities are made evident but are irreversible (Margulis 2004). As mentioned in the answer for the first round of observations, literature recognizes that the increase in deforestation is more correlated to unofficial roads (secondary, tertiary) than to official roads (primary). A study held in Brazil in 2007 shows that deforestation in the Legal Amazon is explained largely by the presence of unofficial roads. Such study indicates that 71% of all mapped roads are classified as unofficial and that 65% of all deforestation in 2003 and that 69% of the increment in 2004-2005 deforestation was located in the vicinity of unofficial roads (Brandão Júnior, Souza Júnior et al. 2007).

In addition, unofficial roads (i.e. secondary, tertiary, and logging roads or pioneer) typically facilitate occupation by land grabbers, ranchers and squatters, and eventually lead to clearcutting once these spontaneous transport corridors permit market access

(May, Millikan et al. 2011). Furthermore, literature indicates that logged areas (which are defined by the presence of tertiary roads) have a high likelihood of being deforested (Asner, Broadbent et al. 2006). The following images taken from Landsat scenes in the vicinity of the Project show how tertiary roads are responsible for the increase in deforestation in the area. For these reasons, although there aren’t official roads nearby or crossing the Project Area, local literature and data from the historical reference period indicate that an increase in density of tertiary roads and their associate deforestation can be expected in the baseline scenario thus generating similar deforestation patterns to those found in the RRD.

Second Round Validation Team Conclusion

Bullet point one**:** This is a feature of the methodology rather than a project-level justification of why reference area selected is appropriate to the project. The methodology still requires that the selected RRD represent a credible proxy for expected deforestation in the project area. The audit

team has not seen sufficient evidence that the selected reference region represents a credible proxy for the deforestation rate expected in the project area in the absence of the project.

Bullet point two: The response seems to imply that deforestation since the start of the historical reference period is not generated due to access by BR-230 and PA-167, whereas deforestation before the start of the historical reference period was generated due to this access. Such a distinction seems artificial and not supported by clear evidence. The spatial patterns in the two images provided in the response document still appear to be facilitated by the road access described. The areas near the official roads still do not appear to represent a credible proxy for the deforestation rate in the project area, which is quite distant from official roads.

Point 2 Evidence regarding the replication of a similar deforestation pattern by the network of unofficial roads:

The response here seems to confuse the validator's concerns about the deforestation RATE being modeled with concerns about the model used to predict the spatial location of deforestation. The selected methodology distinguishes between prediction of the deforestation rate and prediction of the spatial location of deforestation. The validators believe that the distance from unofficial roads is indeed an appropriate metric for predicting the location of deforestation. The concern arises from the fact that the project proponent has defined the RRD by including an area with both major, official roads and a much better developed network of unofficial roads than that found in the project area. We do not believe this area represents a credible proxy for the expected deforestation *rate* in the project area because of these fundamental differences in the access to the area by agents of deforestation. The spatial modeling approach of predicting the spatial location of deforestation as a function of distance to roads (both official and unofficial) seems to be appropriate and justified, but the area from which the deforestation *rate* is calculated does not seem to have the same characteristics as the project area.

The distinction between "tertiary" and "secondary" roads discussed in the response is very difficult to verify. While the classification of certain roads within the project area as secondary may be appropriate, there is not evidence that it is appropriate to classify all roads in the project area as secondary. Even if all the roads were to be classified as "secondary", that does not mean that those roads would be expected to experience deforestation at the same rate as those secondary roads that are immediately connected to highways. The roads observed by the validation team during the site visit did not consistently show signs of frequent persistent use – many had become overgrown and would be difficult to travel in a vehicle without first conducting substantial maintenance. The argument that unofficial roads in the project area behave as secondary, rather than tertiary roads is not consistent with the validators' observations:

- Though some of the roads digitized appear to connect to existing road networks, many do not
- Some of the roads observed by the audit team during the site visit were clearly in a state of abandonment. This is consistent with the description of tertiary roads provided in the Goodrich-Stuart paper.
- No evidence of long term profitable use of these roads beyond timber extraction was observed by the audit team. The project proponents provided anecdotal evidence that cattle ranchers have expressed interest in the area in the form of reports of patrols, but no cattle ranching has actually been observed. We do not know if the development of such ranching would be expected to occur at the same RATE as has been observed near the highways, but substantial differences between the areas appear to be present.

Additionally, figure 9 of the Goodrich---Stuart 2012 paper provided seems to directly contradict the argument that including the highway and areas immediately surrounding it is a credible proxy for the rate of deforestation expected in the project area. This figure shows a clear and strong relationship between distance from a highway and deforestation rate, in which deforestation rates decrease quickly up to about 21 km from the highway, then are relatively static. Many portions of the project area are more distant from highways than even the furthest extent of the x axis of that figure.

To be clear, the concern here is about the suitability of the RRD as a credible proxy for the RATE of deforestation in the project area. We agree that some degree of deforestation would likely occur in the project area in the absence of the project, and that that deforestation would be likely to occur first in areas that are near roads (whether they be official or unofficial). We have not seen evidence, however, that the rate at which that deforestation would occur would be the same as the rate observed in the RRD, which includes a very different network of roads and different means of access to the forest than that observed in the project area.

In conclusion evidence that allows for the validation of the RRD as presently defined has not been presented.

Third Round Response

1. Evidence to address the selected Deforestation Rate:

Deforestation rate has been calculated for the whole reference region thus considers large extensions of forest that do not change over the historical period as well as areas that turn into non---forest by the expansion of ranching activities. For this reason the calculated deforestation rate has been applied equally to the whole RRD. It is the model that localizes the deforestation generated by the deforestationrate according to the historical relevance of the variables. There is no arguing about non---forest in the RRD at the start of the historical reference period was generated due to the access provided by official (BR—230 and PA---167) and some unofficial roads as

Identified by a 1996 Landsat image. However, such non---forest was already present at the start of the historical reference period so it does not account as an“increase” in Deforestation so it does not Influence the deforestation rate (Map1)

2**.** Evidence regarding the replication of a similar deforestation pattern by the network of unofficial roads (tertiary and secondary)

The pattern of deforestation increase during the historical reference period in theRRD is also explained by a study held in Brazilin 2007that covered 78% of Legal Amazonia. This study showed that the increase in deforestation in the Legal Amazon is explained largely by the presence of unofficial roads. Such study indicates that unofficial roadsexplain 73% of the increase in deforestation in 2003 and 89% of the increase in deforestation in 2004—2005 (BrandãoJúnior,SouzaJúnioretal.2007). This same study showed that although deforestation decreases in areas distant from all roads, over time the increase in deforestation not only occur farther from official roads but also around a larger area from unofficial roads (Brandão Júnior, Souza Júnior et al. 2007). The increase in deforestation is driven by better access to forested areas through denser roads networks. Literature indicates that while public highways have caused localized deforestation, the lack of Parállel access outside of these roads leaves large tracts of forest intact. Unofficial roads, however, form extensive, dense networks to support transportation of resources being harvested or extracted and can exacerbate deforestation (Tyrrell, Ashton et al. 2009). In addition, roads built by local individuals, particularly loggers, represent a much greater immediate threat to the integrity of Amazonian forests than the sparse federal system, given the extent of the road system already in place and the size and increasing profitability of the Amazonian logging sector (Arima, Walker et al. 2008). According to literature whereas tertiary roads are used for temporary access to resources and provide only one---time, or limited, use “to pull out a single tree bole”, secondary roads are more often trafficked. Tertiary roads use time often “ends when profitability does”. In addition, while secondary roads often exist attached to primary roads, some secondary or “access” roads have been constructed without primary road connection (Goodrich--Stuart2012). According to these definitions,although unofficial roads in the Project Area and its vicinity are not always directly attached to an official road, they behave as secondary roads because: o Get access to a primary road through the existing road network as proved by the digitalized

roads using Landsat imagery. o Persist over time so they must be often trafficked and are not temporary o Provide access to areas with long—term profitability beyond timber extraction: it has been demonstrated in the baseline scenario that the main driver of deforestation for squatters/ranchers is land speculation followed by the earnings of meat sales.

Third Round Validation Team Conclusion

With the third response, the project developer submitted a significantly revised spatial deforestation model. The revised model distinguishes between official roads and unofficial roads, and significantly modified the predicted patterns of deforestation. The result of the modification to the model was a dramatic reduction in the predicted area of deforestation that falls within the project area under the baseline scenario. The validation team reviewed the revised model and determined that, although the reference area had not changed, it sufficiently accounted for the proximity of deforestation to major roads and the spatial pattern of movement of cattle ranching toward the project area from its' initial location near the major highways. The revised model appropriately assigned deforestation to spatial locations as reflected by access constraints and resulted in closure of the finding. **Closed.**

CAR6

Standard or Methodology Requirement: VM0015 section 1.1.2

Corrective Action Request: At the project start date, all lands included in the project area must be forested (VM0015 section 1.1.2). Maps of forest cover (for example, the provided 2008 forest benchmark map) identify some areas within the project boundaries that are non-forest. No delineation of the project area has been provided that excludes these non-forest areas. The project area maps must be revised to exclude all non-forest areas.

First Round Response

Methodology for delineation of the Project Area is indicated in the answer to CL3, where it is explained that the Project Area, which is found within the project boundaries, includes only forest land from more than 10 years before the Project Start date (2008) and excludes non-forest areas. This was obtained from satellite imagery multitemporal through GIS analysis.

Maps of Project Area at the start date (2008) are provided in the dropbox folder related to this CAR. GIS files in shapefile format (polygons created by conversion of originally raster Project Area file to vector) showing the delineation of the project area are also attacched.

First Round validation Team Conclusion

An appropriate shapefile of the project area that excludes non-forest areas has been provided. **Closed.**

CAR 7:

Standard or Methodology Requirement: VM0015 section 1.1.2

Corrective Action Request: The documents “Report Modeling Deforestation…” indicate that digitized roads from satellite imagery were included in modeling as planned infrastructure. The methodology requires that areas affected by planned infrastructure must be excluded from the project area (VM0015 section 1.1.2, page 23). Further, section 4.2.1 (pg 60) states that “In case of planned infrastructure (e.g. roads, industrial facilities, settlements) provide documented evidence that the planned infrastructure will actually be constructed and the time table of the construction. In case of planned new roads, road improvements, or railroads provide credible and verifiable information on the planned construction of different segments (e.g. how many kilometers will be constructed, where and when). Evidence includes: approved plans and budgets for the construction, signed construction contracts or at least an open bidding process with approved budgets and finance. If such evidence is not available exclude the planned infrastructure from the factors considered in the analysis.” The project must provide evidence of the planned infrastructure development that meets these requirements, and define the project area such that any areas of planned infrastructure are excluded. Note that if infrastructure is reclassified as unplanned, specific procedures apply on pages 60-61 of the methodology as well.

Finally, please provide copies of the images from which data on road locations were digitized in order to allow for the verification of the datasets.

First Round Response

A recent update of the documents "Report Modeling Deforestation…" was performed to exclude sections 5.3 (Incentive maps) and 5.4 (Planned infrastructure) from the previous version of these reports as these factors are no longer being considered in the analysis to run the new deforestation model.

First Round validation Team Conclusion

Consideration of planned infrastructure was removed from the project. Only existing infrastructure was used, which is visible in provided imagery. **Closed.**

CAR8

Standard or Methodology Requirement: VM0015 section 1.1.4

Corrective Action Request: Section 1.1.4 of the methodology requires that the boundary of leakage management areas be clearly defined using the common projection and GIS software formats used in the project and shall be reassessed and validated at each fixed baseline period. Please provide a map and GIS files of all leakage management areas.

First Round Response

The boundaries of Leakage Management Areas have been defined in GIS raster format and based on classified Landsat TM images. It is currently in these areas that Riberinhos live and where the Project Activities will take place. Only non-forest areas within the Project Boundaries in at least one of the classified images are considered as LMA. Areas of No Data (clouds and shadows) and other classes (water) are excluded from this analysis.

Maps of Leakage Management Areas and Project Area are provided in the dropbox folder related to this CAR. GIS files in shapefile format (polygons created by conversion of originally raster files to vector) showing the delineation of the Leakage Management Areas are also attached.

First Round validation Team Conclusion

Appropriate maps of leakage management areas have been provided. **Closed**.

CAR9:

Standard or Methodology Requirement: VM0015 section 2.4.3

Corrective Action Request: No map depicting the category “deforestation” for each sub-period analyzed has been provided as required by section 2.4.3 item (c) of vM0015 (page 41). Additionally, no land-use and land use cover change maps has been provided as required by item (d) (maps in the folder labeled LULC change actually depict land use at a fixed point in time, rather than change in land use) Please provide appropriate maps as listed by the methodology.

First Round Response

Maps depicting the caregory "deforestation" for periods 1996-2004, 2004-2008 and 1996-2004-2008 are presented as JPG files and GIS raster files.

Land Use/Land Cover (LULC) change maps for period 2004-2008 are presented as JPG files and GIS raster files.

First Round validation Team Conclusion

Appropriate maps have been provided. **Closed**.

CAR10:

Standard or Methodology Requirement: VM0015 section 4.1.2

Corrective Action Request: The project documentation does not include a constraint analysis as required by section 4.1.2 of the methodology (VM0015 V1).

First Round Response

The requirement for a constraint analysis has been removed from version 1.1 of VM0015.

First Round validation Team Conclusion

The requirement for a constraint analysis has been removed from version 1.1 of VM0015. **Closed.**

CAR11: Number 11 was inadvertently skipped in numbering. There is no CAR 11.

CAR12

Standard or Methodology Requirement: VM0015 section 4; VCS Standard section 3.1.4

Corrective Action Request: The methodology seParátes projection of the rate of deforestation from prediction of the spatial areas of deforestation (page 51). The annex describing modeling procedures focuses on the process used to predict the spatial location of future deforestation, providing minimal details on the procedures for calculating the rate. Please clearly and transparently describe the form of the baseline model applied for predicting the future deforestation rate and demonstrate that this model conforms with statistical good practice. In addition, please demonstrate that the model conforms with the requirements of the VCS Standard version 3.3 section 3.1.4 (which includes section 4.1.6(2)-(6) by reference). In particular, demonstrate that model uncertainty has been assessed and discounted in accordance with sections 4.1.6 (4-6) of the VCS standard.

First Round Response

Revised Section 3.1.1 and Section 3.1.3

First Round validation Team Conclusion

The model used to predict the rate of deforestation is now more clearly explained. However, based on the response to CL 9, the auditor believes that approach A is required by the methodology for predicting the deforestation rate. Under the guidelines for selecting a baseline approach in section 4.1.1 of the methodology, approach c is applicable only if conclusive evidence is available to predict the deforestation rate and the deforestation rate can be explained by independent driver variables for which historical data and a credible future projection based on documented and verifiable sources is provided (page 57). Based on the response to CL 9, it does not appear that conclusive evidence is available about the

future deforestation rate. Further, based on the description in 3.1.3 of the revised PD, the model used for the deforestation rate does not express deforestation as a function of driver variables as described on page 48 of VM0015, but rather expresses deforestation as a function of past observed deforestation rates. In such a case, the project must use the approach to estimating deforestation based on past observed rates specified by the methodology. [This finding was **closed** after the approach to predicting the rate of deforestation was modified as described in the exchange around CL 9.]

CAR13

Standard or Methodology Requirement: VM0015 section 4.2.2

Corrective Action Request: The methodology requires that "A list of Factor Maps, including the maps used to produce them and the corresponding sources shall be presented in the PD (table 10) together with a flow-chart diagram illustrating how the Risk Map is generated" (VM0015 V1 section 4.2.2). No list conforming to the format prescribed by table 10 of the methodology has been provided, and no flowchart is included in the PD. Please update the PD to include these elements.

First Round Response

Flowcharts of Risk Maps and Table 10 of VM0015 included in the folder of dropbox

First Round validation Team Conclusion

The required documentation has been added to the PD. **Closed**.

CAR14

Standard or Methodology Requirement: VM0015 (miscellaneous sections)

Corrective Action Request: The following errors or inconsistencies were noted in the spreadsheet "Carbon results_Overmann 1994":

1. The calculation of biomass in annual crops does incorporate uncertainty.

2. Column N of the aboveground biomass calculation uses a carbon fraction of 0.47, whereas 0.5 is used elsewhere in the project's calculations.

3. Line 1698 of the Trees_equations sheet does does not calculate DAP from circumference.

4. For several trees in the Trees_equatons sheet, the biomass as predicted by the Overman equation is not converted to Tons (column Z).

5. The validator could not trace column F of the sheet 'Aboveground Biomass Data' back to the calculation of aboveground biomass of individual sampled trees. For example, for map point 0, column E lists an aboveground biomass of 864.604 tons/ha. However, a pivot table summing individual tree biomass as calculated by the Overman equation in columns Yand Z of the "Trees_equatons" sheet provides an aboveground

biomass of 550 tons/ha for this plot. Please correct the discrepancy or clearly demonstrate how the correct biomass for each measurement plot is calculated and populated in the Above-ground Biomass Data sheet from which carbon stock calculations and uncertainty assessments are based.

6. In the Above-ground Biomass Data sheet, belowground biomass appears to have been calculated by a method other than the root to shoot ratio method prescribed on pages 144-145 of the methodology.

7. Cell E39 of the Above and Below-ground Biomass sheet adds the uncertainty deduction, rather than subtracting it.

8. The calculation of belowground carbon in cell P39 applies an aboveground biomass that includes litter in the belowground biomass calculation.

9. In the stock changes sheet, cropland stocks are not considered in the weighted average calculation.

10. A 2% weighting factor is applied in cropland calculations in the “With Decay” sheet, but a 98% weighting factor does not appear to be applied in grassland calculations.

First Round Response

Refer to Validation Evidence ADPML and RMDLT>Annexes Both Projects> Annex 6_Calculations for the Carbon Inventory

1. Biomass in annual crops has been increased in 75% to account for defaul uncertainty

2. Column N has been corrected to use 0.5 as cabon fraction

3. Line 1698 of the Trees_equations sheet now calculate DAP from circumference

4. All trees in the Tees_equations sheet now have their biomass expressed in Tons (column Z)

5. Colum F of the sheet 'Aboveground Biomass Data' can now be traced to Column AA of the sheet Trees_equations

6. Belowground biomass values in the Above-ground Biomass Data sheet have been removed because they did not followed the root to shoot ratio prescribed on pages 144-145 of the methodology. Actual belowground biomass values used to calculate the carbon stock change factor can be found in Column P of the Above and Below-ground Biomass sheet. The value is calculated using a root to shoot ratio of 0.22.

7. Cell E39 of the Above and Below-ground Biomass sheet now subtracts the uncertainty.

8. TO BE RE-ASSESSED ONCE THE NEW VERSION OF THE VM0015 IS RELEASED

9. Cropland is not considered in the weighted average calculation because only Grassland is considered a final post-deforestation land-use. Because the carbon stock in Grassland is higher than in Cropland, this assumption is considered to be conservative

10. The 'With Decay' sheet has been removed because such calculations were not included in the calculations fot he stock change factor

First Round validation Team Conclusion

The spreadsheet errors have been corrected. **Closed.**

CAR15

Standard or Methodology Requirement: AFOLU Non Permanence Risk Tool Section 2.2.1

Corrective Action Request: Though the risk assessment states that after the project is validated the management team will implement additional offices and expand their presence in the project area, the validator cannot yet verify that this has been completed. During the site visit, travel of greater than 1 day was required to reach even the least remote portions of the project area. Consequently, the validator concludes that a score of 2 applies for project management factor (d).

First Round Response

Buffer ranking has been corrected. Please refer to:

Refer to Validation Evidence ADPML and RMDLT> Non-Permanence Assessment_Both Projects> ADPML_Non Permanence> ADPML non-permanence.pdf

First Round validation Team Conclusion

The non permanence risk report now applies a score of 2 to project management factor (d). **Closed**.

CAR16

Standard or Methodology Requirement: AFOLU Non Permanence Risk Tool Section 2.3.2

Corrective Action Request: The community engagement risk factor assessments state that the project area is farther than 3km from river shores. However, the kml files of the project boundary and maps provided in project documentation show the project boundary directly adjacent to rivers in several areas. Please resolve the discrepancy.

First Round Response

As indicated in Annex VIII: Social Assessment, local livelihoods depend on the resources within a buffer of 3Km from the rivers shores, which within the Project's Boundaries constitute the Leakage Management Area. Such delimitation responds to the fact that riberinhos move around the area by foot and, in their own words "it is exhausting and dangerous" to cover greater distances to conduct agriculture or to extract timber as raw material. It is also in this 3Km buffer where riberinhos collect timber as raw materials for their constructions. However, riberinhos do not occupy the shores of every single river in the area thus in some cases the Project Area can be delimited by a river. It is only when settlers' activities have been historically present in the area that this 3Km buffer is identified.

First Round Validation Team Conclusion

Based on the observations of the site visit, there are households living inside the project area and within 20 km of the project area that are reliant on the project area. The argument that villagers in the area don't rely on resources from the project area is not consistent with the observations of the site visit. The incomplete census of inhabitants of the area makes it very difficult to state with confidence that riberinhos are or are not present in specific portions of the area. Additionally, the project boundary does not appear to exclude all forested areas within three kilometers of known populations. Adequate evidence has not been provided that the requirements of the application of a risk score of 0 for the community engagement factors have been met, and it appears impossible to assess the degree to which households have been consulted without first conducting a census of all households to determine the population size and degree to which those households rely on the project area.

Second Round Response

(Proponent) According the results from our PRA the only people reliant on the Project Area are those riberinhos living in the LMA who conduct their agricultural activities no farther than 3Km from river shores. Such people use non-timber resources from the

Project Area (i.e hunting) but would not undertake agricultural activities farther than 3Km from rivershores because it is exhausting to cover greater distances by foot on a daily basis (based on the results of our PRA and witnessed by the CCB audit team during onsite

inspections). Also, riberinhos' economic activity - farinha sale- depends on the river (washing, peeling, and drying cassava as well as cooking and selling farinha). Farinha is sold either at the rivershores to itinerary merchants or transported by boat to Portel.

Therefore, covering large distances by foot does not make sense to them. For this reason, riberinhos do not claim land-use rights or livelihood activities farther than 3Km. The only time riberinhos go beyond 3Km is when they hunt and need to go into the

forest, which is part of the Project Area. As for fuel and construction materials, the CCB auditor has approved the evidence

presented in the CCB PDD. Regarding fuel wood it is obtained from the residual timber left after the clearing of capoeiras (regenerated forest) by slash and burn. Timber as a construction material is collected in the LMA from the forested patches that did not make the cut to be considered part of the Project Area. Therefore there is no evidence that indicates that riberinhos from a surrounding area of 20Km will rely on the Project Area for essential food, fuel, or building materials.

The Project won’t prevent local people from continuing their food-gathering activities in the Project Area, as long as such activities are carried-out to support local livelihoods but not to support commercial objectives. Local people harvest manioc in the LMA, which goes up to 3km from rivershores inwards mainland. As required by the VCS standard, the Project Area has been forest for at least the past 10 years and giving rotation periods for capoeiras (2-3 years) such areas are not included in the Project Area but remain as part of the LMA.

Total estimated population that lives in the LMA has been estimated to be less than 900 based on the demographic density of 1.5 person/Km2 according to the latest demographic census at sectors level (IBGE 2011). From our PRA we know that 6 persons on average compose each household thus the maximum amount of households expected to exist in the LMA is 150. During the PRA 11

villages were approached accounting for a total of 107 households thus more than 50% of the total amount of people who are reliant on the project area have been consulted.

First Round Validation Team Conclusion

After the exchange noted above and additional telephone communication, the project developer modified the risk assessment to no longer claim the risk reduction associated with community engagement. The finding became irrelevant and was **closed.**

CAR17

Standard or Methodology Requirement: AFOLU Non Permanence Risk Tool Section 2.3.2

Corrective Action Request: The project has not yet been validated against the CCB standard, and thus cannot yet use validation against the CCB standard as a basis for claiming the mitigation credit in part (c) of the community engagement portion of the risk assessment. Should the project successfully obtain validation against the CCB standard, this CAR will be closed.

First Round Response

Buffer ranking has been corrected. Please refer to:

Refer to Validation Evidence ADPML and RMDLT> Non-Permanence Assessment_Both Projects> RMDLT_Non Permanence> RMDLT non-permanence.pdf

First Round validation Team Conclusion

The non permanence risk report no longer claims the mitigation score. **Closed**.

CAR18

Standard or Methodology Requirement: AFOLU Non Permanence Risk Tool Section 2.3.3

Corrective Action Request: The AFOLU non permanence risk tool requires that “A governance score (of between -2.5 and 2.5) shall be calculated from the mean of Governance Scores across the six indicators of the World Bank Institute’s Worldwide Governance Indicators (WGI)1, averaged over the most recent five years of available data.” The WGI indicators as downloaded from the link included in the AFOLU tool include data up to and including 2011. The data listed in the document “Governance score.xlsx” is identified as 2010 data, and averaging is applied from 2000-2010 rather than over the last five years of available data. The project must calculate the WGI score as described by the risk tool using the most recently available data.

First Round Response

The existing Governance Score spreadsheet has been updated with the corrected calculations and values. The new Governance Score is 0.055 and the risk factor remains 2

First Round validation Team Conclusion

The governance score has been corrected. **Closed**.

CAR19

Standard or Methodology Requirement: AFOLU Non Permanence Risk Tool Section 2.4

Corrective Action Request: The project has not assessed natural risks in the project area. According to the AFOLU Non-Permanence Risk Tool, AFOLU projects shall asses at a minimum fire, pest and disease outbreaks, extreme weather events such as hurricanes, and geological risk such as earthquakes and volcanoes. The project must assess these risk categories and provide evidence of the types listed in section 2.4.1 of the AFOLU non-permanence risk tool to determine the appropriate risk score.

First Round Response

A thorough assessment has been included in the Risk Assessment to account for Natural Risk. Section 3 of the Non-Permanence Risk Assessment. Final risk score is 1.75

First Round validation Team Conclusion

The project has provided an appropriate discussion of natural risks supported by relevant scientific literature and applied assessed those risks in conformance with the AFOLU Non-Permanence Risk Tool. **Closed**.