APRIL SALUMEI REDD PROJECT
VCS VALIDATION REPORT

Document Prepared By: Environmental Services, Inc.

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Summary:

Environmental Services, Inc., (ESI) was contracted by Rainforest Project Management Limited (RPML) on 01 January 2013 to conduct the project validation of the *April Salumei REDD Project*.

According to the Project Description (PD), the *April Salumei REDD Project* aims to protect the forest

and biodiversity of an area demarcated for timber production and development under a Forest Management Agreement (FMA) authorized by the Papua New Guinea Forest Authority (PNGFA). The project area is defined by the area of forested land on mineral soils within the boundaries of the FMA collectively known as the April Salumei FMA, which encompasses approximately 603,579 hectares (ha) in the East Sepik Province of Papua New Guinea (PNG). The April Salumei FMA is an ecologically significant area that is rich in traditional culture and possesses extraordinary levels of biodiversity. It is under customary ownership through Incorporated Land Groups (ILGs). In addition to protecting the forest and biodiversity in the project area, project goals also include providing income to landowners who reside there, improving the overall wellbeing of local communities, supporting sustainable agricultural opportunities, improving access to healthcare, education, and infrastructure, all while preserving the rich cultural traditions and customs of the indigenous peoples. Forests play a vital role in sustaining the traditional subsistence livelihoods of most of the local population. Under the FMA, conversion of native forests to roads and other associated infrastructure development, along with widespread logging, would occur.

The project start date is 22 May 2009 and the project crediting period will be 38 years (through 21 May 2049). The *April Salumei REDD Project* will achieve Greenhouse Gas (GHG) removals through:

1. Avoiding Planned Deforestation by stopping construction of logging roads and other associated infrastructure
2. Improved Forest Management by preventing widespread logging

The validation objective for this project included an assessment of compliance with the Verified Carbon Standard (VCS) Version 3 (and associated updated), and the likelihood that implementation of the planned Greenhouse Gas (GHG) project will result in the GHG emission removal enhancements as stated by the project developer (ISO 14064-3:2006). This validation assessed the GHG emission removals through Agriculture, Forestry and Other Land Use (AFOLU) criteria, specifically, Reduced Emissions from Deforestation and Degradation – Avoided (Sanctioned) Planned Deforestation (REDD-APD) and Improved Forest Management – Conversion from Logged to Protected Forest (IFM-LtPF) activities.

The scope of the validation included: the GHG project and baseline scenarios; physical infrastructure, activities, technologies and processes of the GHG project; GHG sources, sinks, and/or reservoirs; types of GHGs; and time periods covered.

The geographic validation scope was defined by the project boundary (which will include a single project area), the carbon reservoir types, management activities, growth and yield models, inventory program, and contract periods.

The validation criteria followed the guidance documents provided by VCS and included the following: VCS Program Guide (04 October 2012, v3.4), Program Definitions (04 October 2012, v3.4), AFOLU Requirements (04 October 2012, v3.3), AFOLU Non-Permanence Risk Tool (4 October 2012), and the VCS Methodologies VM0007: "REDD Methodology Modules (REDD-MF)" v1.3 (20 November 2012) (and its associated modules and tools) and VM0010: "Methodology for Improved Forest Management: Conversion from Logged to protected Forests" v1.2 (27 March 2013).

A summary of all findings is included in Appendix A. There are no restrictions of uncertainty.

ESI confirms all validation activities including objectives, scope and criteria, level of assurance and the PD are complete and in adherence to the VCS Version 3 and all associated updates as documented in this report. ESI concludes without any qualifications or limiting conditions that the PD "*April Salumei REDD Project*" (dated 19 September 2013) meets the requirements of VCS Version 3 and all associated updates.

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1 INTRODUCTION

1.1 Objective

The validation objective for this project included an assessment of compliance with the Verified Carbon Standard (VCS) Requirement Documents (VCS Standard v3.3, 04 October 2012 and all sub-documents) and the likelihood that implementation of the planned Greenhouse Gas (GHG) project would result in the GHG emission removal enhancements as stated by the project developer (ISO 14064-3:2006). This validation assessed the GHG emission removals through Agriculture, Forestry, and Other Land Use (AFOLU) criteria, specifically, Reduced Emissions from Deforestation and Degradation – Avoided (Sanctioned) Planned Deforestation (REDD-APD) and Improved Forest Management – Conversion from Logged to Protected Forest (IFM-LtPF) activities (multiple project activities).

1.2 Scope and Criteria

The scope of a validation included: the GHG project and baseline scenarios; physical infrastructure, activities, technologies and processes of the GHG project; GHG sources, sinks and/or reservoirs; types of GHG's; and time periods covered. The geographic validation scope is defined by the project boundary (which will include a single project area), the carbon reservoir types, management activities, growth and yield models, inventory program, and contract periods. The scope of the *April Salumei REDD Project* was outlined by the Project Proponent prior to the validation initiation and is re-defined as follows:

Baseline Scenario	-Construction of sanctioned roads to allow timber extraction -Legal timber harvests as permitted under Forestry Management Agreement
Activities/Technologies/ Processes	-Avoiding Planned Deforestation – Protection without logging, fuel wood collection or charcoal production – VM0007, v1.3 -Improved Forest Management – Conversion from logged to protected forest – VM0010, v1.2
Sources/Sinks/Reservoirs	Carbon Pools: Above-ground biomass, below-ground biomass, deadwood, harvested wood products, and litter. Sources: biomass burning (see PD Section 2.3.2 for full details for each methodology)
GHG Type	CO_2, CH_4, and N_2O
Time Period (Temporal Boundaries)	Project Start Date: 22 May 2009. Project Crediting Period: 22 May 2009 to 21 May 2049 (38 years) Fixed Baseline Period: 22 may 2009 to 21 May 2019 1st Monitoring/Verification Period: 22 May 2009 to 31 December 2012
Project Boundary	-Located in Wosera Gawi and Ambunti Drekiker Districts in the East Sepik province of Papua New Guinea.

	-Centroid: 4°33'31"S and 142°41'20"E -REDD-APD 7,640 ha - IFM-LtPF 196,703 ha

1.3 Level of assurance

The level of assurance was used to determine the depth of detail that the validator placed in the Validation Sampling Plan to determine if there are any errors, omissions, or misrepresentations (ISO 14064-3:2006). Environmental Services, Inc., (ESI) assessed the project (general principles, data, sampling descriptions, documentation, calculations, etc.) to provide reasonable assurance to meet the project level requirements of the VCS Program. The evidence used to achieve a reasonable level of assurance is specified in the following sections.

1.4 Summary Description of the Project

As stated in the Project Description (PD), "the April Salumei REDD Project ('the Project') is a pilot project located in the Wosera Gawi and Ambunti Drekiker Districts in East Sepik Province of Papua New Guinea. The Sepik River area has been identified as one of the least developed areas within Papua New Guinea (WWF, undated). The area is rich in traditional culture and possesses extraordinary levels of biodiversity. The Project is located approximately 122 kilometres (km) from the provincial town of Wewak within north-western Papua New Guinea. Forests play a vital role in sustaining the traditional subsistence livelihoods of most of the local population. However, levels of income, healthcare and education are all very low. The forest and land in the Project Area is under customary ownership, which is formalised via Incorporated Land Groups (ILGs), which are recognized under Papua New Guinea's Lands Group Incorporation Act (1974).[1]

The Project Area is defined by the area of forested land on mineral soils within the boundaries of two Forestry Management Agreements (FMA) namely; April Salumei (528,604 ha) and April River (75,108 ha) with a combined area of 603, 713 hectares (ha), while taking into account a series of exclusions used to model the baseline, as described in Section **Error! Reference source not found.**. An FMA is a legal agreement between the landowners and the Government (issued via the Papua New Guinea Forest Authority). Under the terms of the FMA, the landowners have authorised the issuance of a 50-year timber concession license, allowing harvesting of timber in the FMA. This normally involves the approval of a timber harvest plan for the first rotation (between 30 and 40 years), and then on approval by the Forest Authority, the FMA is extended for a second rotation. The timber harvest plans describe timber extraction rates, road and other infrastructure development and regeneration plans and typically agriculture development plans for areas within the FMA that have low timber production value. Timber harvest plans for the April Salumei and April River areas were available and used to develop the baseline scenario which

[1] In Papua New Guinea, land ownership is based on traditional and customary (i.e. tribal groups and clan) ownership of the land. (including the forest resource and biodiversity). Legal recognition of the corporate status of certain customary and similar groups is formalised by the Land Groups Incorporation Act 1974. Under this Act, landowners are entitled to form ILGs which have legal control and management responsibility for their land. This right is enshrined in Papua New Guinea's Constitution.

includes planned timber extraction (IFM-LtPF) and areas to be converted to non-forest due to construction of logging roads (REDD-APD).

Conversion to agriculture is conservatively ignored in the baseline scenario in this project and is not included in the carbon accounting area. The assumed baseline is conservative, as several studies suggest that logging operations in Papua New Guinea are not undertaken on a sustainable basis (Forest Trends, 2006; ODI, 2006; ITTO, 2007; Shearman, et.al. 2008). For example, Shearman, et.al. (2008) reported that 23% of Papua New Guinea's forest land that was logged between 1972 and 2002, was subsequently converted to non-forest.

The Project Area fits into two different VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Categories[2] depending on whether the forest is converted during the baseline crediting period. These categories are Reduced Emissions from Deforestation and Forest Degradation – Avoided Planned (Sanctioned) Deforestation (REDD-APD), and Improved Forest Management – Logged to Protected Forest (IFM – LtPF)."[3]

2 VALIDATION PROCESS

2.1 Method and Criteria

Our Validation process closely follows the VCS Standard; VCS Program Guide; Agriculture, Forestry and Other Land Use (AFOLU) Requirements; ISO14064-3 and ISO 14065, and ESI's Management System and Management System Manual. ESI's Validation and Sampling Plan was prepared and followed by the validation team. The sample size for the desktop portion of the validation included a complete review of the PD and supporting documents.

The field validation included both onsite and aerial review of the project area and aerial review of proxy areas (please refer to Section 2.4 of this report below for additional information). These areas were visited and observed to allow a review of a sufficient sample to meet a reasonable level of assurance, as directed by the professional judgment of the Validation team.

The validation criteria followed the guidance documents provided by VCS and included the following: VCS Program Guide (04 October 2012, v3.4), VCS Standard (04 October 2012, v3.3), Program Definitions (04 October 2012, v3.4), AFOLU Requirements (04 October 2012, v3.3), AFOLU Non-Permanence Risk Tool (04 October 2012, v3.2), and the VCS Methodologies (VM0007 v1.3 and VM0010, v1.2).

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[2] VCS AFOLU Guidelines V3.3, Section 3.1.8 states that "Projects may include multiple project activities where the methodology applied to the project allows more than one project activity and/or where projects apply more than one methodology, as set out in the VCS Standard. Such projects shall comply with the respective project requirements of each included AFOLU category. For each activity covered by a different methodology, the geographic extent of the area to which the methodology is applied shall be clearly delineated.

[3] April Salumei REDD Project – Project Description, v1.5, dated 19 September 2013.

2.2 Document Review

A detailed review of all project documentation was conducted to ensure consistency with, and identify any deviation from, VCS program requirements (Version 3 and associated updates) and the VCS methodologies: VM0007, v1.3 and VM0010, v1.2. Initial review focused on the PD and included an examination of the project details, data and parameters, quantification of GHG emission reductions and removals, and supporting documents.

Please see Appendix B for a complete list of documents and files provided by the client and reviewed by ESI during validation, including any items associated with the risk analysis.

2.3 Interviews

The onsite validation site visit occurred between 4 March 2013 and 15 March 2013. Onsite interviews and informal discussions were conducted with project staff, members and leaders of the local communities, as well as PNG government representatives. During most interviews, the underlying negative comment received was that the community members wanted the project activities to begin sooner, demonstrating their eagerness and willingness to participate in the project and share in the economic benefits. No other negative comments were received, and information provided in the PD was supported. Representatives of the PNGFA and Vision 2050 provided useful insight regarding the ecological and social sustainability benefits that they are expecting the project to provide in addition to GHG emission reductions. The following is a list of the main interviewees:

Name	Title
Stephen Hooper	CEO, RPML/Project Proponent
Philip Moya	Operations Manager, Pacific Forest Alliance/Implementation Partner
Dr Carly Green	Principal Consultant, EAS/Consultant
Melanie Mueller	Project Manager, EAS/Consultant
Goodwill Amos	Manager, PNGFA
Simon Saulei	Director, PNG Forest Research Institute
Bruno Kuroh	Ecologist/Forester, PNG Forest Research Institute
Gewa Gamoga	REDD/Climate Change Officer,

	PNGFA
Tony Keket	Director General, Vision 2050
Nime Monda	Research Officer, Vision 2050
Gideon Joseph	Executive Chairman, April Salumei ILGs
Philip Ugu	Landowner Chairman, April Salumei ILGs

The interviews confirmed with reasonable assurance that no community members will be negatively affected by the project and that the community members were eagerly anticipating participation in project activities. Further, it is clear that the PNG government supports the project.

2.4 Site Inspections

The validation site inspection followed our prepared Validation and Sampling Plan process and was conducted on 4-15 March 2013. The onsite (ground and aerial) inspection included the review of the project area and reference/proxy areas. Due to the fact that the project had already undertaken monitoring activities, the validation team also re-sampled inventory plots. Six (6) biomass plots (approximately a 33% sample) were randomly selected and re-measured during the site visit. Re-measurement was conducted using the same inventory methods described by the project developer (see Annex 1 of Annex 9: "EAS Tropical Forest Field Inventory Manual"). The validators also requested that the project team demonstrate the inventory methodology on a sample plot, which demonstrated that the inventory methodology was sound and was able to be replicated by the field teams.

The validators completed ground-truthing of the project strata to compare to PD descriptions, in addition to aerial correlation while in the air. The points taken were selected to allow a review of a sufficient sample to provide the necessary sample size to meet a reasonable level of assurance, as directed by the professional judgment of the validation team.

During the field review of the project, the following aspects of the project were assessed:

- Pre-project conditions, as evidenced by current condition of the project area (the effects of baseline activities have not been fully implemented in the project area)

- Current project conditions, including reported tree species and forest cover types, reported growth characteristics (diameter, or similar), and implementation of inventory plan/monitoring prior to monitoring being fully completed

- Baseline conditions, as evidenced by current condition of the proxy areas, evidence of on-going activities that lead to deforestation, and forested and non-forested areas

- Logging road width, extent, and eligible road locations in project area and in example adjacent areas
- Methodology eligibility criteria, including peat land determination/location, ownership, forest cover and related
- Observations of alternative baseline scenarios
- Observations of typical logging operations
- Potential for leakage

Direct field observations were performed throughout the site inspection in order to sufficiently satisfy the professional discretion of the validation team.

2.5 Resolution of Any Material Discrepancy

During the validation process, there was a risk that potential errors, omissions, and misrepresentations would be found. The actions taken when errors, omissions, and misrepresentations were found included: notifying the client of the issue(s) identified, and expanding our review to the extent that satisfied the Lead Validator's professional judgment.

During the course of the validation, two hundred eighty-four (284) Non-Conformity Reports (NCRs) and Clarifications (CLs) were identified.[4] One Opportunity for Improvement (OFI) was also identified. All NCRs/CLs were satisfactorily addressed. The NCRs/CLs provided necessary clarity to ensure the project was in compliance with the requirements of the VCS Standard (v3.3) for GHG projects. For a complete list of all NCRs/CLs and their resolutions, please refer to Appendix B.

3 VALIDATION FINDINGS

3.1 Project Design

The scope of the *April Salumei REDD Project* was outlined in Section 1.2 of this report. This project is seeking registration under VCS Version 3 as a REDD-APD and IFM-LtPF project (multiple project activities) and has been developed in compliance with the AFOLU Requirements (04 October 2012, v3.3). Additionally, the project is in compliance with the VCS Methodologies VM0007 v1.3 and VM0010, v1.2.

3.1.1 Project Proponent and Other Entities

Project Proponent	Point of Contact	Role and Responsibility	Contact Details

[4] Please note that, due to concurrent completion of both Validation and Verification, Appendix B includes both validation and verification NCRs/CLs/OFIs.

Rainforest Project Management Limited (Company No 1-72274)	Stephen Hooper	Project Proponent (financing and implementation)	Po Box 3319, Boroko, NCD, Papua New Guinea Phone: +61 (0) 488 088 321 Email: shooper@p-f-a.org

In addition to the project proponents, there are other individuals and organizations that play an operative role in the project. These parties are presented below:

Name of project partner/stakeholder	Contact/Role in the project	Roles & responsibilities	Contact details
Incorporated Land Groups (ILGs)	Land owners	Owners of the land. Project staff. Chairman of the ILGs has a seat on the April Salumei Group.	Gideon Joseph, Executive Chairman Email: gideonjoseph@gmial.com
Pacific Forest Alliance	Implementation partner	Specifically established to manage the project. For more information see: http://www.pacificforestalliance.org	Philip Moya, Operations Manager 723 55800 Email: pmoya@p-f-a.org
April Salumei Working Group	Implementation partner	Responsible for development of the Project Management Plan. Consists of members and representatives of the landowners within the Project Area	Gideon Joseph Email: gideonjoseph@gmial.com
Environmental Accounting Services (EAS)	Dr. Carly Green -Lead technical & VCS consultant	Technical design and development of the carbon project elements including fieldwork, remote sensing analysis, and historical land use change analysis and technical project development. Also responsible for development of documentation and systems to achieve validation and verification against the VCS.	AUS: +61 3 866 91919 NZ: +64 3 667 0242 Email: carly.green@envirooaccountants.com
University of Papua New Guinea, School of Natural and Physical Sciences:	Technical support	Provision of expert advice on forestry, climate change, natural resources, geology, mining, GIS, geography, sustainable development, hydrology, biodiversity, community livelihoods, law and policy. Assisted with the collection of field inventory data	Professor Chalapan Kaluwin 3267 216 Email: ckaluwin@upng.ac.pg

Papua New Guinea Forest Research Institute	Technical and implementation support	Provided expert advice in tropical forestry and REDD management in Papua New Guinea. Assisted with the collection of field inventory data. Conducted Government liaison for the Project.	Simon Saulei, Director 472 4188 Email: SSailei@fri.pngfa.gov.pg
Papua New Guinea Forest Authority	Government authorisation	Responsible for: official Government approval of the project; provision of forest inventory data and provincial land use planning; advice on REDD project implementation	Goodwill Amos, Manager Climate Change and REDD 675-3277907 Email: gamos@pngfa.gov.pg
Department of Prime Minister and National Executive Council	Policy support	Advice on REDD policy and implementation	Mr. Bill Kua Executive Director The PNG Vision 2050 +675 77008650
Office of Climate Change and Development	Policy support	Advice on REDD policy and implementation	Mr. Joe Pokuna +675 3257528 Email: info@occd.gov.pg
Partners with Melanesia	Community development	Not for Profit (NGO) focused on conservation and community development programmes in Papua New Guinea	(675) 321 0799 Email: info@pwmpng.org.pg

3.1.2 Project Start Date

The project start date is 22 May 2009 – the date on which the first agreement was signed between another project developer and the landowner groups to develop the April Salumei FMA into a REDD Project. Although this contract was not upheld, the date of signing represents a change in management decisions by the landowner groups and, as such, the date on which activities that lead to the generation of GHG emission reductions or removals were implemented.

As stated in the PD, "Under this agreement, Hunstein Range Holdings (HRH, representing the 164 ILGs at the time)[5] transferred the rights to the carbon stored within the Project Area to the Project Developer. Subsequent to this agreement, a joint venture agreement was also signed by both parties. A copy of the original agreement is available to the auditor. "[6]

[5] Subsequently following extensive consultation with the communities HRH has been removed as the landowner representative umbrella group. The landholders have instead reverted to the landowner companies each representing their own 'onetalk' interests and the structure of the agreements and the project operational structure has been updated to reflect this landowner requested change.

[6] April Salumei REDD Project, Project Description, v1.5 dated 19 September 2013

The validators confirmed the signing of the original agreement occurred on 22 May 2009 and that this date also represents the start of the fixed baseline period and the first monitoring period.

3.1.3 Project Crediting Period

The project crediting period for this project is 38 years, beginning on 22 May 2009 and ending on 21 May 2049.

3.1.4 Project scale and estimated GHG emission reductions or removals

Project	No
Large Project	Yes

Estimated GHG emission reductions for the the first 10-year baseline period (through 21 May 2019) for the April Salumei REDD Project are listed below[7]:

[7] Ibid.

Year ending	Estimated net GHG emission reductions REDD-APD (tCO_2e)	Estimated net GHG emission reductions IFM-LtPF (tCO_2e)	Total Estimated GHG emission reductions (tCO_2e)
May 2010	96,001	117,295	213,296
May 2011	98,684	144,627	243,311
May 2012	101,367	171,959	273,326
May 2013	113,441	199,291	312,732
May 2014	106,733	226,622	333,355
May 2015	109,416	253,954	363,370
May 2016	112,099	281,286	393,385
May 2017	114,782	308,618	423,400
May 2018	117,465	335,950	453,415
May 2019	120,148	363,282	483,430
Total Estimated ERs	1,090,136	2,402,884	3,493,020
Total Number of Crediting Years in First 10-year Baseline Period	10	10	10
Average Annual Emissions Reductions	109,014	240,288	349,302

3.1.5 Project Activities

The validation affirmed the three primary objectives of the April Salumei REDD Project: Climate (avoid GHG emissions from planned deforestation and timber harvest), Community (improved health standards, education, transportation, employment opportunities, etc.), and Biodiversity (maintenance of habitat to maximize biodiversity).

The project provided supporting documentation that the project has implemented and will continue to implement a number of project activities as stated below and confirms that the project activities do not lead to the clearance of any native ecosystems.

"Reclassification of the FMA as a REDD Project Area:

The Project Area is defined by an FMA that permits the Papua New Guinea Forest Authority to award forest harvesting rights to a company for fifty (50) years. In agreements signed by the landowners with the Project Developer the landholders have agreed to terminate the FMA upon validation to the VCS. This is possible under clause 16.1 (a) of the FMA agreement which states that the FMA can be terminated "by agreement at any time by all parties". The National Government is the other Party to the FMA agreement through the Papua New Guinea Forest Authority. With the National Governments approval of the FMAs being the REDD pilot project through the NEC decision clearly demonstrates that both parties are in agreement to convert this area from an FMA to a REDD conservation project. Removal of the Project Area from the Papua New Guinea land registry will ensure that commercial logging concessions cannot be awarded in the future. "[8]

"Monitoring of land use change within the Project Area:

During the crediting period, both on-ground monitoring and remote sensing analyses will be utilised to detect and therefore address disturbances in the Project Area. Ground-based monitoring will be undertaken by project employees from the local area. These 'Community Rangers' will be given comprehensive training, including induction, communication skills, and computer training. In addition, 'Forest Stewards' will also be responsible for monitoring, observing and reporting of the forest at local level. They will be trained in measurement of key parameters like tree Diameter at Breast Height (DBH), tree height, tree count, classification of tree species, assessment of abnormalities (tree mortality, logging) and use of a GPS."[9]

"Improved community infrastructure

Housing, community centres and other infrastructure is generally very poor in the Project Area. Examples of activities that are planned to be implemented to improve community infrastructure include:

- Renovation of housing at Yambi and Ambunti, including the establishment of fully equipped offices in the District Headquarters in Yambi. These headquarters will serve as the base for the Project field operations, as well as a community centre for project controls, pending establishment of a community centre inside the Project Area.

- Establishment of regional resource centres in each of the jurisdictions of the land owner companies. These will be multi-purpose, and be a place for the storage, dissemination and exchange of data, knowledge, skills and technology. They will also serve as a communication hub for the landowners."[10]

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[8] Ibid.

[9] Ibid.

[10] Ibid.

"Improve community education quality and extent

Literacy levels in the area are low. The Project aims at improving literacy and general education of children and youth in the Project Area. Examples of early implementation activities include:

- Analysis of the education needs of the respective areas and their current schools in terms of facilities, human resources, and equipment
- Provision of education materials to existing schools, as per needs assessment conducted above
- Provision of secondary and tertiary scholarships to encourage local youths to continue their education and become future leaders in the region."[11]

"Improve healthcare quality and outreach

There is currently little or no access to health care in the area, resulting in a high mortality biased toward small children, infants and mothers. Examples of early implementation activities to address this issue include:

- Comprehensive review of the communities' needs and development of a prioritised Project health plan
- Support for the establishment of community health buildings in strategic locations to improve health care accessibility, in accordance with the Project health plan."[12]

"Improve mobility and transport

The local communities suffer from a lack of mobility along rivers within the Project Area and also isolation from the rest of the region due to a lack of access to transport. This has flow-on implications for the ability of local people to access healthcare and education. Examples of early implementation activities to address this issue include:

- The initial purchase of five large (23 foot) dinghies with 40 horsepower outboard motors to support the transport needs of the communities. The dinghies will also be used in the provision of project programs and for dissemination of information."[13]

[11] Ibid.

[12] Ibid.

[13] Ibid.

"Improved communication networks

Communication networks in the area are not effective, being either erratic or non-existent. Examples of early implementation activities to address this issue include:

- Auditing of existing radio communication and immediately repair or replace faulty radios or components
- Set up of satellite communication for the entire Project Area."[14]

"Update the land owner database

Traditional landowners change frequently due to births and deaths but the cost of updating the ILG database is often too great for landowners to bear. Examples of early implementation activities to address this issue include:

- Arranging for real-time update of all ILG's and mapping their boundaries that will be completed consistently with the new ILG Act. It is estimated that this process will take 3 to 4 years for completion. Mapping of traditional landowner boundaries will help resolve disputes, and will also assist in the fair and transparent distribution of Project benefits."[15]

"Generate employment opportunities

Local employment opportunities will arise from the Project itself, as Forest Stewards and Community Rangers. The project will trial the development of community policing in the Project Area, whereby community leaders develop culturally appropriate but effective ways to promote public safety and enhance the quality of life in their neighbourhoods. In addition, the leakage management activities such as improved agricultural productivity in existing agricultural areas will not only increase food production for subsistence purposes, but it may also result in excess food production that can be sold in local markets."[16]

The validators also confirmed the project's design and use of technologies related to this forest protection project. The project is focused on reducing the drivers of deforestation and degradation by using proven technologies in forest conservation, sustainable agricultural development and small enterprise development as described in the PD.

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[14] Ibid.

[15] Ibid.

[16] Ibid.

3.1.6 Project Location

The *April Salumei REDD Project* is located in the Wosera Gawi and Ambunti Drekiker Districts in the East Sepik province of PNG. The geographic center of the project is located at 4°33'31"S and 142°41'20"E (decimal degrees). The validators confirmed (via maps, imagery, and onsite observations) the project location and the boundary for the REDD-APD (7,640 ha) and IFM-LtPF (196,703 ha) project categories.

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

All relevant information on the project's compliance with laws, statutes, and other regulatory frameworks can be found in Section 1.10 and Appendix 1 of the PD. The project proponent declares that all of the laws, rules and decrees stated there, apply to the whole geographic region considered for the project activity. Compliance with these laws was confirmed to a reasonable level of assurance during validation. The agreements that have been signed as part of the project are legally binding. No violation of laws as a result of the project activities was observed during the site visit.

3.1.8 Ownership and other programs

3.1.8.1 Right of use

As stated in the PD, "the project rights were acquired from the landowners by the PNGFA in 1996 when the FMA was established.

In terms of VCS definitions, the PNGFA on behalf of the PNG Government were therefore were project proponent when the project activities commenced in 2009. On the 10th May 2012 in the National Executive Council awarded the project rights to RPML decision number 106/2012. This decision transfers the rights to the timber resources and the carbon from PNGFA to RPML and confirms the role of RPML as the Project Proponent. This NEC decision is evidence of unconditional, undisputed, and unencumbered user rights to the Project Area. There is a copy of this decision in the Annex 3 of the Project Description. The NEC decision allocates user rights and rights to the timber resource. An NEC decision is the final step in the full allocation of the timber resource to a timber harvest company. In this instance the NEC approval is to allocate the user rights and rights to the resource to develop a carbon project."[17]

The validators confirmed the project proponent's right of use to the emission reductions generated by the project through several discussions with the project proponent and by reviewing the following project documentation:

- Legal agreement between ILGs, landowner companies and RPML
- Joint venture agreement between RPML and landowner companies;

[17] Ibid.

- The FMA (specifically relevant is termination clause in Section 16.1 (a); and
- NEC Decision NG 106/2012
- "Demonstration of User Rights and Project Start Date" document developed by Dr Carly Green (EAS) and Mr Stephen Hooper (RPML)
- A letter from the Office of the Executive General and the Department of the Prime Minister and National Executive Council

These documents indicate that RPML holds the right to develop, establish, and market the project.

3.1.8.2 Emissions trading programs and other binding limits

No emission reductions generated by the project are part of an emissions trading program. PNG does not have a National emission trading program or a legally binding commitment under an international treaty.

3.1.8.3 Participation under other GHG programs

The project was validated to the Climate, Community, & Biodiversity Project Design Standard on 13 June 2011.

3.1.8.4 Other forms of environmental credit sought or received

Not applicable. The project has not created wetland mitigation, water quality, air pollution, other non-VCS GHG emission reduction, or any other form of environmental credit.

3.1.8.5 Rejection by other GHG programs

The project has neither applied to receive credits from, nor has it been rejected by any other GHG program.

3.1.9 Additional information relevant to the project

3.1.9.1 Eligibility criteria for grouped projects

Not applicable. The project is not a grouped project.

3.1.9.2 Leakage management for AFOLU projects

The only leakage that could be attributable to the project activity is related to the relocation of timber harvesting to other areas in PNG and market changes due to decreased supply. The validators confirmed that leakage was accounted for appropriately under both implemented methodologies.

Leakage was evaluated by the validation team at every opportunity during the site. Both Market Effects and Activity Shifting leakage was determined to not be an issue under VM0007 v1.3 and

can be considered to be negligible. Activity shifting leakage was also deemed non-existent under VM0010 V1.2. The appropriate leakage factor for Market Effects leakage was implemented in the quantification of net GHG reductions/removals under VM0010 v1.2.

3.1.9.3 Commercially Sensitive Information

The following documents were reviewed by ESI during the validation. These documents are considered by the project proponent to be confidential and commercially sensitive and will be excluded from the publicly issued PD:

- Legal agreements between the landowner companies and the developer (project proponent)
- NEC decision

The validator confirmed that they met the definition of "Commercially Sensitive" from the VCS Program Definitions (04 October 2012, v3.4)

3.1.9.4 Further Information

There is no further additional information that would have a bearing on the eligibility of the project relating to net GHG emissions reductions or removals, or quantification of net GHG emissions reductions or removals, which has not been included in the PD and its supporting documentation.

3.2 Application of Methodology

3.2.1 Title and Reference

The project is applying two VCS methodologies as the project is divided into two VCS categories (REDD-APD and IFM-LtPF):

- VM0007, *REDD Methodology Modules*, Version 1.3 (20 November 2012) and its associated modules and tools:
    - VMD0001: *Estimation of carbon stocks in the above- and belowground biomass in live tree and non-tree pools (CP-AB)* v1.0 (03 December 2010)
    - VMD0003: *Estimation of carbon stocks in the litter pool (CP-L)* v1.0 (03 December 2010)
    - VMD0005: *Estimation of carbon stocks in the long-term wood products pool (CP-W)* v1.1 (20 November 2012)
    - VMD0006: *Estimation of baseline carbon stock changes and greenhouse gas emissions from planned deforestation and planned degradation (BL-PL)* v1.2 (03 May 2013)
    - VMD0009: *Estimation of emissions from activity shifting for avoided planned* deforestation (LK-ASP) v1.1 (20 November 2012)

- VMD0011: *Estimation of emissions from market-effects (LK-ME)* v1.0 (03 December 2010)
- VMD0013: *Estimation of greenhouse gas emissions from biomass burning (E-BB)* v1.0 (03 December 2010)
- VMD0015: *Methods for monitoring of greenhouse gas emissions and removals (M-MON)* v2.1 (20 November 2012)
- VMD0016: *Methods for stratification of the project area (X–STR)* v1.0 (13 December 2010)
- VMD0017: *Estimation of uncertainty for REDD project activities (X-UNC)* v2.0 (31 July 2012)
- VT0001: *Tool for the Demonstration and Assessment of Additionality in VCS AFOLU Project Activities (T-ADD) v3.0* (01 February 2012)
- Clean Development Mechanism (CDM) Tool: *Tool for testing significance of GHG emissions in Afforestation/Reforestation CDM project activities (T-SIG)* v01

- VM0010, *Methodology for Improved Forest Management: Conversion from Logged to Protected Forest*, Version 1.2 (27 March 2013).

3.2.2 Applicability

The validation confirmed the project met the following applicability conditions of both VM0007 v1.3 and VM0010 v1.2. The applicability criteria and justification were provided in the PD (Tables 13, 14, and 15[18]) as shown below.

Table 13: Applicability criteria common to both methodologies:

[18] Ibid.

Applicability Criteria		Justification
General VM0007 Applicability Criteria		
4	Project proponents must be able to show control over the project area and ownership of carbon rights for the project area at the time of verification.	Landowner communication and legal agreements (Annex 1 and 3) demonstrate ownership of carbon rights for the Project Area. The Government NEC approval of the Project also represents National recognition of the user rights to carbon in this project area. The NEC decision typically allocates user rights and rights to the timber resource. In this case, the NEC decision has allocated user rights to the resource to develop a carbon project. An NEC decision is the final step in the full allocation of the timber resource or carbon rights to a timber harvest company or carbon project developer.
5	Baseline deforestation and baseline forest degradation in the project area fall within one or more of the following categories: o • Unplanned deforestation (VCS category AUDD); • Planned deforestation (VCS category APD); • Degradation through extraction of wood for fuel (fuel wood and charcoal production) (VCS category AUDD).	The baseline deforestation falls under the category of planned deforestation, as the clearing of forest for timber harvest and road construction is sanctioned by the Government when the land was classified as a Forest Management Area and also as described in the approved Timber Harvest Plan.
6	Baselines shall be renewed every 10 years from the project start date.	The Project commits to renewing the baseline every 10 years from 22nd May 2009.
7	All land areas registered under the CDM or under any other carbon trading scheme (both voluntary and compliance-orientated) must be transparently reported and excluded from the project area. The exclusion of land in the project area from any other carbon trading scheme shall be monitored over time and reported in the monitoring reports.	These are no CDM projects registered in Papua New Guinea.
8	If land is not being converted to an alternative use but will be allowed to naturally regrow (i.e. temporarily unstocked), this framework shall not be used.	The deforested land modelled using VM0007 would have been used as primary and secondary roads, and analysis of the proxy areas suggests that these roads are not permitted to naturally regrow, presumably due to frequent traffic.
9	Leakage avoidance activities shall not include: • Agricultural lands that are flooded to increase production (e.g. paddy rice); • Intensifying livestock production through use of “feed-lots”4 and/or manure lagoons.	Leakage avoidance activities are not a requirement of this Project.
Planned Deforestation Applicability Criteria		
10	Conversion of forest lands to a deforested	Deforestation for road development and other

Applicability Criteria		Justification
	condition must be legally permitted	infrastructure is a legally permitted activity in the FMA.
11	Documentation must be available to clearly demonstrate with credible evidence and documentation that indeed the land would have been converted to non-forest use if not for the REDD project.	The approved FMDP within the defined FMA is documentary proof that the land would have been harvested and forest lands subsequently converted to permanent roads if not for the REDD project.
12	Where, pre-project, unsustainable fuel wood collection is occurring within the project boundaries modules BL-DFW and LK-DFW shall be used to determine potential leakage.	The PRA conducted indicated that pre-project fuel wood collection is sustainable in the Project area. Modules BL-DFW was applied in the PRA report to demonstrate that the emissions from fuelwood collection are insignificant.

Table 14: VM0007 applicability criteria:

Applicability Criteria		Justification
General VM0007 Applicability Criteria		
4	Project proponents must be able to show control over the project area and ownership of carbon rights for the project area at the time of verification.	Landowner communication and legal agreements (Annex 1 and 3) demonstrate ownership of carbon rights for the Project Area. The Government NEC approval of the Project also represents National recognition of the user rights to carbon in this project area. The NEC decision typically allocates user rights and rights to the timber resource. In this case, the NEC decision has allocated user rights to the resource to develop a carbon project. An NEC decision is the final step in the full allocation of the timber resource or carbon rights to a timber harvest company or carbon project developer.
5	Baseline deforestation and baseline forest degradation in the project area fall within one or more of the following categories: o • Unplanned deforestation (VCS category AUDD); • Planned deforestation (VCS category APD); • Degradation through extraction of wood for fuel (fuel wood and charcoal production) (VCS category AUDD).	The baseline deforestation falls under the category of planned deforestation, as the clearing of forest for timber harvest and road construction is sanctioned by the Government when the land was classified as a Forest Management Area and also as described in the approved Timber Harvest Plan.
6	Baselines shall be renewed every 10 years from the project start date.	The Project commits to renewing the baseline every 10 years from 22nd May 2009.
7	All land areas registered under the CDM or under any other carbon trading scheme (both voluntary and compliance-orientated) must be transparently reported and excluded from the project area. The exclusion of land in the project area from any other carbon trading scheme shall be monitored over time and reported in the monitoring reports.	These are no CDM projects registered in Papua New Guinea.
8	If land is not being converted to an alternative use but will be allowed to naturally regrow (i.e. temporarily unstocked), this framework shall not be used.	The deforested land modelled using VM0007 would have been used as primary and secondary roads, and analysis of the proxy areas suggests that these roads are not permitted to naturally regrow, presumably due to frequent traffic.
9	Leakage avoidance activities shall not include: • Agricultural lands that are flooded to increase production (e.g. paddy rice); • Intensifying livestock production through use of “feed-lots”4 and/or manure lagoons.	Leakage avoidance activities are not a requirement of this Project.
Planned Deforestation Applicability Criteria		
10	Conversion of forest lands to a deforested	Deforestation for road development and other

Applicability Criteria		Justification
	condition must be legally permitted	infrastructure is a legally permitted activity in the FMA.
11	Documentation must be available to clearly demonstrate with credible evidence and documentation that indeed the land would have been converted to non-forest use if not for the REDD project.	The approved FMDP within the defined FMA is documentary proof that the land would have been harvested and forest lands subsequently converted to permanent roads if not for the REDD project.
12	Where, pre-project, unsustainable fuel wood collection is occurring within the project boundaries modules BL-DFW and LK-DFW shall be used to determine potential leakage.	The PRA conducted indicated that pre-project fuel wood collection is sustainable in the Project area. Modules BL-DFW was applied in the PRA report to demonstrate that the emissions from fuelwood collection are insignificant.

Table 15: VM0010 applicability criteria:

Applicability Criteria		Justification
13	Projects must fall within the AFOLU project category "IFM Logged to Protected Forest"	The Project Area is designated for timber production by the Papua New Guinea Government, via approval of the FMA. The Project activities include elimination of commercial timber harvesting. As a result, this part of the Project Area meets the VCS definition of 'IFM Logged to Protected Forest' as set out in the AFOLU Requirements, version 3.3.
14	Forest Management in the baseline scenario must be planned timber harvest.	The Project Area falls under an FMA approved by the Papua New Guinea Forest Authority and is designated to be harvested.
15	Under the project scenario, forest use is limited to activities that do not result in commercial timber harvest or forest degradation.	No timber harvest or forest degradation will be undertaken in the project scenario. Areas used by the local community for daily activities have been excluded from the Project Area.
16	Planned timber harvest must be estimated using forest inventory methods that determine allowable offtake as volume of timber (m^3 ha^{-1}).	The planned timber harvest volume is specified in the FMDP document, which was provided to the auditor. The planned harvest rates in the FMDP are specified in terms of m^3 ha^{-1}. This was validated via field sampling, as reported in the Forest Carbon Stock report (Annex 9).
17	The boundaries of the forest land must be clearly defined and documented.	Boundaries of the Project Area are based on the boundaries of the FMA, excluding areas of peatland. non-forest, steep slope, permanent inundation, and other exclusions as required in the Papua New Guinea Logging Code of Practice. The boundaries have been clearly defined using Landsat images to determine forest type and ArcGIS to demarcate boundaries, and spatial files of Project boundaries were provided to the auditor.
18	Baseline conditions cannot include conversion to managed plantations.	The allocated FMA is a sustainable timber harvesting licence which does not sanction conversion to managed plantation.
19	The legal right to harvest must be issued by a relevant government body. Legal allocation of rights to a forest timber resource must be provided with a plan for forest management.	The FMA was approved by the Papua New Guinea Forest Authority on 20/12/1996. This document (provided to the auditor as Annex 4) also describes volumes to be expected to harvest, and includes a map of the FMA. FMAs are to be harvested in accordance to the PNG Logging Code of Practice.
20	Intent to harvest must be provided by the project proponent. This can be done through a valid and verifiable Government –approved timber management plan for harvesting the Project Area.	The intent to harvest is represented by the designation of the area by the PNG Forest Authority as a productive timber area and an FMA area. In addition the Development Option Study (DOS) conducted by the Forest Authority defined the timber extraction potential of the area and the signed FMDP outlines expected volumes of timber to be extracted and is a valid document which is consistent with the DOS. This was provided to the auditor in the supporting documentation.

3.2.3 Project Boundary

The **spatial boundary** of the project and categories (REDD-APD and IFM-LtPF) was clearly delineated and confirmed by the validators during both the onsite inspections and desktop review. The following information provided in the PD (Section 2.3.1) was confirmed during the validation process.

Requirement	VM0007 Evidence	VM0010 Evidence
Project Area Name	REDD Project	IFM Project
Maps (digital) of the area	**Error! Reference source not found.**	**Error! Reference source not found.**
Geographic co-ordinates of each polygon vertex and documentation of their accuracy	Boundary of deforested area defined by series of vectors representing modelled roads occurring across the entire extent of the FMA.	Coordinates define the project area: Northern most point: 142°49”30.511” E; 4°13’45.195”S Easternmost point: 143°12”4.441” E; 4°30’29.127”S Southernmost point: 142°34”35.232” E; 4°55’59.609”S Easternmost point: 142°5”34.077” E; 4°36’27.106”S
Total land area (ha)	7,653	196,703
Forest land right and user rights	Subject to an FMA, as discussed in Section **Error! Reference source not found.**	
Project Area and Proxy Areas	A shapefile & KML file of the project boundaries were provided as supporting documentation. File name: April Salumei_Project Boundaries_VM0007_Roads_v2 (KML file), Project Boundaries_Roads_Final_v2 (ArcGIS file).	A shapefile & KML file of the project boundaries provided in supporting documentation. File name: April Salumei_Project Boundaries_VM0010_IFM_v2 (KML file), IFM_Project Boundaries_Final_v2 (ArcGIS file).

The **temporal boundary** as specified in Table 17[19] of the PD of the project was defined and confirmed during the validation process as follows:

Requirements	VM0007 Evidence	VM0010 Evidence
Start and end date of the ‘historical reference period’	The start date of the historical reference period is defined as 2000 and the end date 2009[20].	N/A
Start and end date of the ‘project crediting	The start date of the project crediting period is the date on which the first	The start date of the project crediting period is the date on which the first

[19] Ibid.

[20] This complies with the REDD methodology requirement that the historical reference period start date shall be between 9 and 12 years in the past and end within 2 years of the project start date (REDD-MF, page 10).

period' [21]	monitoring period commenced, which is 22nd May 2009.	monitoring period commenced, which is 22nd May 2009.
Date of baseline revision	The date of the scheduled baseline revision is 21st May 2019[22].	N/A
Duration of monitoring periods	The first monitoring period shall be for a period of 3 years and 7 months (i.e. 22nd May 2009 – 31December 2012). The second, third and fourth monitoring period shall be one year (i.e. 1st January 2013 – 31st December 2013, 1st January 2014 - 31st December 2014 and 1st January 2015 - 31st December 2015) and subsequent monitoring periods shall be every two years thereafter. For the monitoring schedule refer to Section **Error! Reference source not found.**.	The first monitoring period shall be for a period of 3 years and 7 months (i.e. 22nd May 2009 – 31December 2012). The second, third and fourth monitoring period shall be one year (i.e. 1st January 2013 – 31st December 2013, 1st January 2014 - 31st December 2014 and 1st January 2015 - 31st December 2015) and subsequent monitoring periods shall be every two years thereafter. For the monitoring schedule refer to Section **Error! Reference source not found.**

The appropriate **GHGs and Carbon Pools** were confirmed during the validation process for both of the utilized methodologies. Table 18[23] of the PD, as shown below, summarizes the carbon pools included in or excluded from the project boundary, and provides justification.

Table 1: Excluded and included carbon pools:

[21] The definition of the project crediting period was taken from the VCS Program Definitions V3.3, page 8.

[22] In compliance with the VCS V3.3 and the VM0007 the fixed baseline period for planned deforestation is10 years.

[23] April Salumei REDD Project – Project Description, v1.5, dated 19 September 2013.

Carbon Pools	Methodology	Included / Excluded	Justification / Explanation
Above-ground	**VM0007**	**Tree: Included**	Carbon stock change in this pool is always significant.
		Non-tree: Included	Included
	VM0010	**Tree: Included**	Carbon stock change in this pool is always significant.
		Non-tree: Excluded	Excluded as this is conservative when forests remains as forest.
Below-ground	**VM0007**	**Included**	Root allometric equations are available and therefore estimations based on Project Area specific forest inventory can be made. The methodology recommends the inclusion of this pool.
	VM0010	Excluded	This pool will be excluded as it is unlikely to change significantly in forests remaining as forests.
Deadwood	VM0007	Excluded	Deadwood is excluded as it will not be greater in the baseline (i.e. cleared land for roads) compared with the project scenario (i.e. primary tropical forest). Application of T-SIG demonstrates that this pool in insignificant.
	VM0010 (logging slash)	**Included**	This will be greater in baseline than the project scenario and is therefore included.
	VM0010 (naturally accumulated)	**Excluded**	Following IPCC guidelines, it is assumed that carbon stocks in the naturally occurring dead wood pool (both standing and lying) are equivalent in both the project and baseline scenario, and therefore this pool is conservatively excluded.
Harvested wood products	**VM0007**	**Included**	It is assumed that the logging company would harvest all trees above 50cm DBH for commercial use, and these are allocated to the wood products pool. All other trees below this threshold are assumed to be used for roads, bridges and other infrastructure, as is frequently observed to occur in timber harvesting operations in Papua New Guinea (Sherman et al, 2006). They are therefore excluded from the wood products pool. Only timber above 50cm are included in the wood products pool. Application of the T-SIG tool demonstrated that this pool is significant.
	VM0010	**Included**	All wood products above 50cm DBH are assumed to be harvested for commercial timber production, and are therefore allocated to the harvested wood products pool.
Litter	VM0010	Excluded	This pool is insignificant and has been excluded.
	VM0007	**Included**	Measurement of the initial carbon stock in the litter pool took place as part of the field inventory undertaken between May and June 2012 and was included in our calculations.
Soil organic carbon	VM0010	Excluded	Soil organic carbon is a long lived pool that is unlikely to change under the project scenario. Exclusion is always conservative when forests remains as forest
	VM0007	Excluded	Soil organic carbon is a long lived pool that is unlikely to change under the project scenario. Exclusion is conservative.

The **Sources of GHG Emissions** for both methodologies were reviewed and confirmed during the validation process. The summary provided in the PD (Tables 19and 20[24]) and the justification is provided below.

Table 2: REDD Project: excluded and included sources and GHG emissions

Source		Gas	Status	Justification/Explanation of choice
Baseline and Project	**Biomass Burning**	CO_2	Excluded	Counted as carbon stock change
		CH_4	**Included**	Non-CO_2 gases emitted from woody biomass burning – included in both the Project and Baseline scenarios.
		N_2O	**Included**	
	Combustion of fossil fuels	CO_2	Excluded	Excluded from baseline accounting
		CH_4	Excluded	Not a significant source
		N_2O	Excluded	Not a significant source
	Use of fertilisers	CO_2	Excluded	Not a significant source
		CH_4	Excluded	Not a significant source
		N_2O	Excluded	Excluded from the baseline and therefore project accounting. Fertiliser will not be used as a leakage avoidance mechanism

Table 3: IFM project: excluded and included sources and GHG emissions

Source		Gas	Status	Justification/Explanation of choice
Baseline and Project	Combustion of fossil fuels	CO_2	Excluded	Emissions will be greater in the baseline scenario. Conservative to exclude.
		CH_4	Excluded	Emissions will be greater in the baseline scenario. Conservative to exclude.
		N_2O	Excluded	Potential emissions are negligible
	Burning of biomass	**CH_4**	**Included**	**Included as CO_2 equivalent emission**
		N_2O	Excluded	Negligible
	Nitrogen based fertilizer	N_2O	Excluded	Potential emissions are negligible
	Removal of herbaceous vegetation	CO_2	Excluded	Based on CDM EB decision reflected in paragraph 11 of the report of the 23rd session of the board: cdm.unfcc.int/Paneks/ar/023/ar_023_rep.pdf

3.2.4 Baseline Scenario

Based on validator research, review of project documents, and site visits conducted, the findings support the justification that the baseline land use scenario without the project will be continuation

[24] ibid

of pre-project land-use, including: construction of sanctioned roads to allow timber extraction and legal timber harvests as permitted under the FMA.

As stated in the PD, "The most probable baseline scenario in forest areas allocated as Forest Management Areas in Papua New Guinea has been well documented (Forest Trends, 2006, ODI, 2007, Ningal et al, 2008, Shearman et al. 2009, Shearman and Bryan, 2011; GoPapua New Guinea, 1989). As summarised in Babon, 2011, the leading drivers of deforestation in Papua New Guinea have been identified as commercial logging (48.2%) and indigenous production systems (45.6%), with forest fires (4.4%), clearing for agricultural plantations (1.0%) and finally with mining (0.6%) as only a small contributor. This finding was supported by a study conducted by Shearman and Bryan (2011), which found that logging was the main driver of forest cover change in the lowland areas of the coastal and island regions, with indigenous production systems the major driver in the highland areas over the period 1970 - 2000. Rapid population growth, international demand for timber, and weak governance are seen as indirect drivers of deforestation in Papua New Guinea.

In the absence of the Project, the forest within the April Salumei and April River FMA areas would have been logged by one of the large timber harvesting companies operating in Papua New Guinea. Based on our analysis, the most likely agents of deforestation/degradation would have either been 1) the Taiwanese logging company called 'Road Timber Co Ltd', which prepared the Forest Management & Development Proposal (FMDP) plan to log and convert the area; or 2) Rimbuan Hijau (RH), a Malaysian logging company which engaged in discussions with Landowners in the April River area to enact the timber harvest plan (pers comm. Phillip Ugu, Landowner Chairman). Typically, the logging operation would remove all trees +50cm DBH and would cause substantial destruction to the forest in the form of roading and collateral damage from tree felling. Each log is dragged by bulldozer along a 4m wide snig track of cleared vegetation (University of Papua New Guinea, 2006), to a cleared log dump accessible to trucks. Snig tracks can extend up to a few hundred metres away from a log dump and road (Shearman et al. 2009). Roads that can be used by logging trucks require a graded bulldozed track with a 5-6m wide roadway; and typically 30-50m of forest is damaged when obstructing trees are felled and used for road footings and bridges, or bulldozed into the surrounding forest (Shearman et al, 2009)."[25]

"In summary, the baseline scenario is legally sanctioned forest degradation in the IFM-LtPF area, and (planned) deforestation in the REDD-APD area, as a result of classifying the land as an FMA. Theoretically, this sanctioned degradation and deforestation should have conducted in accordance with an agreed FMDP and in compliance with the PNG Logging Code of Practice. However due to a lack of resources and governance, non-compliance becomes the normal operating environment which ultimately compromises sustainable rotational forestry activities, leading to wider scale land use conversion following the completion of the first rotation (i.e. approximately after 30 years since timber harvesting commenced). To be conservative, however, only degradation and deforestation related to the legally permitted logging operations in

[25] Ibid.

accordance with the PNG Logging Code of Practice, have been modelled in the baseline for this Project. Planned agricultural conversion activities have not been included in this project."[26]

3.2.5 Additionality

Both VM0007 v1.3 and VM0010 v1.2 require the use of VT0001: *Tool for the Demonstration and Assessment of Additionality in VCS AFOLU Project Activities (T-ADD)* v3.0 (01 February 2012);" details of its use can for this project can be found in the Section 2.5 of the PD.

The validators confirmed that the alternative scenarios identified by the project proponent represent realistic and credible land-use scenarios that could have occurred within the project area in the absence of the AFOLU project activity under the VCS.

As stated in the PD, the alternative scenarios identified by project proponent are:

1. "Continuation of the pre-project land use (planned deforestation due to road construction, commercial logging)

2. Project activity on the land within the project boundary performed without being registered as the VCS AFOLU project

3. Activities similar to the proposed project activity, resulting from legal requirements"[27]

These land use scenarios are in compliance with all mandatory applicable legal and regulatory requirements and are permissible by law. Following demonstration of legal permissibility, the project proponent selected which of the alternatives identified above represent the most plausible baseline scenario. Continuation of the pre-project land use (planned deforestation due to road construction and commercial logging) was justified and selected as the most plausible baseline scenario as this is the intended purpose of an FMA.

As stated in the PD, "valid, verifiable plans in the form of the FMDP and the April River Development Plan exist that clearly describes logging and road construction as the planned land use in the absence of the Project. It is also likely that conversion to agriculture would have occurred after conclusion of the logging operations. However, this baseline land use conversion scenario was not considered imminent during the ten year baseline validity period, based on the rate of land use change observed in the proxy areas. The baseline will be reassessed within the ten year baseline revision timeline, which may indicate that conversion to agriculture is likely baseline scenario at that time. Protection in the absence of carbon finance is not considered a likely baseline scenario, as the Government has tried, and failed, to pursue this avenue via zonation of the area as a WMA."[28]

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[26] Ibid.

[27] Ibid.

[28] Ibid.

Following the selection of the most plausible baseline scenario, the project proponent, as per VT0001, demonstrated that alternative numbers 2 (project activity on the land within the project boundary performed without being registered as the VCS AFOLU project) and 3 (activities similar to the proposed project activity, resulting from legal requirements) face barriers (i.e. access to funding, poor enforcement of policies and laws, the need for sustainable revenue generation by local populations) that would prevent the implementation of this type of activity without carbon financing. Conversely, these barriers do not prevent the implementation of alternative number 1. That is, large logging companies have capital available to implement road construction and logging activities, are not affected by poor enforcement of policies and laws, and provide direct financial payments from logging or commercial agriculture to local resource owners. Following the barrier analysis, the common practice analysis required by VT0001 (see PD Section 2.5.4) indicated that the proposed project is not common practice in the region, is not the baseline scenario, and, thus, is additional.

3.2.6 Quantification of GHG Emission Reductions and Removals

3.2.6.1 Quantification of Baseline Emissions

VM0007 V1.3

The validators confirmed that the baseline emissions due planned deforestation (construction sanctioned logging roads) have been estimated in accordance with VMD0006 (see PD Section 3.5). Additionally, risk of abandonment has been appropriately assessed and demonstrates the project's eligibility for use of the module.

VMD0006's procedures for quantifying baseline emissions or removals involve several steps. General steps are described here; first, the planned/projected deforestation/degradation area is determined based on a known verifiable deforestation/degradation rate and a defined likelihood of deforestation. Next, the baseline carbon stocking is determined from measurements of woody biomass sampled within the project area. Baseline emissions or removals are then quantified by subtracting the long-term carbon stock after deforestation/degradation and the baseline stock that is harvested and stored in long-term in wood products from the baseline pre-deforestation/degradation stock; emissions from any sources (e.g. biomass burning, fossil fuel combustion, or use of fertilizers are then added).

Estimated baseline total GHG emissions (as quantified using VMD0006) due to planned deforestation for the first 10-year baseline period (through 21 May 2019) for the *April Salumei REDD Project* (2,553 ha) are listed below:

Years	Estimated Baseline GHG Emissions (tCO_2e)
22 May 2009 – 21 May 2010	96,001
22 May 2010 – 21 May 2011	98,684
22 May 2011 – 21 May 2012	101,367

22 May 2012 – 21 May 2013	113,441
22 May 2013 – 21 May 2014	106,733
22 May 2014 – 21 May 2015	109,416
22 May 2015 – 21 May 2016	112,099
22 May 2016 – 21 May 2017	114,782
22 May 2017 – 21 May 2018	117,465
22 May 2017 – 21 May 2019	120,148
Total Estimated Baseline Emissions	1,090,136
Total Number of Crediting Years in First 10-year Baseline Period	10
Average Annual Baseline Emissions	109,014

VM0010 V1.2

The validators confirmed that the baseline emissions due to legally permitted logging operations have been estimated in accordance with Section 8.1 of VM0010 v1.2 (see PD Section 4.1).

"The baseline net greenhouse gas emissions are determined from calculation of dead wood (logging slash) generated in the process of timber harvest (Section 8.1.2), the emissions resulting from production and subsequent retirement of wood products derived from the timber harvesting (Section 8.1.3), minus the rates of forest regrowth post timber harvest (Section 8.1.4). Baseline commercial timber volumes must be derived for development of the timber harvest plan and for ex-post accounting of emissions resulting from natural forest disturbance. The equations calculate the total emissions across the project crediting period for each emission source. Total emissions are averaged across the project crediting period to give annual emissions and are multiplied by t*, time elapsed since the start of project activity. Data for input into these carbon stock change calculations for the baseline scenario must be established from the same data used to create the timber harvesting plan."[29]

Estimated baseline total GHG emissions (as quantified using VM0010) due to legally permitted logging operations for the first 10-year baseline period (through 21 May 2019) for the *April Salumei REDD Project* (63,668 ha) are listed below:

Years	Estimated Baseline GHG Emissions (tCO_2e)

[29] Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, v1.2, 27 March 2013.

22 May 2009 – 21 May 2010	146,619
22 May 2010 – 21 May 2011	180,783
22 May 2011 – 21 May 2012	214,948
22 May 2012 – 21 May 2013	249,113
22 May 2013 – 21 May 2014	283,278
22 May 2014 – 21 May 2015	317,443
22 May 2015 – 21 May 2016	351,608
22 May 2016 – 21 May 2017	385,773
22 May 2017 – 21 May 2018	419,938
22 May 2017 – 21 May 2019	454,102
Total Estimated Baseline Emissions	3,003,605
Total Number of Crediting Years in First 10-year Baseline Period	10
Average Annual Baseline Emissions	300,361

3.2.6.2 Quantification of Project Emissions

VM0007 V1.3

The project proponent demonstrated through appropriate evidence that ex-ante project emissions resulting from illegal logging and flooding are de-minimis and can be assumed to be zero. Additionally, the project activities will not allow for deforestation due to road construction within the project area. Thus, for the *April Salumei REDD Project*, the project emissions equal zero throughout the first ten year baseline period under VM0007.

VM0010 V1.2

Under VM0010, net greenhouse gas emissions in the project scenario are equal to carbon sequestration through on-going forest growth minus any emissions resulting from forest disturbance (both illegal logging and natural disturbances). For this project, forest growth in the project scenario was conservatively excluded from the calculation of emission reductions. Additionally, the project proponent demonstrated through appropriate evidence that ex-ante project emissions resulting from fire, other natural disturbances, and illegal logging are de-minimis and can be assumed to be zero. Additionally, the project activities will not allow for legal logging operations. Thus, for the *April Salumei REDD Project*, the project emissions equal zero throughout the first ten year baseline period under VM0010.

3.2.6.3 Quantification of Leakage

VM0007 V1.3

Project proponents used the required modules VMD009: *Estimation of emissions from activity shifting for avoided planned deforestation (LK-ASP)* v1.1 (20 November 2012) and VMD0011: *Estimation of emissions from market-effects (LK-ME)* v1.0 (03 December 2010) to calculate (ex-ante) the leakage associated with activity shifting market-effects resulting from the project. Both Market Effects and Activity Shifting leakage was determined to be equal to zero throughout the first ten year baseline period under VM0007 v1.3.

VM0010 V1.2

Under VM0010 v1.2, Activity Shifting Leakage is not permitted and leakage due to market effects is equal to the net emissions from planned timber harvest activities in the baseline scenario multiplied by an appropriate leakage factor (as determined in Box 2 of VM0010 v1.2). The project proponent demonstrated through appropriate evidence that there is no leakage due to activity shifting. The appropriate leakage factor for Market Effects leakage was implemented in the quantification of net GHG reductions/removals under VM0010 v1.2. The results provided the total (market-effects due to legal logging operations) leakage estimates below:

Years	Estimated Leakage Emissions (tCO_2e)
22 May 2009 – 21 May 2010	29,324
22 May 2010 – 21 May 2011	36,157
22 May 2011 – 21 May 2012	42,990
22 May 2012 – 21 May 2013	49,823
22 May 2013 – 21 May 2014	56,656
22 May 2014 – 21 May 2015	63,489
22 May 2015 – 21 May 2016	70,322
22 May 2016 – 21 May 2017	77,155
22 May 2017 – 21 May 2018	83,988
22 May 2017 – 21 May 2019	90,820
Total Estimated Leakage Emissions	600,721
Total Number of Crediting Years in First 10-year Baseline Period	10

Average Annual Leakage Emissions	60,072

These assertions were confirmed during the validation event. For evidence of conformance to Section 8.3 of VM0010 v1.2, please see Section 4.3 of the PD. In order to manage leakage, the leakage values reported above are deducted from the gross annual ex ante baseline emissions quantified under VM0010 v1.2.

3.2.6.4 Summary of GHG Emission Reductions or Removals

The validators confirmed that net GHG emission reductions and removals have been estimated in accordance with both VM0007 v1.3 (and its associated modules and tools) and VM0010 v1.2. The results indicate that total net GHG emission reductions or removals for the initial ten year baseline period are estimated at 3,493,020 tCO2e; annual values are presented in Section 3.1.4 above.

3.2.6.5 Uncertainties Associated with the Calculation of Emissions

VM0007 V1.3

The validators confirmed that the project proponent followed VMD0017: *Estimation of uncertainty for REDD project activities (X-UNC)* v2.0 (31 July 2012) to ensure the results were conservative. In accordance with VMD0017, the project proponent quantified uncertainty in both the projection of baseline rate of deforestation, and the aboveground biomass, belowground biomass and litter pools, as the 95% confidence interval as a percentage of the mean.

Total combined uncertainty was found to equal +/- 10.22% at the 95% confidence level. ESI reviewed "VCS_7_10_Calculator_AprilSalumei_M1_06092013.xlsx" and confirms that the reported total combined uncertainly value to be calculated appropriately and in conformance with VMD0017. VMD0017 allows total project uncertainly values of up +/- 15% at the 95% confidence interval. Thus, there are no deductions associated with uncertainty.

VM0010 V1.2

The validators confirmed that the project proponent followed the requirements of Section 8.4.1.1 of VM0010 v1.2 to ensure the results were conservative. Uncertainty was expressed as the 95% confidence interval where the estimated variance exceeds +/- 15 % from the mean. As stated in the PD, for both the baseline and the project, "uncertainty of the estimates was based on the variance of the forest inventory data. Even though the planned merchantable volume data was used, for which there was no variance data available, its variance was assumed to be the same as that of our forest inventory data. Project uncertainty was assumed to be equivalent to the error associated with the baseline uncertainty. The total uncertainty was calculated as the square root of the sum of the squares of the baseline and project uncertainty, through propagating the error in the baseline stocks and the error in the project stocks by applying Equation 29."[30]

[30] April Salumei REDD Project – Project Description, v1.5, dated 19 September 2013.

Total combined uncertainty was found to equal +/- 11.55% at the 95% confidence level. ESI reviewed "VCS_7_10_Calculator_AprilSalumei_M1_06092013.xlsx" and confirms that the reported total combined uncertainly value to be calculated appropriately and in conformance with Section 8.4.1.1 of VM0010 v1.2. VM0010 v1.2 allows total project uncertainly values of up +/- 15% at the 95% confidence interval. Thus, there are no deductions associated with uncertainty.

3.2.7 Methodology Deviations

As stated in the PD, the following the deviations from VM0007 v1.3 and VM0010 v1.2 apply to the *April Salumei REDD Project*:

- "The methodology for calculation of Market Effects Leakage for both VM0010 and VM0007 was based on the ratio of Annual Allowable Cut (AAC) relative to the total concession area, rather than the ratio of aboveground biomass relative to total merchantable biomass. A more detailed explanation of this issue is provided in Section 3.6 of the PD.

- Timber harvesting was modelled to occur in areas of high relief on slopes steeper than 25 degrees. It was not possible to determine areas with slopes of greater than 25 degrees, as the only slope data available (from the PNGRIS dataset) had pre-classified slope categories of 20-30 degrees, and > 30 degrees. Given that all areas with a slope of greater than 30 degrees were excluded from the operable area (and therefore the IFM Project Boundaries), this deviation from the Code is considered negligible.

- The Chave et al equation used to estimate aboveground biomass utilised DBH and wood density as the only input parameters. The inclusion of height as a parameter in the Chave et al equation does not improve its predictive capability (i.e. Coefficient of Determination is equivalent between the two equations for wet forest stands). The exclusion of height represents a deviation from the methodology."[31]

The validation process confirmed that these methodology deviations are reasonable and have been appropriately justified. Further, the project is still in compliance with VCS rules while applying the methodology deviations. The deviations represent a deviation from the criteria and procedures relating to monitoring and/or measurement of GHG emission reductions or removals set out in the selected methodologies. Moreover, the deviations do not negatively impact the conservativeness of the quantification of GHG emissions reductions or removals.

3.2.8 Monitoring Plan

The following are the primary data and parameters that were monitored prior to, and made available and assessed during validation:

- Location of project area

[31] Ibid.

- Boundary of project area
- Ownership of the project area
- Area of planned deforestation in the baseline
- Area of planned timber harvesting in the baseline
- Rate of planned deforestation
- Rate of planned timber harvesting
- Forest/non-forest cover
- Baseline strata
- Number of trees
- DBH
- Biomass allometric equations, coefficients, ratios and parameters
- Leakage calculations
- Uncertainty calculations
- Illegal Logging rates
- Natural and Anthropogenic disturbances
- Risk calculations
- Total CO2

The monitoring plan procedures and equipment were comprehensive and were found to be applicable to the parameters monitored. They were appropriately designed and provided reasonable assurance that the avoided emissions occurring from GHG sources, sinks, and reservoirs was (baseline) and will be (project scenario) accurately assessed. In accordance with the conditions of both VM0007 v1.3 and VM0010 v1.2, emission sources are conservatively excluded from the baseline for this project; emissions from biomass burning will be monitored ex post.

The monitoring plan includes a Quality Assurance/Quality Control (QA/QC) plan to control for errors in measurement and data analysis. Application of the QA/QC plan will provide documentation and consistency in data archiving to permit efficient third-party auditing and evaluation against measurement and quantification standards over the life of monitoring.

RPML is responsible for the registration, monitoring, measurement, and reporting of avoided emission, within the timeframe required by VCS-AFOLU-REDD requirements.

3.3 Environmental Impact

As stated in the PD, “PNG’s Environment Act 2000 (‘the Act’) is the primary legislation regulating the environmental impact of development activities. It defines how adverse effects of such activities should be avoided, remedied or mitigated. Under the Act, developers of certain activities must apply to the PNG Department of Environment and Conservation (DEC) for authorisation to undertake activities which materially impact the environment. Under the Act, if the development is classed as ‘Level 3’, the DEC may require the developer to undertake a full

Environmental Impact Assessment (EIA). At the time of writing, it is understood that planned activities under the Project are not required to conduct a full EIA under the Act. Nevertheless, the Project will be undertaken in accordance with this Act, as well as all other relevant international and local conventions, laws and regulations, as described in Section 9.

To ensure that any potential environmental impacts are minimised, the project commits to conducting a short-form EIA for all existing and new Project activities. This short-form assessment will be used to identify whether any of the activities require a full EIA under the Act (i.e. if they are classed as 'Level 3' activities under the Act)."[32] PD Figure 41 details the decision making process for the project's EIA commitment.

PD Table 58 includes the results of the project's Environmental Impact Register (EIR) template (as assessed for the project development phase). Some negative impacts (e.g. disruption to local communities, increase in emissions from machinery/vehicles, decrease in water quality) were identified and, thus, the Environmental Management Plan (EMP) was completed (PD Table 59). The EMP identifies proposed mitigation measures for identified negative impacts and assigns responsibilities to each. "This EMP then forms part of the activity application process which is submitted with the completed application to the Working Group."[33]

Given that the *April Salumei REDD Project* involves passive land management with positive environmental outcomes, and that no infrastructure or large-scale ground disturbance will be associated with this project, it does not represent a "significant impact" and the project developer's EIA process should remedy any identified issues over the life of the project.

By protecting the native forest from logging, environmental outcomes such as biodiversity, watershed protection and water quality are safeguarded, compared with the impacts of clear-felling for conversion to roads or on-going logging.

This information was confirmed to a reasonable level of assurance during validation through documentation review and the site inspection.

3.4 Comments by stakeholders

Comments from stakeholders were appropriately documented and were found to be overwhelmingly positive. Where concerns have been identified, RPML has made tangible efforts to resolve any issues or concerns. The stakeholder input was confirmed through interviews with a sample of stakeholders conducted during validation. The only negative comment received during validation was that the community members wanted the project activities to begin sooner, demonstrating their eagerness and willingness to participate in the project and share in the economic benefits.

[32] Ibid.

[33] Ibid.

4 VALIDATION CONCLUSION

ESI confirms all validation activities, including objectives, scope and criteria, level of assurance and the PD are complete and in adherence to the selected methodologies (VM0007 v1.3 and VM0010 v1.2) and VCS Version 3 (and updates) as documented in this report. ESI concludes without any qualifications or limiting conditions that the PD *April Salumei REDD Project* dated 19 September 2013 (Version 1.5) meets the requirements of the VCS, and is likely to achieve the estimated GHG emissions reductions or removals stated therein.

Submittal Information:

Report Submitted to:	Verified Carbon Standard Association 1730 Rhode Island Ave. NW, Suite 803, Washington, D.C. 20036 Rainforest Project Management P.O. Box 3319, Boroko, NCD, Papua New Guinea
Report Submitted by:	Environmental Services, Inc. -Corporate Office 7220 Financial Way, Suite 100 Jacksonville, Florida 32257
ESI Lead Validator Name and Signature	Shawn McMahon Lead Validator
ESI Division Regional Technical Manager Name and Signature	Janice McMahon Vice President and Forestry, Carbon and GHG Division Regional Technical Manager
Date:	08 October 2013

JP/SMM/JPM/rb/VO12032.00 April Salumei REDD VCS Validation Report-_Final_08 Oct2013.doc
K pf 10/08/13f

APPENDIX A – DOCUMENTS RECEIVED / REVIEWED

Documents received 4 February 2013

- VCS_7_10_Calculator_PNG-master_V1.0.xlsx
- RPM_April Salumei_ProjectDescription_VCS_V1.0.pdf

Documents received 7 February 2013

- Validation_Audit_Plan_v1.0.doc

Documents received 11 February 2013

- VM0010_LtPF_VCSA_ZR+SI_14012013_Review2 + VCSA2.docx
- VM0010_LtPF_VCSA_v1.2_clean.docx

Documents received 22 February 2013

- Plotlocations_final.shx
- Current_GPS2.dbf
- Current_GPS2.prj
- Current_GPS2.sbn
- Current_GPS2.sbx
- Current_GPS2.shp
- Current_GPS2.shx
- Plotlocations_final.dbf
- Plotlocations_final.prj
- Plotlocations_final.sbn
- Plotlocations_final.sbx
- Plotlocations_final.shp

Documents received 22 February 2013 – 2nd set

- Annex 1_OfficialAgreement_RPMandILGs.pdf
- Annex 2_PFA Booklet.pdf
- Annex 3_NECApproval.pdf
- Annex 4_ Forest Mgmt Agreement.pdf
- Annex 5_HistoricalLULCAnalysis.pdf
- Annex 6_ Development Options Study.pdf
- Annex 7_Non-PermanenceRiskReport_T_BAR.pdf
- Annex 9_Carbon Stock Report .pdf
- Annex 10_April River Timber Harvest Plan.pdf
- Annex 11_Hunstein Range Registration Certificate.pdf
- Annex 12_Standard Operating Procedure.pdf
- Annex 13_Peat Mapping Report.pdf
- Annex 14_Road Timber Forest Management & Development Proposal.pdf
- Annex 15_National Gazette.pdf
- Annex 16_Court Papers.pdf
- Annex 17_Provincial Agricultural Development Plan.pdf

Documents received 27 February 2013

- Annex 8_Participatory Rural Appraisal Report.pdf

Documents received 28 February 2013

- RR_WS_Boundary.shx
- RR_WS_Boundary.dbf
- RR_WS_Boundary.prj
- RR_WS_Boundary.sbn
- RR_WS_Boundary.sbx
- RR_WS_Boundary.shp
- RR_WS_Boundary.shp.xml

Documents received 1 March 2013

- RR_WNB_Boundary.shx
- AS_FMA_nopeat_roads.dbf
- AS_FMA_nopeat_roads.prj
- AS_FMA_nopeat_roads.sbn
- AS_FMA_nopeat_roads.sbx
- AS_FMA_nopeat_roads.shp
- AS_FMA_nopeat_roads.shp.xml
- AS_FMA_nopeat_roads.shx
- PA_originalFMA_exclPeat1.dbf
- PA_originalFMA_exclPeat1.prj
- PA_originalFMA_exclPeat1.sbn
- PA_originalFMA_exclPeat1.sbx
- PA_originalFMA_exclPeat1.shp

- PA_originalFMA_exclPeat1.shp.xml
- PA_originalFMA_exclPeat1.shx
- RR_WNB_Boundary.dbf
- RR_WNB_Boundary.prj
- RR_WNB_Boundary.sbn
- RR_WNB_Boundary.sbx
- RR_WNB_Boundary.shp
- RR_WNB_Boundary.shp.xml

Documents received 4 March 2013

- FM_OperationalBoundary_Final.shx
- AS_FMA.dbf
- AS_FMA.prj
- AS_FMA.sbn
- AS_FMA.sbx
- AS_FMA.shp
- AS_FMA.shp.xml
- AS_FMA.shx
- AS_FMA_peatexcl.dbf
- AS_FMA_peatexcl.prj
- AS_FMA_peatexcl.sbn
- AS_FMA_peatexcl.sbx
- AS_FMA_peatexcl.shp
- AS_FMA_peatexcl.shp.xml
- AS_FMA_peatexcl.shx
- AS_FMA_peatexcl_roadsexcl.dbf
- AS_FMA_peatexcl_roadsexcl.prj
- AS_FMA_peatexcl_roadsexcl.sbn
- AS_FMA_peatexcl_roadsexcl.sbx
- AS_FMA_peatexcl_roadsexcl.shp
- AS_FMA_peatexcl_roadsexcl.shp.xml
- AS_FMA_peatexcl_roadsexcl.shx
- AS_FMA_roads only.dbf
- AS_FMA_roads only.prj
- AS_FMA_roads only.sbn
- AS_FMA_roads only.sbx
- AS_FMA_roads only.shp
- AS_FMA_roads only.shp.xml
- AS_FMA_roads only.shx
- AS_FMA_vegclass_peatexcl.dbf
- AS_FMA_vegclass_peatexcl.prj
- AS_FMA_vegclass_peatexcl.sbn
- AS_FMA_vegclass_peatexcl.sbx
- AS_FMA_vegclass_peatexcl.shp
- AS_FMA_vegclass_peatexcl.shp.xml
- AS_FMA_vegclass_peatexcl.shx
- AS_Peat_Domes_Final.dbf
- AS_Peat_Domes_Final.prj
- AS_Peat_Domes_Final.sbn
- AS_Peat_Domes_Final.sbx
- AS_Peat_Domes_Final.shp
- AS_Peat_Domes_Final.shp.xml
- AS_Peat_Domes_Final.shx
- IFM_OperationalBoundary_Final.dbf
- IFM_OperationalBoundary_Final.prj
- IFM_OperationalBoundary_Final.sbn
- IFM_OperationalBoundary_Final.sbx
- IFM_OperationalBoundary_Final.shp
- IFM_OperationalBoundary_Final.shp.xm

Documents received 22 March 2013

- Annex9-CarbonStockReport_withJPComments.pdf
- Annex9-CarbonStockReport.pdf

Documents received 25 March 2013

- VMD0015 M-MON, v2.1.pdf
- VCS Standard, v3.3.pdf
- picasa39-setup.exe
- Demonstration of User Rights and Project Start Date.pdf
- Map GIS(1).rar
- Map GIS.rar
- Map GIS(1)
- Map GIS

Documents received 27 March 2013

- VCS_7_10_Calculator_PNG-M1_V1.0.xlsx
- Monitoring Report_v1.0.pdf
- RPM_April Salumei_ProjectDescription_VCS_V10.pdf

Documents received 28 March 2013

- REDD_Year4_second_half.shx
- IFM_TotalHarvestableArea_March27_final.dbf

- IFM_TotalHarvestableArea_March27_final.prj
- IFM_TotalHarvestableArea_March27_final.sbn
- IFM_TotalHarvestableArea_March27_final.sbx
- IFM_TotalHarvestableArea_March27_final.shp
- IFM_TotalHarvestableArea_March27_final.shp.xml
- IFM_TotalHarvestableArea_March27_final.shx
- REDD_Year1.dbf
- REDD_Year1.prj
- REDD_Year1.sbn
- REDD_Year1.sbx
- REDD_Year1.shp
- REDD_Year1.shp.xml
- REDD_Year1.shx
- REDD_Year2.dbf
- REDD_Year2.prj
- REDD_Year2.sbn
- REDD_Year2.sbx
- REDD_Year2.shp
- REDD_Year2.shp.xml
- REDD_Year2.shx
- REDD_Year3.dbf
- REDD_Year3.prj
- REDD_Year3.sbn
- REDD_Year3.sb"
- REDD_Year3.shp
- REDD_Year3.shp.xml
- REDD_Year3.shx
- REDD_Year4_first_half.dbf
- REDD_Year4_first_half.prj
- REDD_Year4_first_half.sbn
- REDD_Year4_first_half.sbx
- REDD_Year4_first_half.shp
- REDD_Year4_first_half.shp.xm"
- REDD_Year4_first_half.shx
- REDD_Year4_second_half.dbf
- REDD_Year4_second_half.prj
- REDD_Year4_second_half.sbn
- REDD_Year4_second_half.sbx
- REDD_Year4_second_half.shp
- REDD_Year4_second_half.shp.xml

Documents received 2 April 2013

- HRHL 9 of 9.pdf
- AS ILG Listing.pdf
- ASFMA Landowners Forest Management Area 230509.xls
- HRHL 1of 9.pdf
- HRHL 2 of 9.pdf
- HRHL 3 of 9.pdf
- HRHL 4 of 9.pdf
- HRHL 5 of 9.pdf
- HRHL 6 of 9.pdf
- HRHL 7 of 9.pdf
- HRHL 8 of 9.pdf

Documents received 8 April 2013

- DSCN1255.jpg
- DSCN1191.jpg
- DSCN1192.jpg
- DSCN1231.jpg
- DSCN1232.jpg
- DSCN1233.jpg
- DSCN1237.jpg
- DSCN1240.jpg
- DSCN1241.jpg

Documents received 5 June 2013

- 13_NPV_analysis.xlsx
- April Salumei_Project Boundaries_VM0010_IFM_v3
    - doc.kml
- NCR responses back from client
    - Responses-4Jun2013.xlsx
- Winrock Sampling Calculator _AS.xlsx
- 8_Adaptive management plan.docx
- Annex5_HistoricalLULCAnalysis.docx
- Annex 1_map.jpg
- Annex 3 map.jpg
- Annex 4_map.jpg
- Annex 9_CarbonStockReport.pdf
- AprilSalumei_VCS Risk Report Calculation Tool_REDD, v3.0_M1.xls
- AprilSalumei_VCS Risk Report Calculation Tool_IFM, v3.0_M1.xls

- IDRISI-Selva-GIS-Image-Processing-Brochure.pdf
- Forest Trends_Review of Logging Concessions in PNG Vol1.pdf
- Forest Trends_Review of Logging Concessions in PNG.pdf
- ForestResourceAcquisition.pdf
- Fox et al Ecosystems 2011 AGB in PNG_Impact of Selective Harvesting.pdf
- idrisi_focus_paper_redd.pdf
- ODI2007.pdf
- LegalOpinion.pdf
- masp_1.htm
- masp_2.htm
- masp_3.htm
- masp_4.htm
- masp_5.htm
- masp_6.htm
- Monitoring Report_v1.1._NCR_responses.man
- NFA Jan 1997 HRHL.pdf
- Ningal et al 2008.pdf
- Non-PermanenceRiskReport_IFM v3.0_0.doc
- Non-PermanenceRiskReport_REDD v3.0_0.doc
- PNG_RE_images.zip
- RateofDeforestation_BL-PL.xlsx
- ProjectDescription_VCS_V1.2_NCR_response.docx
- ProxyArea_BLPL_comparison.xlsx
- Up_For_Grabs_2012.pdf
- Sherman and Bryan 2011.pdf
- Sherman_2009State of Forests of PNG.pdf
- Tim Anderson.pdf
- VCS_7_10_Calculator_PNG-master_V1.0_CURRENT.xlsx
- VCS_7_10_Calculator_PNG-M1_V1.1.xlsx
- VCS_7_10_Calculator_PNG-master_V1.0.xlsx
- winrock-biocarbon_fund_sourcebook-compressed.pdf
- Winrock Sampling Calculator _AS.xlsx
- Zanne et al GlobalWoodDensityDatabase.xls

Documents received 7 June 2013

- ProjectDescription_VCS_V1.2_NCR_response.docx

Documents received 18 June 2013

- Roads_10yr_Final.shx
- 032-VCS Project Validation-Verification NCR-CL-OFI_Round1_041713-final-1._EAS.docx
- Annex 8_Participatory Rural Appraisal Report_V2.0.doc
- Monitoring Report_v1.1._NCR_responses.docx
- Roads_10yr_Final.dbf
- Roads_10yr_Final.prj
- Roads_10yr_Final.sbn
- Roads_10yr_Final.sbx
- Roads_10yr_Final.shp
- Roads_10yr_Final.shp.xml

Documents received 20 June 2013

- Roads_10yrs_Final_NEW.shx
- 2009_classification_final.dbf
- 2009_classification_final.prj
- 2009_classification_final.sbn
- 2009_classification_final.sbx
- 2009_classification_final.shp
- 2009_classification_final.shp.xml
- 2009_classification_final.shx
- Roads_10yrs_Final_NEW.dbf
- Roads_10yrs_Final_NEW.jpg
- Roads_10yrs_Final_NEW.prj
- Roads_10yrs_Final_NEW.sbn
- Roads_10yrs_Final_NEW.sbx
- Roads_10yrs_Final_NEW.shp
- Roads_10yrs_Final_NEW.shp.xml

Documents received 4 July 2013

- EditorialResponses-4Jul2013.xlsx

Documents received 9 July 2013

- Responses_Corrections-09Jul2013.xlsx

Documents received 25 July 2013

- Round2Responses_23072013.xlsx
- 24
  - Jaenickeetal_2008.pdf
  - Annex13_Peat_mapping_report.doc
- 27
  - LaunchingLetter_MinisterofForestry.jpg
- 29
  - Steeles FMA opinion.pdf
- 45
  - T-SIG_deadwoodHWP.xlsx
  - Grove Forest Ecology and Management 2001-1.pdf
- Annex5_HistoricalLULCAnalysis_V1_1.docx
- Monitoring Report_v1.2_NCR_responses.docx
- ProjectDescription_VCS_V1_3.docx

Documents received 5 August 2013

- Annex5_HistoricalLULCAnalysis_V1.1.docx
- 29
  - Steeles FMA opinion.pdf
- 68
  - GlobalWoodDensityDatabase.xls
- 107
  - FMA_exclVegclass_exclPeat_exclslope6_final.shx
  - FMA_exclVegclass_exclPeat_exclslope6_final.dbf
  - FMA_exclVegclass_exclPeat_exclslope6_final.prj
  - FMA_exclVegclass_exclPeat_exclslope6_final.sbn
  - FMA_exclVegclass_exclPeat_exclslope6_final.sbx
  - FMA_exclVegclass_exclPeat_exclslope6_final.shp
  - FMA_exclVegclass_exclPeat_exclslope6_final.shp.xml
- 173
  - FM_Project Boundaries__Final_v2.xml
  - 10YearRoadsFile.dbf
  - 10YearRoadsFile.prj
  - 10YearRoadsFile.sbn
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  - AprilRiver_FMA.dbf
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  - IFM_Project Boundaries__Final_v2.sbx
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- IFMBondary_2009_2012LULC.sbn
- IFMBondary_2009_2012LULC.sbx
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- RoadsFile_2009_2012LULC.shp.xml
- RoadsFile_2009_2012LULC.shx
- RoadsFile_2009_2012LULC.txt
- RoadsFile_2009_2012LULC.xml
- RoadsFile_Final.dbf
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  - Annex13_Peat_mapping_report.doc
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  - AprilRiver_FMA.dbf
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  - AprilSalumei_FMA.sbx
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  - PlotTool.xlsx
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  - ForestCarbonStatisticalAnalysis.docx
  - Biomass Statistical Analysis.xlsx
- 201
  - 201Response.docx
- Annex5_HistoricalLULCAnalysis_V1-1.docx

- Annex 9_Forest Carbon Stock Calculations.docx
- Monitoring Report_v1-2_NCR_responses.docx
- PNG Responses-Round2.xlsx
- VCS_7_10_Calculator_PNG-M1_V1-2.xlsx
- ProjectDescription_VCS_V1-3.docx
- ProjectDescription_VCS_V1.3.docx
- Monitoring Report_April Salumei_v1 2.docx
- VCS_7_10_Calculator_PNG-M1_V1 2.xlsx

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- VCS_7_10_Calculator_PNG-M1_V1 2.xlsx
- Monitoring Report_April Salumei_v1 2.docx
- ProjectDescription_AprilSalumei_V1.3.pdf

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- Monitoring Report_April Salumei_v1.2.docx
- ProjectDescription_AprilSalumei_V1.3.docx

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- ProjectDescription_VCS_V1.0.docx
- Field Data_Validation2013_JP_SM_1.xlsx
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    - GreenpeaceRHreport.pdf
    - Sherman Deforestation Presentation.pdf
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      - SIL Awareness JAN 10 (2).pdf
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      - DOBIS-ILG3222.pdf
      - FOHSE - ILG.pd"
      - LATUAM-ILG3281.pdf
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    - ILGs B'Nomo Investments

- AS - YIGAI VILLAGE - ILG Consent for the Sustainable Forestry & Carbon Services Deed.pdf
- AS - BITARA VILLAGE - ILG Consent for the Sustainable Forestry & Carbon Services Deed.pdf
- AS - GAHOM VILLAGE - ILG Consent for the Sustainable Forestry & Carbon Services Deed.pdf
- AS - KAGIRU VILLAGE - ILG Consent for the Sustainable Forestry & Carbon Services Deed.pdf
- AS - WAGU VILLAGE - ILG Consent for the Sustainable Forestry & Carbon Services Deed.pdf
- AS - WOSIME VILLAGE - ILG Consent for the Sustainable Forestry & Carbon Services Deed.pdf

▪ ILGs Nom Investments
  - YERAKAI Village.pdf
  - BANAKOT 2.pdf
  - BANAKOT Village.pdf
  - MALU Village.pdf
  - NAWEI Village.pdf
  - WALFIAN Village.pdf
  - YAUAMBAK Village.pdf
  - YEMBI YEMBI Village.pdf

▪ ILGs Salumei Investments
  - YEMBI YEMBI Village.pdf
  - BISIRIO Village.pdf
  - BUGIAWI Village.pdf
  - CHANGRIMAN Village.pdf
  - \INARU Village.pdf
  - MALI Village.pdf
  - MANSAUT Village.pdf
  - MEKSA Village.pdf
  - MUGUMUTE Village.pdf

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  - AS - YAPTAUE VILLAGE - ILG Consent for the Sustainable Forestry &

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- AS - ARAPI VILLAGE - ILG Consent for the Sustainable Forestry & Carbon Services Deed.pdf
- AS - HANASI VILLAGE - ILG Consent for the Sustainable Forestry & Carbon Services Deed.pdf
- AS - LARIASO VILLAGE - ILG Consent for the Sustainable Forestry & Carbon Services Deed.pdf
- AS - MAPOSI (B) VILLAGE - ILG Consent for the Sustainable Forestry & Carbon Services Deed.pdf
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- AS - NAIEN VILLAGE - ILG Consent for the Sustainable Forestry & Carbon Services Deed.pdf
- AS - NEKIE VILLAGE - ILG Consent for the Sustainable Forestry & Carbon Services Deed.pdf

- AS - PARU VILLAGE - ILG Consent for the Sustainable Forestry & Carbon Services Deed.pdf
- AS - PEI (B) VILLAGE - ILG Consent for the Sustainable Forestry & Carbon Services Deed.pdf
- AS - PEI (C) VILLAGE - ILG Consent for the Sustainable Forestry & Carbon Services Deed.pdf
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- AS - SAURUNAPI (B) VILLAGE - ILG Consent for the Sustainable Forestry & Carbon Services Deed.pdf
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  - Annex9_ForestCarbonStockCalculations.docx
  - Monitoring Report_v1.3.docx
  - ProjectDescription_AprilSalumei_V1.4.docx
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- NCR107
  - Slope30degrees.shx
  - FMABoundaries.dbf
  - FMABoundaries.prj
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  - PeatdomesinFMA.sbn
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  - 2009_mosaic_final.tif.tiff
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- ProjectDescription_AprilSalumei_V1.5.docx
- NCR107
  - SwampForest_only.dbf
  - SwampForest_only.prj
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  - SwampForest_only.sbx
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  - woodland_only.dbf
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- Monitoring Report_v1.3.pdf
- ProjectDescription_AprilSalumei_V1.5.pdf

Documents received 19 September 2013

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- ProjectDescription_AprilSalumei_V1.5.pdf
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- Annex5_HistoricalLULCAnalysis_V1.2.pdf
- Monitoring Report_v1.3.pdf
- ProjectDescription_AprilSalumei_V1.5.pdf

APPENDIX B – NCR/CL/OFI SUMMARY

Please note that, due to concurrent completion of both Validation and Verification, Appendix B includes both validation and verification NCRs/CLs/OFIs.

1. Non-Conformity Report (VCS Checklist Main, Standard 3.3, Line 34)

VCS Criteria: Standard 3.3, 3.2 Multiple Projects – 4) Where AFOLU projects are required to undertake non-permanence risk assessment and buffer withholding determination, this shall be done separately for each project activity.	
Evidence Used to Assess Conformance: Risk Analysis Annex	
Findings: Project appears to have combined the risk analysis. According to this element, the project needs to perform a separate risk analysis for each project activity.	
Non-conformity report (NCR): Please perform a separate risk analysis for each project activity.	
Date issued:	17 April 2013
Project proponent response/actions and date: A Risk Assessment has now been conducted for each activity reporting risk for IFM and REDD activities separately. – 5 June 2013	
Evidence used to close NCR: Project has submitted two separate risk analyses, one for IFM and one for REDD. The individual elements of each will be reviewed in detail in separate sections. This item is addressed in general.	
Date closed:	06 June 2013

2. Non-Conformity Report (VCS Checklist Main, Standard 3.3, Line 116)

VCS Criteria: Standard 3.3, 3.10 Project Location - 3) Project location for AFOLU projects shall be specified using geodetic polygons to delineate the geographic area of each AFOLU project activity and provided in a KML file.	
Evidence Used to Assess Conformance: PDD, shape files provided to verifiers and converted to KML's	
Findings: The project has provided the needed maps of the REDD, IFM, project boundaries and excluded peat soils. All maps have been provided as requested and converted by verifiers into the needed KML's. The project developer has subsequently realized that the boundary in the PDD for IFM related activities needs to be corrected. Quoted form an email, "Please note that during this update we have realized that the boundary map in the PD was an old version and will need to be updated."	
Non-conformity report (NCR): Please confirm that the boundaries for the IFM aspects of the project are correct across the PDD and the provided maps and shape files. Please also provide a KML format as stated in the requirement.	
Date issued:	17 April 2013
Project proponent response/actions and date: Maps have been updated within the PD. Shapefiles and KML files are supplied in folder 2. – 5 June 2013	
Evidence used to close NCR: Updated maps confirmed to have been supplied. Issue is addressed.	
Date closed:	17 July 2013

3. Clarification (VCS Checklist Main, Standard 3.3, Line 149)

VCS Criteria: Standard 3.3, 3.14 Additionality - 3.14.1 Additionality shall be demonstrated and assessed in accordance with the requirements set out in the methodology applied to the project.
Evidence Used to Assess Conformance: PDD, separate methodology tabs
Findings: Project used the 'Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities V3.0' (VT0001). This is found to be compliant as the forests in the project area solely virgin forests and do not violate any laws, and there is consistency in the determination of the baseline and additionality. The history behind the project area includes a governmental determination of a Forest Management Area, and then the subsequent declaration of a Wildlife Management Area. The landowners sued the government who eventually removed the WMA declaration, again making it available for logging. Both sides agreed that the project area could become a carbon project so that both parties would result in a partial win. The landowners can pursue a carbon project and the government has a part in saving the forest from the legally sanctioned logging opportunity. Without the possibility of revenues from carbon

finance, the landowners would not have agreed to protect the area, but rather they would have pursued generation of revenues from the logging concession. A barrier analysis was conducted by the project which used reasonable scenarios and arguments. Direct observations during the site visit confirmed as well that the baseline approach was reasonable and that the project would not have occurred without the possibility of carbon finance. In the absence of this, the project area would have been subject to extractive activities.	
Clarification (CL): Some text is missing or needs to be corrected under the Additionality section in the PDD. Second and third paragraph in Section 2.5.	
Date issued:	17 April 2013
Project proponent response/actions and date: Entire Additionality section has been reviewed and edited, readability improved and sentences completed. – 5 June 2013	
Evidence used to close CL: This section of the PD is much improved over previous versions. As there are separate items for the Additionality Tool in this document, this item can be closed.	
Date closed:	06 June 2013

4. Non-Conformity Report (VCS Checklist Main, Standard 3.3, Line 159)

VCS Criteria: Standard 3.3, Monitoring Plan - 3.16.3 The project proponent shall establish a GHG information system for obtaining, recording, compiling and analyzing data and information important for quantifying and reporting GHG emissions and/or removals relevant for the project (including leakage) and baseline scenario.	
Evidence Used to Assess Conformance: Section 5.7 of PDD, observations during site visit, Monitoring Report	
Findings: The PDD describes an archiving system with how the documents will be stored, where and for how long.	
Non-conformity report (NCR): A reference to the section in the PDD is missing in the text of this section, 5.7.	
Date issued:	17 April 2013
Project proponent response/actions and date: Reference in section 5.7 has been updated to section 5.12. – 5 June 2013	
Evidence used to close NCR: Reference has been updated in the PD. Issue is addressed.	
Date closed:	06 June 2013

5. Non-Conformity Report (VCS Checklist Main, Standard 3.3, Line 178)

VCS Criteria: Standard 3.3, 3.18 Project Description - 3.18.1 The project and its context shall be described in the project description using the VCS Project Description Template (or approved GHG program project description template where the project is requesting registration under an approved GHG program).	
Evidence Used to Assess Conformance: PDD	
Findings: Using v 3.0 but need to be using v 3.1.	
Non-conformity report (NCR): The PDD is written using v 3.0 PDD template; however, a newer template is now available. VCS requires that the most recent version of the PDD be used. v3.1.	
Date issued:	17 April 2013
Project proponent response/actions and date: The PD has been updated to the new version 3.1. A section was added as 3.13 Summary of GHG Emission Reductions and Removals and the header has been changed. – 5 June 2013	
Evidence used to close NCR: PDD was updated as requested and submitted to verifiers. Issue is addressed.	
Date closed:	06 June 2013

6. Clarification (VCS Checklist Main, AFOLU_IFMv3.3, Line 26)

VCS Criteria: Standard 3.3, 4.3 Project Boundary - 4.3.14 RIL and LtPF methodologies shall include the dead wood carbon pool in the project and baseline scenario. Both of these activities reduce the amount of timber extracted per unit area, which, in turn, may reduce the dead wood pool in the project scenario.

Evidence Used to Assess Conformance: PDD, Table 18	
Findings: Included in baseline and project scenario, however in the measurement of plots, this aspect was not quantified.	
Clarification (CL): Please confirm where dead wood was quantified in the baseline scenario.	
Date issued:	17 April 2013
Project proponent response/actions and date: In accordance with the LtP requirements of the VCS, deadwood does need to be included in the Project and Baseline scenarios. There are two forms of deadwood that are relevant here: 1) Natural deadwood that is assumed to be the same in both the baseline and project scenarios. 2) Harvest related deadwood that is expected to be greater in the baseline scenario (with harvest) when compared with the project scenario (without harvest). Deadwood was calculated in accordance with VM0010. The methodology clearly describes the approach on page 16 as The baseline net greenhouse gas emissions are determined from calculation of dead wood(logging slash)generated in the process of timber harvest (Section 8.1.2),the emissions resulting from production and subsequent retirement of wood products derived from the timber harvesting (Section 8.1.3), minus the rates of forest regrowth post timber harvest (Section 8.1.4). The calculations associated with Section 8.1.2 (page 20) are performed in the excel spreadsheet on the tab of the same name (i.e. 8.1.2). Please also see NCR 45 for related response. – 5 June 2013	
Clarification (CL): This item is still open please see item number #45	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
Deadwood in the Project scenario was determined to be insignificant using the T-SIG tool (see NCR 45 for detailed description of the calculation approach). As the baseline scenario is cleared land, the deadwood pool is greater in the project scenarion than the baseline scenario and therefore can be exlcuded from the calculations.	
Evidence used to close CL: See item 45. Issue addressed.	
Date closed:	25 August 2013

7. Non-Conformity Report (VCS Checklist Main, Risk_Tool v3.2 , Line 7)

VCS Criteria: AFOLU V3.2, Table 1, Property Management - Management team does not include individuals with significant experience in all skills necessary to successfully undertake all project activities (i.e., any area of required experience is not covered by at least one individual with at least 5 years' experience in the area).	
Evidence Used to Assess Conformance: Annex 7	
Findings: Management Team consists of trained staff that specialize in specific aspects of the project development and management. Contractors selected are also well versed in their operations and have experience with carbon projects.	
Non-conformity report (NCR): Please provide a listing of team members in all areas of critical expertise, and provide the years of relevant experience for each.	
Date issued:	17 April 2013
Project proponent response/actions and date: Whilst the management team (and most of the technical staff) has been working in REDD projects for more than 5 years the management team do not meet all the requirements (i.e. have achieved verification of a project) and therefore this mitigation element was removed from the risk assessment. – 5 June 2013	
Evidence used to close NCR: Non permanence risk tools for both IFM and REDD projects have been corrected for this item and scored as a 0. Issue is addressed.	
Date closed:	17 July 2013

8. Non-Conformity Report (VCS Checklist Main, Risk_Tool v3.2 , Line 10)

VCS Criteria: AFOLU V3.2, Table 1 Property Management - Mitigation: Adaptive management plan in place.

Evidence Used to Assess Conformance: Annex 7	
Findings: Adaptive management plans are those that identify, assess and create a mitigation plan for potential risks to the project, including those identified in this document, and any other obstacles to project implementation. They include a process for monitoring progress and documenting lessons learned or corrections that may be needed, and incorporating them into project decision-making in future monitoring periods. The onus is on the project proponent to demonstrate that such plans are in place, that such plans have considered the realm of potential risks and obstacles to the project, and that a system is in place for adapting to changing circumstances.	
Non-conformity report (NCR): The Non Permanence Risk Tool, 2.2.1 (5) states that an actual plan must be created. Please provide the adaptive management plan for review. Further, the item explains that the project will be verified annually. Please confirm what type of verification will occur.	
Date issued:	17 April 2013
Project proponent response/actions and date: a. The adaptive management plan is provided as Annex 18 to the PD. b. As discussed with ESI the verification element of this NCR is no longer relevant. – 5 June 2013	
Evidence used to close NCR: Adaptive management plan was submitted to verifiers and reviewed. This issue is addressed.	
Date closed:	17 July 2013

9. Non-Conformity Report (VCS Checklist Main, Risk_Tool v3.2, Line 11)

VCS Criteria: AFOLU V3.2, Total Project Management - Total may be less than 0	
Evidence Used to Assess Conformance: Annex 7	
Findings: Client score is 0 however could be -4	
Non-conformity report (NCR): Please explain the justification for a score of 0 where it appears that a score of -2 or -4 is possible.	
Date issued:	17 April 2013
Project proponent response/actions and date: Corrections to the Risk Assessment reports were made and the score is now reported correctly. – 5 June 2013	
Evidence used to close NCR: This score was corrected. Issue is addressed.	
Date closed:	17 July 2013

10. Non-Conformity Report (VCS Checklist Main, Risk_Tool v3.2, Line 16)

VCS Criteria: AFOLU V3.2, Table 2 Financial Viability - Project cash flow breakeven point is less than 4 years from the current risk assessment	
Evidence Used to Assess Conformance: Annex 7	
Findings: 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.	
Non-conformity report (NCR): Please provide financial documentation as required in the AFOLU Non Permanence Risk Tool, items 2.2.2 (4) and (5).	
Date issued:	17 April 2013
Project proponent response/actions and date: Financial information relating to the project cash in hand is provided with this NCR. The project currently has in its accounts more money than the project owes and so the project cash flow breakeven point is 0 years. It is more than breakeven at the current risk assessment. – 5 June 2013	
Evidence used to close NCR: FinancialPosition.xlsx file was reviewed and found to contain the relevant information needed to close this NCR and find it acceptable.	
Date closed:	17 July 2013

11. Non-Conformity Report (VCS Checklist Main, Risk_Tool v3.2, Line 19)

VCS Criteria: AFOLU V3.2, Table 2 Financial Viability - Project has secured 40% to less than 80% of funding needed to cover the total cash out required before the project reaches breakeven.
Evidence Used to Assess Conformance: Annex 7
Findings: 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.	
Non-conformity report (NCR): Please provide financial documentation as required in the AFOLU Non Permanence Risk Tool, items 2.2.2 (4) and (5)	
Date issued:	17 April 2013
Project proponent response/actions and date: The financial Tables presented as part of NCR 10 show that the Project has secured more than 80% of the funding needed to cover the total cash out required before the project breakeven. The project has secured over 230% of the cash required before the project breaks even. – 5 June 2013	
Evidence used to close NCR: FinancialPosition.xlsx file was reviewed and found to contain the relevant information needed to close this NCR and find it acceptable.	
Date closed:	17 July 2013

12. Non-Conformity Report (VCS Checklist Main, Risk_Tool v3.2, Line 21)

VCS Criteria: AFOLU V3.2, Table 2 Financial Viability - Mitigation: Project has available as callable financial resources at least 50% of total cash out before project reaches breakeven.	
Evidence Used to Assess Conformance: Annex 7	
Findings: 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.	
Non-conformity report (NCR): Please provide financial documentation as required in the AFOLU Non Permanence Risk Tool, items 2.2.2 (4) and (5)	
Date issued:	17 April 2013
Project proponent response/actions and date: The financial tables provided as part of the response to NCR 10 demonstrate that the Project has available at callable financial resources of approximately 58% of the total cash out before the Project breaks even. – 5 June 2013	
Evidence used to close NCR: FinancialPosition.xlsx file was reviewed and found to contain the relevant information needed to close this NCR and find it acceptable.	
Date closed:	17 July 2013

13. Non-Conformity Report (VCS Checklist Main, Risk_Tool v3.2, Line 25)

VCS Criteria: AFOLU V3.2, Table 3 Opportunity Cost - NPV from the most profitable alternative land use activity is expected to be between 50% and up to100% more than from project activities.	
Evidence Used to Assess Conformance: Annex 7	
Findings: NPV of alternative land use (i.e. timber harvest was calculated to be approximately $144 million. NPV of the carbon project was calculated to be approximately $63 million.	
Non-conformity report (NCR): Please provide the NPV analysis conducted as required in the AFOLU Non-Permanence Risk Tool	
Date issued:	17 April 2013
Project proponent response/actions and date: The NPV analysis has been attached. – 5 June 2013	
Evidence used to close NCR: 13_NPV_analysis.xlsx file was reviewed and found to be a logical and correct representation that the most profitable alternative land use is between 50 and 100% more profitable. Issue is addressed.	
Date closed:	17 July 2013

14. Clarification (VCS Checklist Main, Risk_Tool v3.2, Line 31)

VCS Criteria: AFOLU V3.2, Table 3 Opportunity Cost - Mitigation: Project is protected by legally binding commitment (see Section 2.2.4) to continue management practices that protect the credited carbon stocks over the length of the project crediting period.
Evidence Used to Assess Conformance: Annex 7, Annex 1_ Official Agreement _RPMandILGs.pdf
Findings: The legally binding document was provided to verifiers and is found to be applicable for this indicator. See Annex 1 for details. The action for this project is a planned harvest, and the legally

binding document indicates that not harvesting the trees suffices as the continuation of the management practice.	
Clarification (CL): The agreement started or was effective from August 2011. Please defend how this agreement is for the entire crediting period. No defined term is included in the agreement. The PDD project crediting period states 40 years.	
Date issued:	17 April 2013
Project proponent response/actions and date: 1. The project rights were held by the PNG Government until they were awarded to Rainforest Project Management Limited on 10th May 2012 by way of the National Executive Council decision 106/2012 (annexure 3). This provides RPML the right to develop and manage the project. 2. Under the Carbon Services Deed (annexure 1) the landowners have undertaken "all necessary requirements to transfer all present and future legal rights to Carbon Services and Ecosystem services in the project area" to RPML. (Section 4.2 (a)) 3. Carbon Services and Ecosystem Services are defined in the definitions section of the agreement. In summary the rights to develop the Project were held by the Government and have been transferred to RPML for the development of the project. The landowners have consented to this and also transferred all present and future resource rights to RPML. RPML therefore holds the resource rights to the project. This allows RPML to enter into agreements and make legally binding commitments for the project. In this particular case it would be for the term of the project as set by RPML. The term of the Project set by RPML is 40 years as defined in the PD. – 5 June 2013	
Evidence used to close CL: Explanations given for this item are an acceptable argument. Since the project is now under the management of RPML and they have indicated the term under this VCS project description, then the project term under the agreement is 40 years as defined by the PDD. Once the PDD is validated, the project term cannot change, and thus this agreement will be set as the project term.	
Date closed:	17 July 2013

15. Non-Conformity Report (VCS Checklist Main, Risk_Tool v3.2, Line 36)

VCS Criteria: AFOLU V3.2, Table 4 Project Longevity - With legal agreement or requirement to continue the management practice.	
Evidence Used to Assess Conformance: Annex 7 and Annex 1	
Findings: 58/2= 29 (30-29=1)	
Non-conformity report (NCR): The agreement started or was effective from August 2011. Please defend how this agreement is for a time frame greater than the entire crediting period. No defined term is included in the agreement. The project crediting period states 40 years.	
Date issued:	17 April 2013
Project proponent response/actions and date: The legal agreement to maintain the area as a REDD project was defined in 2009 in the settlement documents between the Landholders and the Government. The formal transfer of the user rights from the PNG Forest Authority to RPML was confirmed with the NEC decision. In accordance with the Forestry Act allocation of a FMA area is for a period of 50 years with the option of 2 x 20 year extensions. As defined in other NCRs the project credit period has been adjusted to 38 years, however the Project Longevity is 38 + 20 = 58 years. The risk documents have been adjusted accordingly. – 5 June 2013	
Evidence used to close NCR: Score is calculated correctly and crediting period argument is deemed valid when combined with response for Item 14 above. Issue is addressed.	
Date closed:	17 July 2013

16. Non-Conformity Report (VCS Checklist Main, Risk_Tool v3.2, Line 38)

VCS Criteria: AFOLU V3.2, Table 4 Project Longevity - Total Internal Risks
Evidence Used to Assess Conformance: Annex 7 and Annex 1
Findings: Project claims a total internal risk of 5, however when added up on the scores presented, one comes up with a score of 9. The score is most probable if the project took a negative four (-4) score on the Project Management item, so long as all scores are correctly calculated.

Non-conformity report (NCR): Please correct the Risk Report after providing requested information so that the score represents the correct rating.	
Date issued:	17 April 2013
Project proponent response/actions and date: All changes and required evidence has been presented in the Risk related documentation. – 5 June 2013	
Evidence used to close NCR: Changes have been confirmed. Total score is now 4.	
Date closed:	17 July 2013

17. Non-Conformity Report (VCS Checklist Main, Risk_Tool v3.2, Line 41)

VCS Criteria: AFOLU V3.2, Table 6 Land Tenure - Ownership and resource access/use rights are held by same entity(s)	
Evidence Used to Assess Conformance: Annex 7	
Findings: Project claims "The Landholding companies have complete ownership of the project area."	
Non-conformity report (NCR): Please provide the clear path of ownership evidence.	
Date issued:	17 April 2013
Project proponent response/actions and date: The land is owned by the traditional landholders that have formed themselves into landowner companies. Through the establishment of FMA areas the landholders have allocated the user rights to the Forest Authority. The Forest Authority then applies a 34 step process to allocate the user rights to a developer. The final step in this process of user right allocation is the NEC decision. This same process has been adopted by the Forest Authority to allocate user rights to REDD project developers. The NEC decision provided to the auditors shows that the rights to the project area have been allocated to Rainforest Project Management Limited (RPML). The allocation of user rights are also separately recognized and endorsed by the landholders in the contact between the landholder companies and RPML (Annex 1). – 5 June 2013	
Evidence used to close NCR: NEC decision clearly endorses RPML as the project developer and manager of the carbon rights to the project, however subject to the provisions of the NEC decision relating to the allocation of carbon funding. The ownership pathway is clear in that RPML has the management rights to the carbon project and the land owner companies still retain ownership to their lands. The score is changed to a 2, from previously 0. Issue is addressed.	
Date closed:	17 July 2013

18. Non-Conformity Report (VCS Checklist Main, Risk_Tool v3.2, Line 50)

VCS Criteria: AFOLU V3.2, Table 7 Community Engagement - Less than 50 percent of households living within the project area who are reliant on the project area, have been consulted.	
Evidence Used to Assess Conformance: Annex 8_Participatory Rural Appraisal Report.pdf and Annex 7	
Findings: 100% of villages within the Project area have been consulted about the activities of the project	
Non-conformity report (NCR): Please provide a sample of completed questionnaires from the PRA.	
Date issued:	17 April 2013
Project proponent response/actions and date: There were a number of PRA activities that have been conducted over a period of 2 years in the project boundary. Some of these were informal discussions (i.e. no forma questionnaires) and some others more formal. This approach was taken as women rarely get the opportunity to respond in a more formal setting. Attached to this NCR are some of the Surveys and summaries of interviews conducted in the course of the PRA activities. Note that many people cannot read or write English and so these surveys have been filled by RMPL staff or the landholder chairman in those cases. – 5 June 2013	
Evidence used to close NCR: Three completed PRA samples were provided that clearly show the type of questions asked and the responses. This satisfies this requirement. Issue is addressed.	
Date closed:	17 July 2013

19. Non-Conformity Report (VCS Checklist Main, Risk_Tool v3.2, Line 60)

VCS Criteria: AFOLU V3.2, Table 8 Political Risk - Mitigation: Country is implementing REDD+

Readiness or other activities, as set out in this Section 2.3.3.	
Evidence Used to Assess Conformance: Annex 7, web search, http://www.un-redd.org/Key_results_achievements_PapuaNewGuinea/tabid/106628/Default.aspx	
Findings: While a REDD+ Readiness Proposal has been produced, there is no evidence presented that the country is receiving Readiness funding. This indicator requires the following in order to receive this discount. The mitigation discount may be applied if any of the following applies: a) The country is receiving REDD+ Readiness funding from the World Bank Forest Carbon Partnership Facility, UN-REDD or other bilateral or multilateral donors, and is implementing a REDD+ policy framework covering key components such as GHG credit ownership, clear government authority over REDD+ projects, and/or national measurement, reporting and verification systems. b) The country is participating in the CCBA/CARE REDD+ Social and Environmental Standards initiative.2 c) The jurisdiction in which the project is located is participating in the Governors' Climate and Forest Taskforce (GCF). d) The country has an established national FSC or PEFC standards body. e) The country has an established Designated National Authority under the CDM and has at least one registered CDM Afforestation/Reforestation project.	
Non-conformity report (NCR): A web search reveals that the PNG government is participating in the UN REDD program but it is not obvious as to the status of any funding or implementation of the REDD+ policy framework, as required by this indicator. Please provide evidence in the form of documentation, websites or contact information that supports this claim for this mitigation credit.	
Date issued:	17 April 2013
Project proponent response/actions and date: There are two key references that describe in detail the REDD readiness activities conducted in PNG to date: Links in the UN-REDD website - http://www.un-redd.org/UNREDDProgramme/CountryActions/PapuaNewGuinea/tabid/1026/language/en-US/Default.aspx. The key outcomes of spending are listed as: 2011 Involvement in conducting MRV and REDD+ Technical Working Group (TWG) meetings to ensure stakeholder engagement in the design of a National MRV and REDD+ Mechanism. A roadmap of all DP climate change assistance to Government of PNG through various government agencies has been produced and held in Office of Climate Change and Development (OCCD) as a guide for coordination and avoid duplication among partners to advance the work of REDD in the country with a two specific provincial government consultative workshops. Completion and approval of Government of PNG's National UN-REDD Programme Document. Implementation began with the MRV Design Workshop led by FAO to help stakeholders to understand what they have to do (develop a MRV Action Plan and a NFI Action Plan). National Programme Inception Workshop held on 12 and 13 July 2011 to improve awareness amongst stakeholders on the purpose of PNG's Programme and agreement on the Work Plans. In August, FAO assisted OCCD to draft PNG's REDD+ Action Plan for Information and MRV, to help government to build their specific MRV and NFI action Plans. Report from Information, Monitoring and MRV Workshop is available here. A group of GIS experts from different PNG government departments and academy went to Brazil in September for a 2 week-training organized by FAO to learn about the Information and MRV system. Draft of FPIC guidelines currently under review. OCCD began trialing REDD awareness raising targeting government representatives at the provincial, district and local levels in Morobe and New Ireland Province. 2. The most recent (February 2013) document from the Forest Carbon Partnership Facility - http://www.theredddesk.org/sites/default/files/resources/pdf/2013/r-pp_png.pdf This is a detailed description of the previous work and challenges and the future plans for development. Highlights listed in the Executive Summary include: The future R - PP Programme for PNG will continue to support the current UNREDD Programme beyond 2013, by addressing key gaps while slowly addressing other issues that needs to be resolved	

continuously and consistently throughout the implementation of REDD-plus. PNG has several enabling environments that will support a balance implementation of this R-PP by both the government and UNDP. These includes the following but not limited to; • The newly established Office of Climate Change and Development (OCCD)provide the institutional structure to coordinate action against climate change in PNG. It supports the whole-of government National Climate Change Committee in steering climate change policy and reports to the Minister for Climate Change and Forestry. • A Climate-Compatible Development Strategy(CCDS) sets out the strategic direction for PNG's action against climate change domestically, with a strong focus on REDD-plus. The main elements of the draft CCDS and the process for multi-stakeholder consultation have been endorsed by the National Executive Council (NEC). • The Climate Compatible Development Policy • National Climate Change Bill (Draft) • The Role and Governance structure of the REDD+ and MRV TWG Institutions who provide overall support to the Programme within itself. This also exclusively includes the role of CBOs, CSOs, NGOs, and the Private Sector who will be working closely with government to see through the implementation of this R-PP; and in this case most will be drivers of the implementation of the R-PP activities. Complemented by what has already been implemented under the National UNREDD Programme, PNG is keen on continuing this work through this R-PP. – 5 June 2013	
Evidence used to close NCR: Further web searches combined with the explanation offered by the project developers indicates that PNG is operating with international funding, and UN-REDD funding and is implementing a REDD+ policy framework relating to ownership and clear government authority over REDD+ projects. http://redd-database.iges.or.jp/redd/download/link?id=10. Issue is addressed.	
Date closed:	17 July 2013

20. Non-Conformity Report (VCS Checklist Main, Risk_Tool v3.2, Line 65)

VCS Criteria: AFOLU v3.2, Natural Risks - Pest and Disease	
Evidence Used to Assess Conformance: Annex 7 and personal observations while on the site visit, and through interviews with locals	
Findings: Project claims that should there be pest or disease outbreak that it would be major. Since this is a primary forest, currently pests and diseases appear to operate at an endemic level, due mainly to a lack of human disturbance. It appears from spending several hours flying over the project area and other parts of the country that this is indeed not an occurrence in this forest type. Verifiers find this risk score to be applicable and reasonable.	
Non-conformity report (NCR): Please provide documentation to support the likelihood of occurrence at 100 years.	
Date issued:	17 April 2013
Project proponent response/actions and date: A thorough search of internet and publication sources relevant to reporting Pests and Diseases found no references to pest and disease outbreaks in Papua New Guinea native forests. We also interviewed senior people in PNG Forest Research Institute Prof Simon Saulei and Bruno Kuroh who confirmed that there are no reports of pest and disease incidence in native forest in PNG. To be conservative we have adjusted the rating to be 50 - 100 years and Major significance which is equivalent to 1%. See: http://www.fao.org/docrep/004/AC130E/ac130e04.htm - 5 June 2013	
Evidence used to close NCR: Independent web searches find no information of pest and disease in PNG forests. The explanation given and the new score given appear to reflect a conservative choice on the part of the project manager. Issue is addressed.	
Date closed:	17 July 2013

21. Non-Conformity Report (VCS Checklist Main, Risk_Tool v3.2, Line 66)

VCS Criteria: AFOLU v3.2, Natural Risks - Extreme Weather – Changes in Weather Patterns
Evidence Used to Assess Conformance: Annex 7 and personal observations while on the site visit, and through interviews with locals

Findings: Project claims "Climate change in Papua new Guinea is expected to manifest as hotter minimum, maximum and mean temperatures and a slight delay in the wet season. The resilience of the forest is unlikely to be impacted greatly from this level of change Insignificant (less than 5% loss of carbon stocks) or transient (full recovery of lost carbon stocks expected within 10 years of any event." Drought appears to also be a major issue in the country. Since this project does not involve planting trees, and does not rely on human intervention into the forest for the purposes of maintaining health of trees etc., it is deemed appropriate to not count the risk of drought as a major risk to the project. This is due to the project area consisting of primary, unchanged forest. The size of the project area, combined with lack of human interference and historic resilience of this forest combine to provide evidence that this aspect is scored appropriately.	
Non-conformity report (NCR): Please provide the source/basis/literature for the justification stating it will be hotter, the anticipated resilience of the forest and the anticipated level of impact (less than 5%).	
Date issued:	17 April 2013
Project proponent response/actions and date: Text regarding Climate change has been sourced from the PNG Office of Climate Change and Development. This component of the Risk Assessment now has appropriate references. – 5 June 2013	
Evidence used to close NCR: References and score confirmed. Issue is addressed.	
Date closed:	17 July 2013

22. Non-Conformity Report (VCS Checklist Main, Risk_Tool v3.2, Line 67)

VCS Criteria: AFOLU v3.2, Natural Risks - Geological Risk	
Evidence Used to Assess Conformance: Annex 7 and personal observations while on the site visit and through interviews with locals, http://www.preventionweb.net/english/countries/statistics/?cid=132.	
Findings: Prevention web indicates that earthquakes are the most common geologic disaster for the project area. Since this project area is primary forest, and during a flight over the project area, no major geologic issues (slides etc.) were found that would leave verifiers to believe that this is a major issue. Since the project area is a primary forest that has evolved over time with the presence of regular earthquakes, then this indicator appears scored appropriately.	
Non-conformity report (NCR): Please provide the source/basis/justification for the frequency (100 years).	
Date issued:	17 April 2013
Project proponent response/actions and date: Based on the Prevention Web website the geological risk is less than 0.1 in the Project Area. There are no volcanoes in proximity to the Project Area therefore this element of geological risk is irrelevant. The Risk Assessment has been updated accordingly. – 5 June 2013	
Evidence used to close NCR: Independent review of the geologic risk ratings from the Prevention Web site as well as personal observations during a 6 hour over flight of the region confirm this risk score to be appropriate.	
Date closed:	17 July 2013

23. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 36)

VCS Criteria: VM0007 v1.3, a. All Activity types - Land in the project area has qualified as forest at least 10 years before the project start date.	
Evidence Used to Assess Conformance: PD Section 2.2, Annex 5	
Findings: Site visit confirms the project area has qualified as a forest for much more than 10 years prior to the project start date. However, modeled roads cross non-forest areas (PNGRIS grassland).	
Non-conformity report (NCR): Modeled roads clearly cross non-forest areas (those areas defined as Grassland and Herbland in the PNGRIS dataset). Please address.	
Date issued:	17 April 2013
Project proponent response/actions and date: Grassland and Herbland has been removed from the Project Area. Roads no longer cross these areas – 05 June 2013	

Evidence used to close NCR: AS_FMA_vegclass_peatexcl.shp; 2009_classification_final.shp; Roads_10yrs_Final.shp - Confirmed that Modeled Roads no longer cross non-forest areas (those areas defined as Grassland and Herbland in the PNGRIS dataset and those areas defined as non-forest and water in the 2009 classification layer). Item is addressed.	
Date NCR closed:	17 July 2013

24. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 37)

VCS Criteria: VM0007, v1.3, a. All Activity types - The project area can include forested wetlands2 (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 cm3. If the project area includes a forested wetlands growing on peat (e.g. peat swamp forests), this methodology is not applicable.	
Evidence Used to Assess Conformance: PD Section 2.2, Annex 13	
Findings: A copy of the peat mapping report was provided in the supporting documentation (Annex 13). However, the document lacks detail in describing methodology used to map out horizontal extent of peat domes.	
Non-conformity report (NCR): Please provide additional description in Annex 13 of methodology used to map out horizontal extent of peat domes.	
Date issued:	17 April 2013
Project proponent response/actions and date: The horizontal extent of the peat domes was mapped by interpretation of multi-sensoral remote sensing data. The data sources were a set of Landsat satellite images and a digital elevation model (DEM) from the Shuttle Radar Topography Mission (SRTM), a joint mission by the National Aeronautics and Space Administration (NASA) and the National Imagery and Mapping Agency (NIMA) and was flown from 11 to 22 February 2000 and collected single-pass Radio Detection and Ranging (RADAR) interferometry data covering 99.9% of the land area between 60°N and 56°S latitude. The first step in the horizontal delineation of the peat domes was the mapping of the outlines peat swamp forest in the Landsat satellite imagery. Peat swamp forest has a distinct appearance in terms of spectral response (color) and texture in the Landsat band combination 5-4-3 (Mid Infrared - Near Infrared - Red), due to the homogeneous vegetation structure ("flat" texture) and the high moisture content (which results in a lower reflection in the Mid-Infrared band which is very responsive to differences in moisture content). The preliminary peat dome outlines mapped from the Landsat imagery were then further evaluated for the topography of the peat domes by the SRTM DEM. Tropical ombrogenous peat lands typically have a dome shaped convex surface topography, which is well represented in the SRTM DEM, due to the homogenous vegetation cover of the peat swamp forest. Elevation profiles of the peat domes were drawn from the DEM over the in order to identify the surface curvature and detect the boundary of the peat domes. This information from the elevation profiles was then used to refine the horizontal extent of the peat domes. – 05 June 2013	
Non-conformity report (NCR): An updated Annex 13 has not been provided. Please provide an updated Annex 13 that includes the information in your response. Also, please explain whether the mapping was done using visual interpretation of the referenced datasets, GIS and or imagery analysis, or some other method. Additional transparency is needed in Annex 13 on the methods employed for peat mapping.	
Date issued:	17 July 2013

Project proponent response/actions:	**Date Received:**	31 July 2013
An updated version of Annex13 has been provided. Text added is highlighted in yellow. The RSS team employed a peer reviewed approach to map the extent of the peat boundaries. One of the authors (F Siegert) was on the team who conducted the peat mapping for this project. RSS is internationally renowned for mapping the extent of peatland boundaries in tropical forests. The reference for the approach is attached to this NCR.		

Evidence used to close NCR: Updated Annex 13 provided and the methodology appears to be sound and is peer reviewed. Issue is addressed.	
Date NCR closed:	25 August 2013

25. Clarification (VM0007_REDDMF, VM0007 v1.3, line 38)

VCS Criteria: VM0007, v1.3, a. All Activity types - The project area can include forested wetlands2 (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 cm3. If the project area includes a forested wetlands growing on peat (e.g. peat swamp forests), this methodology is not applicable.	
Evidence Used to Assess Conformance: PD Section 2.2, Annex 13	
Findings: A copy of the peat mapping report was provided in the supporting documentation (Annex 13). However, the document lacks detail regarding the accuracy of the peat mapping analysis and if any ground truthing was done to check the model results.	
Clarification (CL): Please comment on the accuracy of the peat mapping analysis and if any ground truthing was done to check the model results.	
Date issued:	17 April 2013
Project proponent response/actions and date: The peat mapping accuracy has not been assessed and no specific ground truthing has been conducted. We did not see this as essential at this stage as the IFM boundaries and the REDD boundaries are not on swamp forest areas which extend beyond the peat mapped areas. Phase 2 of the project will involve more detailed mapping of the peatland areas within the FMA boundary. – 05 June 2013	
Evidence used to close CL: The verifier is unaware of any known accuracy criteria for peat mapping. Given this, and the fact that the site visit fly over confirmed mapped peat areas on the ground with reasonable assurance, the response adequately addresses this item.	
Date closed:	17 July 2013

26. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 39)

VCS Criteria: VM0007, v1.3, a. All Activity types - The project area can include forested wetlands2 (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 cm3. If the project area includes a forested wetlands growing on peat (e.g. peat swamp forests), this methodology is not applicable.		
Evidence Used to Assess Conformance: PD Section 2.2, Annex 13		
Findings: Spatial data needed to validate the peat mapping analysis has not been provided.		
Non-conformity report (NCR): Please provide spatial data needed to validate the peat mapping analysis, such as elevation, moisture index, vegetation, etc.		
Date issued:	17 April 2013	
Project proponent response/actions and date: Spatial data for the original full extent of the FMA with PINGRIS data is provided with this NCR 26. Note that the peat domes correlated strongly (more than 95%) with soil type Hydroquents (soil code 112) in the PINGRIS data set. These soils are classified as permanently saturated. The PNGRIS codes are also provided with this NCR. – 05 June 2013		
Non-conformity report (NCR): Pending NCR 24. The methodology employed for the peat mapping has yet to be adequately or transparently described.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
See secondary response to NCR 24 and supporting references and updated Annex 13.		
Evidence used to close NCR: The spatial data supports the methods described in Annex 13. Issue addressed.		
Date closed:	25 August 2013	

27. Clarification (VM0007_REDDMF, VM0007 v1.3, line 41)

VCS Criteria: VM0007, v1.3, a. All Activity Types - Project proponents must be able to show control over the project area and ownership of carbon rights for the project area at the time of verification.	
Evidence Used to Assess Conformance: PD Section 2.2 and 1.12.2 ;Annexes 1 and 3, Demonstration of User Rights and Project Start Date.pdf, Annex 4	
Findings: PD Indicates that Annex 1 (Carbon Services Agreement) and 3 (NEC approval) demonstrate the ownership of carbon rights for the Project Area. "The Government NEC approval of the Project also represents National recognition of these rights." Based on discussions with PP and the demonstration documents, the process is as follows: 1. The area's timber rights were acquired from the landowners by the Papua New Guinea Forest Authority (PNGFA) in 1996 when the Forest Management Agreement (FMA) was established. - See Annex 4. - Provide evidence that 80 % agreement was established - FMA agreement seems to indicate 79 % agreed. The second part of Annex 3 (Legal opinion letter) also confirms that PNGFA acquired the timber/carbon rights in 1996. Demonstration of User Rights and Project Start Date.pdf states "Attach to this response is the legal opinion from Steele's Lawyers obtained in 2008 confirming the project rights are acquired by the government in the acquisition component of a Forest Management Agreement." - This document was not attached - please provide 2. PM support for April Salome REDD 181109.pdf indicates that as of 2008, the landowners still had the right to decide if the area would be logged or not (although PNGFA hold timber rights (ultimately the landowners decide whether to proceed with the rest of the FMA steps needed to start logging). From 1996 to 2008 they had chosen not to log in hopes of carbon revenues. 3. On 22nd May 2009 the landowners signed an agreement with a project developer and activities commenced to generate GHG reductions and removals. This agreement has been revoked by the landowners and has been declared invalid as the Landowners executing the agreement never held the right to the forest resource as it was under the authority of the PNGFA. 4. Demonstration of User Rights and Project Start Date.pdf states "On the 10th May 2012 in the National Executive Council awarded the project rights to Rainforest Project Management Limited (RPML) decision number 106/2012. This decision transfers the rights to the timber resources and the carbon from PNGFA to RPML" - This appears to be an incorrect statement, the NEC approval does not mention transferring of any rights, rather it endorses and approves RPML as the Project Developer and Manager of Carbon Services - please modify any associated text indicating that the NEC approval transfers the timber/carbon rights and/or grants right of use to RPML. The NEC approval (to me) approves the project by the government but still doesn't transfer any rights to RPML 5. Finally, according to Demonstration of User Rights and Project Start Date.pdf "the Carbon Services Deed was resigned with all of the Landowner Companies in their respective villages in November 2012 and witnessed by their independent legal representative Mr. John Yamboli LLB This demonstrates RPML's "unconditional, undisputed and unencumbered" rights to the project at time of validation." - See Annex 1 - I think this document shows an agreement to develop the carbon project, specifies RPML as the technical project developer, grants access to RPML, and specifies revenue sharing amongst other things. However, the agreement does not show RPML as having control over the project area - ultimately the landowners control the project area, but have agreed to a carbon project and not to exercise their rights under the FMA and the Forestry Act of 1991. More importantly, the agreement does not specify that the carbon rights for the project area are transferred to RPML. In fact it states that the PNGFA acquired the timber rights under Recital B. Carbon rights are tied to timber rights. The agreement does not clearly transfer carbon rights to RPML. I feel a clear transfer of carbon rights from PNGFA to RPML has to be demonstrated here. Else, PNGFA is the Project Developer as they still own the timber/carbon rights and RPML is the Technical Consultant that implements the project.	
Clarification (CL): Please elaborate on the demonstration of Right of Use in PDD Section 1.12.2 Please include the information found in Demonstration of User Rights and Project Start Date.pdf or refer to the document.	
Date issued:	17 April 2013
Project proponent response/actions and date: The following text was taken from the Demonstration of User Rights and Project Start Date.pdf document and added to Section 1.12.2 of the PD The project rights were acquired from the landowners by the Papua New Guinea Forest Authority (PNGFA) in 1996 when the Forest Management Agreement (FMA) was established.	

In terms of VCS definitions, the PNGFA on behalf of the PNG Government were therefore were project proponent when the project activities commenced in 2009. On the 10th May 2012 in the National Executive Council awarded the project rights to Rainforest Project Management Limited (RPML) decision number 106/2012. This decision transfers the rights to the timber resources and the carbon from PNGFA to RPML and confirms the role of RPML as the Project Proponent. This NEC decision is evidence of unconditional, undisputed, and unencumbered rights to the Project Area. There is a copy of this decision in the Annex 3 of the Project Description. – 05 June 2013
Clarification (CL): Demonstration of User Rights and Project Start Date.pdf; ProjectDescription_VCS_V1.2_NCR_response.docx **-** Confirmed the additional text was added to PD Section 1.11.2 (Right of Use was moved in the updated PD from Section 1.12.2 to Section 1.11.2). However, further review of Demonstration of User Rights and Project Start Date.pdf, associated materials, and the response to Item 30 below, indicate that neither Demonstration of User Rights and Project Start Date.pdf or PD Section 1.11.2 sufficiently show that RPML has control over the project area and ownership of carbon rights at the time of verification (currently underway). Please revise Demonstration of User Rights and Project Start Date.pdf to show clear connections between all documents demonstrating user rights and demonstrate how they are in line with the 34 step process required to be taken before a timber permit can be granted. Else, describe in the document that there has been a deviation from the 34 step process and clearly demonstrate (again showing clear connections between all documents) how RPML owns the timber (and thus carbon) rights and has control of the project area (see items 30 and 31 below for additional information) at the time of verification. Please also include this information in PD Section 1.11.2 or refer to the revised document.
Date issued: 17 July 2013
Project proponent response/actions: **Date Received:** 31 July 2013
The NEC decision clearly demonstrates that the Forest Authortiy has awarded RPML the mangement (user) rights of the Project Area. The 34 step timber approval process was being adopted by the PNG Government as a proxy proccess for this the PNG 'pilot' REDD project. The final step in the 34 step process after the NEC approval is to allocate the timber rights for harvest. The Forest Authority recognises that this step could lead to the approved Project Developer cited in the NEC approval to enact the harvest plan at a future date. As the area has been allocated as a REDD project - logged to protected forest, the Forest Authority and the Government will not allocate the 'timber rights' which would allow harvest. The Government has at this point worked through the process until the management/user rights for the REDD project have been allocated (i.e. the NEC approval). The Government recognition that RMPL has the user rights is further demonstrated with a letter from the Minister for Forests and Climate Change (see attached to this NCR). At this stage the PNG government has defined that the NEC approval acts as defining the user rights in PNG for REDD Projects.
Clarification (CL): User rights summary document was reviewed as well as the documents described therein. The letter from the Constitutional Law Reform Commission dated 2 July 2012 confirms that, as stated in the Annex 3, NEC approval, that the ability for the PNG National Forest Authority to transfer the project carbon development rights to the project proponent is the sole existing legal vehicle available in PNG at this time due to the fact that this is a pilot project and there are no other existing legal frameworks for this to be accomplished at this time in PNG. While the NEC decision does not expressly indicate the timber rights are transferred to the project proponent, it does clearly indicate that the project proponent is the project developer and indicates the distribution of carbon funding by percentages which includes the property owners, the project developer and a percentage to the PNG government. It is clear that the project developer has the right of use and control over the project area and this is granted in the NEC decision. Further evidence was supported by the personal meetings verifiers had while on site with members of the PNG Forest Authority and other officials. The issue remaining is that the NEC decision does not expressly transfer timber rights, however it is

clear that the PNG government feels that granting timber rights would allow for harvest and by withholding this aspect, the government is trying to protect this area from being deforested. This issue is addressed. Requesting a message from the PNG government that expressly defines what was granted to the project developer in the NEC.		
Date issued:	26 August 2013	
Project proponent response/actions:	**Date Received:**	06 September 2013
A letter from the Office of the Executive General and the Department of the Prime Minister and National Executive Council has been provided confirming that RPML has the carbon rights to the Project.		
Evidence used to close CL: april salumei letter carbon rights letter.pdf - The letter is dated 20 August 2013 and states "the NEC decision awards the "project rights" and subsequently the "carbon rights" previously held by landowners and managed by the PNGFA to RPML." Item is addressed.		
Date CL closed:	13 September 2013	

28. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 42)

VCS Criteria: VM0007, v1.3, a. All Activity Types - Project proponents must be able to show control over the project area and ownership of carbon rights for the project area at the time of verification.	
Evidence Used to Assess Conformance: PD Section 2.2 and 1.12.2 ;Annexes 1 and 3, Demonstration of User Rights and Project Start Date.pdf, Annex 4	
Findings: Based on discussions with PP and the demonstration documents, the area's timber rights were acquired from the landowners by the Papua New Guinea Forest Authority (PNGFA) in 1996 when the Forest Management Agreement (FMA) was established. During the Site visit, the PP indicated a FMA required 80% agreement by the landowners. FMA agreement indicates 79 % agreed.	
Non-conformity report (NCR): Review of the FMA agreement indicates 79% agreement from the listed Land Groups. Please demonstrate that the FMA agreement shows the required 80% agreement/consent.	
Date issued:	17 April 2013
Project proponent response/actions and date: The FMA agreement presents the plan to log the Project Area. This does not reflect the agreement to develop a Carbon Project in the areas which is what this VCS criteria relates to. Following the allocation of the area as a Carbon Project the Forest Authority resurveyed the area to determine the support for the Carbon Project. This report showed a strong support for the Carbon Project (i.e. 93%). This was confirmed with ESI during their meeting in Port Moresby with Goodwill from the PNG Forest Authority. The signatures from all the Landowner Company and ILG Chairman also provide comfort that the whole community has been part of the consultative process. The approval of the FMA would not require the signature of all ILGs (only signatures of the companies would be required). Gaining the contracts and support at the ILG level is a significant achievement of the FPIC process that has been ongoing in the Project area since 2009. – 05 June 2013	
Evidence used to close NCR: Client's Response; PNG Forestry Act 1991 - Section 57; Annex 4_ Forest Mgmt Agreement.pdf - This question was posed regarding establishment of the FMA itself, which represents acquisition of the timber rights by the PNGFA - a key step in the events leading to the acquisition of the Right of Use by the Project Proponent. During the Site visit, the PP indicated FMA required 80% agreement by the landowners. Further examination of the PNG Forestry Act 1991 - Section 57 indicates that 75 % is required. The FMA indicated that 79% agreement was achieved. Item is addressed.	
Date closed:	17 June 2013

29. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 43)

VCS Criteria: VM0007, v1.3, a. All Activity Types - Project proponents must be able to show control over the project area and ownership of carbon rights for the project area at the time of verification.
Evidence Used to Assess Conformance: PD Section 2.2 and 1.12.2 ;Annexes 1 and 3,

Demonstration of User Rights and Project Start Date.pdf, Annex 4		
Findings: The second part of Annex 3 (Legal opinion letter) confirms that PNGFA acquired the timber/carbon rights in 1996. Demonstration of User Rights and Project Start Date.pdf states "Attach to this response is the legal opinion from Steele's Lawyers obtained in 2008 confirming the project rights are acquired by the government in the acquisition component of a Forest Management Agreement." This document was not attached		
Non-conformity report (NCR): Demonstration of User Rights and Project Start Date.pdf states "Attach to this response is the legal opinion from Steele's Lawyers obtained in 2008 confirming the project rights are acquired by the government in the acquisition component of a Forest Management Agreement." This document was not attached and could not be located - please provide.		
Date issued:	17 April 2013	
Project proponent response/actions and date: Legal opinion is attached to this NCR. – 05 June 2013		
Clarification (CL): LegalOpinion.pdf was reviewed and found to be the same letter as the second part of Annex 3. Given that letter is from the PNG Constitutional and Law Reform Commission and dated 2012 vs. 2008, the verifier thought that this would be different document. Please explain/clarify why the "Start Date Section" of Demonstration of User Rights and Project Start Date.pdf indicates that the legal opinion is from Steele's Lawyers vs. the PNG Constitutional and Law Reform Commission and was obtained in 2008 vs. 2012.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
Steele's legal doucment is attahced to this NCR.		
Evidence used to close CL: Legal opinion document was received and reviewed. This issue is addressed.		
Date CL closed:	25 August 2013	

30. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 44)

VCS Criteria: VM0007, v1.3, a. All Activity Types - Project proponents must be able to show control over the project area and ownership of carbon rights for the project area at the time of verification.	
Evidence Used to Assess Conformance: PD Section 2.2 and 1.12.2 ;Annexes 1 and 3, Demonstration of User Rights and Project Start Date.pdf, Annex 4	
Findings: Demonstration of User Rights and Project Start Date.pdf states "On the 10th May 2012 in the National Executive Council awarded the project rights to Rainforest Project Management Limited (RPML) decision number 106/2012. This decision transfers the rights to the timber resources and the carbon from PNGFA to RPML" - This appears to be an incorrect statement, the NEC approval does not mention transferring of any rights, rather it endorses and approves RPML as the Project Developer and Manager of Carbon Services.	
Non-conformity report (NCR): The NEC approval (Annex 3) does not mention transferring of any rights, rather it endorses and approves RPML as the Project Developer and Manager of Carbon Services. Please demonstrate how the NEC approval clearly transfers carbon rights from PNGFA to RPML. Else, modify any associated text indicating that the NEC approval transfers the timber/carbon rights and/or grants right of use to RPML	
Date issued:	17 April 2013
Project proponent response/actions and date: The NEC decision allocates user rights and rights to the timber resource. An NEC decision is the final step in the full allocation of the timber resource to a timber harvest company. In this instance the NEC approval is to allocate the user rights and rights to the resource to develop a carbon project. Text has been corrected in Section 1.12.2 to make this clearer. – 05 June 2013	
Non-conformity report (NCR): The response does not adequately demonstrate that RPML (the stated Project Proponent) clearly has control over the project area and ownership of carbon rights for the project area at the time of verification. The response appears to be referring to the required 34 step process required to be taken before a timber permit can be granted and that RPML has followed	

this process in order to obtain control of the project area and ownership of carbon rights. However, the stated response is not the final step required to be taken before a timber permit can be granted. That is, (as per FMA_34Standard Form Checklist.pdf), following NEC approval (a) "the Minister must invite the proponent to make a formal application for a Timber Permit" and (b) "within 30 days thereafter grant a Timber Permit." While it is understood that a Timber Permit has not been sought by the project proponent in this case, the response indicates the 34 step process was indeed followed, and, thus, the verifier is requesting documentation confirming that RPML was invited by the Minister to make a formal application to obtain control of the project area and ownership of carbon rights and within 30 days thereafter control of the project area and ownership of carbon rights were granted. This documentation should define the length of the carbon project agreement. Otherwise, if the 34 step process was not followed, please indicate that there has been a deviation from this process and provide sufficient documentary evidence that the NEC has full authority to grant the timber (and thus carbon) rights and control of the project area to RPML and provide a written statement/legal document from the NEC clearly indicating that control of the project area and the timber (and thus carbon) rights have been assigned to RPML. If this is not the case, then the following applies: As per the FMA Section 4.3, "The Authority May assign timber rights to a forest industry participant in accordance with the terms and conditions of timber permit or authority for the duration of that permit or authority." Please provide a written statement/legal document from either the PNGFA clearly indicating that control of the project area and the timber (and thus carbon) rights have been assigned to RPML. Otherwise, then the PNGFA and the landowners are joint Project Developers (as PNGFA still owns the timber/carbon rights and the landowners ultimately have control over the project area) and RPML would be considered the Technical Consultant that implements the project. See also Item 31 Below.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
NA – project proponent did not provide a response to this Item.		
Evidence used to close NCR: A response was not provided for this Item. However, this Item has been addressed under Item 27 above and can be closed.		
Date NCR closed:	13 September 2013	

31. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 45)

VCS Criteria: VM0007, v1.3, a. All Activity Types - Project proponents must be able to show control over the project area and ownership of carbon rights for the project area at the time of verification.	
Evidence Used to Assess Conformance: PD Section 2.2 and 1.12.2 ;Annexes 1 and 3, Demonstration of User Rights and Project Start Date.pdf, Annex 4	
Findings: According to Demonstration of User Rights and Project Start Date.pdf "the Carbon Services Deed was resigned with all of the Landowner Companies in their respective villages in November 2012 and witnessed by their independent legal representative Mr. John Yamboli LLB. This demonstrates RPML's "unconditional, undisputed and unencumbered" rights to the project at time of validation." This document shows an agreement to develop the carbon project, specifies RPML as the technical project developer, grants access to RPML, and specifies revenue sharing amongst other things. However, the agreement does not show RPML as having control over the project area; ultimately the landowners control the project area, but have agreed to a carbon project and not to exercise their rights under the FMA and the Forestry Act of 1991. More importantly, the agreement does not specify that the carbon rights for the project area are transferred to RPML. In fact it states that the PNGFA acquired the timber rights under Recital B. Carbon rights are tied to timber rights. The agreement does not clearly transfer carbon rights to RPML.	
Non-conformity report (NCR): Annex 1 does not clearly transfer control of the project area or carbon rights to RPML. A clear transfer of control of the project area from landowners and carbon rights from PNGFA to RPML needs to be demonstrated here. Else, PNGFA and the landowners are joint Project Developers as PNGFA still owns the timber/carbon rights and the landowners ultimately have control over the project area. Under the latter scenario, RPML would be considered the Technical Consultant that implements the project.	
Date issued:	17 April 2013

Project proponent response/actions and date: The NEC decision allocates user rights and rights to the timber resource. An NEC decision is the final step in the full allocation of the timber resource to a timber harvest company. In this instance the NEC approval is to allocate the user rights and rights to the resource to develop a carbon project. Text has been corrected in Section 1.12.2 to make this clearer. See also NCR 30 – 05 June 2013.		
Non-conformity report (NCR): The response does not adequately demonstrate that RPML (the stated Project Proponent) clearly has control over the project area and ownership of carbon rights for the project area at the time of verification. See Item 30 above. Also, Annex 1, Clause 8 states "Upon the Project receiving the grant of approval or accreditation by the VCS, CCB Standard (or any other relevant approval), the Landowner and PNGFA agree to: (i) Award the FMA in accordance with the Forestry Act; and (ii) Warrant there are no other forestry management or harvesting rights that have been granted by the PNG Government to the Landowner or its Representatives either in their own right or in the capacity as a forest industry participant." This indicates that the PNGFA will give up the timber rights of the project area (and thus carbon rights) upon "approval" by the VCS. Please clearly define and provide support to the verifier for what PNGFA intended "approval" to mean under this clause (It is validation, is it verification, or some other form of "approval?") and indicate who will be awarded the FMA in accordance with the Forestry Act (this is also unclear in the agreement and may require revision of the agreement). Note that final verification cannot occur unless the stated project proponent is able to show control over the project area and ownership of carbon rights for the project area at the time of verification. Lastly, Demonstration of User Rights and Project Start Date.pdf states "The agreement between the landholders and RPML does not specify an end date. It is binding for the project life which in this case is for 50 years." However, Annex 1, Section 1.hh specifies the Term of the Agreement as beginning on the date of execution and ending on the date specified in Clause 8 (quoted above) unless otherwise agreed between the parties in writing. Please provide evidence of an agreement covering at least 30 years (minimum project life required by the VCS). Else, provide a demonstration how the defined term Annex 1, Section 1.hh will cover the minimum project life as required by the VCS and how it will not affect the permanence of the project.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
NA – project proponent did not provide a response to this Item.		
Evidence used to close NCR: A response was not provided for this Item. However, this Item has been addressed under Item 27 above and can be closed.		
Date NCR closed:	13 September 2013	

32. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 50)

VCS Criteria: VM0007 v1.3 - Baselines shall be renewed every 10 years from the project start date	
Evidence Used to Assess Conformance: PD Section 2.2	
Findings: PD Section 2.2 states: "The Project commits to renewing the baseline every 10 years from 21st May 2009." However, the start date is defined as 22 May 2009 in Section 1.5.	
Non-conformity report (NCR): PD Section 2.2 indicates the project commits to renewing the baseline every 10 years from 21st May 2009. Please revise to match the start date defined in Section 1.5.	
Date issued:	17 April 2013
Project proponent response/actions and date: The baseline renewal date has been revised to 22nd May 2009 in Section 2.2. Change has been highlighted in yellow. – 05 June 2013	
Evidence used to close NCR: ProjectDescription_VCS_V1.2_NCR_response.docx - Confirmed PD Section 2.2. was updated as indicated. Item is Addressed.	
Date closed:	17 June 2013

33. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 51)

VCS Criteria: VM0007 v1.3 - All land areas registered under the CDM or under any other carbon

trading scheme (both voluntary and compliance-orientated) must be transparently reported and excluded from the project area. The exclusion of land in the project area from any other carbon trading scheme shall be monitored over time and reported in the monitoring reports	
Evidence Used to Assess Conformance: PD Section 2.2, 1.12.3, and 1.12.4	
Findings: PD states the Project was validated to the Climate, Community and Biodiversity (CCB) Standard with Gold status on June 11, 2011. This was confirmed; the date, however, doesn't match CCBs website.	
Non-conformity report (NCR): PD Section 1.12.4 indicates the CCB validation date as 11 June 2011. CCB registry indicates the validation date as 13 June 2011. Please revise CCB validation date in PD section 1.12.4 to match the CCB registry.	
Date issued:	17 April 2013
Project proponent response/actions and date: The date of the CCB validation has been changed in PD section 1.12.4 to 13th June 2011. Change has been highlighted in yellow. – 05 June 2013	
Evidence used to close NCR: ProjectDescription_VCS_V1.2_NCR_response.docx - Confirmed PD Section 1.11.4 (Participation under other GHG programs was moved in the updated PD from Section 1.12.4 to Section 1.11.4) was updated as indicated. Item is Addressed.	
Date closed:	17 June 2013

34. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 64)

VCS Criteria: VM0007, v1.3, c Planned Deforestation - Conversion of forest lands to a deforested condition must be legally permitted.	
Evidence Used to Assess Conformance: PD Section 2.2, Annex 4	
Findings: Roads and logging must be done in accordance with the PNG Logging Code of Practice. This code of practice needs reviewed to confirm there are no road reclamation or revegetation requirements. The roads observed during the site visit in the WS Proxy area were built prior to the LCP.	
Non-conformity report (NCR): Many of the roads encountered during the site visit in the West Sepik Proxy area were built prior to the PNG Logging Code of Practice (as per Goodwill Amos). Please provide the verifiers with a copy of the PNG Logging Code of Practice in order to confirm there are no reclamation or re-vegetation requirements following logging operations.	
Date issued:	17 April 2013
Project proponent response/actions and date: PNG Logging Code is attached to this response. The relevant section is Section 6 on page 22 of the Code where Decommissioning of roads is described. This section states: "To close a road to normal traffic and leave it in a state that maintains soils and water values, but leave the road formation intact for reopening if required." – 05 June 2013	
Evidence used to close NCR: PNG LOG CODE OF PRACTICE.pdf - The PNG Logging Code of Practice was reviewed. There are no re-vegetation requirements for de-commissioning roads. Further, the code identifies the maximum road clearing width as 40 meters. Item is addressed.	
Date closed:	17 June 2013

35. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 65)

VCS Criteria: VM0007, v1.3, c Planned Deforestation - Conversion of forest lands to a deforested condition must be legally permitted.	
Evidence Used to Assess Conformance: PD Section 2.2, Annex 4	
Findings: The PNG "Logging Code of Practice" is ambiguously defined as the Forestry Code on page 53 (and also referred to as Code of Forest Practices, page 60, and Forestry Code of Practice, page 72.	
Non-conformity report (NCR): The PNG "Logging Code of Practice" is ambiguously defined throughout the PD. Please ensure consistency in the term used for the PNG "Logging Code of Practice" throughout the PD.	
Date issued:	17 April 2013
Project proponent response/actions and date: References to the PNG Logging Code of Practice has been corrected and made consistent throughout the PD. Changes have been highlighted in yellow. – 05 June 2013	

Evidence used to close NCR: ProjectDescription_VCS_V1.2_NCR_response.docx - The updated PD was reviewed and references to the Logging Code of Practice are now consistent throughout the document. Item is addressed.	
Date closed:	17 June 2013

36. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 66)

VCS Criteria: VM0007, v1.3, c Planned Deforestation - Documentation must be available to clearly demonstrate with credible evidence and documentation that indeed the land would have been converted to non-forest use if not for the REDD project.	
Evidence Used to Assess Conformance: PD Section 2.2 and 3.5.4. Annexes 4, 6, 10, and 14	
Findings: Annex 6 (DOS) recommends the use of the April Salumei forest area as a logging concession. However, there is no date on the document.	
Non-conformity report (NCR): Please provide evidence that development of Annex 6 (DOS) corresponds with the development of the FMA, April River Timber Harvest Plan, and the FMDP.	
Date issued:	17 April 2013
Project proponent response/actions and date: Please see response to NCR 217 of which this is a duplicate – 05 June 2013	
Evidence used to close NCR: Client's Response; Annexes 4 and 10; NFA Jan 1997 HRHL.pdf - Forest Authority meeting minutes from 1997 indicate that the DOS was completed around 1997. This corresponds with the development of the FMA (1995), April River Timber Harvest Plan (1995), and the FMDP (1998). Item is addressed.	
Date closed:	18 June 2013

37. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 67)

VCS Criteria: VM0007, v1.3, c Planned Deforestation - Documentation must be available to clearly demonstrate with credible evidence and documentation that indeed the land would have been converted to non-forest use if not for the REDD project.	
Evidence Used to Assess Conformance: PD Section 2.2 and 3.5.4. Annexes 4, 6, 10, and 14	
Findings: PD indicates the FMDP was approved by the Papua New Guinea Forest Authority (Section 2.2 and 3.5.4). However, the FMDP itself does not indicate it was approved by anyone. There are signatures on every page, but no indication of whose signatures they are.	
Non-conformity report (NCR): PD Sections 2.2 and 3.5.4 indicates the FMDP was approved by the PNGFA. Please provide evidence of FMDP approval by the PNGFA, or modify any associated text in the PD indicating that the FMDP was approved by the PNGFA. If sufficient evidence is not available showing that the FMDP was approved by the PNGFA, please also modify the use of CP-W accordingly.	
Date issued:	17 April 2013
Project proponent response/actions and date: It is understood that the CP-W module requires the use of an approved plan in order to apply the appropriate volume extraction rates. The FMDP can be considered to be 'approved' by the PNGFA and/or PNG Government, for the following reasons: 1. The first page the FMDP includes a certificate of company Incorporation, significantly that the Road Timber CO. was approved by the PNG Government for company registration in 1998. 2. Each page of the FMDP was been initially by two different Government officials, signifying that the document has been reviewed by the PNGFA. 3. The FMDP was provided to the Project Proponent by the PNGFA, in the context that this Plan represents their best estimate of what would have happened in the absence of the REDD+ Project. 4. The FMDP follows closely the Forest Authority development plan for the area (the DOS which was completed by the Forest Authority as part of the process of awarding the FMA) and is therefore consistent with the Forest Authority vision for the area. – 05 June 2013	
Non-conformity report (NCR): The response does not suffice as adequate evidence of FMDP approval. The incorporation certification does not appear to provide more than evidence of incorporation of Road Timber CO Limited and the verifier cannot assume the signatures are those of government officials. The FMDP may have been provided to the Project Proponent by the PNGFA in	

the context that it represents their best estimate of what would have happened in the absence of the REDD+ Project. However, this still does not prove it was ever approved. Finally, any plan submitted for approval would likely be in-line with the DOS. Please provide a written statement/attestation from the PNGFA indicating the FMDP was approved, who approved it, and on what date it was approved.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
The plan is consistent in terms of extractable volume with the approved Development Option Study. Therefore the extractable volume proposed in the PMDP is approved and this is the element of interest here. Option 2 was calculated for coparison and it was found that the net abatement increased. Therefore it is more conservative to use Option 1 nad ew believe more appropriate in terms of the methodology requirements that defaults to Option 1 with an approved plan.		
Evidence used to close NCR: The original intent of this item in the VM0007 methodology states "Documentation must be available to clearly demonstrate with credible evidence and documentation that indeed the land would have been converted to non-forest use if not for the REDD project." It appears that given that the project area started the process to have their FMA completed well before the project start date, the Timber Harvest Plan was prepared by an obviously incorporated Timber production company, the PNG government issued a Development Option Study and then a timber harvest plan was prepared. The April Salumei FMA continued through the 34 Step process to sign the FMA with the land owners thereby allocating the development rights to the Forest Authority (Annex 4) and ultimately seeking a detailed harvest plan from a timber harvest company (Annex 14). Both of these plans are consistent with the Government approved development plan for the FMA areas. Discussions with local tribal leaders indicate that the project area will be harvested for timber if the carbon project is not approved. The timber harvest plans were discussed during a personal meeting with PNGFA members while on the site visit and it was indicated that the forest plan was the approved plan for conducting the harvest activity. Keeping in mind that this harvest plan was submitted to the PNGFA by an independent outside entity who was desiring of having the timber concession... then by all accounts it appears that this project area was in direct threat of being deforested had not this REDD project been initiated by the property owners and the PNG government. the DOS was drafted by the PNGFA, the Forest Management plan was written on the basis of the DOS. The government would not allocate the timber rights to anyone, so long as the Plan is in conformance with the DOS. by default, this forest management plan was approved by the government. Further evidence included verbal attestation from an anonymous member of the PNG government that the forest management plan was approved by the PNGFA just prior to the WMA attempted designation. by an outside entity. Issue is addressed.		
Date NCR closed:	25 August 2013	

38. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 68)

VCS Criteria: VM0007, v1.3, c Planned Deforestation - Where, pre-project, unsustainable fuelwood collection is occurring within the project boundaries modules BL-DFW and LK-DFW shall be used to determine potential leakage	
Evidence Used to Assess Conformance: PD Section 2.2, Annex 8	
Findings: PD States "The PRA, fieldwork and remote sensing analysis conducted indicated that pre-project fuel wood collection is sustainable in the Project area. Modules BL-DFW and LK-DFW were not applied." The PRA (Annex 8), however, indicates that it was aimed at unsanctioned removal of timber, by parties other than the landholders (illegal logging) as required by VM0010 and not at wood collection for fuel, canoe, or home building.	
Non-conformity report (NCR): PD section 2.2 and 3.5.1 suggests the PRA indicates that pre-project fuelwood collection in the project area is sustainable. The PRA (Annex 8), however, indicates that it was aimed at unsanctioned removal of timber, by parties other than the landholders (illegal logging) as required by VM0010. If the PRA did not assess fuel wood collection by landowners, it should not be referred to in the PDD as evidence supporting the claim that pre-project fuel wood collection is sustainable.	
Date issued:	17 April 2013
Project proponent response/actions and date: Participatory Rural Appraisal activities were	

undertaken for a range of reasons and on numerous occasions during the past 3 years within the Project Area. A PRA approach was used to assess the firewood use in the project area, however a formal survey approach was not taken. A formal survey approach was not deemed appropriate as women are the main collectors and users of firewood in the Project Area and they are rarely provided the opportunity to speak in such circumstances. Therefore we did not believe that we would get a reliable estimate of firewood. Results of ad hoc interviews with the local women during visits by female field staff provided some insight into fire wood use. This combined with visual observations in the Project Area combined with relevant national research and extrapolation of figures based on population in the Project Area were used to assess the firewood use in the Project. This is now explained more clearly in the expanded PRA annex to the PD. In summary, firewood is collected from deadwood collected from the forest floor generated in the establishment of gardens or from along river banks during fishing. Trees are not harvested specifically for firewood as the supply from these sources is sufficient to meet the cooking needs of the local villages. Firewood is not sold to outside the Project Area as the distance to market is too far. It is not common for women to travel long distances from the village to collect firewood due to the difficultly in carrying heavy loads long distances. Most women carry the wood and there is abundant sources of firewood close to the villages. Firewood is typically collected in small loads (approximately 2kg in each load and is carry with food collected from the gardens for the daily meal). Calculations applying the BL-DFW approach to estimating emissions form fuelwood (attached to this finding) indicate on average over the life of the life of the project fuelwood emissions are insignificant (0.25%) of total emissions and that is making the conservative assumption that the trees are harvested for fuel wood, which they are not in the Project Area. Deforestation from garden establishment is accounted for in the baseline and the project scenario. Therefore the timber used for firewood is accounted in the loss reported from deforestation in these areas. Regrowth of these areas are conservatively excluded from the Project accounting. – 05 June 2013	
Evidence used to close NCR: Client response; BL-DFWAnalysis.xlsx; Annex 8_Participatory Rural Appraisal Report_V2.0.doc - Confirmed the PRA was updated as indicated. It is now appropriate to refer to the PRA as evidence supporting the claim that pre-project fuel wood collection is sustainable. BL-DFWAnalysis.xlsx was reviewed. It uses conservative assumptions, yet it still indicates that fuelwood emissions are insignificant. This analysis, combined with the client's response, and observations during the site visit, indicate that the fuelwood collection is occurring in the project area, but it is sustainable. Item is Addressed	
Date closed:	18 June 2013

39. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 69)

VCS Criteria: VM0007, v1.3, c Planned Deforestation - Where, pre-project, unsustainable fuelwood collection is occurring within the project boundaries modules BL-DFW and LK-DFW shall be used to determine potential leakage	
Evidence Used to Assess Conformance: PD Section 2.2, Annex 8	
Findings: PD States "The PRA, fieldwork and remote sensing analysis conducted indicated that pre-project fuel wood collection is sustainable in the Project area. Modules BL-DFW and LK-DFW were not applied." There is no mention of fuel-wood collection in Annex 5 (remote sensing analysis).	
Non-conformity report (NCR): PD Section 2.2 and suggests the remote sensing analysis indicates that pre-project fuelwood collection in the project area is sustainable. However, Annex 5 includes no mention of fuelwood collection. Please include in Annex 5 a discussion of how the remote sensing analysis indicates that pre-project fuel wood collection is sustainable in the Project area and please identify where this was added. Else, do not refer to Annex 5 in the PDD as evidence supporting the claim that pre-project fuel wood collection is sustainable.	
Date issued:	17 April 2013
Project proponent response/actions and date: The text presented in Table 14 was misleading. This text has been revised so that Annex 5 is not referred to as evidence that pre-project fuelwood is sustainable.	

Non-conformity report (NCR): The text in Table 14 still states "The PRA, fieldwork and remote sensing analysis conducted indicated that pre-project fuel wood collection is sustainable in the Project area. Modules BL-DFW and LK-DFW were not applied." Please revise the text in Table 14 so that the remote sensing analysis is not referred to as evidence that pre-project fuelwood is sustainable as indicated.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
Text in Table 14 was updated and corrected to remove irrelevant text. Changes are highlighted in green.		
Evidence used to close NCR: Text updated and removed. Issue addressed.		
Date NCR closed:	25 August 2013	

40. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 88)

VCS Criteria: VM0007, v1.3, Project proponents shall clearly define the spatial boundaries of a project so as to facilitate accurate measuring, monitoring, accounting, and verifying of the project's emissions reductions and removals. The REDD project activity may contain more than one discrete area of land. When describing physical project boundaries, the following information shall be provided per discrete area: - total land areas	
Evidence Used to Assess Conformance: PD Section 2.3.1	
Findings: The site visit indicated that the northern FMA boundary as established in GIS is off from Wagu lake northeast to the Sepik River. This was confirmed against Schedule 2 of the FMA. As defined in Schedule 2, the boundary should follow the unnamed river from Wagu Lake to the Sepik. Roads have clearly been modeled outside of what the boundary should be.	
Non-conformity report (NCR): Both the site visit and Schedule 2 of the FMA indicate boundary issues from Wagu lake northeast to the Sepik River as established in GIS. As defined in Schedule 2 and confirmed on the site visit (see WaguLaketoSepik_NorthernBoundaryIssue.docx), the boundary should follow the unnamed river from Wagu Lake to the Sepik. Roads have clearly been modeled outside of the actual FMA boundary in this location. Please address.	
Date issued:	17 April 2013
Project proponent response/actions and date: The shapefile of the April Salumei Forest Management Area boundary is the spatial file provided by the PNG Forest Authority and is the spatial file for the registered FMA from their Forest Information Management System (FIMS). The description in Schedule 2 of the FMA agreement is simply a verbal description using topographical features to describe the boundary characteristics. Whilst we acknowledge that the google earth image you provided shows the boundary does not follow the exact line of the river from Wagu it should be noted that the river system is very dynamic in the region and could have easily shifted from the boundary since it was established in the 1990's. We maintain that we should use the spatial file for the FMA boundary that is from the PNGFA FIMS database rather than adjust the official boundary. – 05 June 2013	
Evidence used to close NCR: Client response; Spatial Data - The GIS FMA boundary in this area is straight and does not indicate that it ever followed the line of the river from Wagu. However, given that most of this area in question is classified as non-forest, the updated modeled roads do not cross non-forest areas or come into the area in question, and that the FMA boundary is the spatial file provided by the PNG Forest Authority and is the spatial file for the registered FMA from the PNGFA Forest Information Management System (FIMS), not adjusting the boundary is warranted. Item is addressed.	
Date closed:	18 June 2013

41. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 89)

VCS Criteria: VM0007, v1.3, Project proponents shall clearly define the spatial boundaries of a project so as to facilitate accurate measuring, monitoring, accounting, and verifying of the project's emissions reductions and removals. The REDD project activity may contain more than one discrete area of land. When describing physical project boundaries, the following information shall be provided per discrete area: - total land areas

Evidence Used to Assess Conformance: PD Section 2.3.1	
Findings: The GIS established FMA boundary includes and crosses the Sepik river near Ambunti (See Boundary_Modeled_Roads_Issues_AmbuntiArea.docx). This also gives an example of a modeled road that is linearly in the Sepik River and also shows the modeled roads extending beyond the GIS established FMA boundary.	
Non-conformity report (NCR): The GIS established FMA boundary includes and crosses the Sepik river near Ambunti (See Boundary_Modeled_Roads_Issues_AmbuntiArea.docx). Please address.	
Date issued:	17 April 2013
Project proponent response/actions and date: The FMA boundary is set by the Forest Authority and was established using the countries PNGRIS spatial data base. The rivers within PNGRIS do not match the rivers mapped in the Project land use change analysis, and they will not match with google earth (which is not orthorectified). The official FMA boundary is a government set boundary and therefore we cannot alter it. It should be noted that the carbon accounting area boundary is smaller than the FMA boundary. The FMA boundary is still included in the Project Description as it demarcates the land use classification for timber harvest and land use conversion, demonstrating that your Project accounting boundaries are within this land use classification and subject to the associated permits and allowances. – 05 June 2013	
Evidence used to close NCR: Client response; Spatial Data - Given that most of this area in question is classified as non-forest, the updated modeled roads do not cross non-forest areas or come into the area in question, and that the FMA boundary is the spatial file provided by the PNG Forest Authority and is the spatial file for the registered FMA from the PNGFA Forest Information Management System (FIMS), not adjusting the boundary is warranted. Item is addressed.	
Date closed:	18 June 2013

42. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 90)

VCS Criteria: VM0007, v1.3, Project proponents shall clearly define the spatial boundaries of a project so as to facilitate accurate measuring, monitoring, accounting, and verifying of the project's emissions reductions and removals. The REDD project activity may contain more than one discrete area of land. When describing physical project boundaries, the following information shall be provided per discrete area: - total land areas	
Evidence Used to Assess Conformance: PD Section 2.3.1	
Findings: Modeled roads clearly extend beyond the GIS established FMA boundary on several accounts.	
Non-conformity report (NCR): Modeled roads clearly extend beyond the GIS established FMA boundary on several accounts. Please address.	
Date issued:	17 April 2013
Project proponent response/actions and date: The modeled roads do not extend beyond the FMA boundary. They do however extend beyond the operational area. This is because there are no roads in the area and they would need to be established to access the timber. The modeled roads are those predicted to be established over the timber harvest cycle based on proxy area analysis. – 05 June 2013	
Evidence used to close NCR: Roads_10yr_Final.shp - The updated roads layer was reviewed and modeled roads no longer extend beyond the GIS established FMA boundary. Item is addressed.	
Date closed:	18 June 2013

43. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 91)

VCS Criteria: VM0007, v1.3, Project proponents shall clearly define the spatial boundaries of a project so as to facilitate accurate measuring, monitoring, accounting, and verifying of the project's emissions reductions and removals. The REDD project activity may contain more than one discrete area of land. When describing physical project boundaries, the following information shall be provided per discrete area: - total land areas
Evidence Used to Assess Conformance: PD Section 2.3.1
Findings: Modeled roads go linearly through rivers in several locations. This occurs on both the Sepik and the April River.
Non-conformity report (NCR): Modeled roads go linearly through rivers (i.e. they are modeled along

a river's course) in several locations. This occurs on both the Sepik and the April Rivers. Please address.	
Date issued:	17 April 2013
Project proponent response/actions and date: The modeled roads have been removed from river course using a 50m buffered PNGRIS river layer. A check was made with major rivers using google earth and roads are no longer running linear along rivers. The new shape file for the roads are supplied in folder 43. – 05 June 2013	
Evidence used to close NCR: Roads_10yr_Final.shp - The updated roads layer was reviewed and roads are no longer modeled along a river's course. Item is addressed.	
Date closed:	18 June 2013

44. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 120)

VCS Criteria: VM0007, v1.3, c. Carbon Pools - The project shall account for any significant decreases in carbon stock in the project scenario and any significant increases in carbon stock in the baseline scenario, and may account for decreases in the baseline scenario and increases in the project scenario. The carbon pools included in or excluded from the project boundary are shown in Table 1 on Page 6	
Evidence Used to Assess Conformance: PD Section 2.3.2	
Findings: Project includes all required carbon pools. Table 18, however, indicates that the litter pool is excluded; however Section 3.9 and the calculations show that it is included.	
Non-conformity report (NCR): Please revise PD Table 18 to indicate that accounting for the litter pool is included in the project.	
Date issued:	17 April 2013
Project proponent response/actions and date: Table 18 has been revised and litter pool included for VM007. Following text was added and highlighted in yellow: 'Measurement of the initial carbon stock in the litter pool took place as part of the field inventory undertaken between May and June 2012 and was included in our calculations.' – 05 June 2013	
Evidence used to close NCR: ProjectDescription_VCS_V1.2_NCR_response.docx - Confirmed Table 18 has been updated as indicated. Item is addressed.	
Date closed:	18 June 2013

45. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 122)

VCS Criteria: VM0007, v1.3, c. Carbon Pools - Where the carbon pool in harvested wood products and dead-wood increases more or decreases less in the baseline case than in the project case, the tool T-SIG shall be used to determine whether significant. Insignificant pools can always be ignored.	
Evidence Used to Assess Conformance: PD General	
Findings: PD mentions this tool and how it will be used to justify exclusions in ex-post monitoring. It is not needed for HWP since it is included. However, neither the PD nor the Calculator indicate that this tool has been used to justify the omission of the dead wood pool.	
Non-conformity report (NCR): Please use T-SIG in demonstrating how the dead-wood carbon pool is insignificant and thus can be conservatively omitted. Include the demonstration in the PD and please identify where this was added.	
Date issued:	17 April 2013
Project proponent response/actions and date: Following the calculation requirements of the VM0007 tool which states (page 13) "Where the carbon pool in harvested wood products and dead-wood increases more or decreases less in the baseline case than in the project case, the tool T-SIG shall be used to determine whether significant. Insignificant pools can always be ignored." The harvested wood products pool increases more in the baseline case and therefore it has been included and calculated in accordance with CP-W. The deadwood pool does not decrease less in the baseline case and therefore there is no need to apply the T-SIG tool. The deadwood would increase more in the baseline scenario (i.e. timber harvest) compared to the project case (i.e. protection)therefore it can be conservatively omitted and the T-SIG tool is not required as the methodology states it is only required when the deadwood pool decreases less in the baseline case. This is consistent with the IPCC good practice guidance which allows pools to be conservatively excluded if they are larger in the baseline than in the project. This is the case here as the clearing of	

the roads will lead to some timber going offsite into to wood products, some staying onsite as road footings and bridges and the smaller trees being pushed to the side of the cleared areas. – 05 June 2013		
Non-conformity report (NCR): The VM0007 statement "Where the carbon pool in harvested wood products and dead-wood increases more or decreases less in the baseline case than in the project case, the tool T-SIG shall be used to determine whether significant. Insignificant pools can always be ignored" does not indicate that the "increases more" applies only to HWP and that "decreases less" only applies to dead-wood. Because the dead-wood pool increases more in the baseline case vs. the project case (as indicated in your response), T-SIG must be used to demonstrate that the dead-wood carbon pool is insignificant and thus can be conservatively omitted. Alternatively, provide evidence (e.g. through literature) that mortality in the project case will exceed the Lying Dead Wood produced in the project case. Also, PD Table 18 currently indicates that dead wood will not be greater in the baseline (i.e. cleared land for roads) compared with the project scenario (i.e. primary tropical forest). Please revise accordingly.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
The application of the T-SIG tool is provided in folder accociated with this NCR. An estimate for the deadwood pool was taken from studies in comparable tropical forest in Australia (rainfall, elevation, temperature and humidity were all consistent between the study site and the Project Area) and was found to be insignificant. In summary the deadwood pool is insignificant in the Project Scenario; the deadwood pool is greater in the project scneario (protected forest) when compared to the baseline scenario (cleared land for road) and therefore can be excluded from the calculations. A full explanation of the application of T-SIG is now presented in Section 3.9 and highlighted green.		
Evidence used to close NCR: The T-SIG_deadwood HWP.xls file was presented to verifiers and finds that the relative contribution to the total tCO2e would be less than 5% and can be considered to be deminimus. Further, the dead wood pool would correctly be less in the baseline (cleared roads) than it would be in the project (protected forest) so it is evident that exclusion of this pool is conservative. Issue addressed.		
Date NCR closed:	25 August 2013	

46. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 135)

VCS Criteria: VM0007, v1.3, e. Sources of Leakage - The list of leakage sources with appropriate justification shall be presented in the VCS PD.	
Evidence Used to Assess Conformance: NA	
Findings: A list of leakage sources with appropriate justification is not included in the PD.	
Non-conformity report (NCR): Please include a table (similar to Tables 18 and 19) in the PD listing leakage sources and appropriate justification. Please identify where this was added.	
Date issued:	17 April 2013
Project proponent response/actions and date: The following text was added to the PD Section 2.3.3. Activity shifting and marketing leakage sources in the project scenario are related to the relocation of timber harvesting to other areas in Papua New Guinea. There are no other sources of leakage relevant to this project. This text is highlighted in yellow. – 05 June 2013	
Evidence used to close NCR: Project Description_VCS_V1.2_NCR_response.docx - Confirmed the text was added to PD Section 2.3.3 as indicated, Item is Addressed.	
Date closed:	18 June 2013

47. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 145)

VCS Criteria: VM0007, v1.3, Step 3 Development of Monitoring Plan - • Monitoring of leakage carbon stock changes and greenhouse gas emissions
Evidence Used to Assess Conformance: PD Section 5.11.1
Findings: Included in Section 5.11.1. However, the technical description refers to the leakage belt

approach, which is not used.	
Non-conformity report (NCR): Please revise PD Section 5 to reflect the leakage factor approach. Currently this section refers to and describes the leakage belt approach, which is not used for the project.	
Date issued:	17 April 2013
Project proponent response/actions and date: All reference to the Leakage Belt Calculations in section 5 has been removed. The revised text in the PD was highlighted yellow. – 05 June 2013	
Evidence used to close NCR: Project Description_VCS_V1.2_NCR_response.docx - Confirmed Section 5 of the PD has been updated as indicated. Item is addressed.	
Date closed:	18 June 2013

48. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 156)

VCS Criteria: VM0007, v1.3, Step 3 Development of Monitoring Plan, b. Data to be collected. The list of data and parameters to be collected shall be given in VCS PD. - • Monitoring of leakage carbon stock changes and greenhouse gas emissions		
Evidence Used to Assess Conformance: PD Section 5.6 and 5.12.1		
Findings: Data and parameters are included for LK-ME but not LK-ASP.		
Non-conformity report (NCR): Please include the data and parameters to be collected regarding monitoring LK-ASP in PD Section 5.		
Date issued:	17 April 2013	
Project proponent response/actions and date: Parameters to be collected regarding LK-ASP have been added to PD Section 5.12.1 and Monitoring Report. – 05 June 2013		
Non-conformity report (NCR): Confirmed data and parameters to be collected regarding monitoring LK-ASP have been added to PD Section 5.12.1 and Monitoring Report Section 3.2.1 as indicated. However, The tables do not correlate between the two documents. A parameter table for ALK-peat, I is not included in the PD and the parameter tables for Aplanned,i and AdefLK,i,t are incomplete in the Monitoring Report. Please ensure consistency in the parameter tables regarding monitoring LK-ASP between the PD and the Monitoring Report.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
A parameter table for ALK-peat has been added to the PD and the parameter tables for Aplanned,i and AdefLK,i,t are now presented consistently between the PD and the Monitoring Report.		
Evidence used to close NCR: The tables have been updated and are now consistent across the two documents. Issue is addressed.		
Date NCR closed:	25 August 2013	

49. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 161)

VCS Criteria: VM0007, v1.3, Step 3 Development of Monitoring Plan, c. Overview of data collection procedures. - Monitoring of leakage carbon stock changes and greenhouse gas emissions	
Evidence Used to Assess Conformance: PD Section 5.6 and 5.12.1	
Findings: Data collection procedures are included for LK-ME but not LK-ASP.	
Non-conformity report (NCR): Please include a brief overview of the data collection procedures regarding monitoring LK-ASP in PD Section 5.	
Date issued:	17 April 2013
Project proponent response/actions and date: The following text was added to the PD regarding Activity Shifting leakage: As the leakage deduction factor of 0.2 was used there are no activities applied to monitor Activity Shifting Leakage. – 05 June 2013	
Evidence used to close NCR: Project Description_VCS_V1.2_NCR_response.docx - Confirmed Section 5 of the PD has been updated as indicated. Also, measurement procedures are included in the parameter tables added to PD Section 5.12.1. Item is addressed.	
Date closed:	18 June 2013

50. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 173)

VCS Criteria: VM0007, v1.3, STEP 4. Estimation of baseline carbon stock changes and greenhouse gas emissions - A description of how the baseline scenario is identified and the description of the identified baseline scenario shall be given in the VCS PD.		
Evidence Used to Assess Conformance: PD Sections 2.4 and 2.5		
Findings: A description of how the baseline scenario was identified and its description is included in Section 2.4. However, Section 3.1.1 refers the reader to Section 0.		
Non-conformity report (NCR): Please revise PD Section 3.1.1 - Step 4 to refer to Section 2.4 as the location of the description of how the baseline scenario was identified and its description. Currently the text refers to Section 0, which does not exist. Please examine the PD throughout for references to Section 0 as this was seen on multiple occasions throughout the document. Please identify where any modifications for references to Section 0 have been made.		
Date issued:	17 April 2013	
Project proponent response/actions and date: Cross referencing issues have been fixed. – 05 June 2013		
Non-conformity report (NCR): "Section 0" is still referred to on three occasions in the PD. Please update accordingly.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	25 August 2013
All Section 0 have again been corrected.		
Evidence used to close NCR: Corrected in PD. Issue addressed.		
Date NCR closed:	25 August 2013	

51. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 174)

VCS Criteria: VM0007, v1.3, STEP 4. Estimation of baseline carbon stock changes and greenhouse gas emissions - The results of the estimations shall be presented in the VCS PD.		
Evidence Used to Assess Conformance: NA		
Findings: The results of the estimates of baseline carbon stock changes and GHG emissions are not included in the PD. Only Net GHG reductions and area deforested is included.		
Non-conformity report (NCR): Please include the results of the estimates of the baseline carbon stock changes and GHG emissions in the PD. Please identify where this was added.		
Date issued:	17 April 2013	
Project proponent response/actions and date: To address other NCRs the most up to date PD template was applied and Section 3.13 added. This section reports baseline carbon stocks and GHG emissions in the PD. – 05 June 2013		
Non-conformity report (NCR): Confirmed Section 3.13 was added. It states "Description of the calculation of Net GHG Emission Reductions is provided in Section 3.1." Section 3.1 does describe the calculation of net GHG emission reductions and indicates that the estimates of baseline carbon stock changes are located in column E of the 'VM0007 REDD-MF' worksheet of the Master Calculation Spreadsheet - this was confirmed. Baseline carbon stock changes are equivalent to the baseline GHG emissions. The results of the estimates of the baseline carbon stock changes/baseline GHG emissions are still not included in the PD as required here. Please include these values in the PD and identify where they were added (Section 3.13 would be ideal).		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
Required Table has been added to Section 3.14		
Evidence used to close NCR: Change made. Section 3.14 and table are added. Issue addressed.		
Date NCR closed:	25 August 2013	

52. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 177)

VCS Criteria: VM0007, v1.3, STEP 5. Estimation of total net greenhouse gas emissions reductions (net of project minus baseline and leakage) - Equation 1	
Evidence Used to Assess Conformance: PD Section 3.1.3, VCS_7_10_Calculator_PNG-master_V1.0.xlsx	
Findings: Equation 1 is identified under Step 5 of PD Section 3.1.3. Equation is applied correctly in ex-ante calculator. However, the ex-ante change in baseline carbon stocks does not match the ex-post change in baseline carbon stocks. This means Table 7 of the PD needs updated as well.	
Non-conformity report (NCR): Please update the ex-ante calculator (VCS_7_10_Calculator_PNG-master_V1.0.xlsx) so that the annual changes in baseline carbon stocks match those of the ex-post calculator (VCS_7_10_Calculator_PNG-M1_V1.0.xlsx) and update PD Table 7 accordingly.	
Date issued:	17 April 2013
Project proponent response/actions and date: Both calculators have the same baseline carbon stocks and Table 7 is also consistent. – 05 June 2013	
Evidence used to close NCR: VCS_7_10_Calculator_PNG-master_V1.0.xlsx; ProjectDescription_VCS_V1.2_NCR_response.docx - The values for the annual changes is baseline carbon stocks have changed due to other NCRs. The values quantified in the most current calculator correlate to PD Table 7. Item is addressed.	
Date closed:	18 June 2013

53. Non-Conformity Report (VM0007_REDDMF, VM0007 v1.3, line 178)

VCS Criteria: VM0007, v1.3, STEP 5. Estimation of total net greenhouse gas emissions reductions (net of project minus baseline and leakage) - Equation 1	
Evidence Used to Assess Conformance: PD Section 3.1.3, VCS_7_10_Calculator_PNG-master_V1.0.xlsx	
Findings: Equation 1 is identified under Step 5 of PD Section 3.1.3. Equation is applied correctly in ex-ante calculator. However, the ex-ante change in baseline carbon stocks does not match the ex-post change in baseline carbon stocks.	
Non-conformity report (NCR): Please describe to the verifiers why the annual changes in baseline carbon stocks changed from the ex-ante calculator (VCS_7_10_Calculator_PNG-master_V1.0.xlsx) to the ex-post calculator (VCS_7_10_Calculator_PNG-M1_V1.0.xlsx).	
Date issued:	17 April 2013
Project proponent response/actions and date: The differences between the calculators was a mistake in the input figures. These figures have now been corrected and they are now reported consistently between the 2 calculators. – 05 June 2013	
Evidence used to close NCR: VCS_7_10_Calculator_PNG-master_V1.0.xlsx; ProjectDescription_VCS_V1.2_NCR_response.docx - The values for the annual changes is baseline carbon stocks have changed due to other NCRs. The values quantified in the most current calculator correlate to PD Table 7. Item is addressed.	
Date closed:	18 June 2013

54. Non-Conformity Report (VMD0001_CP_AB, VMD0001 v.1, line 28)

VCS Criteria: VMD0001, v1.0, II procedures - Step 3: Estimate carbon stock in aboveground biomass for each individual tree of species group j in the sample plot located in stratum i using the selected or developed allometric equation applied to the tree dimensions resulting from Step 1 and sum the carbon stocks in the sample plot	
Evidence Used to Assess Conformance: Annex 9, PD Section 3.8.2; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: Confirmed in ex-post calculator (see CP-AB Tab). A 5 % sample of wood densities was verified. The high end of the medium wood density value was used for Decaspermum Spp.	
Non-conformity report (NCR): Please justify the use of the highest wood density value (0.93) found in the medium range (0.67 to 0.93) for Decaspermum spp.	
Date issued:	17 April 2013
Project proponent response/actions and date: Additional references were found to justify the wood density for Decaspermum. It was determined that the most appropriate value for PNG was 0.702.	

Citation for the wood density database: Zanne, A.E., Lopez-Gonzalez, G.*, Coomes, D.A., Ilic, J., Jansen, S., Lewis, S.L., Miller, R.B., Swenson, N.G., Wiemann, M.C., and Chave, J. 2009. Global wood density database. Dryad. – 05 June 2013	
Evidence used to close NCR: Zanne et al GlobalWoodDensityDatabase.xls; VCS_7_10_Calculator_PNG-master_V1.0.xlsx - Confirmed that 0.702 is an appropriate value and that this wood density has been incorporated into the calculator. Item is addressed.	
Date closed:	18 June 2013

55. Non-Conformity Report (VMD0001_CP_AB, VMD0001 v.1, line 29)

VCS Criteria: VMD0001, v1.0, II procedures - Step 3: Estimate carbon stock in aboveground biomass for each individual tree of species group j in the sample plot located in stratum i using the selected or developed allometric equation applied to the tree dimensions resulting from Step 1 and sum the carbon stocks in the sample plot	
Evidence Used to Assess Conformance: Annex 9, PD Section 3.8.2; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: Plot BB14, tree 14 is dead. The same holds true for BB13 tree 6. Deadwood pool is supposed to be excluded from the project.	
Non-conformity report (NCR): Plots BB13 and BB14 include dead trees (Tree #6 in BB13 and Tree # 14 in BB14). As the deadwood pool is not included in the project, please remove these trees from the quantification of AGB. Else, provide evidence that the trees are living.	
Date issued:	17 April 2013
Project proponent response/actions and date: Dead trees have been removed from the plot data in the spreadsheet. This has made no difference to the carbon stock estimation as they were not accounted for in the carbon stock. – 05 June 2013	
Non-conformity report (NCR): The dead trees referred to in the original NCR are still contained in the plot data in the "VM0007_CP-AB" worksheet and they are being accounted for in the carbon stock (see columns H and I). Please remove these trees from the quantification of AGB or provide evidence that the trees are living.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
Dead trees have been removed and made an immaterial diffrence to the calculations	
Evidence used to close NCR: Dead tree biomass has been removed from this calculation. Issue is addressed.	
Date NCR closed:	25 August 2013

56. Non-Conformity Report (VMD0001_CP_AB, VMD0001 v.1, line 68)

VCS Criteria: VMD0001, v1.0, III. Data and Parameters Note Monitored (default of possibly measured one time) - Allometric equation for species j linking measured tree variable(s) to aboveground biomass of living trees, expressed as t d.m. tree-1 (fj(X,Y)) - It is necessary to validate the applicability of equations used. Source data from which equation was derived should be reviewed and confirmed to be representative of the forest type/species and conditions in the project and covering the range of potential independent variable values. Allometric equations can be validated either by: 1. Limited Measurements or 2. Destructive Sampling	
Evidence Used to Assess Conformance: PD Section 3.8.2	
Findings: PD States: "In order to validate the applicability of the Chave equations used to estimate AGB, the source data used to develop the equation was reviewed. The Chave equation collates destructive sampling data from 27 different tropical forest sites, and it was confirmed that one of these sites was a wet, old growth forest type measured at Marafunga in Papua New Guinea. The latitude and longitude of these measurements was entered into Google Earth, and the site was found to be located 313 km to the south east of the Project Area. It can be concluded that the Chave equation is representative of the forest type/species and conditions in the Project Area, and that it covers the range of potential independent variable values. Furthermore, the Chave equation is listed as one of the preferred equation in the parameters section of the CP-AB module." All of this is true, however,	

there is no evidence that either Limited Measurements or Destructive Sampling was used to validate the equation.	
Non-conformity report (NCR): As per CP-AB, please validate the applicability of the Chave et al equation via the Limited Measurements approach or the Destructive Sampling approach. The methods and results should be included in the PD or as an Annex.	
Date issued:	17 April 2013
Project proponent response/actions and date: The Limited Measurement approach was used to validate the Chave Allometric equation. Of the 33 trees randomly selected an excellent correlation between the allometric estimate and the volume based estimate was found. The Volume based estimate was consistently higher than the allometric and therefore this equation was considered appropriate and conservative. No destructive sampling was required in accordance with the methodology. A summary of this validation outcome is presented in Annex 9, Section 3.1.2. The calculations are also provided in an excel spreadsheet attached to this response. – 05 June 2013	
Evidence Used to Assess Conformance: AllometricValidation.xlsx; Annex 9_CarbonStockReport.pdf	
Non-conformity report (NCR): Confirmed that a summary of the validation outcome is presented in Annex 9, Section 3.1.2. Calculations were reviewed and the following issues arose: 1. Stem volume was quantified using the PNG Forest Authority volume equation. However, species specific wood densities are not multiplied by the stem volume, thus column I of AllometricValidation.xlsx represents cubic meters of green biomass/tree and not t.d.m./tree. 2. The Chave equations (see Column G of AllometricValidation.xlsx) are not using species specific wood densities as they are in VCS_7_10_Calculator_PNG-master_V1.0.xlsx. 3. The plot of biomass estimates is presented in the Carbon Stock Report (Figure 1) with tC representing the y-axis units. Column G of AllometricValidation.xlsx (Chave estimates) are in units of t.d.m/tree and Column I (PNG equation estimates) are in units of cubic meters of green biomass/tree as noted above. 4. The verifier independently calculated the results of both the Chave and PNG equations using species specific wood densities and the results indicates a systematic bias to overestimation of biomass using the Chave equations. Thus, as per this requirement, destructive sampling must be undertaken or another equation must be selected. Please address.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
The analysis was repeated and corrections made. The findings show that the Chave equation estiamtes the aboveground biomass to within the >75% limits stated in the methodology.	
Non-conformity report (NCR): As communicated to the project proponent on 22 August 2013, please revise the text of Annex 9, Section 3.1.2 to indicate that the Chave equation leads to estimates above and below the volume estimate with just less than 75% of the trees being above the predicted curve and correct the misspelling of the word "estimates" in the text that follows Figure 3. Please also provide copies of the field data sheets as documentary evidence of the measured heights used in the analysis.	
Date issued:	26 August 2013
Project proponent response/actions:	**Date Received:** 06 September 2013
The spelling mistake in the Figure 3 caption was corrected. All original fieldwork sheets with height recorded were provided in the NCR56 folder. These height figures match the figures in the validation spreadsheet. Please note that in review of hte spreadsheet it was noted the wood densities had not be updated to match those of the calculation spreadsheet. The changes to the wood density have made no change to the overal validation finding. In addition it should be noted that the fieldsheets have height recorded for trees with less than 20cm DBH which have been excluded from the validation as required by the methodology.	
Evidence used to close NCR: Annex9_ForestCarbonStockCalculations.docx; Field Data Sheets; AllometricValidation_20130625.xlsx - Confirmed that Section 3.1.2 of Annex 9 to indicate that the	

Chave equation leads to estimates above and below the volume estimates and is within the bounds required by VM00101 V1.2. Confirmed the spelling correction of the word "estimates" in the text that follows Figure 3. Field data sheets were reviewed and found to support the heights used in the analysis. Item is addressed.	
Date NCR closed:	13 September 2013

57. Non-Conformity Report (VMD0001_CP_AB, VMD0001 v.1, line 103)

VCS Criteria: VMD0001, v 1.0, Guidelines for Conservative Choice of Default Values - 2. Global values may be selected from Table 4.4 (modified as given above) of the AFOLU Guidelines (IPCC 2006), by choosing a climatic zone and forest type that most closely matches the project circumstances.	
Evidence Used to Assess Conformance: PD Section 3.8.2; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: The global value used for the root to shoot ratio is 0.37. As per this requirement, the modified values must be used.	
Non-conformity report (NCR): As per CP-AB, please use the appropriate modified root to shoot ratios (presented on page 16 of CP-AB) for tropical rainforests in the quantification of BGB.	
Date issued:	17 April 2013
Project proponent response/actions and date: Corrections to the BEF factors were made to the spreadsheet. Specifically the BEF from the Table presented on page 16 of CP-AB were used. – 05 June 2013	
Non-conformity report (NCR): The global value of 0.37 is still being used for the root to shoot ratio. As per CP-AB, please use the appropriate modified root to shoot ratios (presented on page 16 of CP-AB) for tropical rainforests in the quantification of BGB.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
Changes have been made to the spreadsheet (InputsVM0007)and highlighted in green. But it should be noted that CP-AB incorrectly applies the Root:shoot ratio at the plot level when it should be applied at the hectare level to make the IPCC values applicable.	
Evidence used to close NCR: Root to Shoot ratio is changed. Issue addressed.	
Date NCR closed:	25 August 2013

58. Non-Conformity Report (VMD0003_CP_L, VMD0003 v1.0, line 20)

VCS Criteria: VMD0003, v1.0, III Data and Parameters not Monitored (default or possibly measured one time) - Carbon fraction of dry matter (CF) in t C t-1 d.m.: Default value 0.37 t C t-1 d.m. can be used, or species specific values from the literature (e.g. IPCC Chapter 3.2: LUCF Sector Good Practice Guidance).	
Evidence Used to Assess Conformance: Annex 9, PD Section 3.9.2, VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: Default value of 0.47 from Table 4.3 IPCC is used. This is not the correct CF for the litter pool.	
Non-conformity report (NCR): As indicated in PD Section 3.9.2, and as per CP-L, please use the default value of 0.37 t C t-1 d.m. for Carbon fraction of dry matter (CF) in calculating the mean carbon stock per unit area in litter.	
Date issued:	17 April 2013
Project proponent response/actions and date: The correct value for the carbon fraction of dry matter in litter was applied in the spreadsheet. – 5 June 2013	
Non-conformity report (NCR): Confirmed that the default value of 0.37 t C t-1 d.m. for Carbon fraction of dry matter (CF) is now being used in calculating the mean carbon stock per unit area in litter. However, in reviewing this NCR, the verifier found that PD Table 7 does not correlate with the "VCUSummary" Tab of VCS_7_10_Calculator_PNG-M1_V1.1.xls. Please update PD Table 7	

accordingly.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
Final figures to be added to Table 7 and all documents once calculations have been finalised		
Evidence used to close NCR: Final documents were provided on 15 September 2013 - VCS_7_10_Calculator_AprilSalumei_M1_06092013.xlsx; Monitoring Report_v1.3.docx; ProjectDescription_AprilSalumei_V1.5.docx - Confirmed that Monitoring Report Tables 36 through 40 correlate to VCS_7_10_Calculator_AprilSalumei_M1_06092013.xlsx. However, the text just above Table 40 need update to properly report combined total of 626,582 tCO2e (currently reporting 1 tCO2e). Also, PD Table 7 still does not correlate to VCS_7_10_Calculator_AprilSalumei_M1_06092013.xlsx. Specifically, the years 2013 and 2015 for VM0007. None of the ex-ante values match for VM0010. These columns are added together to create column 3, thus, it does not correlate either. Please update PD Table 7 accordingly. This was communicated to the project proponent via email on 16 September 2013. Updated documents were provided on 18 September 2013 - Confirmed that the text just above Monitoring Report Table 40 has been updated to properly report the combined net total GHG reductions/removals of 626,589 tCO2e. Regarding PD Table 7, confirmed that annual values have been updated accordingly for VM0007. However, the total and average are not reported correctly. Total should be 1,090,136 tC)2e vs. 1,090,453 tCO2e and the average should be 109,013.6 vs. 109,045.3, respectively. Also, the ex-ante values for VM0010 are still not reported correctly. Specifically, these are reported as baseline minus project. These, should be reported as baseline minus project minus leakage as per Equation 28 of VM0010 v1.2. This means that column 3 is not reported correctly as well. Please update PD Table 7 accordingly. This was communicated to the project proponent via email on 16 September 2013. Updated documents were provided on 19 September 2013 - Confirmed that the total and average are now reported correctly for VM0007. Also, the ex-ante values for VM0010 are now reported correctly. However, column 3 does not represent the sum of columns one and two or VM0007 + VM0010. Please update PD Table 7 accordingly. This was communicated to the project proponent via email on 20 September 2013. The updated PD was provided on 23 September 2013 and the appropriate revision was made. Item is addressed.		
Date closed:	23 September 2013	

59. Clarification (VMD0005_CP_W, VMD0005, v1.1, line 9)

VCS Criteria: VMD0005, v1.1, Applicability - Timber harvest occurs prior to or in the process of deforestation, and where timber is destined for commercial markets	
Evidence Used to Assess Conformance: PD Section 3.10.1	
Findings: Timber harvesting occurs during the process of road construction. PD States "it seems likely that wood removed during the road construction would have been converted to wood products destined for commercial markets." - Agreed. However, PD Section 3.6.2 - Table 32 states, “Although the land upon which the deforestation occurs is used for productive timber harvest, the timber removed in the deforestation for logging infrastructure (i.e. roads) does not enter the market (i.e. is it used for road footings or bridges) and therefore cannot contribute to activity shifting leakage. Activity shifting leakage related to the baseline activities is fully accounted in the IFM-LtP component of this Project.” Obviously these two statements are conflicting. - requesting clarification here. I agree that Activity shifting leakage will not result from the construction of roads as it is tied to the overall harvesting activities - however this need to be revised to be consistent with Section 3.10.1	
Clarification (CL): PD Section 3.10.1 and 3.6.2 - Table 32 (Response under Step 2) are conflicting. Please revise PD Section 3.6.2 - Table 32 (Response under Step 2) to be consistent with PD Section 3.10.1.	
Date issued:	17 April 2013

Project proponent response/actions and date: Step 2 of Table 32 has now been revised to include the following statement: "Our assessment is that logging could potentially be displaced to any FMA in PNG. We estimate that 80% of these areas are forested, although research conducted by Shearman et al (2008) suggests that this estimate is likely to be conservative." To clarify: for the timber harvested from infrastructure areas, we assume that all timber above 50cm DBH will be used for commercial wood products, timbers between 20 - 49cm DBH would be used on site as road and bridges. – 5 June 2013	
Evidence used to close CL: Addressed. The revision has been made and reference to timber not entering the commercial market has been removed. The correct table is now table 36.	
Date closed:	17 July 2013

60. Non-Conformity Report (VMD0005_CP_W, VMD0005, v1.1, line 10)

VCS Criteria: VMD0005, v1.1, Applicability - The wood products pool is determined to be significant (using T-SIG).	
Evidence Used to Assess Conformance: PD Section 3.10.1	
Findings: PD States "the wood project pool is determined to be significant. As a result, the wood products pool is part of the Project boundary (see Table 18)." However, the use of T-SIG for determining significance is not referred to or presented.	
Non-conformity report (NCR): Please use T-SIG in demonstrating that the wood products pool is significant and thus the applicability requirements of CP-W are met. Include the demonstration in the PD and please identify where this was added.	
Date issued:	17 April 2013
Project proponent response/actions and date: Wood Products from the harvesting of timber in the construction of roads has now been included in the following manner. It is assumed that the logging company would harvest all trees above 50cm DBH for commercial use, and these are allocated to the wood products pool. – 5 June 2013	
Non-conformity report (NCR): The response does not sufficiently address the NCR. PD States "the wood project pool is determined to be significant. As a result, the wood products pool is part of the Project boundary (see Table 18)." However, the use of T-SIG for determining significance is not referred to or presented. Please use T-SIG in demonstrating that the wood products pool is significant and thus the applicability requirements of CP-W are met. Include the demonstration in the PD and please identify where this was added.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
The T-SIG tool has been applied and is provided in response to NCR 45. Additional text has been added to the PD in Section 3.11, highlighted in green to address this issue.	
Evidence used to close NCR: See item 45. PD has been updated. The wood products pool is deemed to be less than 5%, however it makes up the final 5% that allows the total pools to be calculated to be 95%. Therefore it must and is being included. Issue addressed.	
Date closed:	25 August 2013

61. Clarification (VMD0005_CP_W, VMD0005, v1.1, line 24)

VCS Criteria: VMD0005, v1.1, II Procedures, Option 1: Direct Volume Extraction Estimation - Step 1: Identify the wood product class(es) (ty; defined here as sawnwood, wood-based panels, other industrial roundwood, paper and paper board, and other) that are the anticipated end use of the extracted carbon calculated in Step 2.
Evidence Used to Assess Conformance: PD Section 3.10.1; Annex 14; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx
Findings: PD States "The wood product classes were assumed to be the same as those specified in the FMDP, being: sawn timber; veneer and ply; and log export." In the CP_W tab of the calculator, the proportions are quantified by volume extracted by product divided by total volume extracted - However, the values are incorrect for both total volume extracted and product classes extracted. Total

volume extracted should = 380,000 m^3 annually and proportions should be: 8% sawn timber (30,0000 m^3 annually), 42 % veneer and ply (160,000 m^3 annually) , and 50% export (190,000, m^3 annually).	
Clarification (CL): Please examine the "CP_W" and "Inputs (VM0010)" tabs of VCS_7_10_Calculator_PNG-M1_V1.0.xlsx to ensure wood product classes proportions are being calculated correctly. Currently, the wood products classes do not match those of the FMDP - Section 8. This will need updated for the ex-ante estimates as well.	
Date issued:	17 April 2013
Project proponent response/actions and date: Section 8 of the FMDP was used to derive the proportions of wood products that were allocated to each of the wood product classes. The volume of wood harvested in each wood class per annum is equal to the assumed merchantable aboveground biomass, multiplied by the annual operable area planned for harvest. This was based on data from both the FMDP, as well as the April River Development Plan. – 5 June 2013	
Clarification (CL): It is understood that Section 8 of the FMDP was used to derive the proportions of wood products that were allocated to each of the wood product classes. However, the wood products classes do not appear to match those of the FMDP Section 8. According to the FMDP, it appears that proportions should be: 8% sawn timber (30,0000 m^3 annually), 42 % veneer and ply (160,000 m^3 annually) , and 50% export (190,000, m^3 annually). Currently, proportions reported in VCS_7_10_Calculator_PNG-M1_V1.1.xls are equal to: 42% sawn timber, 8 % veneer and ply, and 50% export. Please confirm and update VCS_7_10_Calculator_PNG-M1_V1.1.xls accordingly.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
Corrections were made to cells Inputs(VM0010) E37 - 39 and highlighted green.	
Evidence used to close CL: Items corrected in the referenced cells. Issue addressed.	
Date closed:	25 August 2013

62. Clarification (VMD0005_CP_W, VMD0005, v1.1, line 25)

VCS Criteria: VMD0005, v1.1, II Procedures, Option 1: Direct Volume Extraction Estimation - Step 1: Identify the wood product class(es) (ty; defined here as sawnwood, wood-based panels, other industrial roundwood, paper and paper board, and other) that are the anticipated end use of the extracted carbon calculated in Step 2.	
Evidence Used to Assess Conformance: PD Section 3.10.1; Annex 14; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: Also, "Inputs (VM0010)" tab indicates that the mean volume of extracted timber per unit area is derived from Section 8 and 9.3 of the FMA - it actually comes from those sections of the FMDP and is not on a per unit area basis - rather it is total volume.	
Clarification (CL): The "Inputs (VM0010)" tab of VCS_7_10_Calculator_PNG-M1_V1.0.xlsx indicates that Vex_LE, Vex_ST, and Vex_VP represent the mean volume of extracted timber per unit area. Please revise to indicate that Vex_LE, Vex_ST, and Vex_VP represent the estimated total volume by wood product class.	
Date issued:	17 April 2013
Project proponent response/actions and date: This change has been made in the updated version of the calculator ('VCS_7_10_Calculator_PNG-M1_V1.1.xlsx '). – 5 June 2013	
Evidence used to close CL: Addressed. Change in the calculator confirmed.	
Date closed:	17 July 2013

63. Clarification (VMD0005_CP_W, VMD0005, v1.1, line 26)

VCS Criteria: VMD0005, v1.1, II Procedures, Option 1: Direct Volume Extraction Estimation - Step 1: Identify the wood product class(es) (ty; defined here as sawnwood, wood-based panels, other industrial roundwood, paper and paper board, and other) that are the anticipated end use of the extracted carbon calculated in Step 2.
Evidence Used to Assess Conformance: PD Section 3.10.1; Annex 14;

VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: "Inputs (VM0010)" tab indicates that the mean volume of extracted timber per unit area is derived from Section 8 and 9.3 of the FMA - it actually comes from those sections of the FMDP and is not on a per unit area basis - rather it is total volume.	
Clarification (CL): The "Inputs (VM0010)" tab of VCS_7_10_Calculator_PNG-M1_V1.0.xlsx indicates that Vol, Vex_LE, Vex_ST, and Vex_VP were derived from Sections 9.3 and 8 of the FMA. Please revise to indicate that Vol, Vex_LE, Vex_ST, and Vex_VP were derived from Sections 9.3 and 8 of the FMDP.	
Date issued:	17 April 2013
Project proponent response/actions and date: The following text has been added to column G in the appropriate rows of the calculator: 'Proportion of wood products derived from Section 8 of the FMDP', in order to clarify the source of this data. It should be noted that the volume of timber for each wood product class extracted is based on the assumed annual allowable cut (m3 ha-1), multiplied by the proportion of wood products in each class as specified in Section 8 of the FMDP. – 5 June 2013	
Evidence used to close CL: Addressed. Change in the calculator confirmed.	
Date closed:	17 July 2013

64. Clarification (VMD0005_CP_W, VMD0005, v1.1, line 27)

VCS Criteria: VMD0005, v1.1, II Procedures, Option 1: Direct Volume Extraction Estimation - Step 2: Calculate the biomass carbon of the volume extracted by wood product type ty from within the project boundary using equation 1 on page 5	
Evidence Used to Assess Conformance: PD Section 3.10.2; Annex 14; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: PD States "For the purposes of estimating the volume of timber extracted as wood product from the deforested areas, it was assumed that the logging company would harvest all trees down to a 20cm DBH. While this is below the minimum merchantable log volume allowed for commercial timber harvesting, the construction of roads necessitates removal of all trees, regardless of size. - AGREED. Therefore it was conservatively assumed that the logging company would salvage any commercial value from species regardless of size. - AGREED however - Trees greater than 49 cm dbh were not included in the calculations, thus this statement is not true.	
Clarification (CL): PD Section 3.10.2 states that "it was conservatively assumed that the logging company would salvage any commercial value from species regardless of size." However, only trees 20 to 49 cm DBH were included in the calculation of Merchantable Volume extracted - see VCS_7_10_Calculator_PNG-M1_V1.0.xlsx - Vbsl. Please justify not including trees >49 cm DBH in the calculation of Merchantable Volume extracted (Vbsl) and revise the text in PD Section 3.10.2 accordingly. Else, include trees >49 cm DBH in the calculation of Merchantable Volume extracted.	
Date issued:	17 April 2013
Project proponent response/actions and date: It is acknowledged that the calculator erroneously referred to the incorrect merchantable volume value for calculation of harvested volume in VM0007. This error has now been corrected in the revised calculator (i.e. cell 'E56' now refers to worksheet 'VM010-8.1.1(1)', cell N31. Explanatory text in Section 3.10.2 of the PD has also been clarified, as follows: "For the purposes of estimating the volume of timber extracted as wood product from the deforested areas, it was assumed that the logging company would harvest all trees above 50cm DBH for commercial use. All other trees below this threshold are assumed to be used for roads, bridges and other infrastructure, or will enter the dead wood carbon pool, as is frequently observed to occur in timber harvesting operations in Papua New Guinea (Sherman et al, 2006). Our own forest inventory data was used to calculate the merchantable volume of all trees above 50cm DBH, using a merchantable volume equation provided by the Papua New Guinea Forest Authority. The 50cm+ merchantable volume estimate was already expressed on a per hectare basis.." – 5 June 2013	
Evidence used to close CL: Confirmed that only trees ≥ 50 cm DBH have been included in the calculation of Merchantable Volume extracted (Vbsl) in VCS_7_10_Calculator_PNG-M1_V1.1.xlsx. Previously only trees 20 to 49 cm were included. Confirmed addition of explanatory text to PD Section 3.10.2 as well. Item is addressed.	
Date closed:	17 July 2013

65. Clarification (VMD0005_CP_W, VMD0005, v1.1, line 28)

VCS Criteria: VMD0005, v1.1, II Procedures, Option 1: Direct Volume Extraction Estimation - Step 2: Calculate the biomass carbon of the volume extracted by wood product type ty from within the project boundary using equation 1 on page 5	
Evidence Used to Assess Conformance: PD Section 3.10.2; Annex 14; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: The wood density value used was the weighted mean average of all commercial species listed in the FMDP. - statement isn't true - *Campnosperma brevipetiolata* and *Canarium indicum* are not included in the weighted mean average calculations - however, when included - the weighted mean is the same.	
Clarification (CL): PD Section 3.10.2 states that "The wood density value used was the weighted mean average of all commercial species listed in the FMDP." However, two commercial species listed in the PD (*Campnosperma brevipetiolata* and *Canarium indicum*) are not included in the weighted mean average calculations - see VCS_7_10_Calculator_PNG-M1_V1.0.xlsx - WdDensity Tab and FMDP Table 4. The verifier independently calculated the weighted mean WD including the two missing species and the value was found to be equivalent (0.60). Thus, please revise the text in PD Section 3.10.2 to indicate that these two species were left out and justify why. Else, include *Campnosperma brevipetiolata* and *Canarium indicum* in the calculation of the weighted mean average WD.	
Date issued:	17 April 2013
Project proponent response/actions and date: These two species were erroneously excluded from the wood density calculation. The two species were therefore added to the wood density calculation in the revised version of the calculator ('WdDensity' tab. In correcting this error, it was noted that these two species had been omitted from all further calculations in VM0010, therefore further modifications were made to the following tabs in the calculator: VM0010-6 (2); VM0010-8.1.1 (2); VM0010-8.1.1 (3); and VM0010-8.1.2. – 5 June 2013	
Clarification (CL): Confirmed that the two species were added to the wood density calculation in the revised version of the calculator. However, Column I of the WdDensity Tab of VCS_7_10_Calculator_PNG-M1_V1.1.xlsx appears to include formula errors that result in erroneous percentage values for: Buchanania, Calophyllum inophyllum, Campnosperma brevipetiolata, and Canarium indicum. Ultimately this results in a weighted mean wood density of 0.59 vs. 0.60 as calculated by the verifier. This results in an understatement of the total mean carbon stock of extracted biomass by 1.42 %. Please update Column I of the WdDensity Tab of VCS_7_10_Calculator_PNG-M1_V1.1.xlsx accordingly. Please also update any values in the PD and monitoring report resulting from the update. Please identify where any changes were made in these documents.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
The corrections to the cells in the spreadsheet tab WdDensity have been made and highlighted green. The weighted average was calculated as 0.57 as National specific values for wood density were found (see also response to NCR68). All updated Tables have been highlighted green as required by other NCRs. In particular Table 40 and all other Tables which list the net abatement figures. No changes were necessary in the Monitoring report as the weighted wood density was correctly listed as 0.57.	
Evidence used to close CL: Corrections made to the cells in the WdDensity Tab. Figures entered into the PD and Monitoring plan indicate .57 as the weighted average. See Item 68 response as well. Issue Addressed.	
Date closed:	25 August 2013

66. Non-Conformity Report (VMD0005_CP_W, VMD0005, v1.1, line 30)

VCS Criteria: VMD0005, v1.1, II Procedures, Option 1: Direct Volume Extraction Estimation - Step 4: Calculate the amount of wood products entering the pool at the time of deforestation (CWP,i, calculated in C-WP) that is expected to be emitted over a 100-year timeframe using equation 3 on

Page 6	
Evidence Used to Assess Conformance: PD Section 3.10.2; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: Confirmed application of equation in ex-post calculator - See CP-W Tab. However, incorrect values for SLF were used. PD states "The carbon decay functions for the wood product pools were applied as part of the BL-PL module." SLF is not a parameter originating in BL-PL. It originates in this module - NCR here. Also the values of OF are incorrect as well.	
Non-conformity report (NCR): Please use SLF values presented in CP-W (those published by Winjum et al 1998) in the quantification of C_(WP100,i). This will need updated for the ex-ante estimates as well.	
Date issued:	17 April 2013
Project proponent response/actions and date: The calculator and Table 36 has been revised to reflect that the SLF values specified in VMD0005. It was also noted that version 1.1 of VMD0005 did not include a default value for OF. Therefore the value from version 1.0 of VMD0005 was used. – 5 June 2013	
Evidence used to close NCR: VCS_7_10_Calculator_PNG-M1_V1.1.xlsx **-** Confirmed that the appropriate SLF values are now being used. Confirmed that Table 40 was updated as indicated. Item is addressed.	
Date closed:	17 July 2013

67. Non-Conformity Report (VMD0005_CP_W, VMD0005, v1.1, line 31)

VCS Criteria: VMD0005, v1.1, II Procedures, Option 1: Direct Volume Extraction Estimation - Step 4: Calculate the amount of wood products entering the pool at the time of deforestation (CWP,i, calculated in C-WP) that is expected to be emitted over a 100-year timeframe using equation 3 on Page 6	
Evidence Used to Assess Conformance: PD Section 3.10.2; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: Confirmed application of equation in ex-post calculator - See CP-W Tab. However, the values of OF are incorrect.	
Non-conformity report (NCR): Please use appropriate tropical forest OF values published by Winjum et al 1998 in the quantification of C_(WP100,i). This will need updated for the ex-ante estimates as well.	
Date issued:	17 April 2013
Project proponent response/actions and date: It was also noted that version 1.1 of VMD0005 did not include a default value for OF. Therefore the value from version 1.0 of VMD0005 was used, which is derived from Winjum et al (1998). This was updated in the ex-ante and ex post calculators as well. – 5 June 2013	
Evidence used to close NCR: VCS_7_10_Calculator_PNG-M1_V1.1.xlsx - Confirmed that the appropriate OF values are now being used. Confirmed that Table 40 was updated accordingly. Item is addressed.	
Date closed:	17 July 2013

68. Non-Conformity Report (VMD0005_CP_W, VMD0005, v1.1, line 58)

VCS Criteria: VMD0005, v1.1, III Data and Parameters not Monitored (default or possibly measured on time), basic wood density in t d.m.m-3 for species j (t d.m.m-3) - Where using wood densities developed outside of the project country (cases (b) and (c) above under Source of data), wood densities must be validated with either limited destructive sampling or direct measurement of wood hardness (e.g. with a Pilodyn wood tester) in the field and correlating with wood density.
Evidence Used to Assess Conformance: PD Section 3.10.2; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx
Findings: Option C is used. All values come from either IPCC good Practice Guidance for Land Use, Land Use Change and Forestry or the world agroforestry database. Unfortunately, there is no mention of validation of the wood densities.
Non-conformity report (NCR): As per CP-W, please validate the applicability of the wood densities via the Limited Destructive Sampling approach or the Direct Measurement of Wood Hardness

approach. The methods and results should be included in the PD or as an Annex.	
Date issued:	17 April 2013
Project proponent response/actions and date: The CP-W states that in the absence of National specific values, Global species-specific or group of species-specific values can be applied. As there are no national figures for wood density we relied on globally available wood density databases for species-specific values. We took the mean value from the field inventory which we conducted in the Project Area. Some of the wood density figures selected from the databases were listed as from Australia/PNG. Our validation of the wood density impacts on the carbon stock found good correlation between the above ground biomass estimates using allometric with wood density and DBH compared to the PNG volume equation which only relies on DBH. An excellent correlation was found. Wood products in the baseline scenario represent an insignificant pool. They represent less than 5% of the total annual emission from deforestation resulting from road construction. The level of effort to validate the wood density does not warrant the significance to the account. – 5 June 2013	
Non-conformity report (NCR): High correlation was not found between the above ground biomass estimates using allometric with wood density and DBH compared to the PNG volume equation which only relies on DBH (see ESI Response to Item 56). If the wood products in the baseline scenario represents an insignificant pool, then this module is not applicable as per Section 3. See also ESI response to Item 60. If T-SIG shows that the wood products in the baseline is insignificant, then the applicability conditions of this module are not satisfied and wood products should not be an included pool. if T-SIG shows that the wood products pool is significant, then applicability of the wood densities must be validated for any values not derived from Australia or PNG.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
The application of the T-SIG tool indicated that wood products are a significant pool. Additional research lead to the discovery of Australian/PNG figures for wood density which have now been applied in the spreadsheet. The source of this database is Zanne AE, Lopez-Gonzalez G, Coomes DA, Ilic J, Jansen S, Lewis SL, Miller RB, Swenson NG, Wiemann MC, Chave J (2009) Data from: Towards a worldwide wood economics spectrum. Dryad Digital Repository. doi:10.5061/dryad.234. This database is provided with this NCR. Wood density figures were considered Nationally specific if they were from Austrlaia/PNG/Indonesia. Indonesia figures include those from Indonesian Papua which is the same island as Papua New Guinea. Where only the genus level was recorded, an average of all species was applied. Int his case the average is highlighted yellow in the wdDensity worksheet of the calculator. National specific figures for wood density were discovered for all but 2 commercial species listed. These three species combined made up 3.1% of the volume. The PNG average wood density value was applied to these two species. National specific wood specific wood densities were also re[laced in the carbon stock calculations (i.e. the National figures replaced the global figure on tab WdDensity and subsequently tab CP-AB). The PD and monitoring reports were updated accordingly and all changes highlighted in green. As national figures were used validation of wood density is not required.	
Evidence used to close NCR: Average wood density = .57 as per the column C of the WdDensity tab. Referenced genuses were spot checked into the database listed. Wood products were considered to be significant and included in calculations. Issue addressed.	
Date closed:	25 August 2013

69. Non-Conformity Report (VMD0005_CP_W, VMD0005, v1.1, line 68)

VCS Criteria: VMD0005, v1.1, SLF – fraction of wood products that will be emitted to the atmosphere within 5 years of production by class of wood product ty (SFLty) - Winjum et al. 1998 give the proportions for wood products with short-term (<5 yr.) uses after which they are retired and oxidized (applicable internationally). They are presented in a Table on Page 13.
Evidence Used to Assess Conformance: PD Section 3.10.2; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx
Findings: PD States: "Parameter values were updated in accordance with the new VCS

Requirements for wood product accounting, as per the values reported in VCS Approved methodology, VM003" - confirmed those values, however CP-W v 1.1 is in compliance with the new VCS requirements for wood product accounting.	
Non-conformity report (NCR): PD Section 3.10.2 - Table 36 states that "Parameter values were updated in accordance with the new VCS Requirements for wood product accounting, as per the values reported in VCS Approved methodology, VM003." CP-W version 1.1 is in compliance with the new VCS Requirements for wood product accounting. The values from VM0003 are for within 3 years of harvest (SLF) and within between 3 and 100 years of timber harvest (OF). The values used in Equation 3 of CP-W are for within 5 years of harvest (SLF) and within between 5 and 100 years of timber harvest (OF). Please revise Table 36 accordingly. Note Items 66 and 67 above in your revision.	
Date issued:	17 April 2013
Project proponent response/actions and date: Table 36 has been revised to reflect that the OF values specified in VMD0005 are for wood products that will be emitted to the atmosphere within 5 years of timber harvest. It should be noted that the approach taken to accounting for wood products, including the emission factors, differ between VM0007 and VM0010. Therefore the appropriate emission factors for SLF and OF for VM0007 have been modified in the calculation spreadsheet as well, to reflect the values in the approved methodology. It was also noted that version 1.1 of VMD0005 did not include a default value for OF. Therefore the value from version 1.0 of VMD0005 was used, and this was included as a new box in Table 36, as well as in the calculator. – 5 June 2013	
Evidence used to close NCR: Client Response; ProjectDescription_VCS_V1.2_NCR_response.docx **-** Confirmed that PD Table 40 was updated appropriately. Item is addressed.	
Date closed:	17 July 2013

70. Clarification (VMD0005_CP_W, VMD0005, v1.1, line 82)

VCS Criteria: VMD0005, v1.1, IV Data and Parameters Monitored - The volume of timber in m3 extracted from within the stratum (does not include slash left onsite), reported by wood product class and preferably species. (Vex,i) - Data compilers should also make sure that extracted volumes reported are gross volumes removed (i.e. reported volume does not already discount for estimated wood waste, as is often the practice in harvest records).	
Evidence Used to Assess Conformance: PD Section 3.10.2; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: PD States: "Our own forest inventory data was used to calculate the merchantable volume of all trees above 20cm DBH, using a merchantable volume equation provided by the Papua New Guinea Forest Authority." Total biomass should be used in Equation 1	
Clarification (CL): Please provide evidence that the merchantable volume equation provided by the Papua New Guinea Forest Authority produces gross volumes (i.e. volumes are not already discounted for estimated wood waste).	
Date issued:	17 April 2013
Project proponent response/actions and date: The volume equation applied in the PNG inventory calculations is referred to as the Brereton's formula for log volumes. This is taken from Forest Measurements 4th Edition 1994, Thomas Eugene Avery and Harold E. Burkhart. Specifically the equation is described in Chapter 4 Cubic Volume Cord Measure and Weight Scaling McGraw-Hill Series in Forest Resources. More recently a description of the equations application in PNG is described in The Measurement of Roundwood: Methodologies And Conversion Ratios. By Matthew A. Fonseca (2005) Available at http://books.google.co.nz/books?id=8SlhMaZZpOwC&pg=PA40&lpg=PA40&dq=Breretons+formula+for+log+volumes&source=bl&ots=ZtegLyuLTJ&sig=6iU52CQJ63BHBhgcA_K1qgMqCQA&hl=en&sa=X&ei=AO2rUZaAFtDrlAXr3YHoCw&ved=0CCkQ6AEwAA#v=onepage&q=Breretons%20formula%20for%20log%20volumes&f=false This book describes (Section 2.2.9, page 38 onwards) the calculation of gross volumes. The equation estimates the volume of the log, not the whole tree and then a discount applied for wood waste. – 5 June 2013	

Evidence used to close CL: The referenced publications indicate that the merchantable volume equation provided by the Papua New Guinea Forest Authority produces gross volumes (i.e. volumes are not already discounted for estimated wood waste). Item is addressed.	
Date closed:	17 July 2013

71. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 24)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.1 Identify the agent of planned deforestation in each baseline stratum i - In the simplest scenario the agent is an already defined individual, organization or corporation.	
Evidence Used to Assess Conformance: PD Section 3.5.3	
Findings: "The original FMDP was prepared by Road Timber Limited of Taiwan. At the time of writing, this group does not appear to be operational under this name in Papua New Guinea." – why?	
Non-conformity report (NCR): Please include in PD Section 3.5.2 a discussion of why Road Timber Co Limited is no longer a player in PNG's forest industry. In what year did they go out of business and/or left the game?	
Date issued:	17 April 2013
Project proponent response/actions and date: The project proponent went to considerable effort to trace the fate of the Road Timber Company. This involved on-line searches of the terms 'Road Timber Company PNG' with no results, and also the company's former name 'Gadossi No. 11 Pty Ltd'. However, Section 3.2 of the FMDP lists the parent company of Road Timber as Kunnan International Development Investment Ltd. Internet searches for this company revealed that it was declared bankrupt in the US in April 1997 (see: http://www.cadc.uscourts.gov/internet/opinions.nsf/E7A2E627631D920B85256F15006C3DF0/$file/98-7175a.txt). Despite this finding, the information is not relevant, as VMD0005 permits a 'class of agents' to be defined, where information about the specific agent cannot be identified. This was the option chosen for this project, and deforestation practices in the proxy areas were examined for this purpose. – 5 June 2013	
Evidence used to close NCR: The response sufficiently addresses this NCR.	
Date closed:	17 July 2013

72. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 27)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.1 Identify the agent of planned deforestation in each baseline stratum i - If the agent is not yet defined (i.e. the Government or an alternative agent currently controls the land and the exact agents of deforestation are yet to be determined but will have government sanction) then the most likely "class of deforestation agents" shall be identified.	
Evidence Used to Assess Conformance: PD Section 3.5.3	
Findings: PD Identifies Rimbunan Hijau Group (RH Group) as the most likely agent of deforestation. - however additional documentation is needed to justify this claim. Else, generalize the "class of deforestation agents"	
Non-conformity report (NCR): Please include additional supporting information in PD Section 3.5.2 justifying the claim that Rimbunan Hijau Group (RH Group) as the most likely agent of deforestation. Include, inter alia, data on areas harvested and/or volumes exported and/or volumes harvested and/or stumpage purchased and comparisons to other logging companies currently operating in PNG. Else, generalize the "class of deforestation agents." Note Item 73 below and Item 118 below in addressing this CL.	
Date issued:	17 April 2013
Project proponent response/actions and date: The class of agents was generalized and text revised in Sections 3.5.3 and 3.6.1 of the PD. – 5 June 2013	
Non-conformity report (NCR): Confirmed that the "class of deforestation agents" has been generalized in PD Section 3.5.3 as "Malaysian multinational companies." However, this section states "A map of all similar land uses (i.e. areas demarcated for timber production) is shown in Error! Reference source not found. below." Please update this sentence accordingly. Please also (in PD	

Section 3.5.3.) provide a reference for the spatial data included in Figure 23**.**		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
NA – the project proponent did not provide a response for this Item.		
Evidence used to close NCR: Although the project proponent did not provide a response for this Item, it is clear that the error in the quoted sentence does not exist in the final PD. Further, a valid source for the spatial data included in Figure 23 has been referenced below the figure (PNGRIS). Item is addressed.		
Date closed:	19 September 2013	

73. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 31)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.1 Identify the agent of planned deforestation in each baseline stratum i - The selection of class of agent must be justified through stratification of the region and demonstration with historical records that the identified class of agent is the most common purchaser of similar lands in the identified strata.	
Evidence Used to Assess Conformance: PD Section 3.5.3	
Findings: PD does not indicate that this was done.	
Non-conformity report (NCR): As per BL-PL, please justify the selection of Rimbunan Hijau Group (RH Group) as the most likely agent of deforestation through stratification of the region and demonstration with historical records. Follow the guidance and procedures in BL-PL Section 1.1 for stratification. Include the justification demonstration in the PD and please identify where this was added.	
Date issued:	17 April 2013
Project proponent response/actions and date: Additional justification for defining the 'class of deforestation agent' to be a Malaysian Timber Company has been added to the PD under Section 3.5.3. The requirements to stratify the area have also been addressed as required by Section 1.1 of the BL-PL module. This process has provided visual representation of the PNG Forest Authority assertion that 5 Malaysian companies control over 80% of the timber market in PNG. The additional text in Section 3.5.3 has been highlighted yellow in the PD. – 5 June 2013	
Non-conformity report (NCR): Confirmed that an additional justification for defining the 'class of deforestation agent' to be a Malaysian Timber Company has been added to the PD under Section 3.5.3 as indicated. However, as stated in BL-PL Section 1.1, "Strata must be spatially discrete and defined on the basis of forest carbon stocks. Strata shall reflect biophysical parameters relating to forest productivity, and activity-driven parameters relating to distinct conversion practices." PD Section 3.5.3 states "Those identified strata were based on the legal permission to harvest, defined by legal demarcation for timber harvesting by the Forest Authority, rather than any specific carbon stock or biophysical properties." Please show how this meets the stratification requirements of BL-PL Section 1.1, or make any appropriate revisions to the stratification so that it is in line with the stratification requirements of BL-PL Section 1.1. For further clarification, please discuss with the verifier.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
Following a consideration of the relevant sections of BL-PL and a discussion with Stewart McMorrow on the 31/7/2013 at approximately 9.30 NZ time, it was agreed that the harvest road development would occur in one strata defined as the areas legally available for timber harvest minus aras of peatland and permanent inundation as determined in the spatial analysis. No futher stratification was considered necessary due to only one road type being considered. The verifier confirmed that the statification was conducted in a manner consistent with the methodology requirements.	
Evidence used to close NCR: Stewart McMorrow confirms this statement. Issue addressed.	
Date closed:	25 August 2013

74. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 49)

VCS Criteria: VMD0006, v1.1, II Procedures, 1.2 Area of deforestation Aplanned,i - Legal permissibility for deforestation	
Evidence Used to Assess Conformance: PD Section 3.5.4	
Findings: PD Table 24 States: "Area approved for construction of roads as specified in the FMDP prepared by Road Timber and approved by the Papua New Guinea Forest Authority, an extract of which is provided in Figure 23." - there is no evidence that the FMDP was approved by the PNGFA - requested as CL in Row 63 of the VM0007 tab. Also, if Road Timber Ltd is no longer in business, or isn't the agent of deforestation, wouldn't another logging company have to develop a FMDP that was approved on or before the project start date? This is a question to the lead. If the answer is yes, then they need to have another legally permissible immediate site specific threat of deforestation	
Non-conformity report (NCR): Given that there is no evidence that the FMDP was approved by the PNGFA, please describe how this document represents legal permissibility for deforestation. Please provide additional evidence of meeting this requirement as necessary (e.g. written or verbal statements from an appropriate official could be provided as support).	
Date issued:	17 April 2013
Project proponent response/actions and date: The classification of an area as an FMA by the Government of PNG (the PNG Forest Authority) effectively represents the legal permissibility for deforestation. This process is a 34 step process which is defined in the supporting documentation provided with this NCR. Steps 6-9 represent the process that the Government goes through with the landowners to develop and approve the Development Options Study (DOS). Contained in this Development Options Study is the proposed extracted timber volume and the proposed agriculture and business development wishes of the landowners. Combined with the Timber Code of Practice which outlines how the contracted timber company should extract the timber these two Government approved documents are then used by the Timber Companies to develop their plans for harvest and development which are subsequently approved by the Government and enacted. If these plans are reflective of the DOS then they will be approved. In this case the FM DP and the DOS are aligned and was support and approved by the landowners which is a requirement of the 34 step process. So in the absence of the legal battle over the WMA being allocated at the last minute of the 34 step process there is every indication that the government would have approved the FDMP as the DOS was approved and they are consistent. Additional clarifying text has been added (and highlighted yellow) to Section 3.5.4, Table 24 of the PD. – 5 June 2013	
Evidence used to close NCR: Client Response; ProjectDescription_VCS_V1.2_NCR_response.docx - Confirmed that additional clarifying text has been added to Section 3.5.4, Table 23 of the PD. Because the "approved" FMDP is no longer referred to as the documentary proof demonstrating the legal permissibility for deforestation, this item is addressed. The verifier agrees that the classification of the area as an FMA represents the legal permissibility for deforestation.	
Date closed:	17 July 2013

75. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 62)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.2 Area of deforestation A planned - Where deforestation is by an identified class of agents: A documented history (for example government data or maps) of similar planned deforestation activities by class of agents, of planned deforestation within the five years previous to without-project deforestation.
Evidence Used to Assess Conformance: PD Section 3.5.4; Annex 5
Findings: PD Identifies Rimbunan Hijau Group (RH Group) as the most likely agent of deforestation. PD States: "historical land use change analysis within active FMAs in neighboring West Sepik and West New Britain by similar timber harvesting companies on similar terrain with similar population and regulatory characteristics (see Annex 5) found the plan to be typical of the level of road development by timber harvesting companies in Papua New Guinea." Also, NCR: please provide evidence that Rimbunan Hijau Group (RH Group) conducted the logging activities in the proxy areas.
Non-conformity report (NCR): Please provide additional text/references in both Annex 5 and PD

Table 24 to substantiate the statement "historical land use change analysis within active FMAs in neighboring West Sepik and West New Britain by…(see Annex 5) found the plan to be typical of the level of road development by timber harvesting companies in Papua New Guinea." Annex 5 does not currently indicate the density (m/ha) or level (km/yr.) of road development observed in the proxy areas. Moreover, neither these rates nor the rates specified in the FMDP have been compared to rates proposed or enacted by other logging companies in PNG.	
Date issued:	17 April 2013
Project proponent response/actions and date: Annex 5 has been re-written to address the key elements of the BL-PL module. This text now reads: The legal permissibility and intent to deforest areas for road construction is represented by the land use classification as an FMA. The area is to be harvested for timber and road construction is a necessary element of enacting the legally mandated land use activity. As the methodology states the proportion of the total Project Area planned to be deforested cannot exceed the legal mandate unless common practice in a proxy area shows that the mandates are not enforced. The construction of roads to facilitate access and extraction of the timber resource leads to deforestation in the Project Area. The allocation of the area as an FMA represents the legal right to deforest for road construction which is allowed in the PNG Logging Code of Practice. The Logging Code of Practice provides guidance on how roads should be constructed, including the clearing of areas for road construction of up to 40m width, but does not provide any specification of the density of roads (refer to pages 9 - 21 of the Code). A number of proxy areas were assessed to determine the proportion of an FMA that is deforested annually for road construction as the legally mandated proportion was not able to be established for the following reasons: • the timber harvest plan developed by Road Timbers and April River Landowners as well as the Development Option Study developed by the Forest Authority had a number of mistakes relating to road construction (i.e. it is physically impossible to develop roads to a density of 10km / ha) • the PNG Logging Code of Practice does not specify a minimum/ maximum road building density (i.e. km/ha) • there is a significant body of remote sensing evidence from PNG FMA areas to suggest non-conformance with the PNG Logging Code of Practice (Shearman et al. 2009). In accordance with the methodology six proxy areas were selected to determine the proportion of the Project Area likely to be subject to deforestation and the expected annual rate of deforestation (see Section 2.1.3 for more detail of this analysis). Additionally Tables in Section 2.1.2 of Annex 5 specifically list the road density of each of the proxy areas from which an average was assumed and applied to the Project Area. – 5 June 2013	
Evidence used to close NCR: Client response; ProjectDescription_VCS_V1.2_NCR_response.docx; Annex 5 **-** The statement in PD Table 24 was changed and no longer refers to the FMDP or its road development rate. It now solely refers to the LULC analysis (Annex 5) as the documentary proof of intent to deforest. Confirmed that the additional text was added to Annex 5 as indicated. Confirmed that tables in Annex 5, Section 2.1.3 list the observed road density of each of the proxy areas from which an average was assumed and applied to the Project Area. The LULC analysis (Annex 5) suffices as the documentary proof of intent to deforest. It reports observed road construction by Malaysian logging companies in other FMAs within PNG over a 10 year period prior to the project start date and is the basis of the deforestation rate within the project area itself. Item is addressed.	
Date closed:	17 July 2013

76. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 63)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.2 Area of deforestation A planned - Where deforestation is by an identified class of agents: A documented history (for example government data or maps) of similar planned deforestation activities by class of agents, of planned deforestation within the five years previous to without-project deforestation.
Evidence Used to Assess Conformance: PD Section 3.5.4; Annex 5
Findings: PD Identifies Rimbunan Hijau Group (RH Group) as the most likely agent of deforestation.

PD States: "historical land use change analysis within active FMAs in neighboring West Sepik and West New Britain by similar timber harvesting companies on similar terrain with similar population and regulatory characteristics (see Annex 5) found the plan to be typical of the level of road development by timber harvesting companies in Papua New Guinea."	
Non-conformity report (NCR): Please provide evidence that that Rimbunan Hijau Group (RH Group) conducted the logging activities in the proxy areas. Note Item 72 above in addressing this NCR.	
Date issued:	17 April 2013
Project proponent response/actions and date: The agent of deforestation has more generally been describes as Malaysian Logging Companies, text in the PD (Section 3.5.3) and Annex5 (Section 2.1.1) has been updated to state: The original FMDP was prepared by Road Timber Limited of Taiwan. At the time of writing, this group either in its current name, or its former name (Gadossi No. 11 Pty Ltd) does not appear to be operational within Papua New Guinea. There are currently many international investors and operators in PNG's forest industry who fall into the 'class of deforestation agents" that pose a threat to the April Salumei Forest Management Area. This "class of deforestation agent" is characterized by the PNG Forest Authority as Malaysian multinational companies. According to the PNG Forest Authority website "There are 29 forest concessions currently in production, covering a total area of 3.5 million hectares. Privately owned companies control all commercial timber production from natural forest areas. Companies that are directly or indirectly owned or controlled by Malaysian multinational companies dominate commercial timber production. Five companies control over 80 percent of the market. The dominant timber harvest company in Papua New Guinea is Rimbunan Hijau PNG (known in country as RH), a wholly owned subsidiary of Malaysian company is by far the most influential forestry player in Papua New Guinea. These Malaysian multinational companies generally have a multifaceted business focus in forestry and oil palm, infrastructure development and mining. The selection of the class of deforestation agent was based on stratification of Papua New Guinea which demonstrates with historical records (i.e. PNG land use classification for timber harvesting) that the identified class of agent is the most common purchaser (or in this case allocated the user rights by the PNG Forest Authority as land cannot be purchased from traditional landowners) of similar lands (i.e. lands classified for commercial timber harvest) in the identified strata. Those identified strata where based on the legal permission to harvest as defined as the land use classification by the Forest Authority rather than any specific carbon stock or biophysical properties. The stratification process related to forest productivity activity-driven parameters that lead to distinct conversion practices. The "class of deforestation agent" most likely to pose a threat to the Project Area is a Malaysian Timber Harvest company with a multifaceted business that includes at least forestry, agriculture, oil palm, and infrastructure development. – 5 June 2013	
Non-conformity report (NCR): Not all of the text included in the response is included in the PD or Annex 5 dated 05 June 2013. It is the verifier's understanding that this information will be included in the PD following Round 2. The agent of deforestation has been generalized as Malaysian Logging Companies. The PNGFA's confirmation that the harvesting was conducted in the proxy areas by Malaysian Logging Companies (RH and WTK Realty) suffices as evidence that the observed deforestation due to road construction was done by the identified class of agents. Item is addressed (pending updated PD and Annex 5 for the text included in the response).	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
Correction to Section 3.5.3 of the PD and Section 2.1.1 of Annex5 5 were made to make the text exactly the same as the respoinse. Text changes are highlighted in green.	
Evidence used to close NCR: Text changed in both documents. Issue addressed.	
Date closed:	25 August 2013

77. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 64)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.2 Area of deforestation A planned - Where a specific baseline agent has been identified: Either a valid and verifiable land use management plan for deforesting the project area, or a documented history (for example government data or maps) of similar planned deforestation activities by the baseline agent of planned deforestation within the five years previous to without-project deforestation.	
Evidence Used to Assess Conformance: PD Section 3.5.4	
Findings: PD Identifies Rimbunan Hijau Group (RH Group) as the most likely agent of deforestation. -this falls under the class of agents above. PD States: "The Road Timber FMDP represents a valid and verifiable land use management plan for deforesting the project area. The size, density (i.e. 10m / hectare) and class of logging roads are clearly specified in Section 7.0 of the FMDP." - this is not applicable since a class of agents has been identified.	
Non-conformity report (NCR): Please remove the text "The Road Timber FMDP represents a valid and verifiable land use management plan for deforesting the project area. The size, density (i.e. 10m / hectare) and class of logging roads are clearly specified in Section 7.0 of the FMDP." from PD Table 24 regarding Intent to Deforest. This statement is not applicable since a "class of agents" has been identified.	
Date issued:	17 April 2013
Project proponent response/actions and date: Text has been removed from Table 24 as requested. – 5 June 2013	
Evidence used to close NCR: Client response; ProjectDescription_VCS_V1.2_NCR_response.docx **-** Confirmed the text has been removed as indicated. Item is addressed.	
Date closed:	17 July 2013

78. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 65)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.2 Area of deforestation A planned - The proportion of the total parcel area planned to be deforested cannot exceed the legal mandate unless common practice in a proxy area shows that the mandates are not enforced.	
Evidence Used to Assess Conformance: NA	
Findings: This is not addressed in the PD.	
Non-conformity report (NCR): Please address the following requirement of BL-PL in PD Section 3.5.4: "The proportion of the total parcel area planned to be deforested cannot exceed the legal mandate unless common practice in a proxy area shows that the mandates are not enforced."	
Date issued:	17 April 2013
Project proponent response/actions and date: This BL-PL requirement is addressed in Section 2.1.2 of Annex 5. The following text has been added: "A number of proxy areas were assessed to determine the proportion of an FMA that is deforested annually for road construction as the legally mandated proportion was not able to be established for the following reasons: • the timber harvest plan developed by Road Timbers and April River Landowners as well as the Development Option Study developed by the Forest Authority had a number of mistakes relating to road construction (i.e. it is physically impossible to develop roads to a density of 10km / ha) • the PNG Logging Code of Practice does not specify a minimum/ maximum road building density (i.e. km/ha) • there is a significant body of remote sensing evidence from PNG FMA areas to suggest non-conformance with the PNG Logging Code of Practice (Shearman et al. 2009). In accordance with the methodology six proxy areas were selected to determine the proportion of the Project Area likely to be subject to deforestation and the expected annual rate of deforestation (see Section 2.1.3 for more detail of this analysis)." - 5 June 2013	
Non-conformity report (NCR): Confirmed that this requirement was addressed sufficiently in Annex 5, Section 2.1.2 as indicated. However, 7 proxy areas were used to determine the deforestation rate. Please revise the following sentence of Annex 5, Section 2.1.2: "In accordance with the methodology six proxy areas were selected to determine the proportion of the Project Area likely to be subject to	

deforestation and the expected annual rate of deforestation." This same sentence. as well as others, also need updated in PD Section 3.5.5.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
Correction has been made in both documents and highlighted in green. In the PD corrections were made to Section 3.5.5, Section 3.5.8, Section 3.6.4 and Table 35.		
Evidence used to close NCR: Corrections made. Issue is addressed.		
Date closed:	25 August 2013	

79. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 68)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned - Where a valid verifiable plan exists for rate at which deforestation is projected to occur, this rate shall be used.	
Evidence Used to Assess Conformance: PD Section 3.5.5	
Findings: PD States: "The rate of development of the road density was specified in the Section 7.0 Road Construction of the plan, as occurring at 12.5km annually, or within three years (Figure 23, Figure 24). -Confirmed. However, this pace of road construction was considered unrealistic - 7.7. miles of road annually for three years does not seem that unrealistic - based on our observations from deforestation rates in proxy areas (See Annex 5). Cl here Annex 5 does not currently indicate the level of road development (m/ha) observed in the proxy areas and more info needs to be in the PD.	
Non-conformity report (NCR): Please provide additional text/data in both Annex 5 and PD Section 3.5.5 to substantiate the statement "this pace of road construction was considered unrealistic based on our observations from deforestation rates in proxy areas (See Annex 5)" Annex 5 does not currently indicate the density (m/ha) or level (km/yr.) of road development observed in the proxy areas. Moreover, this statement conflicts with the statement in PD Table 24 regarding Intent to Deforest.	
Date issued:	17 April 2013
Project proponent response/actions and date: See response to NCR 75 where it is explained that the proxy areas were used to determine the anticipated road density and the rate of road development within the Project Area. Clarifying text and data tables have been provided in Annex 5. Text in Table 24 of the PD has been revised to remove conflicting and confusing text. – 5 June 2013	
Evidence used to close NCR: Client response; ProjectDescription_VCS_V1.2_NCR_response.docx; Annex 5 - The statement "this pace of road construction was considered unrealistic based on our observations from deforestation rates in proxy areas (See Annex 5)" is no longer included in the PD. PD Section 3.5.5 and Annex 5 now clearly indicate that that the proxy areas were used to determine the anticipated road density and the rate of road development within the Project Area. Confirmed that tables in Annex 5, Section 2.1.3 list the observed road density of each of the proxy areas from which an average was assumed and applied to the Project Area. Confirmed that the conflicting and confusing text has been removed from PD Table 24. Item is addressed.	
Date closed:	17 July 2013

80. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 71)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned - A minimum of 6 proxy areas shall be included.
Evidence Used to Assess Conformance: PD Section 3.5.5; RR_WS_Boundary.shp; RR_WNB_Boundary.shp
Findings: PD States: "More than 40 areas allocated for timber harvest (e.g.. FMAs) located in two different Provinces (West Sepik and West New Britain) were selected as 'proxy areas' for analysis of the road development rate (Table 25)." - Table 25 (Included twice in PD) only shows 2 timber concessions (within West Sepik) and the province of WNB as a whole. How was % deforestation quantified separately if the concessions are not spatially distinct? The proxy areas were selected based on the criteria listed in the BL-PL, as specified in….. The full extent of all proxy areas was determined to be 566,848 ha.
Non-conformity report (NCR): Please include at least six proxy areas in the analysis of the road

development rate or deforestation (%). Currently only three are being used.	
Date issued:	17 April 2013
Project proponent response/actions and date: At least 6 proxy areas are now spatially delineated in Annex 5 and the calculation spreadsheet has been corrected to conform with the methodology requirements. The PD has also been updated to ensure conformance with this methodological requirements. – 5 June 2013	
Evidence used to close NCR: Client response; ProjectDescription_VCS_V1.2_NCR_response.docx; Annex 5 - Confirmed that 7 proxy areas are now being used in the analysis of the road development rate or deforestation (%). Item is addressed.	
Date closed:	17 July 2013

81. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 72)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned - A minimum of 6 proxy areas shall be included.	
Evidence Used to Assess Conformance: PD Section 3.5.5; RR_WS_Boundary.shp; RR_WNB_Boundary.shp	
Findings: PD Section 3.5.5 Table 25 is included twice.	
Non-conformity report (NCR): PD Section 3.5.5 Table 25 is included twice. Please remove one of the tables from the PD.	
Date issued:	17 April 2013
Project proponent response/actions and date: One of the tables has been removed - 5 June 2013	
Evidence used to close NCR: Addressed. Table 25 in v1.0 is now table 24 in v1.2. Redundant table has been removed.	
Date closed:	17 July 2013

82. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 73)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned - A minimum of 6 proxy areas shall be included.	
Evidence Used to Assess Conformance: PD Section 3.5.5; RR_WS_Boundary.shp; RR_WNB_Boundary.shp	
Findings: PD States: "More than 40 areas allocated for timber harvest (e.g.. FMAs) located in two different Provinces (West Sepik and West New Britain) were selected as 'proxy areas' for analysis of the road development rate (Table 25)." - Table 25 (Included twice in PD) only shows 2 timber concessions (within West Sepik) and the province of WNB as a whole.	
Non-conformity report (NCR): PD Section 3.5.5 Table 25 indicates that two timber concessions within West Sepik and the Province of West New Britain define the proxy areas. Please revise PD Table 25 to support the statement "More than 40 areas allocated for timber harvest (e.g.. FMAs) located in two different Provinces (West Sepik and West New Britain) were selected as 'proxy areas' for analysis of the road development rate (Table 25)." Note Item 80 above in your revision.	
Date issued:	17 April 2013
Project proponent response/actions and date: The application of the proxy areas in the quantification of the baseline deforestation is now more clearly and correctly described in Annex 5; a brief summary is also presented in the PD. The location of these areas covers timber concessions in West Sepik and West New Britain as previously described, however the clarifying text addresses the need for at least 6 spatially distinct proxy areas to be included in the analysis. Accordingly Table 25 was updated to reflect the improvements made to address the previous lack of spatial distinction between the proxy areas as required by the methodology. – 5 June 2013	
Non-conformity report (NCR): The application of the proxy areas in the quantification of the baseline deforestation is indeed more clearly and correctly described in both the PD and Annex 5. However, PD Table 24 and Annex 5 Table 7 do not correlate. PD Table 24 shows 8 proxy areas, while Annex 5 Table 7 Shows 7 proxy areas (PD Table 24 includes Amio Amgen - Annex 5 Table 7 does not). Also, PD Figure 25 shows 7 proxy areas but does not correlate to the 7 listed in Annex 5 Table 7 (East Arowe is left out and Amio Amgen is included). Annex 5 Figure 7 shows 8 proxy areas, which does not correlate with Annex 5 Table 7, or PD Figure 25. Please ensure consistency between	

the tables and figures between the PD and Annex 5. Please also confirm if "Amio Amgen" should actually be "Awio Amgen" or "Avio Amgen" and update any occurrences of "Amio Amgen" in both the PD and Annex 5. Please do the same for "Autovo Ext" vs. "Autuvo Ext" and West/Central/East "Arowe" vs. West/Central/East "Arawe" Please Identify all changes that are made.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
Consistency between the PD and Annex 5 has now been completed. The changes were made to Table 24 and Figure 25 of the PD as well as Figure 9 and Table 7 of Annex 5. Awio Amgen does not form part of the final proxy areas. This area was initially included but was found not to meet all the comparative threshold requirements and was subseqently removed, therefore the last part of this NCR is not applicable. All reference to this FMA have been removed from the PD and Annex 5. Spelling mistakes in the East/WEST/Central Arowe have been corrected between the documents and highlighted green.		
Clarification (CL): Figure 8 (Annex 5) needs to be corrected to refer to 7 proxy areas, not 6.		
Date issued:	26 August 2013	
Project proponent response/actions:	**Date Received:**	06 September 2013
The caption to figure 8 (Annex 5) was correccted to refer correctly to seven proxy areas.		
Evidence used to close NCR: Annex5_HistoricalLULCAnalysis_V1.1.docx - Confirmed the caption to figure 8 (Annex 5) was updated to correctly refer to seven proxy areas. Item is addressed.		
Date closed:	13 September 2013	

83. Clarification (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 74)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned - A minimum of 6 proxy areas shall be included.		
Evidence Used to Assess Conformance: PD Section 3.5.5; RR_WS_Boundary.shp; RR_WNB_Boundary.shp		
Findings: The area values reported for proxy areas in PD Tables 25, 27, 28, and 29 are inconsistent. Also, the units in Table 27 are unclear.		
Clarification (CL): Please ensure consistency in the area values reported for proxy areas in PD Tables 25, 27, 28, and 29. Please also confirm that the Annual Road Development values presented Table 27 actually represent annual values (ha/year). Should these not be total values (ha) over the assessment period (2000 - 2009)?		
Date issued:	17 April 2013	
Project proponent response/actions and date: The tables within the PD (Section 3.5.5) and Annex 5 (Section 2.1.2.1) have been updated to ensure consistency in the values reported for the proxy areas. A table which reports the total deforestation between 2000-2009 from road construction within the proxy areas is now also provided as requested. – 5June 2013		
Clarification (CL): "Risk of Abandonment" section in the PD in section 3.5.7 makes reference to "The LULC matrices provided below", however tables 28 and 29 have been removed from the PD. Similarly, the same language exists in Annex 5 under Section 2.5.1 and the matrices are not provided. Please correct and insert the tables showing the values for all 7 proxy areas in both the PD and Annex 5.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	23 September 2013
Text has been corrected in the PD Section 3.5.7 and Annex 5 Section 2.15 to refer to one table which shows road building activity and deforestation for agriculture and grasslands is ongoing in all the proxy area FMAs. This activity indicates that the FMAs have not been abandoned and continue to undergo timber harvesting and land use change activities.		

Evidence used to close CL: Confirmed that the text has been modified as indicated and that the land use change tables support the updated text. Item is addressed.	
Date closed:	23 September 2013

84. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 75)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned - A minimum of 6 proxy areas shall be included.	
Evidence Used to Assess Conformance: PD Section 3.5.5; RR_WS_Boundary.shp; RR_WNB_Boundary.shp	
Findings: **"**The full extent of all proxy areas was determined to be 566,848 ha." Independent quantification by the validator does not support this statement.	
Non-conformity report (NCR): Please revisit the quantification of area via GIS for the proxy areas and update PD Section 3.5.5 and any associated calculations accordingly. The verifier calculated area independently from the proxy area shapefiles and found significant discrepancies when compared to the total area values reported in PD Section 3.5.5. These values are very important because they are a variable that determines D%_pn. In addressing this CL, consider choosing a consistent datum/projection for all GIS layers and calculations associated with the project.	
Date issued:	17 April 2013
Project proponent response/actions and date: The analysis of the proxy areas has been redone as a result of the rewriting of Annex 5 to conform with the BL-PL module. All shapefiles of the proxy areas and the related classification data is provided in response to NCR 95. projection issues have been rectified and areas are now consistent. All data tables in the PD and Annex 5 are now consistent. – 5 June 2013	
Evidence used to close NCR: Client Response; Proxy Area Shapefiles - Proxy area shapefiles were reviewed and the verifier found that the projections were consistent between the proxy areas. However, they should not have been: some fall into UTM Zone 54 S, Some fall into UTM Zone 55 S, and UTM Zone 56 S. Area (ha) was quantified for all proxy areas based on UTM Zone 54 S. This resulted in errant area (ha) values for those proxy areas falling into UTM Zones 55 and 56 S. However, the verifier independently calculated area based on the appropriate UTM Zone and the deforestation rates for each proxy area were found to match those of the project proponent. Confirmed that the tables between the PD and Annex 5 are consistent. Item is addressed.	
Date closed:	17 July 2013

85. Clarification (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 76)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned - A minimum of 6 proxy areas shall be included.	
Evidence Used to Assess Conformance: PD Section 3.5.5; RR_WS_Boundary.shp; RR_WNB_Boundary.shp	
Findings: The shapefiles for West Sepik do not show distinction between the two timber concessions (Vanimo 1-5 and 6).	
Clarification (CL): The shapefiles for West Sepik do not show distinction between the two timber concessions (Vanimo 1-5 and 6). Please explain to the verifier how deforestation (%) was quantified separately for each concession if the shapefiles are not spatially distinct. Please also provide the verifier with spatially distinct shapefiles for each concession.	
Date issued:	17 April 2013
Project proponent response/actions and date: Spatially distinct shapefiles for each of the proxy areas have now been provided, including Vanimo1-5 and Vanimo 6. The process for quantifying % deforestation is now more clearly defined in Annex 5 and is presented for each concession. – 5 June 2013	
Evidence used to close CL: ProjectDescription_VCS_V1.2_NCR_response.docx; Annex 5; Proxy Area Shapefiles **-** Confirmed that the process for quantifying % deforestation is indeed more clearly defined in both the PD and Annex 5. Confirmed that tables in Annex 5, Section 2.1.3 list the observed road density of each of the proxy areas from which an average was assumed and applied to the Project Area. The spatially distinct shapefiles have been provided. Item is addressed.	
Date closed:	17 July 2013

86. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 77)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned - A minimum of 6 proxy areas shall be included.		
Evidence Used to Assess Conformance: PD Section 3.5.5; RR_WS_Boundary.shp; RR_WNB_Boundary.shp		
Findings: The second to last sentence under the heading "Proxy Areas" is incomplete.		
Non-conformity report (NCR): The second to last sentence under the heading "Proxy Areas" is incomplete. Please revise accordingly.		
Date issued:	17 April 2013	
Project proponent response/actions and date: This sentence has been completed and highlighted in yellow. – 5 June 2013		
Non-conformity report (NCR): The sentence was completed. Addressed. However, the same paragraph states that six proxy areas were selected, but Table 24 shows 8. Further, tables 27 - 33 refer to 7 proxy areas (Amio Amgen is dropped). Please clarify and/or correct.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
Table 24 has been updated to refelct that 7 proxy areas were used in the analysis. Furthermore Figure 25 was corrected. These changes are highlighted green in the PD. The same changes were made to Annex 5, Figure 7.		
Evidence used to close NCR: Table 24 has been corrected. Figure 25 was corrected. 7 proxy areas listed in tables 27-33 all show 7 proxy areas. Issue addressed.		
Date closed:	25 August 2013	

87. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 79)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned, criteria of proxy areas - 1. Land conversion practices shall be the same as those used by the baseline agent or class of agent	
Evidence Used to Assess Conformance: PD Section 3.5.5; Table 26	
Findings: PD States: "All of the proxy areas are areas managed as timber concessions. These areas are subject to the same requirements under the Forestry Code of Practice and therefore are subject to the same land use practices."	
Non-conformity report (NCR): Please provide evidence that the proxy areas are managed as FMAs or TRPs.	
Date issued:	17 April 2013
Project proponent response/actions and date: Shapefiles provided by the University of Papua New Guinea have been added to folder 87. These are for the Sandaun Province (West Sepik Area) and West New Britain FMAs. In the Attribute tables they are clearly marked as FMAs. Please also find a document outlining all current FMAs, this document can also be found under http://www.fiapng.com/ForestResourceAcquisition.pdf. - 5 June 2013	
Evidence used to close NCR: Client response; ForestResourceAcquisition.pdf; proxy Area Shapefiles - Both ForestResourceAcquisition.pdf and the provided shapefiles serve as sufficient evidence that the proxy areas are managed as FMAs or TRPs. Item is addressed.	
Date closed:	17 July 2013

88. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 81)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned, criteria of proxy areas - 3. The proxy areas shall have the same management and land use rights type as the proposed project area under business as usual
Evidence Used to Assess Conformance: PD Section 3.5.5; Table 26
Findings: PD States: "All of the proxy areas are defined as FMAs or TRPs. - CL in Row 77 above. These are all subject to logging practices prescribed under the Logging Code of Practice. Logging

operations within all the proxy areas were overseen by the Papua New Guinea Forest Authority."	
Non-conformity report (NCR): Many of the roads encountered during the site visit in the West Sepik Proxy area were built prior to the PNG Logging Code of Practice (as per Goodwill Amos). Please describe to the verifier, and include in PD Section 3.5.5 how this does not affect the quantification of the baseline deforestation (%). Else, provide evidence that all identified logging roads within the proxy areas that were used to quantify baseline deforestation (%) were subject to the PNG Logging Code of Practice.	
Date issued:	17 April 2013
Project proponent response/actions and date: All activities within timber concessions which occurred since the PNG Logging Code of Practice publication (i.e. 1996) are subject to the Code. All roads that existed in the proxy areas prior to 2000 were mapped as pre-existing roads. Only areas developed as 'new' roads since 2000 were considered in the development of rates of deforestation in the proxy areas. The rate of deforestation resulting from roads in the period 2000 - 2009 were the only activities considered in the establishment of deforestation rates. – 5 June 2013	
Non-conformity report (NCR): The response provides clarity regarding the Item. That is, due to the base mapping procedures, only roads being developed from 2000 through 2009 should be included in the quantification of the deforestation rates. However, for this item to be fully addressed, item 92 must be addressed - Pending Item 92.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
NA – project proponent did not provide a response for this Item.	
Evidence used to close NCR: Although the project proponent did not provide a response for this item, Item 92 has been addressed. Thus, thus Item is addressed.	
Date closed:	25 August 2013

89. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 82)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned, criteria of proxy areas - 4. If suitable sites exist they shall be in the immediate area of the project; if an insufficient number of sites exists in the immediate area of the project, sites shall be identified elsewhere in the same country as the project; if an insufficient number of sites exists in the country, sites shall be identified in neighboring countries	
Evidence Used to Assess Conformance: PD Section 3.5.5; Table 26;RR_WNB_Boundary.shp	
Findings: PD States: "Two active FMAs were selected in the Province of West Sepik, which is in close proximity to the Project Area. Logging concessions in West New Britain Province were also selected based on the having a similar (low) population density to that of East Sepik, where the Project is located. As population has been found to influence land use conversion rates, proxy areas were selected to eliminate population pressure artificially inflating deforestation rates in the Project Area."	
Non-conformity report (NCR): Similar to Item 85 above, the shapefiles for West New Britain do not show spatial distinction between any timber concessions. Please provide evidence that the file RR_WNB_Boundary.shp represents one FMA/TRP. Else, quantify deforestation (%) separately for each concession within the boundary defined by RR_WNB_Boundary.shp and provide the verifier with spatially distinct shapefiles for each concession. Note items 80, 82, and 84 above in addressing this CL.	
Date issued:	17 April 2013
Project proponent response/actions and date: Deforestation was quantified for each of the concessions in accordance with BL-PL. The results are now presented in both Annex 5 and the PD and separate shapefiles are provided in response to NCR 87 and 95. – 5 June 2013	
Evidence used to close NCR: ProjectDescription_VCS_V1.2_NCR_response.docx; Annex 5; Proxy Area Shapefiles - Confirmed that tables in Annex 5, Section 2.1.3 and also the PD list the observed road density of each of the proxy areas from which an average was assumed and applied to the Project Area. The spatially distinct shapefiles have been provided. Item is addressed.	
Date closed:	17 July 2013

90. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 83)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned, criteria of proxy areas - 4. If suitable sites exist they shall be in the immediate area of the project; if an insufficient number of sites exists in the immediate area of the project, sites shall be identified elsewhere in the same country as the project; if an insufficient number of sites exists in the country, sites shall be identified in neighboring countries	
Evidence Used to Assess Conformance: PD Section 3.5.5; Table 26;RR_WNB_Boundary.shp	
Findings: PD States: "Two active FMAs were selected in the Province of West Sepik, which is in close proximity to the Project Area. Logging concessions in West New Britain Province were also selected based on the having a similar (low) population density to that of East Sepik, where the Project is located. As population has been found to influence land use conversion rates, proxy areas were selected to eliminate population pressure artificially inflating deforestation rates in the Project Area."	
Non-conformity report (NCR): Please include population statistics in PD Section 3.5.5 to substantiate the statement "Logging concessions in West New Britain Province were also selected based on the having a similar (low) population density to that of East Sepik, where the Project is located."	
Date issued:	17 April 2013
Project proponent response/actions and date: The actual statistics and the reference have been added to the PD in Section 3.5.5 as requested. The changes have been highlighted in yellow. The Population Census is also attached to this response. – 5 June 2013	
Evidence used to close NCR: Addressed. Population statistics added showing comparative densities with appropriate reference.	
Date closed:	17 July 2013

91. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 84)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned, criteria of proxy areas - 4. If suitable sites exist they shall be in the immediate area of the project; if an insufficient number of sites exists in the immediate area of the project, sites shall be identified elsewhere in the same country as the project; if an insufficient number of sites exists in the country, sites shall be identified in neighboring countries	
Evidence Used to Assess Conformance: PD Section 3.5.5; Table 26;RR_WNB_Boundary.shp	
Findings: None of the proxy areas are in the immediate area of the project.	
Non-conformity report (NCR): Please include in PD Section 3.5.5 a justification as to why no proxy areas were selected from within the East Sepik Province of PNG.	
Date issued:	17 April 2013
Project proponent response/actions and date: Whilst there are areas within East Sepik have been allocated as FMAs, none of these areas are operational at the moment and therefore were not useful proxy areas for baseline timber harvest operations. Instead the proxy areas selected were from neighboring West Sepik and from West New Britain which has similar population pressures and a relevant history (more than a decade) of timber harvest activities, providing a relevant proxy to our Project Area. This text has been added to the requested section of the PD as well as Annex 5 and highlighted yellow. – 5 June 2013	
Evidence used to close NCR: Client Response; ProjectDescription_VCS_V1.2_NCR_response.docx; ForestResourceAcquisition.pdf; proxy Area Shapefiles - Confirmed the response text is included in PD Section 3.5.5. ForestResourceAcquisition.pdf and Proxy Area Shapefiles were reviewed and it is confirmed that the FMAs/TRPs in East Sepik are inactive as of the early 2000s. Thus, the justification is warranted. Item is addressed.	
Date closed:	17 July 2013

92. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 86)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3

Rate of deforestation D planned, criteria of proxy areas - 6. Deforestation in the proxy area shall have occurred within the 10 years prior to the baseline period.	
Evidence Used to Assess Conformance: PD Section 3.5.5; Table 26	
Findings: PD States: "Deforestation within the proxy areas was identified over the period 2000 – 2009." Older vegetated roads would not have been constructed under the PNG Logging Code of Practice and also BL-PL requires that "Deforestation in the proxy area shall have occurred within the 10 years prior to the baseline period." If they are using vegetated roads, they aren't meeting this requirement because those roads are likely 20 to 30 years old.	
Non-conformity report (NCR): Many of the roads encountered during the site visit in the West Sepik Proxy area were vegetated with herbaceous vegetation. Goodwill Amos indicated these roads were 20 to 30 years old. Please demonstrate to the verifier (and include a written demonstration in Annex 5) that the LULC mapping was able to distinguish vegetated from non-vegetated roads and that only non-vegetated roads were included in the quantification deforestation (%) in the proxy areas. Else, provide evidence that all identified logging roads within the proxy areas that were used to quantify baseline deforestation (%) do not pre-date 1999.	
Date issued:	17 April 2013
Project proponent response/actions and date: The LULC change analysis involved the interrogation of images LandSAT from 2000 - 2009. All visible roads in 2000 were classified as roads existing in 2000. This formed the pre-existing road layer map. Only roads that emerged over the time period 2000 - 2009 were classified as 'new' deforestation between 2000 - 2009. If roads "disappeared" between 2000 and 2009 these areas were classified as revegetated during the historical analysis period then they were treated as 'non-permanent' deforestation and were excluded from the deforestation statistics, listed as regrowth areas. A written description of this process is provided in Annex 5 and is highlighted in yellow. – 5 June 2013	
Non-conformity report (NCR): Confirmed that the response was added to Annex 5, Section 1.3.3 as indicated. The response provides clarity regarding the Item. That is, due to the base mapping procedures, only roads being developed from 2000 through 2009 are being included in the quantification of the deforestation rates. However, The spatial data provided does not appear to accurately map roads in the spot-checked area, and the attributes in the land cover shapefiles do not allow for distinguishing between roads mapped in 2000 and roads mapped after 2000 - see Items 201 and 203.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
NA – the project proponent did not provide a response for this Item.	
Evidence used to close NCR: Although the project proponent did not provide a response for this Item, Items 201 and 203 have been addressed. Thus, this Item can be closed.	
Date closed:	25 August 2013

93. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 87)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned, criteria of proxy areas - 6. Deforestation in the proxy area shall have occurred within the 10 years prior to the baseline period.	
Evidence Used to Assess Conformance: PD Section 3.5.5; Table 26	
Findings: PD States: "Deforestation within the proxy areas was identified over the period 2000 – 2009." Older vegetated roads would not have been constructed under the PNG Logging Code of Practice and also BL-PL requires that "Deforestation in the proxy area shall have occurred within the 10 years prior to the baseline period." If they are using vegetated roads, they aren't meeting this requirement because those roads are likely 20 to 30 years old.	
Non-conformity report (NCR): Related to Item 92 above, please provide location information that will allow for confirmation that vegetated roads were excluded from areas considered to have undergone deforestation in the baseline period.	
Date issued:	17 April 2013
Project proponent response/actions and date: As explained in NCR 92, only deforestation from	

road construction between 2000 - 2009 was used in the analysis of the proxy areas. – 5 June 2013	
Evidence used to close NCR: Client Response; ProjectDescription_VCS_V1.2_NCR_response.docx; Annex 5 - The response sufficiently addresses the NCR. That is, due to the base mapping procedures, only roads being developed from 2000 through 2009 are being included in the quantification of the deforestation rates. Vegetated roads would not have been developed over the assessment period, and any roads that grew over were treated as 'non-permanent' deforestation and were excluded from the deforestation statistics. Item is addressed.	
Date closed:	17 July 2013

94. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 88)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned, criteria of proxy areas	
Evidence Used to Assess Conformance: PD Section 3.5.5; Table 26	
Findings: PD States: "A comparison of the project area to the proxy areas (grouped according to Province) was conducted, and the results are shown in the maps and Tables below. The forest types, soil types, slope classes and elevation classes were found to be within ±20% in all cases. The numerical comparison of these variables is available to the auditor on request."	
Non-conformity report (NCR): Please provide the verifier with the numerical comparisons of the site variables (forest types, soils, slope, and elevation) of the proxy areas and project area, demonstrating that the values of the proxy areas are within +/- 20 % of the values of the project area. Note Items 80, 82, 84 and 89 above in addressing this NCR.	
Date issued:	17 April 2013
Project proponent response/actions and date: Tables which demonstrate the numerical comparisons of the site variables (forest types, soils, slope, and elevation) of the proxy areas and project area, showing that the values of the proxy areas are within +/- 20 % of the values of the project area are now provided in Annex 5 Section 2.1.2.1 and the PD Section 3.5.5. – 5 June 2013	
Non-conformity report (NCR): Confirmed the addition of these tables to PD Section 3.5.5 and Annex 5 Section 2.1.2.1 as indicated. However, PD Section 3.5.5 states "Table 27 below provides a summary of the Proxy Area's compatibility with the Project Area against the slope requirements." Table 27, however, shows Proxy Area vs. Project Area forest Type proportions (%) and not slope. Please revise the quoted text accordingly.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
NA – project proponent did not provide a response for this Item.	
Evidence used to close NCR: Although the project proponent did not provide a response for this Item, the revision is included in ProjectDescription_AprilSalumei_V1.5.pdf. Item is addressed.	
Date closed:	20 September 2013

95. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 89)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned, criteria of proxy areas	
Evidence Used to Assess Conformance: PD Section 3.5.5; Table 26	
Findings: Spatial data has not been provided that will allow validation of the proxy area applicability criteria.	
Non-conformity report (NCR): Please provide spatial data (i.e. forest type, soil type, slope, and elevation layers) needed to validate proxy area applicability criteria.	
Date issued:	17 April 2013
Project proponent response/actions and date: Spatial files for each of the proxy areas have been provided to assist in validating the forest type, soil type (inundation), slope and elevation layers). They are attached to this NCR. An excel spreadsheet is also provided to demonstrate how these thresholds were calculated based on	

the data form the shape files. – 5 June 2013	
Evidence used to close NCR: Client Response; Proxy Area Shapefiles; ProxyArea_BLPL_comparison.xlsx - A subsample of the provided shapefiles was evaluated to confirm area measurements presented in referenced excel spreadsheets. ProxyArea_BLPL_comparison.xlsx was reviewed and it is confirmed that the proxy area applicability requirements are met in all cases. Item is addressed.	
Date closed:	17 July 2013

96. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 90)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned, criteria of proxy areas		
Evidence Used to Assess Conformance: PD Section 3.5.5; Table 26		
Findings: The West New Britain proxy area maps in in PD Figures 25, 26, and 27 are not consistent.		
Non-conformity report (NCR): Please ensure consistency in the West New Britain proxy area maps in in PD Figures 25, 26, and 27. All three figures currently show a different boundary.		
Date issued:	17 April 2013	
Project proponent response/actions and date: The boundaries of the six proxy areas are now consistently reported between all documents. Note that figure references in the PD have changed as a result of wider changes to the PD. – 05 June 2013		
Non-conformity report (NCR): PD Figure 25 and Annex 5 Figure 7 do not correlate. Pending item 82 above.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
The figures shaowing the location of the proxy areas are now consistent. Please note this is Figure 25 in the PD and now Figure 9 in the Annex 5.		
Evidence used to close NCR: Figure 25 in PD and Figure 8 in Annex 5 have been corrected to show 7 proxy areas. There is still an issue with the label on Figure 8 where it refers to 6 proxy areas. NCR is still active in 82. This issue addressed.		
Date closed:	25 August 2013	

97. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 93)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned, criteria of proxy areas - The ratio of slope classes “gentle” (slope <15%) to “steep” (slope ≥15%) in the proxy areas shall be (±20%) the same of the ratio in the project area.	
Evidence Used to Assess Conformance: PD Section 3.5.5	
Findings: A map of slope classes is not provided.	
Non-conformity report (NCR): Please include a map (similar to Figures 25, 26, and 27) in PD Section 3.5.5 showing a comparison of slope classes in the Project Area to those in the Proxy Areas.	
Date issued:	17 April 2013
Project proponent response/actions and date: Demonstration of conformance with the thresholds is now presented in both the Annex5 and the PD as tables. Spatial files of the thresholds are provided in folder 95 in support of the data presented in the Tables. – 5 June 2013	
Evidence used to close NCR: ProxyArea_BLPL_comparison.xlsx - Confirmed that the comparison of slope classes is now included in both the PD and Annex 5 in Tabular format. Also confirmed that the +/- 20% proportion requirement is met. Item is addressed.	
Date closed:	17 July 2013

98. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 96)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned, criteria of proxy areas - Examination of proxy areas may be through original data collection (field measurements and/or remote sensing analysis) or where appropriate use

of directly applicable existing data generated from credible sources.	
Evidence Used to Assess Conformance: PD Section 3.5.5; Annex 5	
Findings: The deforestation rate in the Proxy Areas was calculated by conducting a Land Use/Land Cover (LULC) change assessment, according to the methodology described in Annex 5.	
Non-conformity report (NCR): It is apparent from Annex 5 that the procedures of VM0015 (Methodology for Avoided Unplanned Deforestation, v1.1) were followed in performing the LULC analysis. Annex 5 refers to VM0015, but VM0015 is not mentioned in PD. Please reference in PD. Note: Annex 5 was validated and verified against VM0015 separately (see items under VM0015).	
Date issued:	17 April 2013
Project proponent response/actions and date: The reference is Annex 5 to VM0015 was incorrect. Annex 5 has been revised to ensure that all elements of REDD-MF and BL-PL are addressed in accordance with the selection of VM0007 for the planned deforestation elements of the Project. There are no references to VM0015 in Annex 5 or the PD. The approaches presented in Annex 5 are in line with best practice remote sensing techniques and confirm to the requirements of the methodology. – 5 June 2013	
Evidence used to close NCR: Client Response; Annex 5 - Confirmed that Annex 5 has been updated as indicated. See specific items related to Annex 5 elsewhere. This item is addressed.	
Date closed:	17 July 2013

99. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 97)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned, criteria of proxy areas - Examination of proxy areas may be through original data collection (field measurements and/or remote sensing analysis) or where appropriate use of directly applicable existing data generated from credible sources.	
Evidence Used to Assess Conformance: PD Section 3.5.5; Annex 5	
Findings: Annex 5 currently seems to include information and items related to unplanned deforestation (inter alia, prediction of future deforestation in the proxy areas).	
Non-conformity report (NCR): Annex 5 currently seems to include information and items related to unplanned deforestation (inter alia, prediction of future deforestation in the proxy areas). Please revise Annex 5 to only include information pertinent to determining the baseline deforestation rate for this project and predicting planned deforestation in the project area. Identify any changes made.	
Date issued:	17 April 2013
Project proponent response/actions and date: Annex 5 has been rewritten to remove previous information relating to unplanned deforestation. Annex 5 now addresses all requirements of BL-PL for planned deforestation. This relates in particular to the Annex from Section 2 onwards. – 5 June 2013	
Evidence used to close NCR: Client Response; Annex 5 - Confirmed that Annex 5 has been updated as indicated. See specific items related to Annex 5 elsewhere. This Item is addressed.	
Date closed:	17 July 2013

100. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 98)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned - The annual deforestation is calculated with Equation 2 on page 8	
Evidence Used to Assess Conformance: PD Section 3.5.5; Annex 5; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: "The average deforestation rate observed in the proxy areas was used to model the rate of deforestation due to road establishment, as per the equation below." Confirmed application of Equation in ex-post calculator - See BL-PL Tab. However, The values presented in Table 27 do not correlate with the calculator (Vanimo 1-5, and 6 are separate in the calculator). Also, the values in the calculator and Pd Table 27 do not correlate with Annex 5 -Annex 5 does not report observed deforestation % for each proxy area. Also, the use of equation 2 using the values in Table 27 does not equate to an annual linear rate of 0.172% as reported in the text (it equates to 0.1633).	
Non-conformity report (NCR): Please revise PD Tables 27 and 31 to be consistent with the value of D%_planned,i,t reported in the text of PD Section 3.5.5.	
Date issued:	17 April 2013
Project proponent response/actions and date: Section 3.5.5 of the PD has been updated and the	

tables replaced. The D%_planned, i,t is now reported consistently throughout the PD, Annex 5 and the calculation spreadsheet. – 5 June 2013	
Evidence used to close NCR: D% planned has been revised to include the additional breakdown of proxy areas. The new D% is consistent throughout the PD. Calculations were confirmed. Item is addressed.	
Date closed:	17 July 2013

101. Clarification (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 99)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned - The annual deforestation is calculated with Equation 2 on page 8	
Evidence Used to Assess Conformance: PD Section 3.5.5; Annex 5; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: The values of D%_pn reported between Annex 5, the PD, and VCS_7_10_Calculator_PNG-M1_V1.0.xlsx (Inputs (VM0007) Tab) are not consistent.	
Clarification (CL): Please ensure consistency in the values of D%_pn reported between Annex 5, the PD, and VCS_7_10_Calculator_PNG-M1_V1.0.xlsx (Inputs (VM0007) Tab).	
Date issued:	17 April 2013
Project proponent response/actions and date: Appropriate corrections have been made to Annex 5, the PD, and VCS_7_10_Calculator_PNG-M1_V1.0.xlsx (Inputs (VM0007) Tab) and the D%_pn values are now consistently reported. – 5 June 2013	
Evidence used to close CL: Addressed. D% is now confirmed to provide values consistent between the PD, Annex 5, and the current calculator stated to be v1.0. Calculations were confirmed. Item is addressed.	
Date closed:	17 July 2013

102. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 100)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.3 Rate of deforestation D planned - The annual deforestation is calculated with Equation 2 on page 8	
Evidence Used to Assess Conformance: PD Section 3.5.5; Annex 5; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: Observed of values of D%_pn for each proxy area are not clearly reported in Annex 5.	
Non-conformity report (NCR): Please clearly report observed of values of D%_pn for each proxy area in Annex 5. Note Item 99 above in addressing this CL.	
Date issued:	17 April 2013
Project proponent response/actions and date: A Table has been added to the PD (Table 32) and Annex 5 (Table 13) of values for D%_pn for each proxy area. The method for calculating these figures is also provided in the spreadsheet attached to this NCR (RateofDeforestation_BL-PL). – 5 June 2013	
Evidence used to close NCR: Addressed. Table confirmed to be added showing 7 proxy areas.	
Date closed:	17 July 2013

103. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 108)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.5 Risk of abandonment - Identify a minimum of 5 proxy areas deforested by the same 'class of deforestation agent'9 at least ten years previously. If any of the proxy areas have been abandoned to forest regrowth then the planned deforestation activity is not eligible and this module shall not be used.
Evidence Used to Assess Conformance: PD Section 3.5.7
Findings: PD States: "The risk of abandonment was assessed in the six proxy areas defined in Table 25 - table 25 doesn't show six proxy areas - this is covered under CL in row 73 above. Within the 10 year observation period, deforestation continued and no FMAs were abandoned. The LULC matrices listed below, reveal that none of the areas cleared for infrastructure or non-infrastructure uses across the entire reference region reverted back to forest in the 10 year period assessed." - Tables 28 and 29 correlate with Appendix 5 and do support this statement. However, the values for forest lost to infrastructure do not correlate with the values reported in Table 27.

Non-conformity report (NCR): Please ensure consistency in the values of forest lost to infrastructure (or roads) reported between PD Tables 28, 29 and 27.	
Date issued:	17 April 2013
Project proponent response/actions and date: The BL-PL section of the PD and the Annex 5 have been rewritten to more clearly demonstrate conformance with the BL-PL module. The forest lost to infrastructure (roads) within the proxy areas are now presented in Annex 5 (Table 13) and the PD (Table 33). – 5 June 2013	
Evidence used to close NCR: Tables 28 and 29 (matrices) appear to have been removed entirely from the PD and Annex 5, though both still make reference to these tables. See Item 83 above. This Item can be closed.	
Date closed:	17 July 2013

104. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 112)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.5 Annual area of deforestation - The annual area of deforestation in the baseline case is calculated using equation 3 on Page 9	
Evidence Used to Assess Conformance: PD Section 3.5.8; VCS_7_10_Calculator_PNG-master_V1.0.xlsx; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: PD States "Based on extensive LULC change analysis of active and expired timber harvest areas in PNG (Annex ??) the plan to develop a road network to a density of 10m / ha, with width of between 30 and 40m was typical of logging operation in PNG."	
Non-conformity report (NCR): Please clarify in PD Section 3.5.3 which Annex should be referred to in the statement "Based on extensive LULC change analysis of active and expired timber harvest areas in PNG (Annex ??) the plan to develop a road network to a density of 10m / ha, with width of between 30 and 40m was typical of logging operation in PNG." Annex 5 does not currently indicate the density (m/ha), level (km/yr.), or width of typical of logging operations in PNG. If Annex 5 should be referred to, please revise this Annex accordingly to support the statement in PD section 3.5.3 as well.	
Date issued:	17 April 2013
Project proponent response/actions and date: This NCR relates to Section 3.5.8 of the PD. The reference was corrected to Annex 5. Appropriate corrects to Annex 5 and the PD were made regarding the width and density of the road development. The approach is now consistently reported in both documents. – 5 June 2013	
Evidence used to close NCR: Client Response; ProjectDescription_VCS_V1.2_NCR_response.docx; Annex 5 - The statement "Based on extensive LULC change analysis of active and expired timber harvest areas in PNG (Annex ??) the plan to develop a road network to a density of 10m / ha, with width of between 30 and 40m was typical of logging operation in PNG." is no longer included in PD Section 3.5.8. Appropriate references to Annex 5 regarding the quantification of the annual area of deforestation were confirmed. Also confirmed the approach to quantification is consistent between the PD and Annex 5. Item is addressed.	
Date closed:	17 July 2013

105. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 113)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.5 Annual area of deforestation - The annual area of deforestation in the baseline case is calculated using equation 3 on Page 9
Evidence Used to Assess Conformance: PD Section 3.5.8; VCS_7_10_Calculator_PNG-master_V1.0.xlsx; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx
Findings: PD States: "From land use change analysis conducted in the Project area it was determined that roads are developed throughout the FMA areas, not only in the 'productive forest areas'"
Non-conformity report (NCR): Please provide additional detail (spatial data if necessary) to justify the statement "From land use change analysis conducted in the Project area it was determined that roads are developed throughout the FMA areas, not only in the 'productive forest areas'." Also,

please clarify this statement in the PD: shouldn't this be referring to the LULC analysis conducted in the proxy areas?	
Date issued:	17 April 2013
Project proponent response/actions and date: This text was edited in the PD and Annex 5. To more clearly explain the spatial delineation of the road development. Please see Section 4, specifically Section 3.5.8 for the description of how roads were spatially delineated in the Project Area. and Annex 5 3.2.3. – 5 June 2013	
Evidence used to close NCR: Client Response; ProjectDescription_VCS_V1.2_NCR_response.docx; Annex 5 - The statement "From land use change analysis conducted in the Project area it was determined that roads are developed throughout the FMA areas, not only in the 'productive forest areas'." is no longer included in PD Section 3.5.8. Both the PD and Annex 5 are now clearer regarding the spatial delineation of roads. Because the LULC analysis was conducted in FMAs/TRPs managed by the baseline "class of agents," any delineated roads would be reflective of what would have occurred without the project. Item is addressed.	
Date closed:	17 July 2013

106. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 114)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.5 Annual area of deforestation - The annual area of deforestation in the baseline case is calculated using equation 3 on Page 9	
Evidence Used to Assess Conformance: PD Section 3.5.8; VCS_7_10_Calculator_PNG-master_V1.0.xlsx; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: PD States: "It was estimated based on the land use change analysis that lands on peat soils would not be deforested for road construction, therefore these areas were excluded."	
Non-conformity report (NCR): Please provide additional detail (spatial data if necessary) to justify the statement "It was estimated based on the land use change analysis that lands on peat soils would not be deforested for road construction, therefore these areas were excluded."	
Date issued:	17 April 2013
Project proponent response/actions and date: The methodology does not allow for the inclusion of areas of peat soil in the Project Area. All areas of peat (and swamp forest) have been removed from the Project Area. An analysis of the soil conditions classified by the PNGRIS dataset in the areas mapped as peat domes determined that 96% of the mapped peat areas were classified as Hydroquents -Permanently saturated, undifferentiated soils which are soft underfoot and mainly fine textured. Within the proxy areas, there was no road construction on soils types classified as Hydroquents - Permanently saturated, undifferentiated soils which are soft underfoot and mainly fine textured, with the exception of Vanimo 6 which had 1.1% (equivalent to 11 hectares) of its roads developed on this class. This level of road development is insignificant and could equally be attributed to errors in the unvalidated soils data. Explanation of this analysis has been added to Section 3.6.3 of the PD and the excel spreadsheet analysis of the soils data attached to this NCR. See also related response to NCR 118. – 5 June 2013	
Evidence used to close NCR: Client Response; ProjectDescription_VCS_V1.2_NCR_response.docx; PeatandRoad_PINGRIS.xlsx - The statement "It was estimated based on the land use change analysis that lands on peat soils would not be deforested for road construction, therefore these areas were excluded." The explanatory text added to PD Section 3.6.3, as well PeatandRoad_PINGRIS.xlsx suffice as adequate evidence justifying that an insignificant amount of roads are being developed on peat soils in the proxy areas. Item is addressed.	
Date closed:	17 July 2013

107. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 115)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.5 Annual area of deforestation - The annual area of deforestation in the baseline case is calculated using equation 3 on Page 9

Evidence Used to Assess Conformance: PD Section 3.5.8; VCS_7_10_Calculator_PNG-master_V1.0.xlsx; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx		
Findings: PD States: "Based on the available area of this large FMA a total of 18,643 hectares would be expected to be deforested for roads over a 21 year period" - It is unclear from the text where the 18,643 ha and 21 year values come from.		
Non-conformity report (NCR): Please clearly indicate in PD Section 3.5.8 how the values of 18,643 ha expected to be deforested over 21 years was quantified.		
Date issued:	17 April 2013	
Project proponent response/actions and date: As a result of the corrections made to the BL-PL module requested in a range of NCRs the deforestation rate within the Project Area has reduced. The deforestation from roads expected in the Project Area during the first crediting period is now expected to be 2550 hectares, established at a linear rate of 255 hectares per year. Based on the road density detected in the proxy areas, an ultimate road density of 2% of the Project Area could be expected. Our Project Area is now estimated to be 382,017 hectares. Therefore it is estimated that the ultimate road density would be 7653 hectares. At the annual rate of 255 hectares it would be expected to take 30 years to develop the roads to this density. This length of time is considered realistic given the findings in the proxy areas. Section 3.5.8 has been updated. More information is presented in Annex 5 and the calculation spreadsheet provided in support of NCR 102. – 5 June 2013		
Non-conformity report (NCR): PD Section 3.5.8 and Annex 5 now clearly indicate how the expected deforestation in the Project Area was quantified. The values match between the two documents and the calculations have been verified. However, the verifier could not ascertain from any of the provided files how the value of 382,017 hectares that is used for the area impacted by deforestation was quantified. Please clearly demonstrate how this was calculated so it can be validated. Please provide (together in one location), or identify the location of the shapefiles that support the quantification of this value.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
The area expected to be impacted by deforestation was quantified based on the area within the FMA available for conversion to roads. As explained in footnote 6 of Annex 5, "The available area for road construction was determined from the total FMA area minus areas that would not be deforested such as areas of swamp forest, peatland areas, areas of significant slope and altitude (i.e. low montane forest)." A few words have been added to this footnote and highlighted in green to provide more clarity. In addition the shapefile of the Project Accounting Area is provided to demonstrate the area is provided with this NCR.		
Non-conformity report (NCR): Confirmed that clarity has been added to footnote 6 of Annex 5 as indicated. Shapefile was reviewed and found to support the value of 382,017. However, Table 22 of the PD does not mention this figure nor its relevance. Further, page 2 of Annex 9 states "Subsequently the forest areas assessed as available for timber harvest within the defined FMA were reduced to Low Altitude Forest and Low Altitude on Plains and Fans (Figure 2). The total available area was determined to be 348,873 hectares. " Please clarify this difference as well as showing these calculations and providing supporting shapefiles as necessary.		
Date issued:	26 August 2013	
Project proponent response/actions:	**Date Received:**	06 September 2013
Annex 9 has been updated to be consistent with the 382,017 presented in the PD(see page 4). In addition for transparency, Table 44 has been included in Section 4.1.2 of the PD to add to the existing text which explains how the project arrived at this area figure. Shapefiles which confirm the areas listed in Table 23 have been added to the folder NCR 107. The calculations that demonstrate the number of plots required were conducted again to be consistent with the 382,017 hectares. No change in the findings (i.e. number of plots required) resulted. Please refer to NCR 235 for the		

calculation tool.	
Evidence used to close NCR: ProjectDescription_AprilSalumei_V1.4.docx; Annex9_ForestCarbonStockCalculations.docx; Provided Shapefiles - Confirmed that Annex 9 has been updated to be consistent with the 382,017 presented in the PD as indicated. Table 44 has been added to PD Section 4.1.2 as indicated and clearly shows how the project proponent arrived at this area figure. Shapefiles were reviewed found to support the reported values. Item is addressed.	
Date closed:	19 September 2013

108. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 116)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.5 Annual area of deforestation - The annual area of deforestation in the baseline case is calculated using equation 3 on Page 9	
Evidence Used to Assess Conformance: PD Section 3.5.8; VCS_7_10_Calculator_PNG-master_V1.0.xlsx; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: PD Table 30 - the values presented do not match the calculator.	
Non-conformity report (NCR): Please update PD Table 30 to correlate with the values of AAplanned,infra,t presented in VCS_7_10_Calculator_PNG-master_V1.0.xlsx. Note Item 52 above in addressing this CL.	
Date issued:	17 April 2013
Project proponent response/actions and date: Table 30 has been updated to reflect the excel spreadsheet. – 5 June 2013	
Evidence used to close NCR: Addressed. Table 30 is now table 34 on the new PD. Table 34 appears to correlate with the BL-PL tab of the new VCS_7_10_Calculator_PNG-M1_V1.1.xlsx.	
Date closed:	17 July 2013

109. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 117)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.5 Annual area of deforestation - The annual area of deforestation in the baseline case is calculated using equation 3 on Page 9	
Evidence Used to Assess Conformance: PD Section 3.5.8; VCS_7_10_Calculator_PNG-master_V1.0.xlsx; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: Also, This Table does not reflect the first baseline period as indicated. The first baseline period is 10 years not 21.	
Non-conformity report (NCR): PD Table 30 does not reflect the first baseline period as indicated. Please revise accordingly.	
Date issued:	17 April 2013
Project proponent response/actions and date: Table 30 has been updated to reflect the values in the ex-ante spreadsheet. – 5 June 2013	
Evidence used to close NCR: Addressed. Table 30 is now table 34 on the new PD. Table 34 appears to correlate with the BL-PL tab of the new VCS_7_10_Calculator_PNG-M1_V1.1.xlsx, reflecting the 10 year baseline period.	
Date closed:	17 July 2013

110. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 118)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 1 Calculating annual area of land deforested, 1.5 Annual area of deforestation - The annual area of deforestation in the baseline case is calculated using equation 3 on Page 9
Evidence Used to Assess Conformance: PD Section 3.5.8; VCS_7_10_Calculator_PNG-master_V1.0.xlsx; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx
Findings: PD States: "The ratio of total selectively harvested area to deforested area has been estimated to be 15% in tropical operations (Pulkki, 1997), whereas our modeling produced a ratio of 3.4% deforestation for logging infrastructure." - The value of 3.4 % doesn't reflect the numbers – independent calculations result in 9.48 %.
Non-conformity report (NCR): PD Section 3.5.8 indicates that the ratio of total selectively harvested

area to deforested area for the project is equal to 3.4 %. The verifier calculated this ratio independently and the result did not match the 3.4 % value reported in PD Section 3.5.8. Please ensure the proper value for the ratio of total selectively harvested area to deforested area for the project is reported in PD Section 3.5.8.	
Date issued:	17 April 2013
Project proponent response/actions and date: Confusing text was removed from Section 3.5.8. – 5 June 2013	
Evidence used to close NCR: Client Response; ProjectDescription_VCS_V1.2_NCR_response.docx - Confirmed confusing text was removed from section 3.5.8 as indicated. Item is addressed.	
Date closed:	17 July 2013

111. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 121)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 2 Baseline Carbon stock change 10 - The net carbon stock changes in the baseline is equal to the baseline pre-deforestation stock minus the long-term carbon stock after deforestation and minus the baseline stock that enters the wood products pool at the time of deforestation (i.e. not emitted from aboveground biomass at the time of deforestation).	
Evidence Used to Assess Conformance: PD Section 3.5.9; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: Currently the baseline stock that enters the wood products pool is not subtracted from the aboveground biomass, thus it is being double counted. - See BL-PL Tab - Cell P12.	
Non-conformity report (NCR): As per BL-PL, please subtract the baseline stock that enters the wood products pool at the time of deforestation (C_wp,i) from the mean above ground carbon stock density (CAB_tree,i) in the quantification of baseline carbon stock change in aboveground biomass (ΔCABtree,infra). This will need updated for the ex-ante estimates as well.	
Date issued:	17 April 2013
Project proponent response/actions and date: This correction has now been made in the calculator, for both ex ante and ex post estimates. – 5 June 2013	
Evidence used to close NCR: VCS_7_10_Calculator_PNG-M1_V1.1.xlsx - Confirmed the correction has been made as indicated. Item is addressed.	
Date closed:	17 July 2013

112. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 138)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 2 Baseline Carbon stock change 10 - Thus, for a given year t, emissions are summed across areas deforested from time t-10 up to time t (for belowground biomass and dead wood) and from time t-20 up to time t (for soil organic carbon and wood products), using Equation 11 on Page 12.	
Evidence Used to Assess Conformance: PD Section 3.5.9; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: Confirmed application of equation in ex-post calculator - See BL-PL Tab. However there are some clarifications and issues that need to be addressed. In the BL-PL Tab - Cells H15 and G15 have errors in that they are short by one year - this is a result of splitting up year 4 because the monitoring period ends in the middle of the year.	
Non-conformity report (NCR): Please examine cells H15 and G15 of the VM0007-BL-PL Tab of VCS_7_10_Calculator_PNG-M1_V1.0.xlsx. Cumulative terms for the years represented by those cells are currently short by one year. Please revise accordingly and update any values and tables in the Monitoring Report and PD as applicable. Please identify where the associated changes were made in the Monitoring Report and PD. Note Item 108 above in your revisions to the Monitoring report and PD.	
Date issued:	17 April 2013
Project proponent response/actions and date: Corrections were made to the spreadsheet as stated and highlighted yellow. There were no changes required in the PD. All tables in Section 4 of the Monitoring Report were updated if required. – 5 June 2013	
Non-conformity report (NCR): Confirmed the corrections to VCS_7_10_Calculator_PNG-M1 were made as indicated. However, Monitoring Report Tables 7, 36, 37, 38, 39, 40 do not correlate to	

VCS_7_10_Calculator_PNG-M1_V1.1.xlsx. Please ensure that the values reported in these tables are consistent with those quantified by the VCS_7_10_Calculator_PNG-M1.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
Table 7, 36, 37, 38, 39, 40 have been updated in the Monitoring Report to match the calculations spreadsheet.		
Evidence used to close NCR: All tables have been updated and match the figures presented in the calculator file. New documents were sent to ESI on 8/15/13 that confirmed this issue.		
Date closed:	25 August 2013	

113. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 139)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 2 Baseline Carbon stock change 10 - Thus, for a given year t, emissions are summed across areas deforested from time t-10 up to time t (for belowground biomass and dead wood) and from time t-20 up to time t (for soil organic carbon and wood products), using Equation 11 on Page 12.	
Evidence Used to Assess Conformance: PD Section 3.5.9; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: Cumulative term 3 (Column G) is not Summing from time t-20 up to time t. It is summing from time t-10 up to time t.	
Non-conformity report (NCR): Please examine Column G of the VM0007-BL-PL Tab of VCS_7_10_Calculator_PNG-M1_V1.0.xlsx. Cumulative Term 3 is currently summing from time t-10 up to time t. As per Equation 11 of BL-PL, please revise Cumulative Term 3 to sum from time t-20 up to time t. Note Item 112 above in addressing this NCR. This will need updated for the ex-ante estimates as well.	
Date issued:	17 April 2013
Project proponent response/actions and date: Corrections to calculator have been made as requested. The column has been highlighted yellow for ease of review. – 5 June 2013	
Evidence used to close NCR: VCS_7_10_Calculator_PNG-M1_V1.1.xlsx - The correction has not been made as indicated. However, given that this is the initial baseline period, and it only covers 10 years, summing from time t-20 up to time t in column G is irrelevant at this time. This, however, will be relevant during the second baseline period and it should be noted that this will need updated at that time. Item is addressed.	
Date closed:	17 July 2013

114. Clarification (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 140)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 2 Baseline Carbon stock change 10 - Thus, for a given year t, emissions are summed across areas deforested from time t-10 up to time t (for belowground biomass and dead wood) and from time t-20 up to time t (for soil organic carbon and wood products), using Equation 11 on Page 12.	
Evidence Used to Assess Conformance: PD Section 3.5.9; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: Based on the deforestation rate, the 18643 ha deforestation level is reached in year 19.	
Clarification (CL): Please explain to the verifier why deforestation continues beyond year 19 despite the value of 18,643 ha expected to be deforested is reached in year 19 (refer to VM0007-BL-PL Tab of VCS_7_10_Calculator_PNG-M1_V1.0.xlsx).	
Date issued:	17 April 2013
Project proponent response/actions and date: The mistake in the VM0007-BL-PL Tab of VCS_7_10_Calculator_PNG-M1_V1.0.xlsx has been corrected. This response effects finding 119 and 115. – 5 June 2013	
Evidence used to close CL: Addressed. In the previous calculator deforestation continued until year 30, and the new calculator shows deforestation ending in year 19.	
Date closed:	17 July 2013

115. Non-Conformity Report (VMD0006_BL_PL, VMD0006_BL-PL v1.1, line 141)

VCS Criteria: VMD0006, v1.1, II Procedures, Part 2 Baseline Carbon stock change 10 - Thus, for a given year t, emissions are summed across areas deforested from time t-10 up to time t (for belowground biomass and dead wood) and from time t-20 up to time t (for soil organic carbon and wood products), using Equation 11 on Page 12.	
Evidence Used to Assess Conformance: PD Section 3.5.9; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: Based on the deforestation rate, the 18643 ha deforestation level is reached in year 19.	
Non-conformity report (NCR): Please modify the VM0007-BL-PL Tab of VCS_7_10_Calculator_PNG-M1_V1.0.xlsx to end deforestation in year 19 to negate any unnecessary negative carbon stock values. Note Item 114 above in addressing this CL. This will need updated for the ex-ante estimates as well. Please also update any associated text and tables in the PD accordingly and identify where updates were made.	
Date issued:	17 April 2013
Project proponent response/actions and date: The corrections to both the ex-ante and the ex-post calculators were made. In addition corrections to tables were made as well. All changes were highlighted in yellow. See also responses to 119 and 114. – 5 June 2013	
Evidence used to close NCR: Addressed. In the previous calculator deforestation continued until year 30, and the new calculator shows deforestation ending in year 19.	
Date closed:	17 July 2013

116. Non-Conformity Report (VMD0009_LK_ASP, VMD0009 v1.1, line 47)

VCS Criteria: VMD0009, v1.1, Part 1, Step 4, Monitor Greenhouse gas emissions outside the project boundary by baseline agent of deforestation - Part 2: Where only a class of deforestation agents can be identified	
Evidence Used to Assess Conformance: PD Section 3.6.1	
Findings: PD States: "While a specific agent of deforestation has been identified (i.e. Road Timber Co. Ltd), option 1 could not be applied, as it requires access to official records of historical deforestation by the baseline agent of deforestation." This statement conflicts with 3.5.3 above. Road timber is not identified as the specific agent of deforestation. RH (although not explicit) is specified as the most likely class of deforestation agents.	
Non-conformity report (NCR): PD Section 3.6.1 conflicts with PD Section 3.5.3. Please revise accordingly and identify the changes made.	
Date issued:	17 April 2013
Project proponent response/actions and date: The following edited text was incorporated and highlighted yellow into the relevant sections of the PD. Section 3.6.1 - The LK-ASP module must be applied for quantification of leakage emissions due to activity shifting, where forest lands are legally authorized and documented to be converted to non-forest land. Under this module, there are two options for quantification of activity-shifting leakage, where either: 1) the baseline agent of deforestation has been identified; or 2) where only a class of deforestation agents can be identified. While a specific agent of deforestation was involved in the development of the initial Timber Plan this company is no longer operational in PNG and as such a class of deforestation agent (i.e. large timber harvest companies such as the RH Group) has been identified. Therefore option 2 was applied. Section 3.5.3 The original FMDP was prepared by Road Timber Limited of Taiwan. At the time of writing, this group either in its current name, or its former name (Gadossi No. 11 Pty Ltd) does not appear to be operational within Papua New Guinea. There are currently many international investors and operators in PNG's forest industry with Rimbunan Hijau PNG, a wholly owned subsidiary of Malaysian company Rimbunan Hijau, being by far the most influential forestry player. The agent of planned deforestation falls into the category of timber harvest companies. Many of these companies act like the RH Group with a multifaceted business focus in forestry and oil palm, as well as a range of other related activities such as media, hospitality, infrastructure development and mining. – 5 June 2013	
Evidence used to close NCR: The application of option 2 appears to now be in line with the methodology. The text added to the PDD is clearer on what the project is claiming in terms of the	

class of deforestation agent and why the project is not using the original company who authored the FMDP as the actual agent of deforestation. It is clear that any logging company would be willing and able to take on this project in the baseline scenario, and thus is may even be more conservative to use a class of deforestation agent given the many forestry operations currently being conducted in PNG. Issue is addressed.	
Date closed:	17 July 2013

117. Non-Conformity Report (VMD0009_LK_ASP, VMD009 v1.1, line 49)

VCS Criteria: VMD0009, v1.1, Part 1, Step 4, Monitor Greenhouse gas emissions outside the project boundary by baseline agent of deforestation - STEP 1: Identify commodity produced by baseline class of agent	
Evidence Used to Assess Conformance: PD Section 3.6.2 - Table 32	
Findings: PD States: "Timber is the primary product produced by the baseline class of agents. Other agricultural commodities may also be produced; however these were not included in the baseline modeling due to lack of clarity around establishment of these crops." - They are going to produce other commodities. Thus, as assessment of the most likely commodity is required as specified below.	
Non-conformity report (NCR): As per LK-ASP, please include an assessment (including information on commodity suitability and the commodities currently being produced by others in the same class of agent) justifying that "timber is the primary product produced by the baseline class of agents" as states in PD Table 32. Include the justification assessment in the PD and please identify where this was added.	
Date issued:	17 April 2013
Project proponent response/actions and date: We have assumed that timber is the primary product produced by the baseline class of agents for two reasons: 1) Because this is the primary purpose of an FMA, which is the land use classification of the Project Area. For example, page 5 (pdf) or 16 (FMA numbering) of the FMA document (Annex 4) states that "the FMA would seem to be an ideal concession for development of a large scale forestry operation". 2) Because timber production is clearly stated in the FMDP and the April River Timber Harvest Plan as the primary product to be harvested from the Project Area. As described in the PD, conversion to agriculture has conservatively been excluded from the baseline scenario for the first ten years of this project. This additional supporting evidence was added as a footnote under Step 1, Table 32. – 5 June 2013	
Evidence used to close NCR: The information presented here indicates that the assessment includes review of the original logging plan and the government assessment of the area. Further, direct observation of other logging areas clearly shows that logs are the primary product being produced. Conversion to agriculture does not significantly affect the baseline scenario and is not relevant to the overall project calculations. This issue is addressed.	
Date closed:	17 July 2013

118. Non-Conformity Report (VMD0009_LK_ASP, VMD009 v1.1, line 70)

VCS Criteria: VMD0009, v1.1, Part 1, Step 4, Monitor Greenhouse gas emissions outside the project boundary by baseline agent of deforestation - In countries with peatland and where the planned deforestation baseline land use is for a commodity that can be produced on drained peatland, the specific agent shall be identified and leakage to peatland shall, wherever possible, be prevented.
Evidence Used to Assess Conformance: PD Section 3.6.3
Findings: PD States: "Under the LK-ASP module, if the planned deforestation land-use can be conducted on drained peatlands, the specific agent of deforestation must be known, and activity-shifting onto drained peatlands must be prevented via some form of contract or agreement. As timber harvesting does not involve drainage of peatlands, this provision is not necessary."-PNG and the project area itself have peatland. The planned deforestation (road construction) is for extraction of timber, which is a commodity that can be produced on drained peatlands. - THE SPECIAL CASE OF PEATLANDS NEEDS to be addressed.
Non-conformity report (NCR): PD states: "As timber harvesting does not involve drainage of peatlands, this provision is not necessary." The baseline planned deforestation (road construction) is for extraction of timber, which is a commodity that can be produced on drained peatlands. Please

provide evidence in PD Section 3.6.3 (and provide to the verifier) that timber harvesting and road construction does not occur on drained peatlands in PNG. Else, sufficiently address Part 3 of LK-ASP in the PD, monitoring report, and both ex-ante and ex-post emission reductions and identify all changes made.	
Date issued:	17 April 2013
Project proponent response/actions and date: Demonstration that roads are not developed on peatlands within harvest operations is presented in NCR 106. It is recognized that it is possible that FMAs in PNG have peat soils within their boundaries given it is estimated that 6% of PNG soils are peat soils, however the full extent of peat soils in PNG has not been officially mapped Demonstration that roads are not developed on peatlands within harvest operations is presented in NCR 106. The planned deforestation land use is roads in the baseline scenario for VM0007. No commodities are produced on the deforested lands and therefore our response to NCR 106 is sufficient to address this issue and meet the requirements of the methodology. The timber harvest operations are covered by requirements of VM0010. – 5 June 2013	
Evidence used to close NCR: Client Response; ProjectDescription_VCS_V1.2_NCR_response.docx; PeatandRoad_PINGRIS.xlsx - The response and evidence provided for Item # 106 did adequately justify that an insignificant amount of roads are being developed on peat soils in PNG. The planned deforestation land use is roads in the baseline scenario for VM0007. The verifier agrees that no commodities are produced on the deforested lands (roads) and that the response to NCR 106 is sufficient to address this issue and the project meets this requirement of the methodology. Item is addressed.	
Date closed:	17 July 2013

119. Non-Conformity Report (VMD0009_LK_ASP, VMD0009 v1.1, line 97)

VCS Criteria: VMD0009, v1.1, IV. Data and Parameters Monitored - Total area of planned deforestation over the entire project lifetime for stratum I (Aplanned,i) - Source of Data - GPS coordinates and/or Remote Sensing data and/or legal parcel records		
Evidence Used to Assess Conformance: PD Section 3.6.4		
Findings: Listed in the PD - However, the parameters for this value are not the same in this section of the PD compared to PD Table 31.		
Non-conformity report (NCR): Please revise the values of Aplanned, I presented in PD Section 3.6.4 to coincide with those presented in PD Table 31. Note Items 114 and 115 above in addressing this CL.		
Date issued:	17 April 2013	
Project proponent response/actions and date: The deforestation figures were made consistent in Section 3.6.4 and Table 31. See also corrections made to the spreadsheet as required by 114 and 115. – 5 June 2013		
Non-conformity report (NCR): The values of Aplanned, I are still not consistent between PD Section 3.6.4 (2,550 ha over 10 years) and Table 35 (7,653 ha over 10 years). Please revise the values of Aplanned, I presented in PD Section 3.6.4 and PD Table 31 so that they are equivalent. Please also make sure that these values are equivalent to those presented elsewhere in the PD and in VCS_7_10_Calculator_PNG-M1_V1.1.xlsx (i.e. 2,553 ha over 10 years).		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
All vaules for deforestatoin have been made consistent across the material. The changes to the PD and Annex 5 have been highlighted green.		
Evidence used to close NCR: Values have been corrected. Issue addressed.		
Date closed:	25 August 2013	

120. Clarification (VMD0011 LK-ME, VMD0011 v1.0, line 33)

VCS Criteria: VMD0011, v1.0, II-Procedures, Market Effects Leakage Through Decreased Timber

Harvest - The next step is to estimate the emissions associated with the displaced logging activity. This is based on the total volume that would have been logged in the baseline in the project area across strata and time periods (Calculated using Equation 3 on page 3)	
Evidence Used to Assess Conformance: VCS7_10_calculator_PNG_Master_V1.0.xls, VM0007-LK-ME tab and VM0007 BL-PL tab, VM10 8.1.1 (1)	
Findings: Volume of timber projected to be extracted is calculated in the BL-PL module and this total is used for the calculation. This is deemed to be an acceptable approach as the amount of timber or percentage of commercial timber) in the project area is determined in the BL-PL module.	
Clarification (CL): It appears that the total merchantable volume figure used for this step was based on trees 20-49cm in diameter. Please clarify and explain why trees 50cm are not used in this merchantable volume calc.	
Date issued:	17 April 2013
Project proponent response/actions and date: This error has now been corrected. Cell E52 of the 'VM0007 (Inputs)' worksheet has now been changed to the quantity of 50cm+ merchantable volume as specified in Table 4 of the FMDP. – 5 June 2013	
Evidence used to close CL: Cell E56 of VCS_7_10_Calculator_PNG-master_V1.0.xlsx clearly indicates that trees over 50CM are counted for minHarv. Issue is addressed.	
Date closed:	17 July 2013

121. Clarification (VMD0011 LK-ME, VMD0011 v1.0, line 75)

VCS Criteria: VMD0011, v1.0, III – Data Parameters Not Monitored (default or measured one time), Other Requirements - Note that this volume does not include logging slash left onsite (tracked as part of the dead wood pool).	
Evidence Used to Assess Conformance: PDD, Table 33 and FDMP plan for the project areas.	
Findings: It is not clear if the volume reported includes all parts of the tree or if it is just merchantable volume.	
Clarification (CL): Please confirm if the volume estimate is only for merchantable volume and does not include slash.	
Date issued:	17 April 2013
Project proponent response/actions and date: We can confirm that the volume estimate is only for merchantable volume and does not include logging slash. This volume estimate was calculated using our own forest inventory data, from which a merchantable volume equation provided by the Papua New Guinea Forest Authority was applied, in order to estimate the volume timber that can be used for commercial production. Therefore it does not include logging slash, which is normally branches, leaves and small end timber that is considered 'non-merchantable'. – 5 June 2013	
Evidence used to close CL: Explanation is accepted along with personal communication from client in order to confirm that stumps are not counted as well. Issue is addressed.	
Date closed:	17 July 2013

122. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 29)

VCS Criteria: VMD0015, v2.1, 5 Procedures - For the project area the net greenhouse gas emissions in the project case is equal to the sum of stock changes due to deforestation and degradation plus the total greenhouse gas emissions minus any eligible forest carbon stock enhancement (Calculated using Equation 1 on page 6)	
Evidence Used to Assess Conformance: PD Section 5.11.1; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx; Monitoring Report Section 3.4.1	
Findings: Confirmed application of equation in ex-post calculator - See M-MON Tab. In monitoring report Section 3.4.1, equation 1 is presented incorrectly. That is it includes the term ΔCP,DefPA,i,t twice.	
Non-conformity report (NCR): Please revise Equation (M-MON 1) in Monitoring report Section 3.4.1 to be consistent with the PD and M-MON. Currently, term ΔCP,DefPA,i,t is included twice.	
Date issued:	17 April 2013
Project proponent response/actions and date: Equation M-Mon 1 has been revised in Monitoring Report to ensure consistency between the PD and Monitoring Report. This change has been highlighted.5 June 2013	

Evidence used to close NCR: Change has been made as requested. Issue is addressed.	
Date closed:	17 July 2013

123. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 30)

VCS Criteria: VMD0015, v2.1, 5 Procedures - For the leakage belt the net greenhouse gas emissions in the project case is equal to the sum of stock changes due to deforestation in the leakage belt (Calculated using Equation 2 on page 6)	
Evidence Used to Assess Conformance: PD General, Monitoring Report General, Annex 5 General	
Findings: The leakage factor approach is used for the project. However, the PD, Annex 5 and the Monitoring report continually refer to the leakage belt.	
Non-conformity report (NCR): The PD clearly states that the leakage factor approach is used for quantifying leakage in Section 2.3.1. This is also evident from the calculations. However, reference to the leakage belt is included in multiple places in the PD, Annex 5, and the Monitoring Report. Please revise all three documents to remove any reference to the leakage belt and identify where revisions were made.	
Date issued:	17 April 2013
Project proponent response/actions and date: All references to the Leakage Belt have been removed from the parameter tables and changes highlighted by comments in the Monitoring Report, the PD and Annex 5. – 5 June 2013	
Evidence used to close NCR: References to leakage belt have been removed. Issue is addressed.	
Date closed:	17 July 2013

124. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 32)

VCS Criteria: VMD0015, v2.1, 5 Procedures, 5.1 STEP 1: Selection and analyses of sources of land-use and land-cover (LU/LC) change data		
Evidence Used to Assess Conformance: Monitoring Report Section 3.4.1		
Findings: Monitoring Report States: "A land cover / land use change analysis for the years 2009 and 2012 was conducted based on Landsat-5 TM and Landsat-7 ETM+ satellite imagery. The satellite imagery was acquired from the USGS Earth Explorer archive in Level-1T format, which means that the data was delivered as at-sensor-radiance data with basic radiometric calibration applied, and that a geometric correction including terrain correction has been conducted by the data provider." However, the spatial data supporting these statements has not been provided.		
Non-conformity report (NCR): Please provide spatial data sources, including: imagery, forest/non-forest cover shapefiles, LULC change/deforestation shapefiles, evidence of geometric correction of imagery, shapefiles of cloud obscured areas, and a shapefile of points used for validation and their corresponding classification by an analyst that will allow for review of LULC classification and change results for the monitoring period.		
Date issued:	17 April 2013	
Project proponent response/actions:	**Date Received:**	05 June 2013
As this NCR relates to many others a summary of the location of the requested spatial data sources/files is presented below: • Imagery – Rapid eye images are in folder 190 / Landsat have been provided in folder 124 • forest/non-forest cover shapefiles – These can be found in folder 277 • LULC change/deforestation shapefiles – these can be found in folder 277 • evidence of geometric correction of imagery - see 124 • shapefiles of cloud obscured areas – these can be found in folder 197 • and a shapefile of points used for validation and their corresponding classification by an analyst – See response to 205 The fileserver will be updated with folders numbered 124 and 205		
Evidence used to close NCR: Referenced Datasets; Annex 5 - These datasets are found in the files. Since the actual issues related to each one are separated out in several NCR's, this item will be considered addressed with specific issues addressed elsewhere.		
Date closed:	17 July 2013	

125. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 41)

VCS Criteria: VMD0015, v2.1, 5 Procedures, The data collected and analyzed must cover: the entire reference region: data shall be available for the year of baseline renewal or no further in the past than the year prior to baseline renewal - The entire project area: data shall be available for the year in which monitoring and verification is occurring	
Evidence Used to Assess Conformance: Monitoring Report Section 3.4.1; Table 28	
Findings: Images from 2008/2011 were used as data sources to analyze LULC change for 2009/2012.	
Non-conformity report (NCR): Please justify/describe why/how images from 2008/2011 were used as data sources to analyze LULC change for 2009/2012.	
Date issued:	17 April 2013
Project proponent response/actions and date: Cloud cover is an issue over the Project Area. In order to minimize this, images from 2008 and 2011 were used to 'patch' missing areas. Please refer to Table 26 in Monitoring Report, which shows, that only one 2008 and three 2011 images were used. Otherwise 2009 and 2012 (one image from 20130120) images were used for analysis This was done only where no change has been detected. Please find images provided in NCR 124 for proof. – 5 June 2013	
Evidence used to close NCR: The use of slightly older imagery in cases where the cloud cover was obscuring the analysis appears to be a reasonable alternative at this point. Given that the imagery was less than one year older than the target year, the methodology allows for this difference in time. Since the project was able to account for all areas by using slightly older imagery (and one newer image), this issue is considered addressed.	
Date closed:	17 July 2013

126. Clarification (VMD0015_M-MON, VMD0015 v2.1, line 55)

VCS Criteria: VMD0015, v2.1, 5 Procedures, 5.1.2 Post-processing and accuracy assessment - Update the remaining area of forest in RRL (ARRL,forest,t)	
Evidence Used to Assess Conformance: Monitoring Report Section 3.4.1	
Findings: This value is 3233.42 in Table 32. Clarify what value represents RRL. Also, how can forest area increase if there is deforestation?	
Clarification (CL): The verifier is requesting a "walkthrough" of the calculations for Monitoring Report Table 32. During this walkthrough, please identify which value in PD Table 32 represents ARRL,forest,t and explain how/why forest area increased despite deforestation.	
Date issued:	17 April 2013
Project proponent response/actions and date: The table was recalculated. The change statistics were calculated based on the LC datasets with accumulated no data area of both points in time. This is necessary in order to compare a similar area in both datasets. The change statistics are then calculated by the following equations: Change_area = area_T2 - area_T1 Change_% = (area_T2 - area_T1)/area_T1 Change_ha_yr = (area_T2 - area_T1)/(T2 - T1) Change_%_yr = ((area_T2 - area_T1)/area_T1)/(T2 - T1) Where: Change_area: Area change (ha) between the two points in time Area_T2: Area of LC class in the second point in time Area_T1: Area of LC class in the first point in time T1: Point in time 1 T2: Point in time 2 Change_%: Relative change of LC class in relation to area in first point in time Change_ha_yr: Area change per year (ha) Change_%_yr: Relative area change per year (%) in relation to area in T1 - 5 June 2013	
Clarification (CL): Table added. Please identify which value in PD Table 32 represents ARRL,forest,t and explain how/why forest area increased despite deforestation.	

Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
The ARRL is no longer valid as we are not using a reference area. The area of forest did not increase between the periods as is shown in the Tables 32, 33,34.		
Clarification (CL): ARRL,forest,t is removed as a parameter in 5.12.1 of PD and 3.2.1 of Monitoring Report. Tables 32-34 do not list ARRL. However there is an increase shown in Forested area between 2009 and 2012 in table 33. Is this due to ability to detect forest in 2009 due to no data?		
Date issued:		
Project proponent response/actions:	**Date Received:**	06 September 2013
Yes, the increase if forested land between 2009 and 2012 represents 59.51 ha that was originally classifed as No Data in 2009.		
Evidence used to close CL: Client Response; Monitoring Report_v1.3.docx; LULC Shapefiles - The client's response adequately addresses this CL. The LULC shapefiles and provided imagery support the response. Item is addressed.		
Date closed:	13 September 2013	

127. Clarification (VMD0015_M-MON, VMD0015 v2.1, line 56)

VCS Criteria: VMD0015, v2.1, 5 Procedures, 5.1.2 Post-processing and accuracy assessment - Update the remaining area of forest in RRL (ARRL,forest,t)	
Evidence Used to Assess Conformance: Monitoring Report Section 3.4.1	
Findings: The source of the difference between the No Data values for 2009 and 2012 in Monitoring Report Table 32 is unclear.	
Clarification (CL): Related to Item 126 above, please clarify the source of the difference between the No Data values for 2009 and 2012 in Monitoring Report Table 32. It seems as if these values should be equal and that only the Forest, Non-Forest, and Water area values should change.	
Date issued:	17 April 2013
Project proponent response/actions and date: The wrong datasets were used for the calculation of these statistics. The table was recalculated by using the datasets with accumulated no data areas from both points in time. In the new version, the No Data area stays constant and only the area of Forest, Non-Forest, and Water change. – 5 June 2013	
Evidence used to close CL: Table added and no data values are constant. Issue is addressed.	
Date closed:	17 July 2013

128. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 63)

VCS Criteria: VMD0015, v2.1, 5 Procedures, Calculating the rate of deforestation when maps have gaps due to cloud cover is a challenge. - As described in module BL-UP (Part 2, section 2.2.3) multi-date images must be used to reduce cloud cover to no more than 10% of any image.	
Evidence Used to Assess Conformance: Monitoring Report Section 3.4.1	
Findings: Monitoring report States : "This was done by a semi-automated object-based image classification routine, developed by RSS, and executed in the Trimble eCognition software package. The clouds are detected based on the blue and thermal bands in the Landsat images, while cloud shadows are detected based on a brightness threshold in the Near Infrared and adjacency to clouds. The detected clouds and shadows were then masked out."	
Non-conformity report (NCR): Please include in Monitoring Report Section 3.4.1 the values of percent cloud cover that remained in both 2009 and 2012 after removal of clouds and cloud shadows.	
Date issued:	17 April 2013
Project proponent response/actions and date: A table was inserted with the area statistics in both LC time steps, in ha and %. This table contains the residual no data area due to cloud and cloud shadow in % for both time steps (6 % in 2009 and 9 % in 2012). – 5 June 2013	

Evidence used to close NCR: Table 28 added to the Monitoring Report. Issue is addressed.	
Date closed:	17 July 2013

129. Clarification (VMD0015_M-MON, VMD0015 v2.1, line 67)

VCS Criteria: VMD0015, v2.1, 5 Procedures, Calculating the rate of deforestation when maps have gaps due to cloud cover is a challenge. - The historical rate in % should be multiplied by the maximum forest cover area at the start of the period for estimating the total area of deforestation during the period.	
Evidence Used to Assess Conformance: Monitoring Report Section 3.4.1	
Findings: Monitoring report States "In order to estimate the total area of deforestation, the percent rate was then multiplied by the mapped forest extent in the 2012 classification in order to calculate the forest extent for the full study area in 2009 and the total area of deforestation during the observation period 2009 – 2012." This is an unclear statement.	
Clarification (CL): Please clarify or further explain the following statement in Monitoring report Section 3.4.1: "In order to estimate the total area of deforestation, the percent rate was then multiplied by the mapped forest extent in the 2012 classification in order to calculate the forest extent for the full study area in 2009 and the total area of deforestation during the observation period 2009 – 2012."	
Date issued:	17 April 2013
Project proponent response/actions and date: This irrelevant text was deleted from the monitoring report. I was from a previous version of BL-PL that is no longer relevant. – 5 June 2013	
Evidence used to close CL: "The land cover classifications of both observation times were overlaid and a common no data mask was generated in order to exclude areas from the change analysis which were cloud-obscured in one of the classifications. All land-cover change statistics, in particular the deforestation rate, were calculated exclusively on areas which contain data at both observation times. The deforestation rate was then calculated in percent per year." This indicates that the areas where clouds were obscuring the image were removed, as well as this text in question. This Item is addressed.	
Date closed:	17 July 2013

130. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 68)

VCS Criteria: VMD0015, v2.1, 5 Procedures, Calculating the rate of deforestation when maps have gaps due to cloud cover is a challenge. - The overall classification accuracy of the outcome of the previous steps must be 90% or more.	
Evidence Used to Assess Conformance: Monitoring Report Section 3.4.1	
Findings: A LULC change matrix that presents change analysis results for each change class is not included in the Monitoring Report.	
Non-conformity report (NCR): Please provide a LULC change matrix in the Monitoring Report that presents change analysis results for each change class.	
Date issued:	17 April 2013
Project proponent response/actions and date: Table 32 was added to the Monitoring Report and shows the LULC results – 05 June 2013	
Evidence used to close NCR: Table 32 was added to the Monitoring Report and shows the LULC results. Issue is addressed.	
Date closed:	17 July 2013

131. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 69)

VCS Criteria: VMD0015, v2.1, 5 Procedures, Calculating the rate of deforestation when maps have gaps due to cloud cover is a challenge. - The overall classification accuracy of the outcome of the previous steps must be 90% or more.
Evidence Used to Assess Conformance: Monitoring Report Section 3.4.1
Findings: The sampling design used to carry out the accuracy assessment is not specified.
Non-conformity report (NCR): Please describe in detail, citing the appropriate sources, the sampling design used to carry out the accuracy assessment and populate the confusion matrices presented in

Monitoring Report Tables 29 and 30.	
Date issued:	17 April 2013
Project proponent response/actions and date: An accuracy assessment was conducted for the two land cover maps based on confusion matrices. Reference land cover samples were generated based on a stratified random sampling scheme, which uses the land cover classification as stratification. 50 sample points were created for each class. An independent image interpreter then assigned the land cover category to the samples based on interpretation of the satellite images. A confusion matrix was then established comparing the classification result with the reference samples, and the overall classification accuracy, as well as the accuracy of the individual classes (producer's and user's accuracy) were calculated. Details about the procedures can be found in Congalton and Green 1999. R.G. Congalton and K. Green, "Assessing the accuracy of remotely sensed data: principles and practices", Boca Raton, FL (1999). – 5 June 2013	
Evidence used to close NCR: This process appears to be a reasonable and accurate sampling design and methodology for this purpose. Issue is addressed.	
Date closed:	17 July 2013

132. Clarification (VMD0015_M-MON, VMD0015 v2.1, line 70)

VCS Criteria: VMD0015, v2.1, 5 Procedures, Calculating the rate of deforestation when maps have gaps due to cloud cover is a challenge. - The overall classification accuracy of the outcome of the previous steps must be 90% or more.	
Evidence Used to Assess Conformance: Monitoring Report Section 3.4.1	
Findings: It is not clear if the change classes included for 2009-2012 were evaluated for their accuracy.	
Clarification (CL): Please describe whether the change classes included for 2009-2012 were evaluated for their accuracy.	
Date issued:	17 April 2013
Project proponent response/actions and date: As stated in the Monitoring Report under Section 3.4.1 as Step 3, "An accuracy assessment was conducted for the two land cover maps based on confusion matrices. Reference land cover samples were generated based on a stratified random sampling scheme. An independent interpreter then assigned the land cover category to the samples based on interpretation of the satellite images. A confusion matrix was then established comparing the classification result with the reference samples, and the overall classification accuracy, as well as the accuracy of the individual classes (producer's and user's accuracy) were calculated." An accuracy of more than 90% was achieved. – 5 June 2013	
Evidence used to close CL: This process appears to be a reasonable and accurate sampling design and methodology for this purpose. Issue is addressed.	
Date closed:	17 July 2013

133. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 75)

VCS Criteria: VMD0015, v2.1, 5.2 Step 2: interpretation and analyses - The same method should be used for the entire period for which the baseline is fixed.	
Evidence Used to Assess Conformance: Monitoring Report Section 3.4.1; Annex 5	
Findings: 2009 benchmark was established using manual methods, 2012 benchmark was established using computerized methods.	
Non-conformity report (NCR): Please provide justification for the change to the land cover classification approach from the interpretation approach used in the baseline deforestation modeling to an automated approach. VMD0015 Step 2 states "The same method must be used for the entire period for which the baseline is fixed." According to Annex 5, independent interpretation was used to classify the 2009 imagery, which represents the start of the baseline. Thus it appears different methods have been used within the fixed baseline.	
Date issued:	17 April 2013
Project proponent response/actions and date: The same method was used for the entire baseline	

period. This method was independent interpretation of images from 2000 - 2009. This work was conducted by Indufor. Another consulting company RSS was responsible for the Monitoring Period analysis and they separately analyzed the 2009 image and the 2012 image for the Project Area only. We have used the same method for the analysis of the 2009 and the 2012 images for the ex-post monitoring as described in the Monitoring report. – 5 June 2013	
Evidence used to close NCR: Explanation accepted. It appears that the same approach was used for the entire baseline timeframe. Issue is addressed.	
Date closed:	17 July 2013

134. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 79)

VCS Criteria: VMD0015, v2.1, 5.2 STEP 2: Interpretation and analyses - The net carbon stock change as a result of deforestation is equal to the area deforested multiplied by the emission per unit area (represented by Equations 3 and 4 on page 8).	
Evidence Used to Assess Conformance: PD Section 5.11.1; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx; Monitoring Report Section 3.4.1	
Findings: Year 4 of monitoring is including the whole year and should be including only 1/2 the year.	
Non-conformity report (NCR): Please examine cells H14 and K14 of the VM0007-M-MON Tab of VCS_7_10_Calculator_PNG-M1_V1.0.xlsx. These cells are currently representing the time period of 22 May 2012 to 21 May 2013. These cells should represent the time period of 22 May 2012 to 31 Dec 2012. Please revise accordingly and update any values and tables in the Monitoring report as applicable. Please identify where the associated changes were made in the monitoring report.	
Date issued:	17 April 2013
Project proponent response/actions and date: The deforestation figures presented in the VM0007-M-MON Tab of VCS_7_10_Calculator_PNG-M1_V1.0.xlsx were corrected to be representative of the number of months in the monitoring period. For example the total area deforested in the Project Area over the Monitoring period 22 May 2012 to 31 Dec 2012 was 29.2 hectares. Assuming a linear deforestation rate over this period the figure was found to be 0.695 per month or 8.34 ha/ yr and 4.17 ha/6 months. The requested cells were updated and highlighted yellow. The Tables in the Monitoring report were also updated and highlighted yellow. – 5 June 2013	
Non-conformity report (NCR): Call with project developer indicates that the referenced cells were not updated with the current information, even though the correct calculation is presented.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
Corrections have been made to the M-MON Tab of the calculator and highlighted in green	
Evidence used to close NCR: Figures corrected in the M-MON tab of the calculator. Issue addressed.	
Date closed:	25 August 2013

135. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 80)

VCS Criteria: VMD0015, v2.1, 5.2 STEP 2: Interpretation and analyses - The net carbon stock change as a result of deforestation is equal to the area deforested multiplied by the emission per unit area (represented by Equations 3 and 4 on page 8).	
Evidence Used to Assess Conformance: PD Section 5.11.1; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx; Monitoring Report Section 3.4.1	
Findings: Table 49 of the PD needs revised….the last monitoring period in the initial baseline period is defined as 1 year and should be 1.5 years.	
Non-conformity report (NCR): PD Table 49 currently indicates that the last monitoring period in the initial baseline period is equal to one year. The time period covered is 1st January 2018 – 21 May 2019, thus the duration of the last monitoring period in the initial baseline period is equal to 1.5 years. Please revise PD Table 49 accordingly.	
Date issued:	17 April 2013

Project proponent response/actions and date: The time period covered for the 1st January 2018 to 21 May 2019 has been changed to 1.5 years in the PD, table 49. This change has been highlighted. – 5 June 2013	
Evidence used to close NCR: Table 52 has been changed, not table 49. The issue has been corrected.	
Date closed:	17 July 2013

136. Clarification (VMD0015_M-MON, VMD0015 v2.1, line 83)

VCS Criteria: VMD0015, v2.1, 6.2 Step 2: interpretation and analyses - It is conservative in the project case to assume no wood products are produced.	
Evidence Used to Assess Conformance: PD Section 5.11.1; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx; Monitoring Report Section 3.4.1	
Findings: The project case is not assuming no wood products are produced. Given that anthropogenic deforestation is due primarily due to mining and not illegal logging, and that natural deforestation is due to fire and shifting rivers, it is highly unlikely that the wood is making it to market or going into LLWP.	
Clarification (CL): Please justify the inclusion of wood products in the project case in Monitoring Report Section 3.4.1. Else, conservatively assume no wood products are produced in the project case.	
Date issued:	17 April 2013
Project proponent response/actions and date: For completeness the Monitoring equations were presented in the Monitoring Report as listed in the M-MON module. In the parameters tables it is stated that "This parameter was not monitored ex-post and is therefore excluded from this monitoring period in accordance with the validated Project Description." This approach is conservative and is consistent with the calculations presented in the Project spreadsheet: VCS_7_10_Calculator_PNG-M1_V1.0.xlsx. – 5 June 2013	
Evidence used to close CL: Reference found to the statements. Issue addressed.	
Date closed:	17 July 2013

137. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 156)

VCS Criteria: VMD0015, v2.1, 5.2.3 Monitoring areas undergoing natural disturbance - Where natural disturbances occur ex-post in the project area such as tectonic activity (earthquake, landslide, volcano), extreme weather (hurricane), pest, drought, or fire that result in a degradation of forest carbon stocks, the area disturbed shall be delineated and the resulting emissions estimated.	
Evidence Used to Assess Conformance: PD Section 5.11.1; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx; Monitoring Report Section 3.4.1	
Findings: Though not explicitly stated in the Monitoring report, one can infer that areas deforested due to river expansion and fire was delineated. The monitoring of anthropogenic and natural deforestation is presented in Figure 7. However, the figure does not clearly differentiate between anthropogenic deforestation, deforestation from shifting rivers, and deforestation from Fire. The resulting emissions are estimated for shifting rivers. Losses to shifting rivers are claimed insignificant under T-SIG. What about losses due to landslides. These are not included in the monitoring report	
Non-conformity report (NCR): Please clearly differentiate between anthropogenic deforestation, deforestation from shifting rivers, and deforestation from fire in Monitoring Report Figure 7. Note 138 in addressing this NCR.	
Date issued:	17 April 2013
Project proponent response/actions and date: A map has been produced to show anthropogenic deforestation and natural deforestation (flooding) in the Project Area. This new map has replaced Figure 7. – 5 June 2013	
Evidence used to close NCR: New map found in Monitoring Report and reviewed. Deforestation due to fire and non fire events are identified. Observation while on site confirms the difficulty in determining deforestation from landslides vs. garden areas. Issue is addressed.	
Date closed:	17 July 2013

138. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 157)

VCS Criteria: VMD0015, v2.1, 5.2.3 Monitoring areas undergoing natural disturbance - Where natural disturbances occur ex-post in the project area such as tectonic activity (earthquake, landslide, volcano), extreme weather (hurricane), pest, drought, or fire that result in a degradation of forest carbon stocks, the area disturbed shall be delineated and the resulting emissions estimated.	
Evidence Used to Assess Conformance: PD Section 5.11.1; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx; Monitoring Report Section 3.4.1	
Findings: Several landslides were observed during the site visit, yet these are not included in the delineation of areas undergoing natural disturbance.	
Non-conformity report (NCR): Several landslides were observed during the site visit. Please include landslides in the delineation of areas undergoing natural disturbance and estimate the associated emissions. Else, justify insignificance via T-SIG.	
Date issued:	17 April 2013
Project proponent response/actions and date: All areas undergoing disturbance that were detected in the Project Area are included in the calculations relating to VM0010. Tab 8.2.2 lists the area disturbed as 186.7 hectares per year. Due to the nature of the disturbance in the project area for natural disturbance and gardening it is difficult to detect the difference between natural disturbance and anthropogenic. As fire is not used for converting forest to gardens and the trees in the garden areas are typically used for canoes, houses and firewood all disturbance in the Project Area is accounted for as 'non-fire deforestation" in the calculations. – 5 June 2013	
Evidence used to close NCR: This description is reasonable, as is the end product. Non fire and fire related deforestation is captured. Item is addressed.	
Date closed:	17 July 2013

139. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 158)

VCS Criteria: VMD0015, v2.1, 5.2.3 Monitoring areas undergoing natural disturbance - Where natural disturbances occur ex-post in the project area such as tectonic activity (earthquake, landslide, volcano), extreme weather (hurricane), pest, drought, or fire that result in a degradation of forest carbon stocks, the area disturbed shall be delineated and the resulting emissions estimated.	
Evidence Used to Assess Conformance: PD Section 5.11.1; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx; Monitoring Report Section 3.4.1	
Findings: Monitoring report Sates "Natural disturbance in the Project Area relate primarily to loss of forest cover from shifting rivers and fire. Buffering of rivers was conducted as a means of minimizing disturbance from shifting rivers." - Buffers were not applied to the rivers.	
Non-conformity report (NCR): Monitoring Report Section 3.4.1 states: "Natural disturbance in the Project Area relate primarily to loss of forest cover from shifting rivers and fire. Buffering of rivers was conducted as a means of minimizing disturbance from shifting rivers." Review of the provided shapefiles indicates buffers were not applied to rivers as indicated. Moreover, the rivers are not "cut out" of the IFM operational boundary, thus indicating that rivers represent forested areas. Please address.	
Date issued:	17 April 2013
Project proponent response/actions and date: Please find attached maps which show that once rivers have been taken from the layer, FMA shows through, indicating that this is not included in the IFM layer. Therefore rivers have been buffered and have been cut out from the IFM project area. – 5 June 2013	
Evidence used to close NCR: Shapefiles indicate that rivers have been buffered and removed appropriately. Issue is addressed.	
Date closed:	17 July 2013

140. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 159)

VCS Criteria: VMD0015, v2.1, 5.2.3 Monitoring areas undergoing natural disturbance - Emissions resulting from natural disturbances may be omitted if they are deemed de minimis through the use of the module T-SIG.
Evidence Used to Assess Conformance: Monitoring Report Section 3.4.1
Findings: Monitoring Report States: "The T-SIG Tool was applied to area deforested as a result of

fire and it was found that the resulting emissions were less the 5% and therefore deemed insignificant and subsequently excluded from the Project Emissions calculations." However, no data or calculations have been given to show this.	
Non-conformity report (NCR): Please provide the verifier with data/calculations demonstrating the emissions resulting from fire were less than 5% of the total and therefore deemed insignificant via T-SIG. Note Item 143 below in addressing this NCR.	
Date issued:	17 April 2013
Project proponent response/actions and date: No area was deforested by fire and therefore the T-SIG tool was not applied as 0 hectares deforested is insignificant. Text within the Monitoring Report has been clarified to eliminate the confusion. See 143/144/145. – 5 June 2013	
Evidence used to close NCR: As stated in the monitoring report, "As there was no deforestation from fire during the monitoring period Equations M-MON 21 and M-MON 22 were not applied." Issue is addressed.	
Date closed:	17 July 2013

141. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 167)

VCS Criteria: VMD0015, v2.1, The net carbon stock change as a result of the disturbance is equal to the area disturbed multiplied by the emission per unit area. The reduction factor is calculated using Equation 19 on Page 19. - Net carbon stock change as a result of natural disturbance in the project case is calculated using Equation 20 on Page 19.	
Evidence Used to Assess Conformance: PD Section 5.11.1; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx; Monitoring Report Section 3.4.1	
Findings: Confirmed application of equation 20 in ex-post calculator - See M-MON Tab. However, The equation is not included in either the PD or the Monitoring Report.	
Non-conformity report (NCR): Please identify M-MON Equation 20 in PD Section 5.11.1 as the equation used to quantify Net carbon stock change as a result of natural disturbance in the project case.	
Date issued:	17 April 2013
Project proponent response/actions and date: M-Mon Equation 20 could not be found. Equation 23 was identified as the relevant equation. Following sentence was added and highlighted in the PD in section 5.11.1 "To calculate the net carbon stock changes as a result of natural disturbance following equation is applied:" - 5 June 2013	
Evidence used to close NCR: Pages 89 and 90 of the monitoring report clearly show the use of equation 20. Issue is addressed.	
Date closed:	17 July 2013

142. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 168)

VCS Criteria: VMD0015, v2.1, The net carbon stock change as a result of the disturbance is equal to the area disturbed multiplied by the emission per unit area. The reduction factor is calculated using Equation 19 on Page 19. - Net carbon stock change as a result of natural disturbance in the project case is calculated using Equation 20 on Page 19.	
Evidence Used to Assess Conformance: PD Section 5.11.1; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx; Monitoring Report Section 3.4.1	
Findings: Confirmed application of equation 20 in ex-post calculator - See M-MON Tab. However, The equation is not included in either the PD or the Monitoring Report.	
Non-conformity report (NCR): Please identify M-MON Equation 20 in Monitoring Report Section 3.4.1 as the equation used to quantify net carbon stock change as a result of natural disturbance in the project case.	
Date issued:	17 April 2013
Project proponent response/actions and date: Appropriate corrections have been made to the Monitoring Report and the PD. – 5 June 2013	
Evidence used to close NCR: Pages 89 and 90 of the monitoring report clearly show the use of equation 20. Issue is addressed.	
Date closed:	17 July 2013

143. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 170)

VCS Criteria: VMD0015, v2.1, Section 5.2.3 - Monitoring areas undergoing natural disturbance - Emissions from any fires shall be calculated using E-BB and included calculated in Section 5.2.5 Monitoring project emissions.	
Evidence Used to Assess Conformance: Monitoring Report Section 3.4.1	
Findings: Monitoring Report States: "The remote sensing indicated 0 hectares of burning within the IFM and REDD project boundaries. Therefore module E_BB was not applied." This conflicts with other statements in this section that indicate that there were fires.	
Non-conformity report (NCR): Monitoring Report Section 3.4.1 states "The remote sensing indicated 0 hectares of burning within the IFM and REDD project boundaries. Therefore module E_BB was not applied." This conflicts with other statements in this section that indicate that there are areas deforested as a result of fire. Please revise accordingly and indicate the changes made.	
Date issued:	17 April 2013
Project proponent response/actions and date: There was no fires detected in the Project Area from the analysis of MODIS data. No deforestation resulted from fire. Text was clarified in Section 3.4.1 (highlighted in yellow) to remove any confusion regarding the lack of deforestation from fire in the Project Area. – 5 June 2013	
Evidence used to close NCR: Monitoring Report indicates "As there was no deforestation from fire during the monitoring period Equations M-MON 21 and M-MON 22 were not applied." Issue is addressed.	
Date closed:	17 July 2013

144. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 171)

VCS Criteria: VMD0015, v2.1, v2.1, Section 5.2.3 - Monitoring areas undergoing natural disturbance - The net carbon stock change as a result of the disturbance is equal to the area disturbed multiplied by the emission per unit area - The emission per unit area is equal to the difference between the stocks before and the stocks after the natural disturbance minus any wood products created from timber extraction following the natural disturbance (represented by Equation 23 on Page 20).	
Evidence Used to Assess Conformance: PD Section 5.11.1; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx; Monitoring Report Section 3.4.1	
Findings: Confirmed application of equation 23 in ex-post calculator - See M-MON Tab. However, the Monitoring report indicates that it is not used because fire is insignificant. However, the equation was clearly used to quantify emissions per unit area for determining net carbon stock change as a result of shifting rivers.	
Non-conformity report (NCR): Monitoring Report Section 3.4.1 states "The T-SIG Tool was applied to area deforested as a result of fire and it was found that the resulting emissions were less the 5% and therefore deemed insignificant and subsequently excluded from the Project Emissions calculations. As such Equations M-MON 21, M-MON 22, M-MON 23 and M-MON 24 were not applied." However, M-MON Equation 23 was clearly used in VCS_7_10_Calculator_PNG-M1_V1.0.xlsx for determining net carbon stock change as a result of shifting rivers. Please revise accordingly and indicate the changes made. Note Items 145 and 146 below in addressing this NCR.	
Date issued:	17 April 2013
Project proponent response/actions and date: Clarifying text and the inclusion of the correct M-MON equations were made in section 3.4.1 of the Monitoring Report. See also responses to 145 and 146. – 5 June 2013	
Evidence used to close NCR: Monitoring report details the use of equation 20 and 23." Equation M-MON 20 was used to determine the Net carbon stock change as a result of natural disturbance in the project case in the project area in stratum I at time t. "Equation M-MON 23 was then applied to quantify net carbon stock changes in pools as a result of natural disturbance in the project case during the monitoring period." This appears to be the correct use of these equations. Issue is addressed.	
Date closed:	17 July 2013

145. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 172)

VCS Criteria: VMD0015, v2.1, v2.1, Section 5.2.3 - Monitoring areas undergoing natural disturbance - The net carbon stock change as a result of the disturbance is equal to the area disturbed multiplied

by the emission per unit area - The emission per unit area is equal to the difference between the stocks before and the stocks after the natural disturbance minus any wood products created from timber extraction following the natural disturbance (represented by Equation 23 on Page 20).	
Evidence Used to Assess Conformance: PD Section 5.11.1; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx; Monitoring Report Section 3.4.1	
Findings: M-MON Equation 23 is not identified in Monitoring Report Section 3.4.1 as the equation used to quantify net carbon stock changes in pools as a result of natural disturbance in the project case.	
Non-conformity report (NCR): Please identify M-MON Equation 23 in Monitoring Report Section 3.4.1 as the equation used to quantify net carbon stock changes in pools as a result of natural disturbance in the project case.	
Date issued:	17 April 2013
Project proponent response/actions and date: Following responses was added and highlighted under 3.4.1: 'M-MON 23, which quantifies net carbon stock changes in pools as a result of natural disturbance in the project case, was not applied.' – 5 June 2013	
Evidence used to close NCR: Equation is listed and identified on page 90 of the monitoring report. Issue is addressed.	
Date closed:	17 July 2013

146. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 177)

VCS Criteria: VMD0015, v2.1, For each post-natural disturbance stratum (q) estimate the carbon stock following the natural disturbance - Alternatively, it can be conservatively assumed that a post-natural disturbance live and dead vegetation pool is equal to zero.	
Evidence Used to Assess Conformance: PD Section 5.11.1; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx; Monitoring Report Section 3.4.1	
Findings: Confirmed that in ex-post calculator that post-natural disturbance live and dead vegetation pool is equal to zero - See M-MON Tab. However, the Monitoring report indicates that it is not used because fire is insignificant.	
Non-conformity report (NCR): Please identify in Monitoring Report Section 3.4.1 that M-MON Equation 24 was not used to quantify carbon stock in all pools in post-natural disturbance strata because it was conservatively assumed that the post-natural disturbance live and dead vegetation pool is equal to zero.	
Date issued:	17 April 2013
Project proponent response/actions and date: M-MON 24 was not applied, as it was conservatively assumed that the post-natural disturbance of the live and dead vegetation pool is zero. This information was added and highlighted under M-Mon 23 in Monitoring Report. – 5 June 2013	
Evidence used to close NCR: Statement confirmed in Monitoring Report. Issue is addressed.	
Date closed:	17 July 2013

147. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 203)

VCS Criteria: VMD0015, v2.1, 5.3 Step 3 Documentation - The following information must be provided when remotely sensed data are used - a. Data sources and pre-processing: Type, resolution, source and acquisition date of the remotely sensed data (and other data) used; geometric, radiometric and other corrections performed, if any; spectral bands and indexes used (such as NDVI); projection and parameters used to geo-reference the images; error estimate of the geometric correction; software and software version used to perform tasks; etc.	
Evidence Used to Assess Conformance: Monitoring Report Section 3.4.1 - Step 1	
Findings: Type is specified. Resolution is not specified. Source and acquisition date is specified. Correction performed is specified. Projection and parameters used to geo-reference the images is not needed because it was done by the producer; error estimate of the geometric correction is included in Table 31. Any software used is specified.	
Non-conformity report (NCR): As per M-MON, please specify in Monitoring Report Section 3.4.1 the resolution of the Landsat-5 and Landsat-7 imagery used for LU/LC monitoring.	
Date issued:	17 April 2013
Project proponent response/actions and date: The resolution of images used is 30m. This	

information was added and highlighted in the Monitoring Report in Section 3.4.1. – 5 June 2013	
Evidence used to close NCR: Confirmed as having been added to the monitoring report. Issue is addressed.	
Date closed:	17 July 2013

148. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 204)

VCS Criteria: VMD0015, v2.1, 5.3 Step 3 Documentation - The following information must be provided when remotely sensed data are used - a. Data sources and pre-processing: Type, resolution, source and acquisition date of the remotely sensed data (and other data) used; geometric, radiometric and other corrections performed, if any; spectral bands and indexes used (such as NDVI); projection and parameters used to geo-reference the images; error estimate of the geometric correction; software and software version used to perform tasks; etc.	
Evidence Used to Assess Conformance: Monitoring Report Section 3.4.1 - Step 1	
Findings: Spectral bands and indexes used are not specified.	
Non-conformity report (NCR): As per M-MON, please specify in Monitoring Report Section 3.4.1 the spectral bands and indexes used (such as NDVI) for LU/LC monitoring.	
Date issued:	17 April 2013
Project proponent response/actions and date: Landsat 5 TM and Landsat 7 ETM+ have a resolution of 30 m and 7 spectral bands. Please also see Annex 5, Appendix 1 for this information. This information has been added on page 68 in the Monitoring Report. The additional text has been highlighted. The Landsat images were acquired in Level 1T preprocessing format, which means that a very accurate geometric correction, including terrain correction has already been applied by the data provider (USGS). The images were checked for geometric alignment, and it was concluded that the geometric matching was very accurate, and no further correction required. The images were delivered in the UTM (Universal Transverse Mercator) projection, Zone 54 S. The pixel information in the Landsat Level 1T imagery contains the at-sensor radiance, i.e. the radiation reflected from the earth surface at top of the atmosphere. This at-sensor-radiance contains atmospheric disturbances due to illumination, aerosols, water vapor etc. during image acquisition. In order to correct these disturbances, an atmospheric correction procedure has been applied, which removes these effects and converts the data into surface reflectance. The software ATCOR-2 has been used for this task, which makes use of the MODTRAN atmospheric transfer code. The atmospheric correction facilitates that differences between the images due to atmospheric disturbances are removed. Additional preprocessing steps included spectral enhancement of the data by calculating the NDVI (Normalized Difference Vegetation Index) (Lillesand et al. 2004), and applying a MNF Transformation (Minimum Noise Fraction) (Green et al. 1988) in order to generate additional input bands for classification. The preprocessing was conducted in the software package ENVI / IDL (ExelisVis) and the ATCOR-2 software. References: Green, A. A., Berman, M., Switzer, P., and Craig, M. D., 1988, A transformation for ordering multispectral data in terms of image quality with implications for noise removal: IEEE Transactions on Geoscience and Remote Sensing, v. 26, no. 1, p. 65-74. T.M. Lillesand, R.W. Kiefer, J.W. Chipman, "Remote Sensing and Image Interpretation", 5th edition, New York (2004). – 5 June 2013	
Evidence used to close NCR: This discussion was added to the monitoring report page 77 (subject of change) and is deemed to be an applicable response. Issue is addressed.	
Date closed:	17 July 2013

149. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 205)

VCS Criteria: VMD0015, v2.1, 5.3 Step 3 Documentation - The following information must be provided when remotely sensed data are used - b. Data classification: Definition of the classes and categories; classification approach and classification algorithms; coordinates and description of the ground-truth data collected for training purposes; ancillary data used in the classification, if any;

software and software version used to perform the classification; additional spatial data and analysis used for post-classification analysis, including class subdivisions using non-spectral criteria, if any; etc.	
Evidence Used to Assess Conformance: Monitoring Report Section 3.4.1 - Step 2	
Findings: Classes are defined - Forest, Non-forest, and water. Classification approach/algorithms are defined - object-based semi-automated processing routine in eCognition. Coordinates and description of the ground-truth data collected for training purposes is not included. Does not appear that ancillary data was used. Any software used is specified.	
Non-conformity report (NCR): As per M-MON, please include information in Monitoring Report Section 3.4.1 regarding any ground-truth data collected for training purposes in land cover classification processes. Include coordinates and description of the data if applicable. Else, specify that no ground-truthing data were used.	
Date issued:	17 April 2013
Project proponent response/actions and date: No ground-truth data was collected for training purposes. This information was added and highlighted in Section 3.4.1 in the Monitoring Report and highlighted. – 5 June 2013	
Evidence used to close NCR: This statement was found in the monitoring report. Issue is addressed.	
Date closed:	17 July 2013

150. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 206)

VCS Criteria: VMD0015, v2.1, 5.3 Step 3 Documentation - The following information must be provided when remotely sensed data are used - b. Data classification: Definition of the classes and categories; classification approach and classification algorithms; coordinates and description of the ground-truth data collected for training purposes; ancillary data used in the classification, if any; software and software version used to perform the classification; additional spatial data and analysis used for post-classification analysis, including class subdivisions using non-spectral criteria, if any; etc.	
Evidence Used to Assess Conformance: Monitoring Report Section 3.4.1 - Step 2	
Findings: Sufficient detail has not been provided to allow for review of the "threshold-based classification rule-set"…" used to assign the land cover classes to the image objects."	
Non-conformity report (NCR): Please provide sufficient detail to allow for review of the "threshold-based classification rule-set"…" used to assign the land cover classes to the image objects."	
Date issued:	17 April 2013
Project proponent response/actions and date: This was added to section 3.4.1 of the monitoring report. – 5 June 2013	
Evidence used to close NCR: This is added under Step 2 in the 3.4.1 section of the Monitoring Report. The rules appear to make sense for the purpose at hand. Issue is addressed.	
Date closed:	17 July 2013

151. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 207)

VCS Criteria: VMD0015, v2.1, 5.3 Step 3 Documentation - The following information must be provided when remotely sensed data are used - c. Classification accuracy assessment: Accuracy assessment technique used; coordinates and description of the ground-truth data collected for classification accuracy assessment; and final classification accuracy assessment.	
Evidence Used to Assess Conformance: Monitoring Report Section 3.4.1 - Step 3	
Findings: Accuracy assessment technique used is defined - confusion matrix. Coordinates and description of the ground-truth data collected for classification accuracy assessment is not included. Final classification accuracy assessment is included in Table 31.	
Non-conformity report (NCR): As per M-MON, please include information in Monitoring Report Section 3.4.1 regarding any ground-truth data collected for the classification accuracy assessment. Include coordinates and description of the data if applicable. Else, specify that no ground-truthing data were used.	
Date issued:	17 April 2013
Project proponent response/actions and date: No ground-truth data was collected for the	

classification accuracy assessment. This information was added to the Monitoring Report in Section 3.4.1 and highlighted. – 5 June 2013	
Evidence used to close NCR: This statement was found in the monitoring report. Issue is addressed.	
Date closed:	17 July 2013

152. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 222)

VCS Criteria: VMD0015, v2.1, 6 Parameters - 6.1 Data and Parameters not Monitored-Project Forest Cover Benchmark Map	
Evidence Used to Assess Conformance: NA	
Findings: Not currently included in monitoring Report.	
Non-conformity report (NCR): Please include the parameter "Project Forest Cover Benchmark Map" in Monitoring Report Section 3.1.1.	
Date issued:	17 April 2013
Project proponent response/actions and date: This parameter has been added and highlighted in Section 3.1.1. – 5 June 2013	
Evidence used to close NCR: Added to section 3.1.1 of Monitoring report. Issue is addressed.	
Date closed:	17 July 2013

153. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 240)

VCS Criteria: VMD0015, v2.1, 6 Parameter- 6.1 Data and Parameters not Monitored - Area of stratum I (Ai)	
Evidence Used to Assess Conformance: NA	
Findings: Not currently included in monitoring Report.	
Non-conformity report (NCR): Please include the parameter "Area of stratum I (Ai)" in Monitoring Report Section 3.1.1.	
Date issued:	17 April 2013
Project proponent response/actions and date: This parameter has been added to the Monitoring Report and is highlighted yellow. – 5 June 2013	
Evidence used to close NCR: Added to section 3.1.1 of Monitoring report. Issue is addressed.	
Date closed:	17 July 20113

154. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 330)

VCS Criteria: VMD0015, v2.1, 6.2 Data and Parameters Monitored for Verification -Degradation PRA Results - The PRA shall evaluate whether the following activities may be occurring in the project area - Harvesting of Fuelwood	
Evidence Used to Assess Conformance: Annex 8	
Findings: The PRA does not evaluate whether the Harvesting of Fuelwood is occurring in the project area.	
Non-conformity report (NCR): The PRA (Annex 8) does not evaluate whether the harvesting of fuelwood is occurring in the project area. Please address.	
Date issued:	17 April 2013
Project proponent response/actions and date: Annex 8 has been updated to include work conducted on fuelwood collection. See also response to NCR 38. – 5 June 2013	
Evidence used to close NCR: Annex 8 clearly indicates that fuelwood collection occurs in the project area, however it is deemed to be insignificant through the use of the VM0007 module VMD0008 Estimation of baseline emissions from forest degradation caused by extraction of wood for fuel (BL-DFW), v1.0 was applied. Issue is addressed.	
Date closed:	17 July 2013

155. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 331)

VCS Criteria: VMD0015, v2.1, 6.2 Data and Parameters Monitored for Verification -Degradation PRA Results - The PRA shall evaluate whether the following activities may be occurring in the project area - Harvesting of Wood for Charcoal Production

Evidence Used to Assess Conformance: Annex 8	
Findings: The PRA does not evaluate whether the Harvesting of wood for charcoal production is occurring in the project area.	
Non-conformity report (NCR): The PRA (Annex 8) does not evaluate whether the harvesting of wood for charcoal production is occurring in the project area. Please address.	
Date issued:	17 April 2013
Project proponent response/actions and date: Harvesting of wood for charcoal production is not practiced in the April Salumei Project Area, nor in PNG more broadly See: http://epubs.scu.edu.au/cgi/viewcontent.cgi?article=1118&context=theses This recent (2009) and relevant reference states: "Although charcoal is more energy efficient and more portable than wood (Wardle and Palmieri 1981) charcoal has met with very limited use in PNG both for domestic consumption and as an export commodity. Hermescec's report in 1981 was to research and develop a retort for charcoal production specific to PNG (Hermescec 1981). A small scale charcoal production in RabaulEast New Britain Province produced charcoal from 1968 to 1974 for export. The price of exported charcoal increased from Au$44.38/tonne in 1968 to Au$100.00/t by 1974, nonetheless the charcoal production ceased after 1974. In Lae, the Atzera project which began in 1979 (6 year project life) with assistance from UNESCO/UNEP had charcoal and fuelwood depots established around the vicinity of Lae but the project folded after only three years(Maiguo 2000). Despite efforts to train and raise awareness on the benefits of charcoal, the uptake in PNG households was minimal (Hermescec 1981; Siki 1984). It seems some countries, like Nigeria and Zimbabwe (Morgan 1983), preferred solid wood to charcoal and maybe, the same could be said for PNG. In the 5 visits to the Project Area by EAS staff there has never been evidence of charcoal production or use in the Project Area. Interviews with the Landholder Chairman also confirmed that charcoal production is not conducted in the project area nor in PNG more widely. Therefore it was not included in the PRA process as it was irrelevant in the context of PNG. – 5 June 2013	
Evidence used to close NCR: This discussion is acceptable. Personal observations conclude that charcoal is not used in the project area. Issue is addressed.	
Date closed:	17 July 2013

156. Clarification (VMD0015_M-MON, VMD0015 v2.1, line 343)

VCS Criteria: VMD0015, v2.1, 6.2 Data and Parameters Monitored for Verification - Result of Limited Degradation Survey - Ex-ante, estimation shall be made of degradation in the with-project case. If the belief is that zero degradation will occur within the project boundaries then this parameter may be set to zero if clear infrastructure, hiring and policies are in place to prevent deforestation.	
Evidence Used to Assess Conformance: PD Section 5.12.1; Monitoring Report section 3.2.1	
Findings: Ex ante degradation in the with-project case is certainly set to zero. However, there has been no mention in the PD regarding clear infrastructure, hiring and policies to prevent deforestation.	
Clarification (CL): It is clear that degradation is set to zero in the with-project case in the ex-ante estimates. In order to justify this circumstance, please provide evidence that clear infrastructure, hiring and policies are in place to prevent degradation within the April Salumei FMA. Include this justification in the PD and indicate where it was added.	
Date issued:	17 April 2013
Project proponent response/actions and date: The Project has policies and procedures that require approvals for commercial activities to be established in the Project Area. These approaches require approval from the landowner companies. In addition there will be forest stewards who will be engaged to patrol the Project Area to educate the villagers in the Project operational procedures and to monitor and report any degradation activities. The Project Area is extensive and remote and the population within the Project is very low. Subsistence activities such as building canoes, collecting firewood from the forest floor and building houses has not led to degradation in the Project Area to date. Project monitoring will pick up any increases in disturbance and education programs will inform people and discourage them from degradation activities. – 5 June 2013	

Clarification (CL): This discussion is deemed adequate; however, it is not clear if this was added to the PDD. Please add this to the PDD and this issue will be addressed.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
This text has been added to the PD under Section 5.11.1 - Monitoring degradation. It has also been added to the Monitoring Report approxumately page 88 - 89 - Monitoriong Degradation. Text is highlighted green		
Evidence used to close CL: Text added to both PD and Monitoring Report. Issue addressed.		
Date closed:	25 August 2013	

157. Clarification (VMD0015_M-MON, VMD0015 v2.1, line 350)

VCS Criteria: VMD0015, v2.1, 6.2 Data and Parameters Monitored for Verification - Area of recorded deforestation in the project area in stratum I converted to land use u at time t (ADefPA,i,u,t) - Ex-ante, an estimation shall be made of deforestation in the with-project case. If the belief is that zero deforestation will occur within the project boundaries then this parameter may be set to zero if clear infrastructure, hiring and policies are in place to prevent deforestation.		
Evidence Used to Assess Conformance: PD Section 5.12.1; Monitoring Report section 3.2.1		
Findings: Ex ante deforestation in the project caser is certainly set to zero. However, there has been no mention in the PD regarding clear infrastructure, hiring and policies to prevent deforestation. Moreover, the first monitoring period has shown deforestation throughout the April Salumei FMA.		
Clarification (CL): It is clear that deforestation is set to zero in the with-project case in the ex-ante estimates. In order to justify this circumstance, please provide evidence that clear infrastructure, hiring and policies are in place to prevent deforestation within the April Salumei FMA. Include this justification in the PD and indicate where it was added.		
Date issued:	17 April 2013	
Project proponent response/actions and date: This NCR was a duplicate of 156. Please refer to NCR 156 for the response to this issue. – 5 June 2013		
Clarification (CL): This discussion is deemed adequate; however, it is not clear if this was added to the PDD. Please add this to the PDD and this issue will be addressed.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
This text has been added to the PD under Section 5.11.1 - Monitoring degradation. It has also been added to the Monitoring Report approxumately page 88 - 89 - Monitoriong Degradation. Text is highlighted green		
Evidence used to close CL: Text added to both PD and Monitoring Report. Issue addressed.		
Date closed:	25 August 2013	

158. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 360)

VCS Criteria: VMD0015, v2.1, 6.2 Data and Parameters Monitored for Verification - Area potentially impacted by degradation processes in stratum I (ADegW,i).	
Evidence Used to Assess Conformance: NA	
Findings: Not currently included in PD or monitoring Report.	
Non-conformity report (NCR): Please include the parameter "Area potentially impacted by degradation processes in stratum I (ADegW,i)" in PD Section 5.12.1	
Date issued:	17 April 2013
Project proponent response/actions and date: Parameter added as requested and highlighted yellow for ease of review. – 5 June 2013	
Evidence used to close NCR: Parameter added. Issue is addressed.	
Date closed:	17 July 2013

159. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 361)

VCS Criteria: VMD0015, v2.1, 6.2 Data and Parameters Monitored for Verification - Area potentially impacted by degradation processes in stratum I (ADegW,i).	
Evidence Used to Assess Conformance: NA	
Findings: Not currently included in PD or monitoring Report	
Non-conformity report (NCR): Please include the parameter "Area potentially impacted by degradation processes in stratum I (ADegW,i)" in Monitoring Report Section 3.2.1	
Date issued:	17 April 2013
Project proponent response/actions and date: Parameter added to Monitoring Report as requested. The text is highlighted yellow. – 5 June 2013	
Evidence used to close NCR: Parameter added. Issue is addressed.	
Date closed:	17 July 2013

160. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 379)

VCS Criteria: VMD0015, v2.1, 6.2 Data and Parameters Monitored for Verification, Area impacted by natural disturbance in the project stratum i converted to natural disturbance stratum q at time t; ha (ADistPA,q,i,t)	
Evidence Used to Assess Conformance: NA	
Findings: Not currently included in PD or monitoring Report	
Non-conformity report (NCR): Please include the parameter "Area impacted by natural disturbance in the project stratum i converted to natural disturbance stratum q at time t; ha (ADistPA,q,i,t)" in PD Section 5.12.1.	
Date issued:	17 April 2013
Project proponent response/actions and date: This parameter was added in Section 5.12.1 and highlighted in yellow. – 5 June 2013	
Evidence used to close NCR: Parameter added. Issue is addressed.	
Date closed:	17 July 2013

161. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 380)

VCS Criteria: VMD0015, v2.1, 6.2 Data and Parameters Monitored for Verification, Area impacted by natural disturbance in the project stratum i converted to natural disturbance stratum q at time t; ha (ADistPA,q,i,t)	
Evidence Used to Assess Conformance: NA	
Findings: Not currently included in PD or monitoring Report	
Non-conformity report (NCR): Please include the parameter "Area impacted by natural disturbance in the project stratum i converted to natural disturbance stratum q at time t; ha (ADistPA,q,i,t)" in Monitoring Report Section 3.2.1.	
Date issued:	17 April 2013
Project proponent response/actions and date: Parameter added to the Monitoring Report as requested and highlighted yellow for ease of review. – 5 June 2013	
Evidence used to close NCR: Parameter added. Issue is addressed.	
Date closed:	17 July 2013

162. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 386)

VCS Criteria: VMD0015, v2.1, 6.2 Data and Parameters Monitored for Verification - Area impacted by natural disturbance in the project stratum i converted to natural disturbance stratum q at time t; ha (ADistPA,q,i,t) - Ex-ante, estimations of emissions from natural disturbances shall be based on historic incidence of such event in the Project region
Evidence Used to Assess Conformance: NA
Findings: Ex ante emissions from natural disturbances are equal to zero. There is no mention in the PD regarding historic incidence of natural disturbances in the Project region. Moreover, the first monitoring period has shown deforestation due to shifting rivers and fire.
Non-conformity report (NCR): It is clear that emissions from natural disturbances (i.e. shifting rivers, fire, landslides) are equal to zero the ex-ante estimates. In order to justify this circumstance, please

provide information regarding historic incidence of natural disturbances in the project region. Include this justification in the PD and indicate where it was added. Note Item 137 above when addressing this NCR.	
Date issued:	17 April 2013
Project proponent response/actions and date: Land use land change analysis was conducted in the Project Area between 2000 and 2009. Emissions from deforestation from anthropogenic and natural disturbance were difficult to distinguish due to the small scale nature of the disturbances (i.e. distinguishing between gardening and shifting rivers). These areas of disturbance are now included in the baseline and project scenario. As fire is not used to clear lands for gardening the accounting is the same for anthropogenic and natural disturbance. – 5 June 2013	
Evidence used to close NCR: Deforestation due to fire and non fire events are identified. Observation while on site confirms the difficulty in determining deforestation from landslides vs. garden areas. It does not appear that fire plays a role in deforestation on a large scale in this project area. This was directly observed while conducting an over flight of the project area and witnessing fire in other areas, where it is clearly used for clearing lands in wide open areas. This project area is all dense forest and any fire related disturbances would have been quite obvious as fire does not appear to be a natural process in these forests and as such, they do not appear to recover very quickly. This leads verifiers to conclude that these disturbances can only be categorized as being either fire or non fire related. River shifting has been accounted for by buffering the river areas. All other deforestation is being captured in the new LULC analysis. Issue is addressed.	
Date closed:	17 July 2013

163. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 399)

VCS Criteria: VMD0015, v2.1, 6.2 Data and Parameters Monitored for Verification, Remaining area of forest in RRL at time t (ARRL,forest,t)	
Evidence Used to Assess Conformance: NA	
Findings: Not currently included in PD or monitoring Report	
Non-conformity report (NCR): Please include the parameter "Remaining area of forest in RRL at time t (ARRL,forest,t)" in PD Section 5.12.1.	
Date issued:	17 April 2013
Project proponent response/actions and date: Parameter added and highlighted yellow for ease of review – 5 June 2013	
Evidence used to close NCR: Parameter added. Issue is addressed.	
Date closed:	17 July 2013

164. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 400)

VCS Criteria: VMD0015, v2.1, 6.2 Data and Parameters Monitored for Verification, Remaining area of forest in RRL at time t (ARRL,forest,t)	
Evidence Used to Assess Conformance: NA	
Findings: Not currently included in PD or monitoring Report	
Non-conformity report (NCR): Please include the parameter "Remaining area of forest in RRL at time t (ARRL,forest,t)" in Monitoring Report Section 3.2.1.	
Date issued:	17 April 2013
Project proponent response/actions and date: Requested additions to the Monitoring Report parameters made and highlighted in yellow for ease of review. – 5 June 2013	
Evidence used to close NCR: Parameter added. Issue is addressed.	
Date closed:	17 July 2013

165. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 407)

VCS Criteria: VMD0015, v2.1, 6.2 Data and Parameters Monitored for Verification, Total area of degradation sample plots in stratum I (Api)
Evidence Used to Assess Conformance: NA
Findings: Not currently included in PD or monitoring Report

Non-conformity report (NCR): Please include the parameter "Total area of degradation sample plots in stratum I (Api)" in PD Section 5.12.1.	
Date issued:	17 April 2013
Project proponent response/actions and date: Parameter added and highlighted yellow for ease of review – 5 June 2013	
Evidence used to close NCR: Parameter added. Issue is addressed.	
Date closed:	17 July 2013

166. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 408)

VCS Criteria: VMD0015, v2.1, 6.2 Data and Parameters Monitored for Verification, Total area of degradation sample plots in stratum I (Api)	
Evidence Used to Assess Conformance: NA	
Findings: Not currently included in PD or monitoring Report	
Non-conformity report (NCR): Please include the parameter "Total area of degradation sample plots in stratum I (Api)" in Monitoring Report Section 3.2.1.	
Date issued:	17 April 2013
Project proponent response/actions and date: Requested changed made and highlighted in yellow for ease of review. – 5 June 2013	
Evidence used to close NCR: Parameter added. Issue is addressed.	
Date closed:	17 July 2013

167. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 417)

VCS Criteria: VMD0015, v2.1, 6.2 Data and Parameters Monitored for Verification, Biomass carbon of trees cut and removed through illegal logging and fuelwood and charcoal extraction degradation process from plots measured in stratum i at time t (CDegW,i,t)		
Evidence Used to Assess Conformance: NA		
Findings: Not currently included in PD or monitoring Report		
Non-conformity report (NCR): Please include the parameter "Biomass carbon of trees cut and removed through illegal logging and fuelwood and charcoal extraction degradation process from plots measured in stratum i at time t (CDegW,i,t)" in PD Section 5.12.1.		
Date issued:	17 April 2013	
Project proponent response/actions and date: Parameter added as requested and highlighted yellow for ease of review. – 5 June 2013		
Non-conformity report (NCR): Not added. Please add this Parameter to the PDD.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
Parameter was added to the Monitoring Report and highlighted yellow, has now also been added to PD in Section 3.12.1 and highlighted green.		
Evidence used to close NCR: Parameter added to PD and Monitoring Report along with all needed descriptions and justifications and units. Issue addressed.		
Date closed:	25 August 2013	

168. Non-Conformity Report (VMD0015_M-MON, VMD0015 v2.1, line 418)

VCS Criteria: VMD0015, v2.1, 6.2 Data and Parameters Monitored for Verification, Biomass carbon of trees cut and removed through illegal logging and fuelwood and charcoal extraction degradation process from plots measured in stratum i at time t (CDegW,i,t)	
Evidence Used to Assess Conformance: NA	
Findings: Not currently included in PD or monitoring Report	
Non-conformity report (NCR): Please include the parameter "Biomass carbon of trees cut and removed through illegal logging and fuelwood and charcoal extraction degradation process from plots measured in stratum i at time t (CDegW,i,t)" in Monitoring Report Section 3.2.1.	
Date issued:	17 April 2013

Project proponent response/actions and date: Addition made to Monitoring report and highlighted yellow for ease of review. – 5 June 2013		
Non-conformity report (NCR): Not added. Please add this Parameter to the Monitoring Report.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
This is in the monitoring report in Section 3.2.1 on page 50. It is highlighted yellow.		
Evidence used to close NCR: Parameter added to PD and Monitoring Report along with all needed descriptions and justifications and units. Issue addressed.		
Date closed:	25 August 2013	

169. Non-Conformity Report (VMD0016_X_STR, VMD0016, v1.0, line 17)

VCS Criteria: VMD0016, v1.0, II Procedures - At the project start and whenever biomass stocks are re-measured (i.e. at least every 10 years), project proponents must demonstrate after inventory that within the project area there are no unidentified (i.e. not previously stratified) discrete clusters of sample plots/points representing >10% of samples in the project area that consistently differ (i.e. each sample plot/point estimate) from the overall project mean by ±20%. In the event that such a cluster of points is identified, a new stratum will be delineated.	
Evidence Used to Assess Conformance: PD Section 3.4; Annex 9	
Findings: This is not addressed in the PD or Annex 9. 10 plots were found to deviate from the mean by more than 20 % and 2 clusters representing greater than 10 % of the samples were identified. However, systematic (grid) sampling was not used across the study area. Sampling locations represent the clusters and all sample points were located in Low Altitude forests. Additionally, the site visit indicated that not stratifying was warranted and Annex 2 of Annex 9 supports their carbons stocking estimates.	
Non-conformity report (NCR): Please address the following requirement of X-STR in PD Section 3.4: "At the project start and whenever biomass stocks are re-measured (i.e. at least every 10 years), project proponents must demonstrate after inventory that within the project area there are no unidentified (i.e. not previously stratified) discrete clusters of sample plots/points representing >10% of samples in the project area that consistently differ (i.e. each sample plot/point estimate) from the overall project mean by ±20%. In the event that such a cluster of points is identified, a new stratum will be delineated." Please refer to Annex 9 as appropriate in addressing this NCR.	
Date issued:	17 April 2013
Project proponent response/actions and date: The following text was added to Annex 9 Section 3.1.1 Stratification of biomass stocks can improve the accuracy of estimation. Typical forest stratification factors include characteristics such as forest type, elevation and soils. VCS methodology VMD0016 describes how the project should be stratified. The Project area was stratified prior to inventory which served to avoid requirements for post measurement stratification. To do this we used the acceptable practice of using ancillary data to serve as a proxy for potential biomass classes (e.g. PNGRIS data) as described in section 2.2 above. As the area was stratified prior to the fieldwork all areas were identified (i.e. previously stratified). Even though we measured individual points that varied more than 20% from the mean estimate applied. Our reading of the methodology is that further stratification of these points are only required if the area is not previously stratified. In our case it was and therefore it is not a requirement of the methodology to stratify further if the variation of more than 205 from the overall mean is experienced. Nonetheless after exhaustive statistical analysis, no significant difference was found between the PNGRIS forest classes, field forest classification, elevation or soil type and therefore there was no characteristic upon which to further stratify. - 5 June 2013	
Non-conformity report (NCR): Verifiers find the discussion on stratification to be a sound argument given that the project area was stratified prior to the field visit, and using existing information on previously identified forest strata. However the Annex 9 indicates that 4 different strata were identified and targeted to a specific number	

of plots. Following sampling, the total number of plots per stratum was not reached. It appears that 6 plots were located in Low Montane and the other 12 were all in Low Altitude. Table 2 of Annex 9 indicates that there are 4 distinct strata that were initially used to determine the target number of plots for fieldwork. These numbers, by strata, were not met. Please discuss this difference between the initial stratification and the final application of field plots, as these do not match the Annex plans, and do not add to the justification of the final sampling effort. Additionally, the strata listed in section 2.2.1 being Seral Swamp forest, low altitude, low Montane, low altitude on plains and woodland do not match the strata listed just below in Table 2, being Seral Swamp forest, low altitude, low altitude on plans and a separate stratum named woodland. Please explain the differences in these strata names. If strata were joined together and or removed from the sampling effort, please justify this situation since verifiers cannot find consistent language, or strata names, nor final sampling efforts that would allow us to be reasonably assured that there were not biases in the sampling effort and strata left out of the sampling effort.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
Annex 9 has been revised to presnet information only relevant to the field inventory. As such it is clearer now that only Low Altitude forest types were considered in the field inventory. The Low Montane reference in the Annex 9 was not adding value and was added only to identify that 1-2 species typically found in Low Montane forest were identified within the plots and was used to determone in the statistic if these plots had a significantly different carbon stock. As no significant difference was found all plots were considered int he one forest carbon strata. The reference to Low Montane has now been removed from Annex 9. The CDM plot number tool was applied as requested in other NCRs and therefore the text in Annex 9 regarding stratification has been corrected and text decribing the stratafication of hte project, including maps have been added to provide clarity. Strata within the whole FMA that have been left out of the sampling effort have also been leftout of the carbon accounting area (i.e. the Project Area).		
Evidence used to close NCR: Stratification of the forest area is now explained in detail to represent the stratification before and after the sampling effort. It is explained that the only strata used for both quantification of carbon and the survey effort was from the Low Altitude areas (a combination of Low Alt on Uplands and Low Alt on plains and fans). Figures 1 and 2 show this in much better detail. There is a figure listed in Annex 9 that lists a different total area available for deforestation than what is listed in the project calculations, and this area calculation is not explained in the PD. This is raised as an NCR in item 107. The stratification issue is resolved for the purpose of this NCR; however clarification is requested in NCR 107.		
Date closed:	25 August 2013	

170. Non-Conformity Report (VMD0016_X_STR, VMD0016, v1.0, line 18)

VCS Criteria: VMD0016, v1.0, II Procedures - At the project start and whenever biomass stocks are re-measured (i.e. at least every 10 years), project proponents must demonstrate after inventory that within the project area there are no unidentified (i.e. not previously stratified) discrete clusters of sample plots/points representing >10% of samples in the project area that consistently differ (i.e. each sample plot/point estimate) from the overall project mean by ±20%. In the event that such a cluster of points is identified, a new stratum will be delineated.
Evidence Used to Assess Conformance: PD Section 3.4; Annex 9
Findings: PD states: "No significant difference in carbon stock was detected between the productive forest strata measured in the field, therefore a single forest carbon strata was defined." - no data or information has been provided indicating this. Also, all plots were located in Low Altitude forest. PD and Annex 9 indicate plots were located in both low montane and low altitude.
Non-conformity report (NCR): D Section 3.4 States "No significant difference in carbon stock was detected between the productive forest strata measured in the field, therefore a single forest carbon strata was defined." However, based on GIS shapefiles, all plots were located in the Low Altitude Vegetation Class. How can significant differences be detected between strata if plots are only located in one stratum? Address and revise PD Section 3.4 accordingly.

Date issued:	17 April 2013
Project proponent response/actions and date: Section 3.4 of the PD has been revised to state "No significant difference (CI 95%) in carbon stock was detected between the plots measured in the field, therefore a single forest carbon strata was defined." Text is highlighted yellow for ease of review. – 5 June 2013	
Non-conformity report (NCR): As stated previously, this statement does not add to the argument that there were several forest strata identified in PNGRIS, the project identified 4 strata for sampling and then only sampled 2, and found differences that appear significant as per the methodology. The bigger issue here is that there is no information to suggest that all four of the original strata were measured so that this conclusion could be reached. Please discuss and show the calculations that allowed the project to decide to allocate the sample plots to only one or two strata, and merge all four previously identified strata into only one. If using previous sampling information from the previous sampling effort performed by the PNG Forest Authority, then please indicate as such, since at this time, there is not enough evidence to support the claims made. This item is considered to be very important since the entire project's carbon credits are being based upon a small number of samples that appear to only be taken from a limited area.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
all four previously identified strata were not merged into one. Only Low Altitude on Uplands and Low Altitude on Plains and Fans were 'merged'. This made sense as they are the same species/forest type, but are distinguished on slope/aspect. The other forest types int he FMA area were excluded from the accounting becasue they would not be harvested and therefore harvest roads wold not be established on them. As such the Project Area does not include all of the FMA area. Only areas classified as Low Altitude Forest are included in the Project Area. Figures 1 and 2 have been added to Annex 9 to and clarify this situation.	
Evidence used to close NCR: Stratification of the forest area is now explained in detail to represent the stratification before and after the sampling effort. It is explained that the only strata used for both quantification of carbon and the survey effort was from the Low Altitude areas (a combination of Low Alt on Uplands and Low Alt on plains and fans). Figures 1 and 2 show this in much better detail. There is a figure listed in Annex 9 that lists a different total area available for deforestation than what is listed in the project calculations, and this area calculation is not explained in the PD. This is raised as an NCR in item 107. The stratification issue is resolved for the purpose of this NCR; however clarification is requested in NCR 107.	
Date closed:	25 August 2013

171. Non-Conformity Report (VMD0016_X_STR, VMD0016, v1.0, line 19)

VCS Criteria: VMD0016, v1.0, II Procedures - At the project start and whenever biomass stocks are re-measured (i.e. at least every 10 years), project proponents must demonstrate after inventory that within the project area there are no unidentified (i.e. not previously stratified) discrete clusters of sample plots/points representing >10% of samples in the project area that consistently differ (i.e. each sample plot/point estimate) from the overall project mean by ±20%. In the event that such a cluster of points is identified, a new stratum will be delineated.
Evidence Used to Assess Conformance: PD Section 3.4; Annex 9
Findings: Annex 9 indicates plots were located in both Low Montane and Low Altitude strata. It is clear, however, that all plots were located in the Low Altitude Stratum.
Non-conformity report (NCR): Annex 9 indicates plots were located in both Low Montane and Low Altitude strata. Similar to Item 170 above, please revise Annex 9 to indicate all plots were located in the Low Altitude stratum. Please identify where changes were made.
Date issued: 17 April 2013
Project proponent response/actions and date: Reference to plots being located in Montane forest was removed from Section 1 of Annex 2 to Annex 9 of the PD. Remaining text in relevant paragraph were highlighted yellow to highlight changes. – 5 June 2013

Non-conformity report (NCR): Annex 9 still shows plots located in Low Montane in table 3. Were plots actually allocated to Low Montane originally? If so, that suggests that the project appeared to stratify prior to sampling, but the sample plots did not get allocated to the correct strata when the sampling finally occurred. Please clear up this confusion.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
No plots were located in the Low Montane strata originally, as these areas would not be harvested under the code of practice and were therefore eliminated from the inventory design. All reference to plots being allocated in strata other than Low Altitude forest types has now been removed to reflect the actual inventory approach taken.		
Evidence used to close NCR: Stratification of the forest area is now explained in detail to represent the stratification before and after the sampling effort. It is explained that the only strata used for both quantification of carbon and the survey effort was from the Low Altitude areas (a combination of Low Alt on Uplands and Low Alt on plains and fans). Figures 1 and 2 show this in much better detail. There is a figure listed in Annex 9 that lists a different total area available for deforestation than what is listed in the project calculations, and this area calculation is not explained in the PD. This is raised as an NCR in item 107. The stratification issue is resolved for the purpose of this NCR; however clarification is requested in NCR 107.		
Date closed:	25 August 2013	

172. Non-Conformity Report (VMD0016_X_STR, VMD0016, v1.0, line 21)

VCS Criteria: VMD0016, v1.0, II Procedures - A map displaying the final delineation of strata must be included in the VCS PD.	
Evidence Used to Assess Conformance: PD Section 3.4	
Findings: Map is included as Figure 22 but it is not current - the IFM operational boundary has changed	
Non-conformity report (NCR): PD Figure 22 is outdated. Please update this map accordingly and also ensure that all maps in the PD and associated Annexes are current. Please identify where any other maps are updated.	
Date issued:	17 April 2013
Project proponent response/actions and date: All maps have been updated accordingly and highlighted in yellow – 5 June 2013	
Evidence used to close NCR: Map updated. Issue is addressed.	
Date closed:	17 July 2013

173. Non-Conformity Report (VMD0016_X_STR, VMD0016, v1.0, line 22)

VCS Criteria: VMD0016, v1.0, II Procedures - Areas of individual strata naturally sum to the total project area; any discrepancies must be reconciled.	
Evidence Used to Assess Conformance: PD Section 3.4	
Findings: PD Indicates the individual strata sum to the total project area and it does match the calculator. However, independent quantification of the area of the strata does not match those presented in PD Table 23.	
Non-conformity report (NCR): Please revisit the quantification of area via GIS for the strata listed in PD Table 23 and update PD Section 3.4 and any associated calculations accordingly. The verifier calculated area independently from the provided shapefiles and found significant discrepancies when compared to the values reported in PD Table 23. These values are very important because they are variables that ultimately determine the amount of VCUs issued to the project. In addressing this NCR, consider choosing a consistent datum/projection for all GIS layers and calculations associated with the project.	
Date issued:	17 April 2013
Project proponent response/actions and date: All GIS area calculations have been re-visited as suggested. All files use for the area calculations (including operable area exclusions) have been re-projected into a consistent datum/projection that is appropriate for the site (Projected Coordinate	

System: WGS_1984_UTM_Zone_54S; Projection: Transverse_Mercator). Copies of the revised spatial files have been provided to the auditor. Note that there remains a very slight discrepancy between the IFM and REDD Project Boundaries specified in the calculation spreadsheet (and reproduced in Table 23), and those derived from the GIS files of the project boundaries. The GIS files for the Project boundaries are 20 ha and 2ha greater than the planned/calculated estimates, for the IFM and REDD Project boundaries respectively. The reason for the slight difference is because the planned area figures used for the calculations and reported in Table 23 were derived in from: 1) deforestation rates observed in proxy areas (in the case of the REDD Project boundaries), as well as 2) harvest rates and merchantable volume estimates cited in the FMDP and April River Timber Harvest Plan (in the case of the IFM Project boundaries). These areas were then spatially delineated in ArcGIS according to the procedures described in Sections 3 and 4 of the PD. Due to the iterative nature of this operation, it was not possible to get an exact match between the planned area figures and those spatially delineated in ArcGIS, due to the large number of exclusions required (e.g. peat domes, riverine buffers, slope etc.), which were performed using the 'Erase' tool in ArcGIS. It should be noted that all area figures are consistently applied in the calculations, the discrepancy will not affect the accuracy of the VER calculations. Given that there is only one forest carbon strata in the Project Area, the only implication of the discrepancy is that a slightly larger area will be monitored than strictly required, and any disturbance occurring in these areas will be reported and deducted from the estimates of VERs accordingly. Therefore this discrepancy is conservative. An asterix next to the affected figures in Table 23 clarifies the extent of this discrepancy. – 5 June 2013		
Non-conformity report (NCR): Spatial files not found. Please forward the revised spatial files for review.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
Spatial files provide in response to this NCR include: The IFM Project boundary (196,723) The April River FMA boundary (74,979 ha) the April Salumei FMA boundary(582,600 ha) and the first 10 year roads boundary (2,553 ha).		
Evidence used to close NCR: Provided Spatial Files; ProjectDescription_AprilSalumei_V1.3.docx - Spatial files were reviewed and independent quantification indicates that the GIS area quantification issues have been rectified. PD Table 22, Section 3.4 and associated calculations have been updated accordingly. Although there are small discrepancies in the GIS values and those used in accounting, it is justified and conservative. Item is addressed.		
Date closed:	19 August 2013	

174. Clarification (VMD0016_X_STR, VMD0016, v1.0, line 23)

VCS Criteria: VMD0016, v1.0, II Procedures - Areas of individual strata naturally sum to the total project area; any discrepancies must be reconciled.	
Evidence Used to Assess Conformance: PD Section 3.4	
Findings: PD Table 23 indicates that the total forested area in the FMA is 582, 762. The FMA document itself indicates the FMA totals 521, 500 Ha.	
Clarification (CL): Please explain how the total forested area of the FMA is 582,762 ha if the entire FMA (including all land uses) is 521,500 ha (as defined in Annex 4 Schedule 2).	
Date issued:	17 April 2013
Project proponent response/actions and date: Corrections have been made to the Section 3.4 of the PD for clarity. Previously the total Area was listed as Forest Area only and this was confusing. This clarifying text now reads "The total area listed in Table 23 represents the combined area of April Salumei (528,590 hectares) and April River (74,978 hectares) FMA areas as reported I the PNG Forest Authority spatial database." Annex 4, Schedule 2 was not considered as accurate as spatial files did not accompany this document. Improvements to the spatial data of FMAs in PNG has occurred since the publication of Annex 4, Schedule 2 and therefore this spatial dataset was considered more appropriate for areas. Note Annex 4 Schedule 2 only refers to the April Salumei FMA area which is reported as	

521,500hectares compared with 528,590 hectares in the spatial database. – 5 June 2013		
Clarification (CL): Statement not found in Section 3.4 of PDD 528,590 + 74,978 = 603,568 ha 603,713 ha is listed in the PD as the total in table 22. Spatial files not found for comparison. Please explain the difference in these totals and please forward the spatial files for review.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	05 August 2013
Text has now been added to Section 3.4 of the PD and highlighted green. Spatial files have been provided alside this NCR. In the correct projection of WGS84 54S the total area of the FMAs is 603,579 hectares. The documents have been updated accordingly.		
Evidence used to close CL: Provided Spatial Files; ProjectDescription_AprilSalumei_V1.3.docx - The text modifications/additions to PD Section 3.4 adequately address this item. PD Table 22, Section 3.4 and associated calculations have been updated accordingly. Although there are small discrepancies in the GIS values and those used in accounting, it is justified and conservative.		
Date closed:	19 August 2013	

175. Clarification (VMD0016_X_STR, VMD0016, v1.0, line 24)

VCS Criteria: VMD0016, v1.0, II Procedures - Areas of individual strata naturally sum to the total project area; any discrepancies must be reconciled.	
Evidence Used to Assess Conformance: PD Section 3.4	
Findings: Also, Why is Schedule 2 - Item 2 (FMA Map) not included	
Clarification (CL): Please explain why Schedule 2 - Item 2 (FMA Map) is not included in Annex 4.	
Date issued:	17 April 2013
Project proponent response/actions and date: Schedule 2 in Annex 4 is a description of the FMA area and is included on page 38. The description starts on the following page from title. The physical map is missing from this FMA agreement due to the controversy surrounding the WMA area which covered the conservation area described in the DOS (see also response to 178). The actual spatial files of the April Salumei FMA can (and have been) extracted from the PNG Forest Authority spatial database which is considered to be the most accurate source. The April Salumei FMA spatial file from the PNG Forest Authority spatial database matches the text description on page 38 of the Annex 4. – 5 June 2013	
Evidence used to close CL: Schedule 2 found on PDF page 38 and includes a description of the area being 521,500 ha. Issue is addressed.	
Date closed:	17 July 2013

176. Clarification (VMD0016_X_STR, VMD0016, v1.0, line 25)

VCS Criteria: VMD0016, v1.0, II Procedures - Areas of individual strata naturally sum to the total project area; any discrepancies must be reconciled.	
Evidence Used to Assess Conformance: PD Section 3.4	
Findings: Schedule 2 of the FMA does not clearly include the April River Area.	
Clarification Schedule 2 of Annex 4 (FMA) does not clearly identify the April River Area as being part of the April Salumei FMA. Further, the DOS (Annex 6) indicates landowners in the April river Area refused to sign the FMA. Please identify where in the PD supporting documentation provided it can be verified that the April River area is clearly included in the FMA. Else provide additional verifiable documentation indicating that the April River area is indeed a FMA.	
Date issued:	17 April 2013
Project proponent response/actions and date: Annex 4 represents the April Salumei FMA only. Both the April River and April Salumei areas are defined as FMA areas in the PNG Forest Authority Spatial Database. A map has been developed in response to NCR 219 showing the spatial delineation of the two areas as defined in the spatial database. Both areas were to be included in the original Development Option Study as evidenced by Forest Authority meeting minutes from 1997 (attached to this finding, see pages 2 and 3). This area was	

removed from the initial DOS due to the wishes of the landholders to have their land spatially delineated. Their unwillingness to sign was not because they did not want to have the area harvested (which is further supported by the group conducting their own timber harvest plan based on the DOS for April Salumei)but rather their unwillingness to sign was due to an unwillingness to join at the time with the landholders of April Salumei. this unwillingness was primarily due to conflicts between some landowner chairmen. The April River area is demarcated for timber harvest by the Forest Authority and therefore is at risk of being harvested due to its land use classification. – 5 June 2013	
Evidence used to close CL: Minutes reviewed and comments found that support the idea that the April River area was intended to have been included. Issue is addressed.	
Date closed:	17 July 2013

177. Non-Conformity Report (VMD0016_X_STR, VMD0016, v1.0, line 26)

VCS Criteria: VMD0016, v1.0, II Procedures - Areas of individual strata naturally sum to the total project area; any discrepancies must be reconciled.	
Evidence Used to Assess Conformance: PD Section 3.4	
Findings: The south western boundary doesn't match the East Sepik boundary.	
Non-conformity report (NCR): Schedule 2 of the FMA indicates boundary issues from along the southwestern FMA boundary as established in GIS. As defined in Schedule 2, the boundary should follow the provincial Administrative boundary of the West Sepik Province northerly and westerly to the intersection with Leonard Schultze river. Please address.	
Date issued:	17 April 2013
Project proponent response/actions and date: The shapefile of the April Salumei Forest Management Area boundary is the spatial file provided by the PNG Forest Authority and is the spatial file for the registered FMA from their Forest Information Management System (FIMS). The description in Schedule 2 of the FMA agreement is simply a verbal description using mainly topographical features to describe the boundary characteristics. See also our related response to NCR 40. We maintain that we should use the spatial file for the FMA boundary that is from the PNGFA FIMS database as this is the recorded official boundary. We believe we should not alter this boundary. The FMA boundary was agreed by the landholders and the PNG Forest Authority. For the purposes of the project this boundary defines the land ownership and land use classification of the Project Area which consists of the IFM boundary and the REDD boundary which are both within the bounds of the FMA. – 5 June 2013	
Evidence used to close NCR: The FMA boundary is the spatial file provided by the PNG Forest Authority and is the spatial file for the registered FMA from the PNGFA Forest Information Management System (FIMS), not adjusting the boundary is warranted. Item is addressed.	
Date closed:	17 July 2013

178. Clarification (VMD0016_X_STR, VMD0016, v1.0, line 27)

VCS Criteria: VMD0016, v1.0, II Procedures - Areas of individual strata naturally sum to the total project area; any discrepancies must be reconciled.	
Evidence Used to Assess Conformance: PD Section 3.4	
Findings: Also, the DOS (Annex 6) and the FMA (Annex 4) indicates that a 68,050 ha area was demarcated on the FMA map as a conservation area. Further the DOS indicates that physical demarcation of this area will occur prior to commencement of logging activities.	
Clarification The DOS (Annex 6) and the FMA (Annex 4) indicate that an area of approximately 68,050 ha area was demarcated on the FMA map (which is missing from the FMA document) as a conservation area. Further, the DOS indicates that physical demarcation of this area would occur prior to commencement of operations, thus suggesting the area would not be subject to infrastructure development or logging activities. Please explain if and how this conservation area was considered with regards to this project.	
Date issued:	17 April 2013
Project proponent response/actions and date: The conservation area referred to in the DOS describes the area temporarily defined as the WMA. Much of this area is wetlands and peatland areas	

that were considered at the time of the DOS to be important conservation areas. Whilst the WMA was temporarily spatially delineated, it is no longer active. In the development of the Project we have restricted the harvesting to areas only considered to be Low Altitude Forest and all low lying wetland and peatland areas have been removed. – 5 June 2013	
Evidence used to close CL: WMA area issues were discussed while on the site visit. This area was determined to not be allocated as a conservation area. This issue is addressed.	
Date closed:	17 July 2013

179. Non-Conformity Report (VMD0017_X_UNC, VMD0017 v2.0, line 28)

VCS Criteria: VMD0017, v2.0, 5 Procedures, Step 1: Assess uncertainty in projection of baseline rate of deforestation or degradation, a. Planned Deforestation: where rate of deforestation is derived from measurements of proxy areas (see module BL-PL): - The uncertainty shall be equal to the 95% confidence interval as a percentage of the mean of the area deforested in each proxy (D%pn) divided by the number of years over which deforestation occurred in each proxy (Yrspn).	
Evidence Used to Assess Conformance: PD Section 3.12.2; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: The uncertainty is not current being calculated as 95% CI (% of Mean)/#years of deforestation. See X-UNC tab - Cell C5. Currently is being calculated as 95% CI (% of Sum) of Deforestation. Currently shows 1.38 %, should equal 4.14 %.	
Non-conformity report (NCR): Please revise Cell C5 of the VM0007-X-UNC Tab of VCS_7_10_Calculator_PNG-M1_V1.0.xlsx. Uncertainty for deforestation rate is currently being calculated as the 95% CI as a percentage of the sum of D%pn divided by the number of years.	
Date issued:	17 April 2013
Project proponent response/actions and date: This issue was corrected by removing the '+' signs in the cell so that average was correctly calculated. Changes are highlighted in Yellow. – 5 June 2013	
Non-conformity report (NCR): No change noted in VCS _7_10_Calculator_PNG-M1_V1.1.xls Please make the change as well as include all 7 of the proxy areas in the calculation and resubmit.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
The correction to the cell has been made on the X-UNC tab. Correction has been highlighted green. Note also that the t statistics were found to be incorrectly listed on tab InputsVM0007 and have been updated. The t-Table used is provided with this NCR.	
Evidence used to close NCR: These corrections have been made in the VM0007-X-UNC tab. Issue addressed.	
Date closed:	25 August 2013

180. Non-Conformity Report (VMD0017_X_UNC, VMD0017 v2.0, line 34)

VCS Criteria: VMN0017, v2.0, 5 Procedures, Step 2: Assess uncertainty of emissions and removals in project area - Uncertainty should be expressed as the 95% confidence interval as a percentage of the mean using Equation 4 on Page 8	
Evidence Used to Assess Conformance: PD Section 3.12.2; VCS_7_10_Calculator_PNG-M1_V1.0.xlsx	
Findings: Confirmed application of equation in ex-post calculator - See X-UNC Tab. However, uncertainty from the wood products pool is not included - the uncertainty should be the confidence interval around the volume of timber extracted from the forest.	
Non-conformity report (NCR): Please justify non-inclusion of uncertainty from the wood products pool in the assessment of uncertainty of emissions and removals. Else, include the uncertainty from the wood products pool in the assessment as the confidence interval around the volume of timber extracted from the forest.	
Date issued:	17 April 2013
Project proponent response/actions and date: The VMD0014 X-UNC v2.0 module states: "For wood products the uncertainty should be the confidence interval around the volume of timber	

extracted from the forest. For emission sources conservative parameters should be used sufficient to allow the uncertainty to be set as zero." The uncertainty related to the extracted volume is conservatively assumed to be zero as there is no evidence that the timber harvest companies extract less than the specified amount in the timber harvest plan. In fact there is evidence that over the course of the FMA timber harvest plan more timber than legally permitted is removed (see attached supporting evidence). The project has used conservative extracted volumes and therefore in accordance with the module the associated uncertainty was assigned at zero. – 5 June 2013	
Evidence used to close NCR: This explanation is valid as it has been proven via direct observations that the logging companies most likely take more than they are allowed, and further, there is no proof that can be reasonably gained that would point to a legitimate CI around the amount of wood taken. To set the uncertainty of this parameter to 0 appears valid. Issue is addressed.	
Date closed:	17 July 2013

181. Non-Conformity Report (VT0001_T-ADD, VT0001 v3.0, line 10)

VCS Criteria: VT0001, v3.0, 1 Scope and Applicability, 1.2 Applicability conditions - a) AFOLU activities the same or similar to the proposed project activity (In the context of this tool, activities the same or similar to the proposed project activity are used for the identification of possible land use scenarios that are allowable AFOLU activities under VCS document AFOLU Requirements) 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;	
Evidence Used to Assess Conformance: PD Section 2.5, Annexes 3 and 4	
Findings: PD States: "As the project is focused solely on the protection of virgin forest areas, the proposed project activities do not lead to violation of any applicable law, even if the law is not enforced. The forest was zoned for timber harvest however the Forest Authority has formally agreed to allow the Project Area to be protected as a REDD project. This agreement was formalized through the National Executive Committee decision number NG 106/2012 dated 6th November 2002. This document can be found in Annex 3." Annex 3 does indicate that PNGFA has agreed that the April Salumei area can be managed to protect forest resources. Further, the legal opinion letter indicates that the project itself and voluntary carbon trading will not be in violation of any law. However, The PD presents the incorrect date of the NEC Decision.	
Non-conformity report (NCR): PD Section 2.5 indicates that the National Executive Committee decision number NG 106/2012 is dated 06 November 2002. The document itself is dated 10 May 2012. Please modify the text in PD Section 2.5 to indicate the correct date of the NEC decision supporting the REDD project.	
Date issued:	17 April 2013
Project proponent response/actions and date: This date has been changed to 10th May 2012 and text highlighted. – 5 June 2013	
Evidence used to close NCR: Section 2.5.1 text changed. Issue is addressed.	
Date closed:	17 July 2013

182. Non-Conformity Report (VT0001_T-ADD, VT0001 v3.0, line 29)

VCS Criteria: VT0001, v3.0, 2 Procedures, 2.1.1 Sub-step 1a. Identify credible alternative land use scenarios to the proposed VCS AFOLU project activity, iii) If applicable, activities similar to the proposed project activity on at least part of the land within the project boundary of the proposed VCS AFOLU project at a rate resulting from: - c) Outcome of Sub-step 1a: List of credible alternative land use scenarios that could have occurred on the land within the project boundary of the VCS AFOLU project.
Evidence Used to Assess Conformance: PD Section 2.5.1
Findings: 1. Continuation of pre-project land use: planned deforestation due to road construction, commercial logging. 2. Project activity on the land within the project boundary performed without being registered as the VCS AFOLU project: protection of the area without carbon revenues. 3. Activities similar to the proposed project activity, resulting from legal requirements - protection resulting from WMA establishment. All three seem to be realistic and credible..... The FMA is an Agreement that is the combination of two plans: Road Timber's plan and April Development Corp

Timber Resource's plan. Figure 21 - Why would agricultural conversion be approved in these plans by the Forest Authority, unless PNG wants to create agriculture lands for private investment after logging? If this is true, then another plausible baseline scenario should be to attract private capital and develop these ag lands and develop employment. Several times it is stated that ag conversion is done because of future investment interest. It appears that the FMA plan is never complied with, since agriculture is never accomplished. PNG just allows companies like Road Timber to cut and run with no investment in ag development. Where is the evidence that agriculture investment exists? Should timber revenues be used to develop agricultural jobs for ILGs?	
Non-conformity report (NCR): In regards to conversion to Agriculture, PD Section 2.5.1 states "this baseline land use conversion scenario was not considered imminent during the ten year baseline validity period, based on the rate of land use change observed in the proxy areas." Conversion to palm oil plantations was observed during the site visit at the West Sepik proxy area. Please provide evidence that conversion to agriculture would not occur during the first ten year baseline period and include this evidence in Section 2.5.1. Else, please include another plausible baseline scenario that includes development of agricultural lands immediately after harvesting.	
Date issued:	17 April 2013
Project proponent response/actions and date: During the 10 year historical land use change analysis conducted in West Sepik there was no clearing for agriculture conversion detected. This is evident in the LULC map presented in Section 2.5.1. The palm oil plantations observed in commercial timber areas during the site visit had been cleared after the end of our baseline period (i.e. after 2009). The areas of agricultural clearance in West New Britain are occurring in FMAs that have been operational for timber extraction for periods slightly longer than West New Britain. Whilst it is likely that lower lying areas in lower productive forest lands such as woodlands and swampland would be converted within our FMA earlier than 10 years after the start date for harvesting (and as per the plan) these areas are being considered in Phase 2 of the Project and would be outside of our IFM accounting area. Given the topographical conditions in the IFM boundary combined with the vast amount of lower lying less productive forest area within the April Salumei FMA it is obvious these other areas will be converted to palm oil, coffee and cocoa. These will be considered in Phase 2 and will not be considered within the existing IFM and road boundaries that form this Phase 1 of the project. – 5 June 2013	
Evidence used to close NCR: This explanation makes sense given the topography and the much more rich and accessible soils found in the peat areas. Issue is addressed.	
Date closed:	17 July 2013

183. Non-Conformity Report (VT0001_T-ADD, VT0001 v3.0, line 42)

VCS Criteria: VT0001, v3.0, 2 Procedures, 2.2 Step 2. Investment analysis - Determine whether the proposed project activity, without the revenue from the sale of GHG credits is economically or financially less attractive than at least one of the other land use scenarios.	
Evidence Used to Assess Conformance: NA	
Findings: Table 21 Barrier Analysis - This analysis is not sufficient. There is no rigor in this analysis. The financial analysis must be conducted to clearly demonstrate that carbon revenues are required to make this project work. This will require a disclosure of the revenue streams created by the timber concession and payments made to the ILGs. Timber revenue is known and predictable, and demand is increasing globally. The price for VCS forest carbon offsets and VCU carbon revenues are unknown, and will likely be significantly less over the 10 years that the baseline is valid. What was promised in the Agreement to reclassify the FMA into a REDD project? What was April promised? A financial analysis should clearly show that carbon revenue streams are greater than timber concession revenue streams. Why are the ILGs not capturing the lion's share of timber royalties? These should be greater than carbon revenues for paying for all the Strategies under Section 1.8.2. Also note that during the field opening meeting, Stephen indicated that @ $5/tonne, the REDD project is more financially rewarding versus logging.	
Non-conformity report (NCR): The Barrier Analysis is not deemed to be sufficient. Please include an investment analysis to clearly demonstrate that carbon revenues are required to make this project work. In completing the investment analysis, follow the procedures outlines in Section 2.2 of T-ADD.	
Date issued:	17 April 2013

Project proponent response/actions and date: Additional supporting evidence was provided for the Barrier Analysis and therefore the Investment Analysis was not deemed required to conduct an Investment Analysis in accordance with T-ADD. – 5 June 2013		
Non-conformity report (NCR): Please indicate exactly what additional information was provided for the barrier analysis as it is not located by verifiers.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
In the original version of the PD the Barrier Analysis was presented on page 58, Table 21. This was brief and to the point. As a result of the NCR, significant additioanl material was added to the barrier analysis. This is now presented in Section 2.5.3. This section expalnds on the barriers ober 3-4 pages. It identifies three main barriers to implementation and cites a signifincat number of relevant studies that have been conducted in PNG. A comparison of hte material presented in the first version f hte PD and the current version of the PD is attached to this NCR to assist in the review of the material.		
Evidence used to close NCR: Barrier analysis now appears to be much more detailed to reflect the fact that conservation funds are not available for the scale and type of project area involved in this project. Further, this project appears to only be applicable if carbon funding is available. This is evidenced additionally by the fact that the project area was deemed to be suitable as a wildlife management area, but the project area owners litigated against this because there was not sufficient funding available to support this designation, and that the options of either timber production or carbon finance were the only viable options. the fact is the land owners need to earn money from their land and no other option short of carbon finance or logging will actuate that reality. This issue is addressed.		
Date closed:	25 August 2013	

184. Non-Conformity Report (VT0001_T-ADD, VT0001 v3.0, line 90)

VCS Criteria: VT0001, v3.0, 2 Procedures, 2.3 Step 3. Barrier analysis, c) Institutional barriers, inter alia: - ii) Lack of enforcement of forest or land-use-related legislation.	
Evidence Used to Assess Conformance: PD Section 2.5.2	
Findings: "Poor enforcement of Government conservation policies makes it difficult to implement a conservation project in the absence of carbon finance. This is evidenced by the Government's failed attempt to implement a WMA on the site." - How does a failed attempt to implement a WMA show that a lack of enforcement would prevent the implementation of this type of proposed project activity without the revenue from the sale of GHG credits? Had the landowners agreed, the WMA would have been established. Please provide additional references/information supporting this claim. "Many publications (GoPapua New Guinea, 1989, Forest Trends, 2006, ODI, 2007, Ningal et al, 2008, Shearman et al. 2009, Shearman and Bryan, 2011) document and provide evidence of illegal logging, unregulated agricultural expansion, and noncompliance with the Government's forestry and agriculture policies. This low level of compliance implies that it is actually easier to implement an (unsustainable) logging or agricultural regime in Papua New Guinea, so poor enforcement of Government policy and legislation is not a barrier to these land uses."	
Non-conformity report (NCR): Please include in PD Table 21 relevant transparent and documented evidence clearly supporting the claim that poor enforcement of government policies & laws would prevent the implementation of a forest protection project without the revenue from the sale of GHG credits. A failed attempt to implement a WMA does not support this; had the landowners agreed, wouldn't the WMA have been established? Enforcement of the requirements of the WMA would have come after establishment.	
Date issued:	17 April 2013
Project proponent response/actions and date: Table 21 - Poor enforcement of Government policies & laws on sustainable land management. This element in the demonstration of additionality has been edited in the PD (and highlighted yellow) as follows: The PNG government recognized the relationship between the people and nature and at independence, provision was made in the constitution for "...all necessary steps to be taken to give adequate protection to all our valued birds, animals, fish, insects, plants and trees". In addition to this	

biodiversity is explicitly protected by the following legislation: Fauna Act/1982, Conservation areas Act/1980, 1992, the Crocodile Trade Act/1982 and the International Trade Act/1982. However, despite the provision for conservation in the legal framework, as well as interest shown by international organizations such as Conservation International (CI), The Binatang Research Centre (BRC), Wildlife Conservation Society (WCS), World Wildlife Fund (WWF) and The Nature Conservancy (TNC) it is still a challenge to carry out conservation in PNG. The land tenure, wherein the communities own 97% of the land makes it difficult for the government or any conservation organization to procure land for conservation. Therefore, involving communities in establishing Wildlife Management Areas (WMA) was identified as being compatible with the PNG land tenure system. The PNG constitution recognized this and empowered the landowners to be involved with conservation on their own land. A study into the effectiveness of some WMA areas in PNG (Benson, 2007) found that it was "unclear if on-the-ground management practices have changed as a result of this official (WMA) recognition". The study found International NGOs seem to be focusing more on the creation of such areas while neglecting the implementation and enforcement of WMA management plans. It gives the example of the Tab Island WMA created by Siar landowners, dynamite fishing and deforestation continue despite rules forbidding such practices in the Management Plan. The government of PNG does not have the finances to actively enforce the Management Plans and is relying on NGOs. with many of these organizations leaving the country due to safety and security issues the ongoing implementation of the management plans will pose challenges as landholders must still make a livelihood from the resources available to them in their land and many of these management plans have not provide provision or activities to do so (Benson, 2007). – 5 June 2013	
Evidence used to close NCR: Benson document reviewed and found similar conclusion. It is clear that the project area would have been converted to something less than conservation oriented in the absence of the project. The land owners were clearly trying to move forward with logging operation. WMA or other conservation option does not pay the bills, nor does it provide any infrastructure etc. While the WMA was not implemented, it does not mean that it would have remained and it was clear that the land owner groups did not want it in the forest place. They need to produce an income from their properties so they can improve their lives. this would not happen without the implementation of the FMA or a Carbon project. No group is offering to pay them for a conservation area. It seems that this barrier may not be the most strong of the three listed, but clearly has some relevance given the vast area covered by this project and the simple fact that the land owners need to secure more funding. Even if they did protect the area, it is probable that there would still be incursions into the area by illegal logging (adjacent FMA's) or simply noncompliance with the WMA. This barrier is considered addressed.	
Date closed:	17 July 2013

185. Non-Conformity Report (VT0001_T-ADD, VT0001 v3.0, line 124)

VCS Criteria: VT0001, v3.0, 2 Procedures, 2.3 Step 3. Barrier analysis, v) Barriers relating to markets, transport and storage - I) Provide transparent and documented evidence, and offer conservative interpretations of this documented evidence, as to how it demonstrates the existence and significance of the identified barriers. Anecdotal evidence can be included, but alone is not sufficient proof of barriers.	
Evidence Used to Assess Conformance: PD Section 2.5.2	
Findings: Access to NGO or Government funding barrier - no transparent and documented evidence provided.	
Non-conformity report (NCR): Please include in PD Table 21 (and provide to the verifier) transparent and documented evidence demonstrating the existence and significance of Access to NGO or Government Funding as a barrier to project implementation.	
Date issued:	17 April 2013
Project proponent response/actions and date: There are many aid and NGO programs in PNG but none achieving the forest conversation outcomes on the scale or longevity that this project will bring. A list of the largest Aid agencies / NGO programs is provided here to demonstrate that the activities are not achieving forest conservation outcomes. Since the commencement of the April Salumei project, funds have been made available from the UN REDD program and are being utilized for forest	

research and jurisdictional REDD activities, however none of these projects are of the scale of April Salumei nor of the same forest conservation type. All the other projects have additional revenue streams from logging or are afforestation activities. Caritas - In 2010/11 Caritas Australia implemented 11 projects with 14 local partners in PNG. Just over $1.8 million was spent on projects covering a variety of issues including education, basic health and HIV/AIDS, and community empowerment. http://www.caritas.org.au/learn/countries/papua-new-guinea WWF - Forest Conversion Project - WWF approach in Malaysia, Papua New Guinea, Brazil, where the HCV -concept is unknown or untested, pilot projects should be initiated both at the landscape and concession levels. While WWF can provide some seed money, contributions in kind (expertise, staff time) should be favored in order to avoid a dependency upon WWF. Once successful pilots have been conducted, WWF's efforts should focus on mainstreaming the methodology and successively taking over the role of a critical but constructive stakeholder. At the time of writing WWF no longer has offices in PNG and have no active project there. AUSAID - the Australian government provides more than $490 million in aid to PNG in 2012/2013. Australia's assistance to PNG is directed to four priority areas jointly agreed and reflected in the PNG-Australia Partnership for Development. These priority areas are: education, (including higher education) health and HIV/AIDS law and justice transport infrastructure. No funds are directed to forest conservation. http://www.ausaid.gov.au/countries/pacific/png/Pages/default.aspx The Australian Government provides Forest related aid to PNG through Papua the New Guinea-Australia Forest Carbon Partnership The Prime Ministers of Australia and Papua New Guinea established the Papua New Guinea-Australia Forest Carbon Partnership on 6 March 2008, formalizing our cooperation on REDD+. Australia has committed up to $3 million in initial funding which includes technical, scientific and analytical support for whole of government policy development on REDD+. this program is currently on-hold. http://www.climatechange.gov.au/government/initiatives/international-forest-carbon-initiative/action.aspx Whilst there are funds available most of the money is taking time to filter through to PNG due to the governance challenges. These programs are primarily focused on addressing governance and developing policy rather than being funds available for landholders to develop and progress carbon projects through the VCS. – 5 June 2013
Evidence used to close NCR: Verifiers have reviewed these websites and also performed an independent web search that reveals that while conservation is a popular concept outside of PNG, it is not practiced nor is it enforced within PNG. There is no evidence that supports government or NGO funding for continued protection of forests and certainly not to the scale of this project. According to Wikipedia- "There has been strong debate about whether conservation driven by international NGOs is truly sustainable in PNG; certain large integrated conservation-development projects operated by the local offices of these international NGOs has come under fire,[31] and broader complaints have surfaced.[32] The criticism is that international conservation NGOs have become corporate entities in a way that no longer mirrors the way indigenous conservation initiative has naturally evolved in countries prior to their existence." this argument appears valid for the purposes of establishing the fact that funding for conservation is clearly not common in PNG and that alone satisfies this item.
Date closed: 17 July 2013

186. Clarification (VT0001_T-ADD, VT0001 v3.0, line 124)

VCS Criteria: VT0001, v3.0, 2 Procedures, 2.3 Step 3. Barrier analysis, v) Barriers relating to markets, transport and storage - I) Provide transparent and documented evidence, and offer conservative interpretations of this documented evidence, as to how it demonstrates the existence and significance of the identified barriers. Anecdotal evidence can be included, but alone is not sufficient proof of barriers.
Evidence Used to Assess Conformance: PD Section 2.5.2

Findings: Need for sustainable revenue generation - transparent and documented evidence exists that supports the need for sustainable revenue generation would prevent the implementation of a forest protection project without the revenue from the sale of GHG credits- Annex 16, but it needs referred to.	
Clarification (CL): In PD Table 21, please refer to transparent and documented evidence clearly supporting the claim that the Need for Sustainable Revenue Generation would prevent the implementation of a forest protection project without the revenue from the sale of GHG credits.	
Date issued:	17 April 2013
Project proponent response/actions and date: There is a plethora of studies and peer reviewed literature on the fate of land in PNG once title has been registered and the land classified for production either as an FMA or more recently as an SABL. Once the land is registered the pressure internally (from the landholders for development and income) and externally (from large development companies such as timber and palm oil) mounts to generate a return from the land. Two such references are attached to this finding. Anderson (date unknown), succinctly explains the fate of registered land "Cash poor, asset rich families are vulnerable in exchange, as there are pressures to earn money to pay their children's school fees and health service fees. They are vulnerable to cash offers, and can easily undervalue their assets." More recently a report by Greenpeace (Up for Grabs, 2012) explains the pressure on land in PNG that is registered and allocated as FMAs for large scale conversion activities under the controversial land classification of Special Agricultural Business Licenses (SABLs). These activities clearly demonstrate that the land is under pressure for timber harvest or conversion to agriculture from large companies and that once registered (like the Project Area) these areas will not be preserved unless income can be generated. – 5 June 2013	
Evidence used to close CL: Verifiers have reviewed these websites and also performed an independent web search that reveals that while conservation is a popular concept outside of PNG, it is not practiced nor is it enforced within PNG. There is no evidence that supports government or NGO funding for continued protection of forests and certainly not to the scale of this project. According to Wikipedia- "There has been strong debate about whether conservation driven by international NGOs is truly sustainable in PNG; certain large integrated conservation-development projects operated by the local offices of these international NGOs has come under fire,[31] and broader complaints have surfaced.[32] The criticism is that international conservation NGOs have become corporate entities in a way that no longer mirrors the way indigenous conservation initiative has naturally evolved in countries prior to their existence." This argument appears valid for the purposes of establishing the fact that funding for conservation is clearly not common in PNG and that alone satisfies this item.	
Date closed:	17 July 2013

187. Clarification (VT0001_T-ADD, VT0001 v3.0, line 133)

VCS Criteria: VT0001, v3.0, 2 Procedures, 2.3.2 Sub-step 3b. Show that the identified barriers would not prevent the implementation of at least one of the alternative land use scenarios (except the proposed project activity): - If the identified barriers also affect other land use scenarios, explain how they are affected less strongly than they affect the proposed VCS AFOLU project activity. In other words, explain how the identified barriers are not preventing the implementation of at least one of the alternative land use scenarios.	
Evidence Used to Assess Conformance: PD Section 2.5.2	
Findings: Access to NGO or Government funding barrier - need the documents referred to already. Need for sustainable revenue generation - evidence that is does not prevent the implantation of logging needs to be supported by external FMDPs - As per 2.3.10.a above, the barriers should not be specific to the project or the project proponent(s) - the evidence given is specific to the project	
Clarification (CL): Please provide the verifiers with the references in Table 21 supporting the claim that enforcement of government policies & laws on sustainable land management is not a barrier to an unsustainable logging or agricultural regime in Papua New Guinea.	
Date issued:	17 April 2013
Project proponent response/actions and date: The following references were provided: (Forest Trends, 2006, ODI, 2007, Ningal et al, 2008, Shearman et al. 2009, Shearman and Bryan, 2011).	

We do not have an electronic or hard copy of the GoPNG,1989 reference. – 5 June 2013	
Evidence used to close CL: This information is sufficient to satisfy this item. It was clear during the site visit that the land owners want to create income from their property and will take whatever steps needed to do so. It is clear that regardless of the sustainability of revenue, that the project area would be logged over several years and possibly some areas would be converted to Palm Oil. Even while on the site visit, verifiers had the opportunity to speak with a government official who was on site to research the possibility of rice production. During a 6 hour over flight of the area, it was clear that production, logging and mining were happening all over the country, even within the project area, unbeknownst to the actual land owners. This was due to a personal agreement having been made with one village just so that funding could be generated. Issue is addressed. References submitted to verifiers. Issue is addressed.	
Date closed:	17 July 2013

188. Non-Conformity Report (VT0001_T-ADD, VT0001 v3.0, line 133)

VCS Criteria: VT0001, v3.0, 2 Procedures, 2.3.2 Sub-step 3b. Show that the identified barriers would not prevent the implementation of at least one of the alternative land use scenarios (except the proposed project activity): - If the identified barriers also affect other land use scenarios, explain how they are affected less strongly than they affect the proposed VCS AFOLU project activity. In other words, explain how the identified barriers are not preventing the implementation of at least one of the alternative land use scenarios.	
Evidence Used to Assess Conformance: PD Section 2.5.2	
Findings: Access to NGO or Government funding barrier - need the documents referred to already. Need for sustainable revenue generation - evidence that is does not prevent the implantation of logging needs to be supported by external FMDPs - As per 2.3.10.a above, the barriers should not be specific to the project or the project proponent(s) - the evidence given is specific to the project	
Non-conformity report (NCR): Please include in PD Table 21 (and provide to the verifier) transparent and documented evidence that is not specific to the project area, and that supports the claim that the Need for Sustainable Revenue Generation does not prevent the implementation of logging operations (i.e. other FMDPs or similar in PNG).	
Date issued:	17 April 2013
Project proponent response/actions and date: The text in the table has been edited and highlighted yellow as follows: In rural areas of PNG, there are usually extremely limited opportunities for formal paid employment. While most rural people in PNG have cash incomes from small-scale agriculture, the informal economy, or remittances from employed family members living in town, these amounts are usually small and irregular. Direct financial payments to local resource owners are therefore a major inducement to accept commercial exploitation of forest resources. The extent and size of direct financial benefits paid to resource owners in the forestry sector varies from project to project and can change over time as agreements are renegotiated to satisfy stakeholder expectations or changing circumstances. A timber royalty calculated according to the volume of timber harvested is common to all projects. The rate is nationally mandated and currently stands at K10 per cubic meter (about 3 US dollars). Based on current export levels, resource owners are currently entitled to receive about K20 million kina (US$6 million) in royalties each year. This represents about K4 (US$1.20) per person if averaged across everyone in PNG. The Resource Economists engaged as part of a Review of Current Logging Projects found: "Few lasting benefits are reaching landowners because payments to the poorest and most remotely located communities are too small and ephemeral to have a lasting impact and are not complemented by investment in public services by government. Payments that reach rural populations, furthermore, are primarily used to purchase consumables by men and infrequently invested." There is also the problem that because logging is not managed on a sustained yield basis, cash incomes to local groups only exist for a few years as the logging company moves through a particular forest area and do not provide 'sustained and certain income streams.' Reference: Forest Trend, 2006 Volume 1. - 5 June 2013	

Evidence used to close NCR: This information is sufficient to satisfy this item. It was clear during the site visit that the land owners want to create income from their property and will take whatever steps needed to do so. It is clear that regardless of the sustainability of revenue, that the project area would be logged over several years and possibly some areas would be converted to Palm Oil. Even while on the site visit, verifiers had the opportunity to speak with a government official who was on site to research the possibility of rice production. During a 6 hour over flight of the area, it was clear that production, logging and mining were happening all over the country, even within the project area, unbeknownst to the actual land owners. This was due to a personal agreement having been made with one village just so that funding could be generated. Issue is addressed. References submitted to verifiers. Issue is addressed.	
Date closed:	17 July 2013

189. Non-Conformity Report (VT0001_T-ADD, VT0001 v3.0, line 143)

VCS Criteria: VT0001, v3.0, 2 Procedures, 2.4 Step 4. Common practice analysis - Provide documented evidence and, where relevant, quantitative information.	
Evidence Used to Assess Conformance: PD Section 2.5.3	
Findings: No documented evidence or quantitative evidence is included or referred to. A quick internet search indicates there is another: Kamula Doso - currently undergoing validation. What about the WWF in PNG? What about RPML's other projects?	
Non-conformity report (NCR): Please include in the Common Practice Analysis (PD Section 2.5.3) and provide to the verifier documented evidence and, if relevant, quantitative information, supporting the claim that there are no activities similar to the proposed VCS AFOLU project activity in Papua New Guinea.	
Date issued:	17 April 2013
Project proponent response/actions and date: The April Salumei area is listed as one of the five pilot projects within PNG (FCPF, 2013) and the only project defined as Logged to Protected Forest. The PNG R-PP published in January 2013 confirms the five project areas in PNG. April Salumei is the only one of its kind in scale and AFOLU category Logged to Protected Forest. http://www.forestcarbonpartnership.org/sites/forestcarbonpartnership.org/files/Documents/PDF/Jan2013/PNG%20R-PP_Draft%20Jan_2013%20Version.pdf – 5 June 2013.	
Evidence used to close NCR: Reference reviewed. Information added to 2.5.4 in PD Issue is addressed.	
Date closed:	17 July 2013

190. Non-Conformity Report (GISRS Checklist, GIS and RS, Line 5)

VCS Criteria: VM0015 V1.1, PART2 - STEP 2. Analysis of Historical Land-Use and Land-Cover Change - Collect medium resolution spatial data (from 10m x 10m up to a maximum of 100m x 100m resolution) from optical and non-optical sensor systems, such as (but not limited to) Landsat, SPOT, ALOS, AVNIR2, ASTER, IRS sensor data) covering the past 10-15 years.		
Evidence Used to Assess Conformance: Annex 5, Section 1.1		
Findings: They used Landsat 5 and 7 data. Used many images (due to cloud cover issues) to generate forest cover maps.		
Non-conformity report (NCR): Please provide the highest quality raw Landsat image from each time period (2000, 2004, 2009) for the proxy areas in order to visually compare your LULC classifications to the imagery.		
Date issued:	17 April 2013	
Project proponent response/actions and date: Images have been provided in folder 190 – 5 June 2013		
Non-conformity report (NCR): Images with ".browse" in filename have 50m pixel size. Please provide Landsat images as originally requested that have 30m pixel size.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013

The imagery used for the proxy area analysis is provided in folder on fileserver labeled 20130326. In this file the 30m .tif LandSAT images are provided along with the shapefiles to compare the LULC classifications. This material was provided with the original data in March. All requested files are there. It is not clear what additional data the validator is requesting. Following a phone call on the 2 August it was agreed LandSAT and RE images as well as road files for 2000/2004/2009 are provided for the Vanimo proxy area to the spatial analyst for further review. This collection of files is provided in folder NCR 190.	
Evidence used to close NCR: The newly provided imagery is indeed of 30 m pixel size. Classification was spot-checked and found to be in order. Item is addressed.	
Date closed:	25 August 2013

191. Non-Conformity Report (GISRS Checklist, GIS and RS, Line 6)

VCS Criteria: VM0015 V1.1, PART2 - STEP 2. Analysis of Historical Land-Use and Land-Cover Change - Collect high resolution data from remote sensors (< 5 x 5 m pixels) and/or from direct field observations for ground-truth validation of the posterior analysis. Describe the type of data, coordinates and the sampling design used to collect them.	
Evidence Used to Assess Conformance: Annex 5, Section 1.1	
Findings: They used RapidEye imagery. Table 1-4 says RapidEye imagery has a 6.5m pixel size (which does not meet the meth requirements), while Appendix 2 of Annex 5 indicates a pixel size of 5m.	
Non-conformity report (NCR): Please justify using imagery for accuracy assessment that provides coverage for only a small portion of the study area.	
Date issued:	17 April 2013
Project proponent response/actions and date: The accuracy assessment was data driven due to lack of cloud free high resolution imagery. But, note that the area covered by the RE imagery is 518,417 ha) which is > 20% of the total area if the combined project and reference area. These areas were used to assess the accuracy of 2009 the LU/LC map. To determine the sampling intensity, a number of assumptions and factors were considered. As the analysts involved in the classification of imagery had no prior knowledge of the landscape, it is reasonable to assume that 65% map accuracy could be achieved as there is no benchmark. In undertaking the accuracy assessment, using higher resolution imagery makes it necessary to have a low allowable error in the calculated map accuracy with a 95% confidence interval. Therefore, with RapidEye imagery, it is assumed that the calculated map accuracy will be no more than 5%. Having assumed an initial map accuracy of 65%, which in this instance is considerably conservative, the sampling intensity was determined resulting in 350 sampling points to be assessed. The minimum sample size required for assessing accuracy of any map depends on allowable error, confidence interval required and the overall accuracy of the classified map. - 5 June 2013	
Evidence used to close NCR: VM0015 states "Collect high resolution data from remote sensors (< 5 x 5 m pixels) and/or from direct field observations for ground-truth validation of the posterior analysis." Developer used 5m resolution data, which according to the project developer is the best available. Using a subset of the project area and evaluating the classification accuracy using higher resolution imagery is a common practice when ground truth data is not available. This item is addressed.	
Date closed:	17 July 2013

192. Clarification (GISRS Checklist, GIS and RS, Line 7)

VCS Criteria: VM0015 V1.1, PART2 - STEP 2. Analysis of Historical Land-Use and Land-Cover Change - Collect high resolution data from remote sensors (< 5 x 5 m pixels) and/or from direct field observations for ground-truth validation of the posterior analysis. Describe the type of data, coordinates and the sampling design used to collect them.
Evidence Used to Assess Conformance: Annex 5, Section 1.1
Findings: They used RapidEye imagery. Table 1-4 says RapidEye imagery has a 6.5m pixel size (which does not meet the meth requirements), while Appendix 2 of Annex 5 indicates a pixel size of 5m.
Clarification (CL): VM0015 requires use of high resolution imagery with pixel size of <5m. Table 1-4 says RapidEye imagery has a 6.5m pixel size, while Appendix 2 of Annex 5 indicates a pixel size of

5m. Please clarify.		
Date issued:	17 April 2013	
Project proponent response/actions and date: Pixel size has been corrected to 5m in Table 'Images used for Historical LU/LC Change Analysis' and highlighted. – 5 June 2013		
Clarification (CL): Change confirmed to be made to 5 m. Please confirm if this was just a typo or if a change to the imagery was required.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
This was a typo. Rapid Eye orthorectified images have a resolution of 5m. http://www.rapideye.com/products/ortho.htm		
Evidence used to close CL: Change made. Issue addressed.		
Date closed:	25 August 2013	

193. Clarification (GISRS Checklist, GIS and RS, Line 18)

VCS Criteria: VM0015 V1.1, PART2 - STEP 2. Analysis of Historical Land-Use and Land-Cover Change - 2.2 Definition of classes of land-use and land-cover - The description of a LU/LC class must include criteria and thresholds that are relevant for the discrimination of that class from all other classes. Select criteria and thresholds allowing a transparent definition of the boundaries of the LU/LC polygons of each class. Such criteria may include spectral definitions as well as other criteria used in post-processing of image data, such as elevation above sea level, aspect, soil type, distance to roads and existing vegetation maps. Where needed, in the column "description" of table 6 refer to more detailed descriptions in the methodological annex to be prepared in step 2.6.		
Evidence Used to Assess Conformance: Annex 5, Section 1.2.3		
Findings: It is unclear how the selection and discrimination of LULC classes meets this requirement.		
Clarification (CL): Please provide clarification on how your selection and discrimination of LULC classes meets this requirement, including how roads were digitized by hand given that they are such narrow features and Landsat data has a pixel size of 30m.		
Date issued:	17 April 2013	
Project proponent response/actions and date: Because there are only 2 land cover classes mapped, even the 30m Landsat imagery is capable (spectrally) of distinguishing forest from non-forest at the minimum mapping unit of 1 ha. The linear nature of roads means they are easily identifiable even on 30m resolution Landsat imagery. The Landsat image attached shows a road inside the red line. Clearly the road is at least 1 pixel. As such, such features were digitized as lines (linear features) then buffered 15m either side since thus in line with the 30m pixel size. In other case, the linear features were large enough to be digitized as polygons. In instances where the roads are less than a pixel, then they would not be readily identifiable. – 5 June 2013		
Clarification (CL): Please provide the highest quality raw Landsat image from each time period (2000, 2004, 2009) for the proxy areas in order to visually compare your LULC classifications to the imagery. Please ensure that the images provided encompass the entirety of all areas used as proxy areas. The imagery provided in response to NCR 204 does not include 30m Landsat imagery.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
See response to 190.		
Evidence used to close CL: The newly provided imagery is indeed of 30 m pixel size. Classification was spot-checked and found to be in order. Item is addressed.		
Date closed:	25 August 2013	

194. Non-Conformity Report (GISRS Checklist, GIS and RS, Line 23)

VCS Criteria: VM0015 V1.1, PART2 - STEP 2. Analysis of Historical Land-Use and Land-Cover

Change - 2.2 Definition of classes of land-use and land-cover - List the resulting final LU/LC-classes in table 6.	
Evidence Used to Assess Conformance: NA	
Findings: This requirement is not addressed in Annex 5 or the PD.	
Non-conformity report (NCR): Please provide a table in Annex 5 that addresses this requirement.	
Date issued:	17 April 2013
Project proponent response/actions and date: Compliance with VM00015 is not required as VM0007 was used to develop the baseline planned deforestation scenario. Annex 5 has been edited to demonstrate compliance with VM0007 and therefore this NCR is no longer valid. – 5 June 2013	
Evidence used to close NCR: The verifier agrees that compliance with VM0015 is not required and has confirmed that Annex 5 has been updated to demonstrate compliance with VM0007 and BL-PL. Annex 5 Table 12 show the land use change in each proxy area over the assessment period. Item is addressed.	
Date closed:	17 July 2013

195. Clarification (GISRS Checklist, GIS and RS, Line 27)

VCS Criteria: VM0015 V1.1, PART2, 2.4 Analysis of historical land-use and land-cover change - Using the data collected in step 2.1, divide the reference region in polygons representing the LU/LC-classes and LU/LC-change categories defined in steps 2.2 and 2.3. In the case of the project area, LU/LC-change analysis is required to exclude any area with forests that are less than 10 years old at the project start date.	
Evidence Used to Assess Conformance: Annex 5	
Findings: This requirement is not addressed in Annex 5.	
Clarification (CL): Please explicitly state in Annex 5 whether this 10 year age criteria has been met.	
Date issued:	17 April 2013
Project proponent response/actions and date: Following text has been added under section 4.1.2.2 : 'forest areas that have been classified as forest for the previous 10 years have been included'. Changes have been highlighted in yellow. – 5 June 2013	
Evidence used to close CL: Addressed. Change confirmed to be made stating the 10 year criteria is met.	
Date closed:	17 July 2013

196. Non-Conformity Report (GISRS Checklist, GIS and RS, Line 32)

VCS Criteria: VM0015 V1.1, PART2 - STEP 2. Analysis of Historical Land-Use and Land-Cover Change - 2.4.1 Pre-Processing - a) Geometric corrections to ensure that images in a time series overlay properly to each other and to other GIS maps used in the analysis (i.e. for post-classification stratification). The average location error between two images should be < 1 pixel.	
Evidence Used to Assess Conformance: Annex 5, Section 1.2.1	
Findings: They've used A LOT of images, but I'd like to see documentation that they evaluated at least a subset of them to make sure they overlaid properly, especially since they're using both Landsat 5 and 7 data.	
Non-conformity report (NCR): Annex 5, p. 10 says "All images were found geometrically correct and registered with each other within sub-pixel level." Please provide quantitative evidence that images used in this analysis overlay properly.	
Date issued:	17 April 2013
Project proponent response/actions and date: I suggest they are given access to the imagery and they can do an assessment of imagery to check for any offsets using linear features or what are called invariant targets (features that do not change over time). For example, using the swipe tool in ArcGIS, an operator makes one image 50% transparent and swipes over another to visually check for offsets. The image attached shows 2 images being swiped over the same area. If there was an offset, it would be evident where the river changes direction. – 5 June 2013	
Non-conformity report (NCR): See NCR 190. Please provide 30m Landsat imagery.	

Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
The 30m Landsat imagery has been provided In response to NCR 190.		
Evidence used to close NCR: The newly provided imagery is indeed of 30 m pixel size and was found to be sufficient for the LULC analysis. Item is addressed.		
Date closed:	25 August 2013	

197. Non-Conformity Report (GISRS Checklist, GIS and RS, Line 33)

VCS Criteria: VM0015 V1.1, PART2 - STEP 2. Analysis of Historical Land-Use and Land-Cover Change - 2.4.1 Pre-Processing - b) Cloud and shadow removal using additional sources of data (e.g. radar, aerial photographs, field-surveys).	
Evidence Used to Assess Conformance: Annex 5, Section 1.2.1	
Findings: Shapefiles of cloud obscured areas have not been provided for review.	
Non-conformity report (NCR): Please provide shapefiles of cloud obscured areas that were excluded from the LULC analysis.	
Date issued:	17 April 2013
Project proponent response/actions and date: This shapefile was provided in folder 197. Please note that proxy areas don't have permanent cloud cover, only the Project Area. – 5 June 2013	
Evidence used to close NCR: Shapefiles provided. Item is addressed.	
Date closed:	17 July 2013

198. Clarification (GISRS Checklist, GIS and RS, Line 34)

VCS Criteria: VM0015 V1.1, PART2 - STEP 2. Analysis of Historical Land-Use and Land-Cover Change - 2.4.1 Pre-Processing - b) Cloud and shadow removal using additional sources of data (e.g. radar, aerial photographs, field-surveys).	
Evidence Used to Assess Conformance: Annex 5, Section 1.2.1	
Findings: It is unclear what is meant by the following quoted text: "Persistent cloud cover and no data area: Persistent cloud cover and the data gap created due to SLC off Landsat 7 images for each point in time were generated to estimate the data gap. The masks were generated using band thresholding approach using IDL routine developed by Indufor Asia Pacific (IAP). The masks were subsequently reviewed and edited using the source imagery as required."	
Clarification (CL): Please clarify the meaning of the statement on p. 10 of Annex 5 that says "Persistent cloud cover and no data area: Persistent cloud cover and the data gap created due to SLC off Landsat 7 images for each point in time were generated to estimate the data gap. The masks were generated using band thresholding approach using IDL routine developed by Indufor Asia Pacific (IAP). The masks were subsequently reviewed and edited using the source imagery as required."	
Date issued:	17 April 2013
Project proponent response/actions and date: Persistent cloud cover and no data area: Masks depicting persistently cloudy and no data areas within all the satellite images from each time period were generated using IDL routines developed by Indufor Asia Pacific (IAP). The routines first applied a band thresholding algorithm to auto-classify cloud and no data pixels within each image. The auto-generated masks were then manually reviewed and edited within a GIS to correct any misclassification errors. Coincident images from each time period were then combined to produce a mask of persistently cloudy and/or no data pixels. – 5 June 2013	
Evidence used to close CL: Response sufficient. Item is addressed.	
Date closed:	17 July 2013

199. Non-Conformity Report (GISRS Checklist, GIS and RS, Line 43)

VCS Criteria: VM0015 V1.1, PART2 - STEP 2. Analysis of Historical Land-Use and Land-Cover Change - 2.4.2 Interpretation and classification - Independent interpretation of multi-temporal images should be avoided (but is not forbidden).
Evidence Used to Assess Conformance: Annex 5, Section 1.2.3
Findings: It appears they did a manual change detection using independent interpretation.

Non-conformity report (NCR): VM0015 states that independent interpretation should be avoided. Please justify your use of independent interpretation, given that it is not recommended, by citing the specific section(s) of the most recent GOFC Gold Sourcebook.	
Date issued:	17 April 2013
Project proponent response/actions and date: This project did not apply VM00015 in is development. This methodology is not relevant. Annex 5 was misleading in its structure and has been completely updated to remove the confusion. This Annex includes justification for independent interpretation and cites the specific sections of the most recent GOFC Gold Sourcebook as requested. – 5 June 2013	
Non-conformity report (NCR): Annex 5, Section 1.3.3 states "In areas obscured by sporadic cloud (i.e. where at least one period is clear) the change was attributed to the first period it was observed in. Areas obscured by persistent cloud, and all areas under persistent cloud in 2009 are excluded from the change analysis and are presented as no data. According to the Sourcebook on REDD (GOFC-GOLD, 2009), the preferred method for analysis on images with cloud cover is visual interpretation, this is considered for this project. However, the specific sections of the most recent GOFC Gold Sourcebook are not cited as indicated. Thus, the NCR still stands. Also, GOFC-GOLD, 2009 is a citation in the text of Annex 5 Section 1.3.3, but only GOFC-GOLD, 2011 is included in the references Section. Please revise accordingly.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
The most recent GOFC-GOLD, 2012 reference was update in the text of Section 1.3.3 and bibliography. Additional references relating to cloud cover analysis have been added to the document and highlighted green. It is unclear why this remains open as the document states that this approach was taken ad spatial files provided show the excluded persistent cloud cover areas.	
Evidence used to close NCR: References have been corrected in the text and in the references. The project is not using VM00015, so that aspect is closed. Issue is addressed.	
Date closed:	25 August 2013

200. Clarification (GISRS Checklist, GIS and RS, Line 44)

VCS Criteria: VM0015 V1.1, PART2 - STEP 2. Analysis of Historical Land-Use and Land-Cover Change - 2.4.2 Interpretation and classification - Interpretation is usually more accurate when it focuses on change detection with interdependent assessment of two multi-temporal images together. A technique that may be effective is image segmentation followed by supervised object classification.	
Evidence Used to Assess Conformance: Annex 5, Section 1.2.3	
Findings: It is unclear if the interpretation approach incorporated the guidance provided here by the methodology.	
Clarification (CL): Please comment on whether your interpretation approach incorporated the guidance provided here by the methodology.	
Date issued:	17 April 2013
Project proponent response/actions and date: VM0015 was not applied. Annex 5 had been rewritten in accordance with BL-PL and good practice, therefore this clarification request is no longer relevant. – 5 June 2013	
Evidence used to close CL: The verifier agrees that compliance with VM0015 is not required and has confirmed that Annex 5 has been updated to demonstrate compliance with VM0007 and BL-PL. Independent Interpretation was used. See item 199 above for a related NCR. This Item is addressed.	
Date closed:	17 July 2013

201. Non-Conformity Report (GISRS Checklist, GIS and RS, Line 50)

VCS Criteria: VM0015 V1.1, PART2 - STEP 2. Analysis of Historical Land-Use and Land-Cover Change, 2.4.3 Post-processing - At the end of step 2, the following products should be prepared for the reference region and project area - a) A Forest Cover Benchmark Map for at least the most recent date (+-2 years from the project start date) and 10 (+-2) years prior to the project start date, showing only “forest” and “non-forest”.

Evidence Used to Assess Conformance: Annex 5, Section 1		
Findings: Forest/non-forest cover shapefiles for 2000, 2004, and 2009 for the proxy areas has not been provided for review.		
Non-conformity report (NCR): Please provide forest/non-forest cover shapefiles for 2000, 2004, and 2009 for the proxy areas.		
Date issued:	17 April 2013	
Project proponent response/actions and date: These have been provided in folder 204 – 5 June 2013		
Non-conformity report (NCR): Performed spot check of road delineations in comparison to Landsat images on image "5437816_2011-11-28_RE5_3A_143346". Digitized roads do not spatially overlay with 50m pixel images or RE images. Please address.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
Screenshot from the "5437816_2011-11-28_RE5_3A_143346" of the Landsat and RE images are provided in the 201 NCR folder. These images show that the roads do spatially overlay with the 30m images images. And the RE images. It is not clear why the validator is getting a different perspective. Please also see collection of files provided in response to NCR 190 where these checks can be made again.		
Evidence used to close NCR: Provided files were reviewed and spot checked. Confirmed that digitized roads correctly overlay the 30m imagery. Item is addressed.		
Date closed:	25 August 2013	

202. Non-Conformity Report (GISRS Checklist, GIS and RS, Line 51)

VCS Criteria: VM0015 V1.1, PART2 - STEP 2. Analysis of Historical Land-Use and Land-Cover Change, 2.4.3 Post-processing - At the end of step 2, the following products should be prepared for the reference region and project area - b) A Land-Use and Land-Cover Map for at least the most recent date (+-2 years from the project start date) depicting the LU/LC-classes defined in step 2.2. If such a map cannot be generated at the levels of accuracy required by this methodology (see step 2.5), areas of the different LU/LC-classes may be estimated by sampling techniques (e.g. by overlaying a grid of dots on the satellite image and then counting the points falling in each LU/LC-class, or by sampling the landscape with higher resolution images and then classifying the sampled images), or by using other sources of data, such as official statistical data on land-use (e.g. agricultural census data).		
Evidence Used to Assess Conformance: Annex 5, Section 1		
Findings: An LULC shapefile that includes all LULC classes as defined in Step 2.2 has not been provided for review.		
Non-conformity report (NCR): Please provide an LULC shapefile that includes all LULC classes as defined in Step 2.2 for, at a minimum, 2009.		
Date issued:	17 April 2013	
Project proponent response/actions and date: This information has been provided in folder 204. Note that VM0015 has no longer been followed. The REDD-MF and BL-PL modules should be referred to for compliance. – 5 June 2013		
Non-conformity report (NCR): See NCR 201		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
t is not clear from the validaotrs responses what is required to close this item. Discussions with the validation team on the 2 August 2013 indicate that the response to NCR 201 will be suffiient to close this NCR.		
Evidence used to close NCR: As discussed, this is covered under Item 201 above. Thus, this item can be closed.		

Date closed:	25 August 2013

203. Non-Conformity Report (GISRS Checklist, GIS and RS, Line 52)

VCS Criteria: VM0015 V1.1, PART2 - STEP 2. Analysis of Historical Land-Use and Land-Cover Change, 2.4.3 Post-processing - At the end of step 2, the following products should be prepared for the reference region and project area - c) A Deforestation Map for each sub-period analyzed, depicting at least the category "deforestation". Many projects will have some level of no-data areas because of cloud-cover. In this case change rates should be calculated for each time step based only on areas that were not cloud-obscured in either date in question. Then, a maximum possible forest cover map should be made for the most recent year (+-2 years from the project start date). The historical rate in % should be multiplied by the maximum forest cover area at the start of the period for estimating the total area of deforestation during the period.		
Evidence Used to Assess Conformance: Annex 5, Section 1		
Findings: Deforestation shapefiles for 2000-2004 and 2004-2009 have not been provided for review.		
Non-conformity report (NCR): Please provide deforestation shapefiles for 2000-2004 and 2004-2009.		
Date issued:	17 April 2013	
Project proponent response/actions and date: These have been provided in LULC shapefiles in folder 204 for the proxy areas. Please note P1= 2000-2004 and P2= 2004-2009 – 5 June 2013		
Non-conformity report (NCR): Spot-checked "AutuvoExt_LULC_54s.shp" shapefile. The P1 and P2 fields are mostly empty and are otherwise uninformative. Please address.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
The deforestation information is presented in the file under the headings DEfPeriod and LULC. The propopoent is happy to step though the files with the validator/verifier as offered previously. Nothing has been changed/added in response to this NCR. Please see the file previously supplied.		
Evidence used to close NCR: Overlaid road delineation from 2000, 2004, and 2009 from "\\2013-06-05_ftp\204\Vanimo 1_5_LULC_54s.shp" to spot check roads mapping in proxy areas. Spot check indicated good road delineation in this area and confirmation of corresponding portion of Table 31 in PD. However, there is one clarification needed that is related to this item. Please clarify why the large polygon of forest in the southwestern portion of Vanimo1-5 that was included in "All_Areas_LULC_Change_081012_Ver1" within the map package "http://intranet.enviroaccounts.com/ABY/20130731/190/West_Sepik.mpk" is not included in the footprint of the "\\204\Vanimo 1_5_LULC_54s.shp" shapefile. Thus was communicated to the client via email on 25 August 2013. The client responded on 26 August 2013: "*The files provided in the "All_Areas_LULC_Change_081012_Ver1" within the map package cover the complete area that was covered in the land use and land cover change analysis. We identified relevant proxy areas as FMA boundaries for the full analysis, this was because the PNGFRI team will also use the maps we developed for their research.* *The boundaries of the "\\204\Vanimo 1_5_LULC_54s.shp" shapefile" had to be subsequently clipped so that the characteristics of this proxy area would have (within the methodology thresholds) the same characteristics as the Project Area as required by the methodology. the methodology states that each proxy area separately has to have the same characteristics within the thresholds as the Project Area.* *So this made the Vanimo Area smaller but meant we meet the methodology requirements. Santosh who did the land use change analysis just put the full data set in the map package provided s this was the element he was involved with."* Further review of the spatial data indicates that the excluded area is composed of lower slope %, represents inundated areas (and associated vegetation), could potentially be peat, and is of low elevation. This contrasts to the areas of the Vanimo FMA that were used to quantify deforestation (which were confirmed to be similar to the project area within the bounds defined by the methodology).		

There are no rules within VM0007 that would prevent this area from being excluded from the analysis. Additionally, similar areas have been delineated and excluded from the project accounting area. Thus this item is addressed.	
Date closed:	26 August 2013

204. Non-Conformity Report (GISRS Checklist, GIS and RS, Line 54)

VCS Criteria: VM0015 V1.1, PART2 - STEP 2. Analysis of Historical Land-Use and Land-Cover Change, 2.4.3 Post-processing - At the end of step 2, the following products should be prepared for the reference region and project area - d) A Land-Use and Land-Cover Change Map for at least the most recent period analyzed (3-5 years) depicting the LU/LC-change categories defined in step 2.3. In most cases, this map will be prepared by combining the Deforestation Map of the most recent period (3-5 years) with the most recent Land-Use and Land-Cover Map. If the area of the LU/LC-classes was estimated using sampling techniques or other sources of information, a LU/LC-Change Map is not required.		
Evidence Used to Assess Conformance: Annex 5, Section 1		
Findings: LULC change shapefile(s) have not been provided for review.		
Non-conformity report (NCR): Please provide LULC change shapefile(s) for, at a minimum, 2004-2009		
Date issued:	17 April 2013	
Project proponent response/actions and date: LULC shapefiles for proxy areas and Project Area has been supplied in folder 204 – 5 June 2013		
Non-conformity report (NCR): See NCR 203		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
See response to 203		
Evidence used to close NCR: This is covered under Item 203 above. Thus, this item can be closed.		
Date closed:	25 August 2013	

205. Non-Conformity Report (GISRS Checklist, GIS and RS, Line 57)

VCS Criteria: VM0015 V1.1, PART2 - STEP 2. Analysis of Historical Land-Use and Land-Cover Change, 2.5 Map accuracy assessment - A verifiable accuracy assessment of the maps produced in the previous step is necessary to produce a credible baseline. See Chapter 5 of IPCC 2003 GPG, Chapter 3A.2.4 of IPPC 2006 Guidelines for AFOLU, and the most recent version of the GOFC-GOLD Sourcebook on REDD for guidance on map accuracy assessment.	
Evidence Used to Assess Conformance: Annex 5, Section 1.3.1	
Findings: A shapefile of points used for validation and their corresponding classification by an analyst has not been provided for review.	
Non-conformity report (NCR): Please provide a shapefile of points used for validation and their corresponding classification by an analyst for 2000, 2004, and 2009.	
Date issued:	17 April 2013
Project proponent response/actions and date: Point maps used for accuracy assessment are located in Folder 205 on the fileserver. a. 'Points_map_class_accuracy_check' is the map with random points generated for accuracy assessment and stores the class for each point from the LULC map (subjected to accuracy assessment). b. 'Points_reference_accuracy_check' is the same point map used by analyst to record the classes from reference data (Rapid Eye Imagery). The interpretation was cross checked by more experienced analyst on random basis. So, it records the class for each point based on reference data. The accuracy was assessed based on the agreement of the classes from those two maps. – 5 June 2013	
Non-conformity report (NCR): See NCR 201. Before accuracy assessment can be reviewed, roads	

LC issue needs to be resolved.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
EAS sent an email dated 11/7/2013 which had our response. In addition a folder with spatial files to check was provided on the fileserver.		
Evidence used to close NCR: Classification accuracy was spot-checked and found to be in order. Item is addressed.		
Date closed:	25 August 2013	

206. Non-Conformity Report (GISRS Checklist, GIS and RS, Line 58)

VCS Criteria: VM0015 V1.1, PART2 - STEP 2. Analysis of Historical Land-Use and Land-Cover Change, 2.5 Map accuracy assessment - The accuracy must be estimated on a class-by-class (LU/LC map) and, where applicable, category-by-category (LU/LC-change map) basis, respectively. A number of sample points on the map and their corresponding correct classification (as determined by ground-surveys or interpretation of higher resolution data as collected in step 2.1) can be used to create an error matrix with the diagonal showing the proportion of correct classification and the off-diagonal cells showing the relative proportion of misclassification of each class or category into the other class or, respectively, categories. Based on the error matrix (also called confusion matrix), a number of accuracy indices can be derived (see e.g. Congalton, 1991 and Pontius, 2000).	
Evidence Used to Assess Conformance: Annex 5, Section 1.3.1	
Findings: The assumed map accuracy of 65% has not been justified.	
Non-conformity report (NCR): Please justify use of assumed 65% map accuracy.	
Date issued:	17 April 2013
Project proponent response/actions and date: In the first instance, the remote sensing analyst were not familiar with the project area in terms of having been physically on the ground. As such, the analyst uses knowledge and experience in interpreting remote sensing data to detect areas with vegetation and non-vegetation. This approach determines how confident an analyst would be to accurately map the different cover classes and how conservative we should when determine the sampling intensity. We also made reference to various literature. The minimum sample size required for assessing accuracy of any map depends on allowable error, confidence interval required and the overall accuracy of the classified map. The following equation based on binominal probability theory that defines the relationship of sample size with allowable error and map accuracy can be used to estimate the number of points required to assess the map accuracy (van Genderen and Lock, 1977; Fitzpatrick-Lins, 1981, Marsh et al., 1994). Where; N = Number of sample points z = Standard normal deviate for the specified (two tail) confidence interval e.g. 1.96 for 95% p = Expected or calculated map accuracy in percentage q = 100 - p e = allowable error in percentage It was decided to accept an allowable error of 5% or less in the calculated map accuracy with a 95% confidence interval. As there was no information on the initial thematic accuracy of the map, an assumption of overall accuracy of the map is also required. Because we were not familiar with project area, we needed to increase the sampling intensity to ensure we ended with a higher sampling intensity. We therefore deliberately assumed a predicted lower accuracy of 65% - i.e. at the very least, an analyst would be able to determine the correct class 65% of the time. This assumption then becomes the basis for determining the sampling intensity required to meet this accuracy level. The assumption of the initial accuracy of the map could be higher, but in this case a conservative map accuracy estimate was used. By adopting this approach a larger number of sampling points are allocated which allows for the possibility that some points can be discarded if the sample is cloud covered. - 5 June 2013	
Evidence used to close NCR: The client's response adequately justifies the use of an assumed map accuracy of 65% Item addressed.	
Date closed:	17 July 2013

207. Non-Conformity Report (GISRS Checklist, GIS and RS, Line 60)

VCS Criteria: VM0015 V1.1, PART2 - STEP 2. Analysis of Historical Land-Use and Land-Cover Change, 2.5 Map accuracy assessment - The minimum classification accuracy of each class or category in the Land-Use and Land-Cover Map and Land-Use and Land-Cover Change Map, respectively, should be 80%. If the classification of a class or category is lower than 80%: Consider merging the class/category with other classes/categories; or Exclude from the Forest Cover Benchmark Map the forest-classes that are causing the greatest confusion with non-forest classes according to the error matrix (e.g. initial secondary succession and heavily degraded forest may be difficult to distinguish from certain types of grassland or cropland, such as agro-forestry and silvo-pastoral systems not meeting the definition of "forest"). This implies conservatively reducing the area of the Forest Cover Benchmark Map.		
Evidence Used to Assess Conformance: Annex 5, Section 1.3.3.1		
Findings: The Producer's Accuracy value of 75.7% for non-forest in the 2009 LULC map does not meet the minimum 80%.		
Non-conformity report (NCR): Please comment on the Producer's Accuracy value of 75.7% for non-forest, which does not meet the minimum 80% in the 2009 LULC map.		
Date issued:	17 April 2013	
Project proponent response/actions and date: Please refer to table attached. The methodology suggests merging classes that are causing accuracy problems. In this case, that confusion was arising from non-forest classes (note that the forest class is already at 98.3%). So to resolve the inaccuracy of the non-forest classes, we merged them and achieved 93.4% accuracy. And note that the methodology refers to the overall class rather than User and Producer. User and producer accuracy are there to assist in identifying sources of confusion through the confusion matrix from which a decision can be made to merge classes for instance. - 5 June 2013		
Non-conformity report (NCR): The referenced 'attached' table was not submitted. Please submit.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
The Table is now attached seperately to this NCR. This Table is a copy of Table 4 in Annex 5. this Table has not changed since previous versions of the document but has been highlighted green so ti is easier to find.		
Evidence used to close NCR: Classification accuracy was spot-checked and found to be sufficient and in order. Item is addressed.		
Date closed:	25 August 2013	

208. Non-Conformity Report (GISRS Checklist, GIS and RS, Line 84)

VCS Criteria: VM0015 V1.1, PART 2 - STEP 4. Projection of Future Deforestation, 4.1.1 Selection of the baseline approach - a) Historical average approach: Under this approach, the rate of baseline deforestation is assumed to be a continuation of the average annual rate measured during the historical reference period within the reference region or, where appropriate, within different strata of the reference region.	
Evidence Used to Assess Conformance: Annex 5	
Findings: Based on the LULC analysis described in Annex 5, it seems as if the historical average approach was used to establish the baseline and project future deforestation in the project area.	
Non-conformity report (NCR): Based on the LULC analysis described in Annex 5, it seems as if the historical average approach was used to establish the baseline and project future deforestation in the project area. Please clarify your approach and the applicability of your selected approach.	
Date issued:	17 April 2013
Project proponent response/actions and date: Annex 5 has been rewritten to follow the approach listed in the BL-PL module. As the methodological approach was followed no further justification is deemed required. – 5 June 2013	
Evidence used to close NCR: The verifier agrees that compliance with VM0015 is not required and has confirmed that Annex 5 has been updated to demonstrate compliance with VM0007 and BL-PL.	

No further justification is needed and this Item is addressed.	
Date closed:	17 July 2013

209. Clarification (GISRS Checklist, GIS and RS, Line 111)

VCS Criteria: VM0015 V1.1, PART 2 - STEP 4. Projection of Future Deforestation -4.1.2 Quantitative projection of future deforestation- 4.1.2.1 Projection of the annual areas of baseline deforestation in the reference region.	
Evidence Used to Assess Conformance: Annex 5	
Findings: It is unclear how the deforestation rate of 0.185% per annum was calculated.	
Clarification (CL): Please clearly demonstrate in Annex 5 how the deforestation rate of 0.185% per annum was calculated.	
Date issued:	17 April 2013
Project proponent response/actions and date: Section 2 of Annex 5 now follows the BL-PL module and describes how the rate of deforestation is estimated. Based on the changes largely as a result of the spatial delineation of the proxy areas, the rate of deforestation was found to be 0.07% per year. The way which this figure is calculated is detailed in a range of table in this section. The approach is also presented in an excel spreadsheet provided in response to related NCR 102. – 5 June 2013	
Evidence used to close CL: Confirmed that Section 2 of Annex 5 now follows the BL-PL module and describes how the rate of deforestation is estimated. It is now clear how the deforestation rate of 0.07% per year was quantified. Item is addressed.	
Date closed:	17 July 2013

210. Clarification (GISRS Checklist, GIS and RS, Line 112)

VCS Criteria: VM0015 V1.1, PART 2 - STEP 4. Projection of Future Deforestation -4.1.2 Quantitative projection of future deforestation- 4.1.2.1 Projection of the annual areas of baseline deforestation in the reference region - Approach "c": Modeling. The annual area of baseline deforestation that applies at year t in stratum i within the reference region is estimated using a statistical model, such as simple regression, multiple regressions, logistic regression, or any other possible model to be proposed and justified by the project proponent. The proposed model must demonstrably comply with statistical good practice, and evidence that such requirement has been met shall be provided to VCS verifiers at the time of validation (see EXAMPLE equations 8a, 8b, and 8c and additional requirements of Approach C on pgs. 47-48 of methodology).	
Evidence Used to Assess Conformance: Annex 5	
Findings: It is unclear how the IDRISI model complies with statistical good practice.	
Clarification (CL): Please provide additional details on how the IDRISI model complies with statistical good practice.	
Date issued:	17 April 2013
Project proponent response/actions and date: the following text was added to Annex 5, Section 4.2 Future deforestation is projected using the Idrisi Land Change Modeler in a stepwise process for each future year. The Land Change Modeler provides: • A suite of tools for land cover change analysis, allowing you to quickly map changes in the landscape, identify and uncover land class transitions and trends, and monitor ongoing plans; • A modeling and prediction environment to create future landscape scenarios with the integration of user-specified drivers of change, such as slope or distance maps, as well as constraint or incentive information which would impact the scenario, such as infrastructure changes or zoning regulations; • A wide range of tools for incorporating habitat information to current and future landscape scenarios, thereby providing species-specific habitat assessment, detection of changes in habitat status, species distribution modeling and more; • Tools for the implementation of REDD projects including the ability to estimate deforestation baselines, and model and validate future deforestation scenarios. The IDRISI suite of tools is provided for predictive land cover change modeling as well as the assessment of predictions, utilizing knowledge of past changes. These tools include Markov Chain Analysis, Cellular Automata, logistical regression and multinomial logistical regression, GEOMOD, and	

Artificial Neural Networks. The Land Change Modeler provides tools for the assessment of land cover change, the identification of driving forces of change, and the use of that information to predict future scenarios. The Land Change Modeller runs two simultaneous predictions: hard and soft. The hard prediction is one possible change scenario chosen from many equally plausible scenarios. In the case of very sporadic deforestation, the hard prediction is often not predicting deforestation event locations exactly in the correct place. However, if the model is good, the predicted deforestation events should appear close to the actual occurrence. The soft prediction depicts areas vulnerable to change based on the driver variables and how they were used in the model. The soft prediction can therefore often be a better choice. However, irrespective of the prediction method used, the models must be validated. For both soft and hard prediction, a series of models were run using different variables and combinations in order to come up with the most accurate deforestation map. The comparison and validation of models was complete using Relative Operating Characteristics (ROC) statistics with the Area Under Curve (AUC) as the main indicator for model fit. The most accurate deforestation map was selected by calculating ROC statistics for the soft prediction. The ROC statistics are used to determine how well a continuous surface predicts the locations given the distribution of a Boolean variable (in this case the predicted deforestation). The ROC value is a continuous number ranging from 0 to 1 - 1 being "perfect" and "0" showing no correlation between the prediction and the actual change. In addition two brochures from Clark Labs website are provided for more information. – 5 June 2013	
Evidence used to close CL: Client response; Annex 5; IDRISI-Selva-GIS-Image-Processing-Brochure.pdf; idrisi_focus_paper_redd.pdf - Confirmed the additional text was added to Annex 5, Section 3.2 as indicated. The information sufficiently demonstrates how the IDRISI model complies with statistical good practice. Item addressed.	
Date closed:	17 July 2013

211. Non-Conformity Report (GISRS Checklist, GIS and RS, Line 113)

VCS Criteria: VM0015 V1.1, PART 2 - STEP 4. Projection of Future Deforestation -4.1.2 Quantitative projection of future deforestation- 4.1.2.1 Projection of the annual areas of baseline deforestation in the reference region.	
Evidence Used to Assess Conformance: Annex 5	
Findings: Estimates of deforestation in the proxy areas at year t have not been provided in Annex 5 or the PD.	
Non-conformity report (NCR): Please include a table in Annex 5 that provides estimates of deforestation in the proxy areas at year t. Else, refer to a table in the PD or elsewhere that contains this information.	
Date issued:	17 April 2013
Project proponent response/actions and date: Table 15 of Annex 5 now shows the deforestation rate for each year of the first crediting period. This Table is replicated in the PD as Table 34. Note that VM0015 was no longer followed in the estimation of the planned deforestation. The BL-PL module requirements are detailed in Annex5 and the PD. – 5 June 2013	
Evidence used to close NCR: Client response; Annex 5; ProjectDescription_VCS_V1.2_NCR_response_with_ESI_Comments.docx - Annex 5 Tables 12 and 14 show observed deforestation in the proxy areas over the assessment period (2000 - 2009). Confirmed that Table 15 of Annex 5 shows the estimated deforestation (ha) at every time t over the initial baseline period. PD Table 34 correlates to this table. Item is addressed.	
Date closed:	17 July 2013

212. Clarification (GISRS Checklist, GIS and RS, Line 117)

VCS Criteria: VM0015 V1.1, PART 2 - STEP 4. Projection of Future Deforestation -4.1.2 Quantitative projection of future deforestation- 4.1.2.1 Projection of the annual areas of baseline deforestation in the reference region.
Evidence Used to Assess Conformance: Annex 5
Findings: The applicability of deforestation factor and risk maps is unclear.

Clarification (CL): Please clarify the applicability of deforestation factor and risk maps. This doesn't seem to pertain to an APD project.	
Date issued:	17 April 2013
Project proponent response/actions and date: To reduce confusion these surplus maps were removed from Annex 5 in the re-write of this document. – 5 June 2013	
Evidence used to close CL: Client Response; Annex 5; Roads_10yr_Final.shp - Confirmed the surplus maps were removed from Annex 5 as indicated. Item is addressed.	
Date closed:	17 July 2013

213. Clarification (GISRS Checklist, GIS and RS, Line 118)

VCS Criteria: VM0015 V1.1, PART 2 - STEP 4. Projection of Future Deforestation -4.1.2 Quantitative projection of future deforestation- 4.1.2.1 Projection of the annual areas of baseline deforestation in the reference region.	
Evidence Used to Assess Conformance: Annex 5, Section 4	
Findings: The applicability of Step 3 of Annex 5 is unclear.	
Clarification (CL): Please clarify the applicability of Step 3 of Annex 5. This doesn't seem to pertain to an APD project where the deforestation agent or "class of agents" is known.	
Date issued:	17 April 2013
Project proponent response/actions and date: Annex 5 has been completely rewritten to remove all unrelated steps in an APD project. – 5 June 2013	
Evidence used to close CL: Client Response; Annex 5 - Confirmed that Annex 5 has been completely rewritten to remove all unrelated steps in an APD project. Item is addressed.	
Date closed:	17 July 2013

214. Clarification (GISRS Checklist, GIS and RS, Line 145)

VCS Criteria: VM0015 V1.1, PART 2 - STEP 4. Projection of Future Deforestation, 4.2.4 Mapping of the locations of future deforestation.	
Evidence Used to Assess Conformance: Annex 5, Section 5.2.2	
Findings: It is unclear what is meant by the following quoted text: "Baseline rate is discounted by the infrastructure deforestation rate."	
Clarification (CL): Please clarify the meaning of the statement in Annex 5, Section 5.2.2 that states "Baseline rate is discounted by the infrastructure deforestation rate."	
Date issued:	17 April 2013
Project proponent response/actions and date: This report was written by a person with English as a second language. This sentence has been removed. The meaning was that the deforestation rate in the baseline was separated into infrastructure and non-infrastructure categories. Annex 5 has been updated and text in yellow highlight in this section clarifies the intent of the previous sentence. – 5 June 2013	
Evidence used to close CL: Annex 5 - Confirmed this sentence has been removed as indicated. It is clear in Annex 5 that infrastructure and non-infrastructure categories were assessed and that only infrastructure deforestation was included in developing the baseline deforestation rate. Item is addressed.	
Date closed:	17 July 2013

215. Non-Conformity Report (GISRS Checklist, GIS and RS, Line 146)

VCS Criteria: VM0015 V1.1, PART 2 - STEP 4. Projection of Future Deforestation, 4.2.4 Mapping of the locations of future deforestation - 1. In the most accurate Deforestation Risk Map select the pixels with the highest value of deforestation probability. Add the area of these pixels until their total area is equal to the area expected to be deforested in the reference region in project year one according to table 9.a. The result is the Map of Baseline Deforestation for Year 1. Repeat the above pixel selection procedure for each successive project year t to produce a series of Maps of Baseline Deforestation for each future project year. Do this at least for the upcoming fixed baseline period and, optionally, for the entire project crediting period. Add all yearly (baseline deforestation maps in one single map showing the expected Baseline

Deforestation for the fixed baseline period and, optionally, for the entire project crediting period. Present this map in the PD.	
Evidence Used to Assess Conformance: Annex 5, Section 5.2.2	
Findings: Spatial data supporting the projected deforestation has not been provided.	
Non-conformity report (NCR): Please provide a shapefile of the combined yearly deforestation maps.	
Date issued:	17 April 2013
Project proponent response/actions and date: Please find shapefiles for roads over the 10 year baseline and remaining roads in folder 215. Map is supplied in Annex 5. – 5 June 2013	
Non-conformity report (NCR): Shapefile has been provided and reviewed. The file is only a visual representation of the projected deforestation rate. All issues regarding the roads crossing non-forest areas, extending beyond the FMA boundaries, and following rivers in a linear fashion have been addressed. However, Annex 5 Figure 8 does not correlate with Roads_10yr_Final.shp. Please update Annex 5 Figure 8 accordingly.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
The figure in Annex5 that was updated was Figure 9. This figure now represents the road extent. Additionally Figures 3,14,22 have beeen updated in the PD.	
Evidence used to close NCR: Annex5_HistoricalLULCAnalysis_V1.1.docx; 10YearRoadsFile.shp; ProjectDescription_AprilSalumei_V1.3.docx - Confirmed that Annex 5 Figure 9 and PD Figures 3, 14, and 22 have been updated accordingly. Item is addressed.	
Date closed:	19 August 2013

216. Clarification (GISRS Checklist, GIS and RS, Line 147)

VCS Criteria: VM0015 V1.1, PART 2 - STEP 4. Projection of Future Deforestation, 4.2.4 Mapping of the locations of future deforestation - To obtain the annual areas of baseline deforestation within the project area, combine the annual maps of baseline deforestation for the reference region with a map depicting only the polygon corresponding to the project area. After this step, table 9.b can be filled-out.	
Evidence Used to Assess Conformance: NA	
Findings: Estimates for deforestation in project area are not provided in Annex 5 or the PD.	
Clarification (CL): Please include a table in Annex 5 that provides estimates for deforestation in project area and satisfies data requirements in table 9.b from VM0015. Else, refer to a table in the PD or elsewhere that contains this information.	
Date issued:	17 April 2013
Project proponent response/actions and date: Table 15 of Annex 5 now shows the deforestation rate for each year of the first crediting period. This Table is replicated in the PD as Table 34. Note that VM0015 was no longer followed in the estimation of the planned deforestation. The BL-PL module requirements are detailed in Annex5 and the PD. See also response to related NCR 211. – 5 June 2013	
Evidence used to close CL: Client response; Annex 5; ProjectDescription_VCS_V1.2_NCR_response_with_ESI_Comments.docx **-** Confirmed that Table 15 of Annex 5 shows the estimated deforestation (ha) at every time t over the initial baseline period. PD Table 34 correlates to this table. Item is addressed.	
Date closed:	17 July 2013

217. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 7)

VCS Criteria: VM0010 V1.2, 4.1 Eligibility - Intent to Harvest - Project proponents must demonstrate intent to harvest through the following forms of evidence originating prior to the date of all evidence in pursuit of carbon finance/consideration of IFM. Projects shall provide either: • Documented evidence demonstrating that:

o The project site is representative of other forestlands harvested in the country within the past two years; and o The project site is within commercially viable distance to existing transport networks and a port for timber export or a mill for timber processing; or • A valid and verifiable Government-approved timber management plan for harvesting the project area.	
Evidence Used to Assess Conformance: Annexes 4, 10 and 14	
Findings: It appears that Annexes 10&14, in conjunction with the FMA, provides this information. The link between the FMA (Annex 4) and Annex 10 isn't clearly evident.	
Non-conformity report (NCR): Please provide clarity as to the relationship of Annexes 10&14 and Annex 4 (FMA) in providing a government approved plan for harvesting the project area. Alternatively, please identify in Annex 4 where the required details in this requirement are located.	
Date issued:	17 April 2013
Project proponent response/actions and date: Both the April River and April Salumei areas are defined as FMA areas in the PNG Forest Authority Spatial Database. A map has been developed in response to NCR 219 showing the spatial delineation of the two areas as defined in the spatial database. Both areas were to be included in the original Development Option Study (Annex 4) as evidenced by Forest Authority meeting minutes from 1997 (attached to this finding, see pages 2 and 3). This area was removed from the initial DOS due to the wishes of the landholders to have their land spatially delineated. Their unwillingness to sign was not because they did not want to have the area harvested (which is further supported by the group conducting their own timber harvest plan based on the DOS for April Salumei (Annex 10))but rather their unwillingness to sign was due to an unwillingness to join at the time with the landholders of April Salumei. This unwillingness was primarily due to conflicts between some landowner chairmen. The April Salumei FMA continued through the 34 Step process to sign the FMA with the Forest Authority thereby allocating the development rights to the Forest Authority (Annex 4) and ultimately developing seeking a detailed harvest plan from a timber harvest company (Annex 14). Both of these plans are consistent with the Government approved development plan for the FMA areas. - 5 June 2013	
Evidence used to close NCR: Forest Authority meeting minutes from 1997 indicate that the DOS was completed around 1997. This corresponds with the development of the FMA (1995), April River Timber Harvest Plan (1995), and the FMDP (1998). Item is addressed.	
Date closed:	17 July 2013

218. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 11)

VCS Criteria: VM0010 V1.2, 5 Project Boundary - 5.1 Geographical Boundaries -When describing physical project boundaries, the following information shall be provided per discrete area: • unique identifier for each discrete land parcel used in the timber harvest plan; • map(s) of the area (preferably in digital format); • geographic coordinates of each polygon vertex (preferably obtained from a GPS or from a geo-referenced digital map); • total land area; and • details of forest land rights holder and user rights. The geographic boundaries of an IFM project are fixed and thus do not change over the project lifetime. Following the VCS definition of market leakage the geographic boundaries for leakage from market effects are those of the country in which the project area occurs.
Evidence Used to Assess Conformance: PD Table 16.
Findings: Map of IFM Operational Area (Figure 3, PD) cannot be reconciled with the shapefiles provided (see SF IFM_OPerationalBoundary_Final). Given that two Timber Harvest Plan documents (April Salumei and April River) are provided, we should have a shapefile for each.
Non-conformity report (NCR): Please explain how map of VM0010 area showed in Figure 3 PD and the IFM_OperationalBoundary_Final shapefile can be reconciled.

Date issued:	17 April 2013
Project proponent response/actions and date: In an email sent on the 28/03/2013 addressed to Shawn following explanation was provided in regards to the difference of the maps and shapefiles: "The IFM boundary has been shifted based on altitude to match the forest strata we saw during the fly over. The IFM boundary now definitely covers 1 forest type and is the correct area in hectares, being slightly larger than the area from which the extractable volume will be taken (as described in the PD and the calculator). Please note that during this update we have realized that the boundary map in the PD was an old version and will need to be updated." We have now updated the maps in the PD to match the IFM_OperationalBoundary_Final shapefile. – 5 June 2013	
Evidence used to close NCR: Maps have been updated in the PD. Issue is addressed.	
Date closed:	17 July 2013

219. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 11)

VCS Criteria: VM0010 V1.2, 5 Project Boundary - 5.1 Geographical Boundaries -When describing physical project boundaries, the following information shall be provided per discrete area: • unique identifier for each discrete land parcel used in the timber harvest plan; • map(s) of the area (preferably in digital format); • geographic coordinates of each polygon vertex (preferably obtained from a GPS or from a geo-referenced digital map); • total land area; and • details of forest land rights holder and user rights. The geographic boundaries of an IFM project are fixed and thus do not change over the project lifetime. Following the VCS definition of market leakage the geographic boundaries for leakage from market effects are those of the country in which the project area occurs.	
Evidence Used to Assess Conformance: PD Table 16.	
Findings: Map of IFM Operational Area (Figure 3, PD) cannot be reconciled with the shapefiles provided (see SF IFM_OPerationalBoundary_Final). Given that two Timber Harvest Plan documents (April Salumei and April River) are provided, we should have a shapefile for each.	
Non-conformity report (NCR): Please provide maps and/or shapefiles showing clearly the April River Timber Harvest Plan area and the April Salumei Timber Harvest Plan Area.	
Date issued:	17 April 2013
Project proponent response/actions and date: Project proponent response/actions and date: A map and shapefiles have been provided in folder 219 – 5 June 2013	
Evidence used to close NCR: Maps and Shapefiles added. Issue is addressed.	
Date closed:	17 July 2013

220. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 11)

VCS Criteria: VM0010 V1.2, 5 Project Boundary - 5.1 Geographical Boundaries -When describing physical project boundaries, the following information shall be provided per discrete area: • unique identifier for each discrete land parcel used in the timber harvest plan; • map(s) of the area (preferably in digital format); • geographic coordinates of each polygon vertex (preferably obtained from a GPS or from a geo-referenced digital map); • total land area; and • details of forest land rights holder and user rights. The geographic boundaries of an IFM project are fixed and thus do not change over the project lifetime. Following the VCS definition of market leakage the geographic boundaries for leakage from market effects are those of the country in which the project area occurs.
Evidence Used to Assess Conformance: PD Table 16.
Findings: A unique identifier has not been provided for each discrete land parcel used in the timber harvest plan.
Non-conformity report (NCR): Please provide compartment number and allotment number (or equivalent) for each discrete land parcel.

Date issued:	17 April 2013
Project proponent response/actions and date: Compartment numbers for each discrete harvest block have now been provided and are presented in Figure 33 of the PD. – 5 June 2013	
Evidence used to close NCR: Since there are no compartment blocks or anything else similar to this in the harvest plan, the project proponent has simply included the planned productivity. This NCR does not seem relevant and therefor is deemed addressed.	
Date closed:	17 July 2013

221. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 11)

VCS Criteria: VM0010 V1.2, 5 Project Boundary - 5.1 Geographical Boundaries -When describing physical project boundaries, the following information shall be provided per discrete area: • unique identifier for each discrete land parcel used in the timber harvest plan; • map(s) of the area (preferably in digital format); • geographic coordinates of each polygon vertex (preferably obtained from a GPS or from a geo-referenced digital map); • total land area; and • details of forest land rights holder and user rights. The geographic boundaries of an IFM project are fixed and thus do not change over the project lifetime. Following the VCS definition of market leakage the geographic boundaries for leakage from market effects are those of the country in which the project area occurs.	
Evidence Used to Assess Conformance: PD Table 16.	
Findings: The spatial extent of Annexes 1, 3, & 4 is unclear.	
Non-conformity report (NCR): Please provide a clear description or preferably a map of the spatial extent of Annexes 1, 3, & 4.	
Date issued:	17 April 2013
Project proponent response/actions and date: Maps for Annexes 1, 3 & 4 are in folder 221. A document is also provided from the April Salumei Working Group, outlining the extent of the April Salumei Project Area. – 5 June 2013	
Evidence used to close NCR: Maps have been provided for each of these items. Additionally, a letter was provided from Gideon Joseph that confirms the spatial extent of the April river area and that is under the agreement with RPML. Issue is addressed.	
Date closed:	17 July 2013

222. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 11)

VCS Criteria: VM0010 V1.2, 5 Project Boundary - 5.1 Geographical Boundaries -When describing physical project boundaries, the following information shall be provided per discrete area: • unique identifier for each discrete land parcel used in the timber harvest plan; • map(s) of the area (preferably in digital format); • geographic coordinates of each polygon vertex (preferably obtained from a GPS or from a geo-referenced digital map); • total land area; and • details of forest land rights holder and user rights. The geographic boundaries of an IFM project are fixed and thus do not change over the project lifetime. Following the VCS definition of market leakage the geographic boundaries for leakage from market effects are those of the country in which the project area occurs.	
Evidence Used to Assess Conformance: PD Table 16.	
Findings: IFM boundaries in the PD and the monitoring report do not correlate and it appears that non-operable areas have not been removed/buffered.	
Non-conformity report (NCR): Please insure that IFM boundaries in the PD and the monitoring report are identical. In addition, please assure that the boundaries correctly characterize any areas removed from the IFM project because of topographic, water/river, or other constraints/conditions.	
Date issued:	17 April 2013
Project proponent response/actions and date: Maps have been changed accordingly. Excluded	

areas from the IFM project area clearly cut out as the layer underneath shows through. – 5 June 2013	
Evidence used to close NCR: This issue was raised in a previous NCR (139) and addressed. This issue is considered addressed.	
Date closed:	17 July 2013

223. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 11)

VCS Criteria: VM0010 V1.2, 5 Project Boundary - 5.1 Geographical Boundaries -When describing physical project boundaries, the following information shall be provided per discrete area: • unique identifier for each discrete land parcel used in the timber harvest plan; • map(s) of the area (preferably in digital format); • geographic coordinates of each polygon vertex (preferably obtained from a GPS or from a geo-referenced digital map); • total land area; and • details of forest land rights holder and user rights. The geographic boundaries of an IFM project are fixed and thus do not change over the project lifetime. Following the VCS definition of market leakage the geographic boundaries for leakage from market effects are those of the country in which the project area occurs.	
Evidence Used to Assess Conformance: PD Table 16.	
Findings: IFM boundaries in the PD and the monitoring report do not correlate and it appears that non-operable areas have not been removed/buffered.	
Non-conformity report (NCR): Please provide evidence that water areas (specifically, rivers) have been removed from the harvestable project area.	
Date issued:	17 April 2013
Project proponent response/actions and date: Please see NCR 139 for evidence and provided shapefiles in folder 223. – 5 June 2013	
Evidence used to close NCR: This issue was raised in a previous NCR (139) and addressed. This issue is considered addressed.	
Date closed:	17 July 2013

224. Clarification (VM0010 IFM-LtPF v1.2, VM0010, Line 11)

VCS Criteria: VM0010 V1.2, 5 Project Boundary - 5.1 Geographical Boundaries -When describing physical project boundaries, the following information shall be provided per discrete area: • unique identifier for each discrete land parcel used in the timber harvest plan; • map(s) of the area (preferably in digital format); • geographic coordinates of each polygon vertex (preferably obtained from a GPS or from a geo-referenced digital map); • total land area; and • details of forest land rights holder and user rights. The geographic boundaries of an IFM project are fixed and thus do not change over the project lifetime. Following the VCS definition of market leakage the geographic boundaries for leakage from market effects are those of the country in which the project area occurs.	
Evidence Used to Assess Conformance: PD Table 16.	
Findings: There are unknown linear features in the shapefile "IFM_TotalHarvestableArea_March27_final.shp."	
Clarification (CL): Please clarify the nature of the linear feature in the shapefile "IFM_TotalHarvestableArea_March27_final.shp." They do not appear to be either roads or water.	
Date issued:	17 April 2013
Project proponent response/actions and date: The linear features in this shapefile are roads. Close inspection of the shapefile will reveal that the area of roads have been excised from the VM0010 (IFM) project boundaries. This is necessary to avoid double-counting, and to achieve compliance with Section 3.1.8 of the VCS AFOLU Requirements which states that: "For each activity covered by a different methodology, the geographic extent of the area to which the methodology is applied shall be clearly delineated." - 5 June 2013	

Evidence used to close CL: This issue was similar to the issue raised in NCR 139. It is clear that the roads have been removed from the IFM project area. Issue is addressed.	
Date closed:	17 July 2013

225. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 13)

VCS Criteria: VM0010 v1.2, 5.2 Temporal Boundaries - Start date and length of the project crediting period The project crediting period is the period of time for which the net GHG emissions reductions or removals will be verified. The project crediting period must be set in accordance with the VCS rules for IFM LtPF projects. The duration of the project crediting period must be reported in the VCS Project Description (VCS-PD).	
Evidence Used to Assess Conformance: FMA (Annex 4)	
Findings: Start Date May 2009. End Date 5/21/2049. Length 40 years. FMA began 12/20/96 and lasted 50 years. Thus, it expires on 12/20/2046, but supposedly would have easily been renewed. Project crediting period of 40 years is within the Standard's guidelines for AFOLU crediting periods.	
Non-conformity report (NCR): Please explain how the project crediting period can extend beyond the expiration date of the FMA.	
Date issued:	17 April 2013
Project proponent response/actions and date: The initial project crediting period was 40 years, commencing in May 2009, which implies that harvesting in the baseline would continue until the calendar year 2048. Forty years was chosen for the crediting period, as this is equivalent to the duration of the cutting cycle, as stated in the 'Road Timbers' FMDP. The duration of the FMA is 50 years (with the option for 20 year renewal periods), as stated in Section 2.1 and 2.2 of the FMA (p.18): "The term of this Agreement is for a period of 50 years, commencing on the date set out in Schedule 1". Schedule 1 of the FMA states that "The term is 50 years commencing on the 20th day of December 1996 and expiring on the 19th day of December 2046." It is acknowledged that the duration of the crediting period therefore extends for 2 years beyond expiry of the FMA (conservatively assuming no extension to the FMA period). As a result, the Project Proponent has reduced the crediting period to 38 years, which aligns with the expiry date of the FMA. All years in the calculator have been reduced accordingly, as well as all references in the PD. Reducing the credit period to 38 also impacts the Project Longevity of the Risk Assessment as the FMA has provision for extension following the 50 years for a 20 year renewal. It is common that the FMAs in PNG are renewed or the land use is changed to agriculture conversion at the end of the 50 years. This option is available to the Project Proponent who intends to enact the option. Therefore the Project Longevity in the Risk Assessment has been set to (38+20 = 58) 58 years. – 5 June 2013	
Non-conformity report (NCR): Crediting period still states 40 years in PD and in calcs. Please complete this correction.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
Table 6 of the PD as been updated to state that the crediting period is 38 years. Change is highligted in green. In the calculator all tabs have been corrected to show only 38 years.	
Evidence used to close NCR: All corrections have been completed in both the PD, carbon and risk calculations. Issue addressed.	
Date closed:	25 August 2013

226. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 14)

VCS Criteria: VM0010 v1.2, 5.2 Temporal Boundaries - Duration of the monitoring periods. Issuance of Verified Carbon Units (VCUs) is subject to monitoring and verification. The minimum duration of a monitoring period is one year and the maximum duration is 10 years. Project proponents are free to decide the periodicity of verifications, however, in accordance with the VCS rules, if verification does not occur within 5 years, 50% of the buffer account credits are placed on hold.

Baseline projections are calculated ex-ante and are not adjusted through-out the project lifetime.	
Evidence Used to Assess Conformance: Table 5 PD & Table 17 PD Table 49 PD	
Findings: First monitoring period is May 22, 2009 to May 21, 2012 per Table 5 PD. First monitoring period is May 22, 2009 to Dec 31, 2012 (3yrs & 7 months) & that after the fourth monitoring period "subsequent monitoring periods shall be every two years thereafter." per Table 17 PD. Table 49 agrees with Table 17 until 6th monitoring period which is shown as 1 yr, but should be 1.4 (and is not 2 as stated in Table 17)	
Non-conformity report (NCR): Please change PD so that Tables 5, 17, & 49 are consistent in terms of dates and lengths of monitoring periods.	
Date issued:	17 April 2013
Project proponent response/actions and date: Date for the end of the first monitoring period has been changed to 31 Dec 2012 in Table 5. Change has been highlighted in yellow. – 5 June 2013	
Evidence used to close NCR: Tables 5 and 17 have the correct monitoring periods included. Not sure why table 49 was listed. Issue is addressed.	
Date closed:	17 July 2013

227. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 16)

VCS Criteria: VM0010 v1.2, 5.3 Carbon Pools - The carbon pools included or excluded from the project boundary are shown in Table 2. (see Methodology for Table 2)	
Evidence Used to Assess Conformance: Table 18 PD.	
Findings: Table 2 in the Methodology separates deadwood into logging slash and naturally accumulated.	
Non-conformity report (NCR): Please separate dead wood in Table 18 of the PD into logging slash (included in the baseline) and naturally accumulated (excluded) as required in the methodology.	
Date issued:	17 April 2013
Project proponent response/actions and date: This change has been added to Table 18 and highlighted in yellow – 5 June 2013	
Evidence used to close NCR: This change has been made in the Table 18 of the PD. Issue is addressed.	
Date closed:	17 July 2013

228. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 22)

VCS Criteria: VM0010 v1.2, 6 – 6.1 Selection of Baseline - The project proponent must use the current version of the VCS Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities to assess which of the baseline alternatives shall be excluded from further consideration. As per the applicability conditions, the project must demonstrate a baseline of planned timber harvest. If such a baseline cannot be demonstrated then this methodology cannot be applied. Planned timber harvest events in the baseline scenario can occur in any year of the project activity, not just year 0.
Evidence Used to Assess Conformance: PD 2.5
Findings: PD states that Tool for the Demonstration and Assessment of Additionality (VT0001 version 3.0) is used. Annex 4, 10, and 14 combine to demonstrate a baseline of planned timber harvest. The timber harvests are planned for a 40 year rotation. That these plans were reasonably expected to be acted upon is demonstrated in the DOS (annex 6), according to the PD (see 2.51 of PD). That the annexes referred to pre-date this carbon project by ~13 years raises the question of whether the timber harvest was a realistic expectation.
Non-conformity report (NCR): Section 0 is referenced multiple times in the PD but is not to be found in the document or the TOC. Please provide. There is a large time difference between the FMA and associated documents (Annexes 6, 10, and 14) and the start of the project. Please provide additional detail as to how the proposals associated with

the FMA and its annexes remained viable after such a lengthy time had passed.	
Date issued:	17 April 2013
Project proponent response/actions and date: Section 0 issues have been addressed and cross referenced accordingly. In regards to the delay between the date the FMA was signed, as the modeled baseline onset of harvest: A discussion of this issue is provided on page 39 of the PD, and reproduced below: "On 20 December 1996, landowners of the Project Area, in their legal capacity as ILGs, entered into an FMA agreement with the Papua New Guinea Forest Authority. Under this agreement the Papua New Guinea Forest Authority have the rights to award a logging concession to a logging company for 50 years. Negotiations between the ILGs and prospective concession owners took place not long after the FMA was signed. However a concession had not yet been awarded when, on 13 September 1997, the Papua New Guinea Government declared part of the FMA to be a Wildlife Management Area (WMA) in accordance with the Fauna (Protection and Control) Act 1966. This was done without landowner consent and in direct breach of the FMA. Legal action was taken by the landowners, and in an out-of-court settlement, it was agreed the remaining area under the FMA should become a pilot project for Papua New Guinea's REDD program as an option to avoid unsustainable logging alternatives." In summary, the reason for the delay between signing of the FMA and modeled commencement of timber harvesting was due to the dispute surrounding classification of the Project Area as a WMA. This dispute continued for a number of years, until it was finally resolved on 21 May 2007, when the court ruled that the PNG Forest Authority had breached the conditions of the FMA by declaring the area a WMA (Annex 16). Following this resolution, the landowners agreed to set-aside the area as a REDD project. Were this not an option, the landowners would almost certainly have resumed their original plans to engage a logging company to commence harvesting of the area. The baseline scenario assumes that it would take approximately 2 years from resolution of the WMA dispute until commencement of logging, which is a realistic amount of time for engagement of a logging contractor, based on anecdotal evidence of similar activities in PNG. as well as discussions with forestry officials in PNG. This also coincides with the 2009 Project start date. – 5 June 2013	
Non-conformity report (NCR): Section 0 references still exist in the PD. Please correct these references. The discussion on the start date appears reasonable and site visit information confirms that the project should have begun without the possible carbon funding. 2 years appears reasonable for a start of the logging operations given the need for roads into the edge of the project area. Since the start of the project, mining prospecting had already begun, thus showing the speed at which land owners are willing to get projects started. Issue is addressed.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
All Section 0 references have been corrected.	
Evidence used to close NCR: Section 0 references have been removed. Issue addressed.	
Date closed:	25 August 2013

229. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 24)

VCS Criteria: VM0010 v1.2, 6 – 6.2.1 Historical Baseline Scenario A baseline scenario and timber harvest plan (see methodology for Box 1) derived from the historical practices of the baseline agent of timber harvest must be modeled as the project baseline if the following documents exist for the project proponent as the baseline land manager for forests in the same region as the project area: 1. Historical records of forest management exist for a minimum of 5 or more years preceding the project start date. 2. Historical records indicate that the management practices have surpassed the legal requirements provided by conforming with all local and regional forest legislation. 3. Historical records that indicate that the historical management surpasses financial barriers by providing above average financial returns.

Evidence Used to Assess Conformance: PD 4.1.2	
Findings: PD states using "a combination of the 'historical' and 'common practice' options"	
Non-conformity report (NCR): PD 4.1.2 states that "a combination of the 'historical' and 'common practice' options were used". Given that none of the conditions for use of the Historical Baseline Scenario approach exist, please identify the project approach as a methodology deviation, inclusive of a solid explanation. Alternatively, please revise to use only the common practice baseline scenario approach.	
Date issued:	17 April 2013
Project proponent response/actions and date: Section 4.1.2 of the PD has been revised to identify that a 'common practice' method was used to model the baseline scenario. Historical data was not used, and therefore this erroneous reference has been removed from the PD. – 5 June 2013	
Evidence used to close NCR: Item corrected. Issue is addressed.	
Date closed:	17 July 2013

230. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 25)

VCS Criteria: VM0010 v1.2, 6 - 6.2.2 Common Practice Baseline Scenario All other cases must model baseline harvest based on common practice. Common practice will be timber harvest under the legal requirements for forest management and will be determined from a timber harvest plan (see Box 1) developed from: 1. The project area through scenario modeling as though the legal requirements were implemented in the project area; and 2. A reference area (or multiple reference areas) already under timber harvest management that complies with legal requirements for forest management and selected to be representative of local common practice for timber harvest. Common practice cannot contradict management of the baseline agent except where common practice represents a lower harvest intensity (in m3/ha) than management by the baseline agent. Where there is limited capacity to generate the baseline scenario using a reference site in the region of the project area, multiple reference areas may be selected to cover a country so long as the reference area criteria regarding forest types, climate and elevation are met.	
Evidence Used to Assess Conformance: 4.1.2, Table 39 PD	
Findings: Using Annex 10 and 14 as Timber Harvest Plans. Table 39 of PD addresses the Requirements of the Harvest Plan and references Annex 14 (April Salumei FMDP) and Annex 10 (April River). The FMDP (Ann14) has at least most of the requirements of a timber harvest plan. Annex 10 is written more as an initial feasibility assessment with references to a complete inventory being conducted and further analysis. I have a difficult time seeing this as a spatially defined Timber Harvest Plan.	
Non-conformity report (NCR): Please provide a merchantable forest inventory volume per ha in Table 39 and, if possible, the details of the inventory that led to that number. The calculation of non-operable areas in Table 39 is unclear and not very standard. Non-operable areas should be defined in the PD and delineated spatially and those areas removed from the potential harvest volume. The timber harvest plan should be calculated on the remaining timberland using a reasonable and clear forest inventory, assumptions about growth rates, and assumptions about harvest rate. The plans provided are conducted at a very gross level and additional clarity is needed to show that the summation of these plans is a reasonable and realistic timber harvest plan. Please provide this clarity.	
Date issued:	17 April 2013
Project proponent response/actions and date: A new Sub-section has been inserted into Section 4.1.2 of the PD, titled 'Development of the Timber Harvest Plan', in order to provide greater clarity on the timber harvest plan. This includes a number of maps which provide clarity on how the non-operable area was defined. Additional text has been added to Section 4.1.5 to provide greater clarity on how our forest inventory data was used to validate the data in the plan. In summary, our own forest inventory calculated the of merchantable volume of trees greater than 20cm DBH (135.66 m3 ha-1). The inventory was conducted according to the procedures are described in the Carbon Stock Report (Annex 9). Our estimate of merchantable volume was greater than the same estimate in the FMDP and the April River Harvest Plan (93.54 m3 ha-1). The methodology states that: "If the validated estimate of volume is	

within the 90% confidence interval of the corresponding estimate or is greater than the estimate calculated from pre-existing forest inventory data, the pre-existing forest inventory data may be used." As a result, the pre-existing (more conservative) pre-inventory data was used to estimate merchantable volume. The merchantable volume estimates presented in the Road Timbers FMDP were "assessed through an inventory undertaken in 1989 by the Forest Office East Sepik" (Section 5.0, FMDP), with a stated plot intensity of 0.074%. This is presumably the same inventory that was undertaken as part of the Development Option Study (DOS, Annex 6) for the same area. Unfortunately the DOS did not state how the forest inventory was performed. The merchantable volume estimates for the April River Timber Harvest Plan were based on a forest inventory conducted by Forest Engineering Consultants/Unitech Development and Consultancy in 1993 or 1995 (April River Timber Harvest Plan, p.2 & 8), although the Plan contains conflicting information related to the inventory. The Plan states that the forest inventory was conducted according to a 'stripline' method, however no further detail was provided. – 5 June 2013		
Non-conformity report (NCR): The PD now shows in detail the calculation of the non operable areas. The PD also now explains the origin of the inventory that was used to create the merchantable volume. Since these FMA plans were written for the purpose of estimating volume for removal and not for the purpose of calculating volume for a carbon project, additionally, they were probably written conservatively in hopes that the timber company would not have to pay more royalties than absolutely needed, this inventory estimate is accepted. Personal communication with one of the original surveyors from this inventory confirms that the inventory estimates were conducted as stated in the response. A carbon sequestration rate of 1 t C ha-1 yr-1 was assumed in Equation 9 as shown below, as this was the measured forest carbon sequestration rate following selective harvest for the PSP located in the Southern Highlands, which is closest to the Project Area. Please describe the pattern of harvesting presented in Figure 32. These harvest blocks appear non-sensical given the terrain and infrastructure needs.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
It is unclear why the validator believes the compartments to be non-sensical. These areas were allocated as a conceptual model. All the avaialble areas will be harvested as demonstrated to the validator during the fly over of operational FMAs in PNG. In the absence of comparetments being defined the methodology allows the allocation of compartments which is what was done. As there is only one forest strata it makes no difference to the net carbon abatement where the compartments are allocated as long as they are withint he forest strata. We have excluded high altitude forest and steep slopes that would not be harvested in accordance with the code so all other areas are available for harvest. The location of the coups makes no material difference to the net abatement.		
Evidence used to close NCR: Client Response; ProjectDescription_AprilSalumei_V1.3.docx - The response adequately addresses this item. In determining the operable areas, a model is being used that is taking into account the needed factors (slope, inundation, etc.), The location of the operable areas as predicted by the model and shown on the map does not affect the rate of harvesting that is expected to occur.		
Date closed:	19 August 2013	

231. Clarification (VM0010 IFM-LtPF v1.2, VM0010, Line 25)

VCS Criteria: VM0010 v1.2, 6 - 6.2.2 Common Practice Baseline Scenario All other cases must model baseline harvest based on common practice. Common practice will be timber harvest under the legal requirements for forest management and will be determined from a timber harvest plan (see Box 1) developed from: 1. The project area through scenario modeling as though the legal requirements were implemented in the project area; and 2. A reference area (or multiple reference areas) already under timber harvest management that complies with legal requirements for forest management and selected to be representative of local

common practice for timber harvest. Common practice cannot contradict management of the baseline agent except where common practice represents a lower harvest intensity (in m3/ha) than management by the baseline agent. Where there is limited capacity to generate the baseline scenario using a reference site in the region of the project area, multiple reference areas may be selected to cover a country so long as the reference area criteria regarding forest types, climate and elevation are met.	
Evidence Used to Assess Conformance: 4.1.2, Table 39 PD	
Findings: Using Annex 10 and 14 as Timber Harvest Plans. Table 39 of PD addresses the Requirements of the Harvest Plan and references Annex 14 (April Salumei FMDP) and Annex 10 (April River). The FMDP (Ann14) has at least most of the requirements of a timber harvest plan. Annex 10 is written more as an initial feasibility assessment with references to a complete inventory being conducted and further analysis. I have a difficult time seeing this as a spatially defined Timber Harvest Plan. In addition, there are several points of confusion that need addressed: 1. Forest Inventory. Values provided in Table 39 of PD show 460,000m3 of forest inventory. Referring to the Annex's, this is actually the estimated annual harvest and not the standing inventory. 2. The non-operable areas are identified as 367,412 ha. Operable Acres are calculated from a net operable hectares harvested per year times a 40 year cycle as 196707. Gross acres are calculated from 382762 forested acres in April Salumei (Annex 14, 2.5) plus 200,000 acres (Introduction, Annex 10). This value 582762 less the calculated 196707 equals non-operable areas.	
Clarification (CL): Please explain where the 4918 hectares of operable forest value shown in Table 39 originates.	
Date issued:	17 April 2013
Project proponent response/actions and date: Cell E7 of the 'VM00010 (Inputs)' worksheet of the calculator has been modified to improve clarity as to how this parameter was calculated. In summary, the annual harvest area was calculated according to the formula specified in Section 5.5 of the FMDP, which is a commonly used formula to calculate annual harvest blocks in PNG. It is calculated as total annual allowable cut divided by the merchantable volume per hectare of the FMA. – 5 June 2013	
Evidence used to close CL: E7 now states "Calculated as the AAC for the April Salumei FMA, specified in Section 9.3 of FMDP (380,000 m3 yr-1),plus the AAC for the April River Area, specified on page 3 of the April River Harvest Plan (80,000 m3 yr-1)". Issue is addressed.	
Date closed:	17 July 2013

232. Clarification (VM0010 IFM-LtPF v1.2, VM0010, Line 25)

VCS Criteria: VM0010 v1.2, 6 - 6.2.2 Common Practice Baseline Scenario All other cases must model baseline harvest based on common practice. Common practice will be timber harvest under the legal requirements for forest management and will be determined from a timber harvest plan (see Box 1) developed from: 1. The project area through scenario modeling as though the legal requirements were implemented in the project area; and 2. A reference area (or multiple reference areas) already under timber harvest management that complies with legal requirements for forest management and selected to be representative of local common practice for timber harvest. Common practice cannot contradict management of the baseline agent except where common practice represents a lower harvest intensity (in m3/ha) than management by the baseline agent. Where there is limited capacity to generate the baseline scenario using a reference site in the region of the project area, multiple reference areas may be selected to cover a country so long as the reference area criteria regarding forest types, climate and elevation are met.
Evidence Used to Assess Conformance: 4.1.2, Table 39 PD
Findings: Using Annex 10 and 14 as Timber Harvest Plans. Table 39 of PD addresses the Requirements of the Harvest Plan and references Annex 14 (April Salumei FMDP) and Annex 10 (April River). The FMDP (Ann14) has at least most of the requirements of a timber harvest plan. Annex 10 is written more as an initial feasibility assessment with references to a complete inventory being conducted and further analysis. I have a difficult time seeing this as a spatially defined Timber Harvest Plan.

In addition, there are several points of confusion that need addressed: 1. Forest Inventory. Values provided in Table 39 of PD show 460,000m3 of forest inventory. Referring to the Annex's, this is actually the estimated annual harvest and not the standing inventory. 2. the non-operable areas are identified as 367,412 ha. Operable Acres are calculated from a net operable hectares harvested per year times a 40 year cycle as 196707. Gross acres are calculated from 382762 forested acres in April Salumei (Annex 14, 2.5) plus 200,000 acres (Introduction, Annex 10). This value 582762 less the calculated 196707 equals non-operable areas.	
Clarification (CL): Please explain how Annex 10 is a spatially defined timber harvest plan and not a prospectus or feasibility study. In particular, address the comments in this document about needed information (inventory) prior to developing a full plan.	
Date issued:	17 April 2013
Project proponent response/actions and date: Annex 10 is the April River Timber Harvest Plan. It is a plan that landowners in the April River FMA specifically had developed for timber harvesting of their area, following completion of the Development Options Study. While it had not yet been approved by the Ministry of Forestry prior to enactment of the Wildlife Management Area (WMA) in the FMA, the plan was well on its way towards approval before the WMA blocked the process. As a plan that was specifically commissioned by the landowners, in accordance with their legal right under the FMA, and the plan contains sufficient data in order to develop a 'timber harvest plan' as is required under the Methodology, we consider that Annex is in compliance with the requirements of the methodology. – 5 June 2013	
Evidence used to close CL: Annex 10 is the April River Timber Harvest Plan. It is a plan that landowners in the April River FMA specifically had developed for timber harvesting of their area, following completion of the Development Options Study. While it had not yet been approved by the Ministry of Forestry prior to enactment of the Wildlife Management Area (WMA) in the FMA, the plan was well on its way towards approval before the WMA blocked the process. As a plan that was specifically commissioned by the landowners, in accordance with their legal right under the FMA, and the plan contains sufficient data in order to develop a 'timber harvest plan' as is required under the Methodology, we consider that Annex is in compliance with the requirements of the methodology.	
Date closed:	17 July 2013

233. Clarification (VM0010 IFM-LtPF v1.2, VM0010, Line 27)

VCS Criteria: VM0010 v1.2, 6 - 6.3 Stratification If the proposed project area contains different forest types or forests with different carbon density, stratification must be carried out in order to improve the accuracy and precision of carbon stock estimates. For estimation of base year carbon stocks, strata must be defined on the basis of parameters that are key variables in any method used to estimate changes in managed forest carbon stocks. Strata will include either forest type, vegetation type and/or target timber species.	
Evidence Used to Assess Conformance: Carbon Stock Report (Annex 9) and PD Section 3.4.	
Findings: PD 3.4, Stratification using PNGRIS dataset (remote-sensing?) resulted in 3 strata into which field plots were located. Field data (18 plots) were collected. Post collection, analysis showed that the plots in the different pre-determined strata did not differ in carbon stock details. No significant analysis was presented.	
Clarification (CL): Since Table 2 does not show any field plots allocated to the pre-determined Low Montane strata, please explain how it was determined that the carbon stock of this potential strata was not significantly different from the others.	
Date issued:	17 April 2013
Project proponent response/actions and date: The Low Montane strata has now been removed from the Project Area. Given the remote nature of the area and the significant slope experienced in the strata would make harvesting of these areas illegal compared with the forest Code of Practice. While it is likely that these areas would be harvested in the baseline scenario nonetheless, these areas were excluded. – 5 June 2013	
Clarification (CL): Please show evidence that the Low Montane strata was removed. Was not the	

entire project area determined to be only one strata? If so, please show evidence of how this was accomplished. This question is related to a previous NCR regarding the stratification. (169). Carbon Stock report still indicates that plots were allocated to this stratum.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
A map of the excluded strata has been provided in Annex 9. This map shows the strata excluded and that only the low Altitude forest was considered. The total area considered in the inventory, the IFM calculations and the REDD calucations is 348,873 hectares of Low Altitude forest. This map clearly shows that montane forest was removed from the analysis.		
Evidence used to close CL: This issue is addressed. Please see item 169 and the updated Annex 9.		
Date closed:	25 August 2013	

234. Clarification (VM0010 IFM-LtPF v1.2, VM0010, Line 27)

VCS Criteria: VM0010 v1.2, 6 - 6.3 Stratification If the proposed project area contains different forest types or forests with different carbon density, stratification must be carried out in order to improve the accuracy and precision of carbon stock estimates. For estimation of base year carbon stocks, strata must be defined on the basis of parameters that are key variables in any method used to estimate changes in managed forest carbon stocks. Strata will include either forest type, vegetation type and/or target timber species.	
Evidence Used to Assess Conformance: Carbon Stock Report (Annex 9) and PD Section 3.4.	
Findings: PD 3.4, Stratification using PNGRIS dataset (remote-sensing?) resulted in 3 strata into which field plots were located. Field data (18 plots) were collected. Post collection, analysis showed that the plots in the different pre-determined strata did not differ in carbon stock details. No significant analysis was presented.	
Clarification (CL): Please provide additional details related to the statistical analysis which determined that there was no difference between the original strata in terms of post-data collection carbon stock levels. Such details might include output from a statistical package, calculations of test statistics or similar.	
Date issued:	17 April 2013
Project proponent response/actions and date: An additional Statistical Biomass Assessment was attached to Annex 9 which demonstrated the statistical work conducted to demonstrate that while the mean carbon stock estimate used is lower than that reported in other studies in the same forest types in PNG it is not significantly different. Our mean carbon stock for the project area is conservative and reported within the 95% confidence interval required by the standard. – 5 June 2013	
Evidence used to close CL: Additional statistical information was reviewed. This item is addressed, however there is an issue raised in the previous NCR's regarding some of the language (and resulting inputs to this statistical analysis) that will render this item closed when those last X-STR items are closed.	
Date closed:	17 July 2013

235. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 43)

VCS Criteria: VMD0010, v1.2, 8.1.1 Calculation of carbon stocks in commercial timber volumes (see methodology for nomenclature) - Validation of pre-existing forest inventory data must be carried out by field surveys. For each strata, mean volume is estimated from sample plots/points measured within the project area using standard forest inventory assessment methods. The number of sample plots will be determined from application of the most recent version of the Tool for Calculation of the Number of Sample Plots for Measurements within A/R CDM Project Activities.
Evidence Used to Assess Conformance: PD 4.15, Carbon Stock Report
Findings: Strata used to allocate samples but eliminated post-processing. There is no mention of the use of the CDM tool in the PD or the Monitoring Report even though it is required under the meth. The tool is somewhat similar to the Winrock calculator they used quantify the number of sample plots. The equation to determine the # of sample plots is slightly different, but I did the math and it gives the

same results at the Winrock Calculator. However, the tool includes an iterative process and further adjustment steps that I'm pretty sure the Winrock calculator does not implement.		
Non-conformity report (NCR): As per VM0010, please demonstrate that the CDM "Tool for Calculation of the Number of Sample Plots for Measurements within A/R CDM Project Activities" was used to determine the sample size necessary for the inventory of carbon stocks used to validate pre-existing data .		
Date issued:	17 April 2013	
Project proponent response/actions and date: The Winrock sample size calculator was used to determine the number of plots. This calculator uses the equations from the CDM tool. References supporting this statement are supplied with this NCR. Clarifying text has been added to the PD in section 4.1.5 (highlighted in yellow) and supporting documentation provided. – 5 June 2013		
Non-conformity report (NCR): Clarifying text not found in PD. Please just show the comparison between the two methods or just simply use the tool. Since the methodology requires the use of the tool and not the Winrock Calculator, please just add the use of the tool and the results to the PD and Annex 9.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
The CDM "Tool for Calculation of the Number of Sample Plots for Measurements within A/R CDM Project Activities" was used to determine the sample size necessary for the inventory of carbon stock. This is presented in the spradsheet provided with this NCR. The number of plots required determined by this tool is now presented in Annex 9 Table 2nad Table 4.		
Non-conformity report (NCR): The tool was used and the submitted files show most of the work. However it is unclear how the acceptable margin of error was calculated. Please add show calculations or assumptions.		
Date issued:		
Project proponent response/actions:	**Date Received:**	06 September 2013
The acceptable margin of error applied as 15%. This is explained in Annex 9 on page 5. The CDM tool states that "A default value equal to 10% of the mean biomass stock within the project boundary may be used unless a different value is prescribed in a methodology". VCS methodologies have the requirement for 15% of the mean at the 95% confidence interval before a confidence deduction needs to be applied. Therefore we applied 15% of the mean as the acceptable margin of error to be consistent with all other calculations in the project. A note has been added to the calculation spreadsheet (Tab:PostFieldInventory_CellB11) and additional text added to a footnote in Annex 9 on page 5 to improve clarity.		
Evidence used to close NCR: PlotTool.xlsx; Annex9_ForestCarbonStockCalculations.docx - The validator understands that the applied MOE is +/- 15 % @ 95 % CI (as defined in VM0010 V1.2). Confirmed that this has been explained in Annex 9 as indicated. PlotTool.xlsx represents an accurate application of the CDM Tool. Item is addressed.		
Date closed:	11 September 2013	

236. Clarification (VM0010 IFM-LtPF v1.2, VM0010, Line 44)

VCS Criteria: VM0010 v1.2, 8.1.1 Calculation of carbon stocks in commercial timber volumes - If the validated estimate of volume is within the 90% confidence interval of the corresponding estimate or is greater than the estimate calculated from pre-existing forest inventory data, the pre-existing forest inventory data may be used. If the validation estimate is less than the corresponding estimate calculated from pre-existing forest inventory data, the estimate from pre-existing data cannot be used.
Evidence Used to Assess Conformance: PD 4.1.5. Annex 14 5.5, Annex 10 4 b.
Findings: Table 41 in PD shows 145.17 m3/ha of standing volume which exceeds the (~93m3/ha in annex 10 and the ~85 m3/ha in annex 14. However, looking at only the >50cm dbh trees, the carbon stock report and PD show 37.47 m3/ha which is significantly lower than the 55.3 m3/ha assumed in

both Annex 10 and 14. It was the >50cm dbh trees that were used to determine allowable cut acres. Also, nowhere in the carbon stock report are the calculations show in Table 41 of PD. The carbon stock report jumps straight to CO2e rather than m3/ha.	
Clarification (CL): Annex 10 and 14 appear to base allowable cut on >50cm dbh volume. That volume is used to determine the allowable cut. While the TOTAL volume in the carbon stock report is higher than the TOTAL volumes reported in the two annexes, the volume in the >50cm class is substantively lower. Please explain how the allowable cut determined in the annexes is supported by the carbon stock report information.	
Date issued:	17 April 2013
Project proponent response/actions and date: For the merchantable volume calculations in the timber harvest plan, it was assumed that commercial trees above 50cm DBH would be used for sawn timber, plywood and export logs. Trees with a DBH between 20 - 49cm are assumed to be processed locally for sawn timber products and housing. The minimum and maximum diameters for harvesting were based on requirements of the PNG Harvesting Code of Practice, as well as discussions with experts, who suggested that timber is often harvested below 50 cm DBH for both export logs and local uses (Forest Research Institute and University of Melbourne). Harvesting of trees in the range of DBH above 20cm was clearly envisioned in the FMDP and April River plans, whereby the logging companies provided forest inventory data for species between 20 - 49 cm DBH (see Figure 28). However the Annual Allowable Cuts specified in the FMDP and the April River Timber Harvest Plan were calculated based on their assessed volume of 50Cm+ trees which is the export component of the harvest which is the practice conducted by the PNG Forest Authority stemming from a period of time when there was no requirement of in-country processing and all timber was exported. The Forest Act now requires all operations to include local processing of timber which will drive a market for smaller DBH wood. Plans for such processing were provided in the FMDP for such processing. We have conservatively assumed that the timber harvest company would only extract the allowable cut from timber of DBH 20cm and above. During the field visit the flight over an active 'illegal' logging operation provided first had evidence of the extraction of timber below the 50cm DBH which supports our assumptions. – 5 June 2013	
Evidence used to close CL: "As stated in the methodology, “if the validated estimate of volume is … greater than the estimate calculated from pre-existing forest inventory data, the pre-existing forest inventory data may be used.” As a result, the merchantable volume estimates from the FMDP and April River plan were conservatively used for the timber harvest schedule, as required under the Methodology (i.e.: 93.54 m3 ha-1 yr-1, or 460,000 m3 yr-1)." While the over 50cm DBH class is smaller in the current estimate, the 20-49cm DBH class is larger, and the combined total is larger in the current estimate. In this case, the project is using the smaller figure, which is allowable by the methodology. Issue is addressed.	
Date closed:	17 July 2013

237. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 44)

VCS Criteria: VM0010 v1.2, 8.1.1 Calculation of carbon stocks in commercial timber volumes - If the validated estimate of volume is within the 90% confidence interval of the corresponding estimate or is greater than the estimate calculated from pre-existing forest inventory data, the pre-existing forest inventory data may be used. If the validation estimate is less than the corresponding estimate calculated from pre-existing forest inventory data, the estimate from pre-existing data cannot be used.	
Evidence Used to Assess Conformance: PD 4.1.5. Annex 14 5.5, Annex 10 4 b.	
Findings: Table 41 in PD shows 145.17 m3/ha of standing volume which exceeds the (~93m3/ha in annex 10 and the ~85 m3/ha in annex 14. However, looking at only the >50cm dbh trees, the carbon stock report and PD show 37.47 m3/ha which is significantly lower than the 55.3 m3/ha assumed in both Annex 10 and 14. It was the >50cm dbh trees that were used to determine allowable cut acres. Also, nowhere in the carbon stock report are the calculations show in Table 41 of PD. The carbon stock report jumps straight to CO2e rather than m3/ha.	
Non-conformity report (NCR): In the carbon stock report, please show the derivation of Table 41 (PD) clearly.	
Date issued:	17 April 2013

Project proponent response/actions and date: A new Section (2.4.4) has been added to the carbon stock report, in order to explain how merchantable volume was calculated using plot data. A reference to the newly added section of the carbon stock report was also cross-referenced in the PD, Section 4.1.5. – 5 June 2013	
Evidence used to close NCR: This information was added to section 2.4.4 of the Annex 9 and to 4.1.5 of the PD. Issue is addressed.	
Date closed:	17 July 2013

238. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 44)

VCS Criteria: VM0010 v1.2, 8.1.1 Calculation of carbon stocks in commercial timber volumes - If the validated estimate of volume is within the 90% confidence interval of the corresponding estimate or is greater than the estimate calculated from pre-existing forest inventory data, the pre-existing forest inventory data may be used. If the validation estimate is less than the corresponding estimate calculated from pre-existing forest inventory data, the estimate from pre-existing data cannot be used.	
Evidence Used to Assess Conformance: PD 4.1.5. Annex 14 5.5, Annex 10 4 b.	
Findings: Table 41 in PD shows 145.17 m3/ha of standing volume which exceeds the (~93m3/ha in annex 10 and the ~85 m3/ha in annex 14. However, looking at only the >50cm dbh trees, the carbon stock report and PD show 37.47 m3/ha which is significantly lower than the 55.3 m3/ha assumed in both Annex 10 and 14. It was the >50cm dbh trees that were used to determine allowable cut acres. Also, nowhere in the carbon stock report are the calculations show in Table 41 of PD. The carbon stock report jumps straight to CO2e rather than m3/ha.	
Non-conformity report (NCR): Please reconcile in either the PD or the carbon stock report the estimation procedures, units, sampling, and other relevant items in clearly showing that the units and values in Annex 10, 14, and the Carbon Stock report can be compared.	
Date issued:	17 April 2013
Project proponent response/actions and date: A new Section (Section 2.4.4) has been added to the Carbon Stock Report, so show how merchantable volume was calculated using data from the forest inventory. In addition, a new column titled 'Standing Volume - FMDP' has been added to Table 41 (now Table 40), in order to facilitate comparison between the volume estimates reported in the FMDP, vs. those measured with our dataset. – 5 June 2013	
Evidence used to close NCR: Section 2.4.4 confirmed, however, Table 40 information is not found in table 40 or 41. Info was found in table 44. Issue is addressed.	
Date closed:	17 July 2013

239. Clarification (VM0010 IFM-LtPF v1.2, VM0010, Line 44)

VCS Criteria: VM0010 v1.2, 8.1.1 Calculation of carbon stocks in commercial timber volumes - If the validated estimate of volume is within the 90% confidence interval of the corresponding estimate or is greater than the estimate calculated from pre-existing forest inventory data, the pre-existing forest inventory data may be used. If the validation estimate is less than the corresponding estimate calculated from pre-existing forest inventory data, the estimate from pre-existing data cannot be used.	
Evidence Used to Assess Conformance: PD 4.1.5. Annex 14 5.5, Annex 10 4 b.	
Findings: Table 41 in PD shows 145.17 m3/ha of standing volume which exceeds the (~93m3/ha in annex 10 and the ~85 m3/ha in annex 14. However, looking at only the >50cm dbh trees, the carbon stock report and PD show 37.47 m3/ha which is significantly lower than the 55.3 m3/ha assumed in both Annex 10 and 14. It was the >50cm dbh trees that were used to determine allowable cut acres. Also, nowhere in the carbon stock report are the calculations show in Table 41 of PD. The carbon stock report jumps straight to CO2e rather than m3/ha.	
Clarification (CL): As merchantable volume is assumed to be that volume >50cm in the FMDP, please explain why the estimate of merchantable volume is different in the Carbon Stock Report (in that all volume >20cm is used to validate pre-existing data).	
Date issued:	17 April 2013
Project proponent response/actions and date: For the merchantable volume calculations in the timber harvest plan, it was assumed that commercial trees above 50cm DBH would be used for sawn timber, plywood and export logs. Trees with a DBH between 20 - 49cm are assumed to be processed locally for sawn wood for housing and other local uses.	

The minimum and maximum diameters for harvesting were based on requirements of the PNG Harvesting Code of Practice, as well as discussions with experts, who suggested that timber is often harvested for pulpwood as well as sawlogs (Forest Research Institute and University of Melbourne). Harvesting of pulpwood was clearly envisioned in the FMDP and April River plans, whereby the logging companies provided forest inventory data for species between 20 - 49 cm DBH (see Figure 28). However the Annual Allowable Cuts specified in the FMDP and the April River Timber Harvest Plan were calculated based on their assessed volume of 50Cm+ trees. This is because harvesting of pulpwood timber, while not officially permitted in the Harvesting Code of Practice, is generally accepted practice by the PNG Forest Authority. The project proponent has minutes of meetings with PNG Forest Authority officials where this 'quasi-legal' practice is confirmed.
It is acknowledged that the inclusion of tree species between 20 - 49cm DBH in the merchantable volume calculations represents a methodology deviation. Therefore this deviation has been noted in Section 2.6 of the PD. – 5 June 2013

Clarification (CL): Please present this quasi-legal practice in evidence that cannot be disputed as being allowable by the Harvesting Code of Practice, otherwise, please remove it from the calculations since it is clearly not overtly permitted.

Date issued:	17 July 2013

Project proponent response/actions:	**Date Received:**	31 July 2013

Please refer to the expert opinion on the extraction and use of trees below the 50cm DBH. This statement also shows footage of lower DBH trees that have been harvested nad marked for extraction. http://www.youtube.com/watch?v=KgPKOAflWtk

Clarification (CL): While the evidence points to illegal logging of smaller trees, this is an overtly illegal activity and it seems to be in conflict with the Additionality test where an activity needs to be considered legal in order to qualify as a possibility. According to VM0010 V1.2 Section 6.2.2, the timber harvest plan/schedule (which represents the baseline and ultimately net GHG reductions) must be what is allowed under legal requirements (harvesting must not exceed extraction quotas defined by law) and must follow "best practice." During the review of this issue, it appeared that there was no quantifiably legal harvest amount specified in any of the harvest plan or DOS documents. Following a phone conversation with the project proponent on 22 August 2013, it was the validator's understanding that the legal extraction quota (AAC) is defined in the DOS, while the PNG Logging Code of Practice defines the "best practice." The PNGFA requires full compliance with the 24 Key Standards outlined in the LCOP. Although the LCOP identifies merchantable trees as 50cm or greater, harvesting of smaller trees is not explicitly strictly prohibited as one of the key standards and it does not appear to be specified by any other law. Thus, it seems not harvesting the <50 cm DBH trees would be similar to voluntary BMPs in the US. Nonetheless this would still be required

It is evident that there are two separate items by which the timber harvest plan must follow.
The first is the legal extraction rate (identified as being defined in the DOS as AAC). Upon farther review of the DOS, the validator found that the DOS defined the AAC (or the "annual sustainable harvest volume") as 160,000 cubic meters or harvesting 4133.512 ha/year on a 36 year rotation at a level of 38.708 m^3/ha. The values in Section 2.0 of the DOS indicates that AAC is based solely on net sawlog volume and does not include pulpwood volume. Moreover, volumes specified in the FMA itself only include sawlog volume (50+ cm DBH). In light of this finding, the validator must question the AAC value of 93.54 m3 ha-1 yr-1, or 460,000 m3 yr-1 used in the project. If the DOS is what is allowed under legal requirements (harvesting must not exceed extraction quotas defined by the DOS), please justify (using documentation as appropriate) how the use of the AAC values used for the Timber Harvest Plan is in line with Section 6.2.2. and Box 1. Else revise the quantification of GHG reductions based on the AAC defined in the DOS. Currently, the AAC (or legal volume extraction level as defined by the DOS) is currently being exceeded.

The Second item by which the timber plan must follow is adherence to "best practice." How the Timber Harvest Plan adheres to "best practice" was also discussed during a phone conversation with the project proponent on 22 August 2013. The project proponent indicated that all of the Timber

Harvest Companies in PNG harvest at the "legally allowable extraction levels" defined by the DOS. It was indicated that, if the Timber Harvest Company is not getting the AAC while harvesting, the PNGFA will allocate additional acres else whether the area is demarcated as an FMA or not. This is so the timber companies are able to profit from their investment. Based on this information, the validator initially thought that evidence of harvesting at (but not below) the AAC would suffice as evidence that harvesting trees of <50 cm dbh in the Timber Harvest Plan is valid and acceptable. This was under the assumption that common practice would be to never cut below the AAC and that trees of any size class would be used to meet the AAC. However, the aforementioned finding related to the AAC as defined in the DOS has changed the situation. Because the AAC in the DOS is based on only net sawlog volume, the goal of the LCOP is retain smaller trees for a future crop, and the site visit did not confirm that all <50 cm trees were removed in all areas of selective logging, the validator cannot currently confirm with reasonable assurance that the THP meets the "best practices" requirements of VM0010 V1.2 Section 6.2.2 and Box 1. Please justify (using documentation as appropriate (e.g. meeting minutes identifying that is acceptable to harvest trees <50 cm DBH in order to meet the legally allowable 50+ cm DBH extraction level) how the inclusion of trees 20 to 49cm DBH in the Timber Harvest Plan is in line with Section 6.2.2. and Box 1. Else revise the quantification of GHG to include only trees 50+ cm DBH.		
Date issued:		
Project proponent response/actions:	**Date Received:**	06 September 2013
Revised quantification to only include trees 50+ cm DBH. This resulted in the figure of VEX on Tab Inputs (VM0010) to be adjusted to represent only volume of trees above 50cm DBH as calculated on Tab VM108.1.1(1) cell N30. We also changed the wood products allocation to reflect this change as all timber above 50+cm is exported and therefore would be the fate of the timber from the April Salumei area. The PD has been reviewed to remove text related to trees lower than 50cm DBH. Revised sections are deleted in track changes. The AAC was also reduced to 160,000m3 for the April Salumei area and kept to 80,000m3 for the April river area, being a total of 240,000m3. These changes have effected the spreadsheet and sections in the PD which have all been revised and highlighted blue.		
Evidence used to close CL: VCS_7_10_Calculator_AprilSalumei_M1_06092013.xlsx; ProjectDescription_AprilSalumei_V1.4.docx; NFA Jan 1997 HRHL.pdf; Annex 6_ Development Options Study.pdf - Confirmed that quantification of GHG reductions/removals has been revised to only include trees 50 + cm DBH as indicated. Confirmed that the AAC was reduced to 240,000m3 as indicated. Although the DOS Specifies an AAC of 160,000 m3, the April River area was not included in the DOS as stated on page 2. Thus, there is no quantifiably legal harvest amount specified for April River. Review of area and time frame values indicates that the April River Timber Harvest Plan would involve harvesting approximately 2,067 ha per year on a 33 year rotation. Thus, the AAC of 80,000m3 for the April River area represents a feasible and sustainable harvest and is based on per hectare sawtimber volumes outlined in the DOS and there is nothing to suggest a legal extraction level is being exceeded. Changes to the PD were reviewed and found to be adequate. Item is addressed.		
Date closed:	12 September 2013	

240. Clarification (VM0010 IFM-LtPF v1.2, VM0010, Line 44)

VCS Criteria: VM0010 v1.2, 8.1.1 Calculation of carbon stocks in commercial timber volumes - If the validated estimate of volume is within the 90% confidence interval of the corresponding estimate or is greater than the estimate calculated from pre-existing forest inventory data, the pre-existing forest inventory data may be used. If the validation estimate is less than the corresponding estimate calculated from pre-existing forest inventory data, the estimate from pre-existing data cannot be used.
Evidence Used to Assess Conformance: PD 4.1.5. Annex 14 5.5, Annex 10 4 b.
Findings: Table 41 in PD shows 145.17 m3/ha of standing volume which exceeds the (~93m3/ha in annex 10 and the ~85 m3/ha in annex 14. However, looking at only the >50cm dbh trees, the carbon stock report and PD show 37.47 m3/ha which is significantly lower than the 55.3 m3/ha assumed in both Annex 10 and 14. It was the >50cm dbh trees that were used to determine allowable cut acres. Also, nowhere in the carbon stock reports are the calculations show in Table 41 of PD. The carbon stock report jumps straight to CO2e rather than m3/ha.

Clarification (CL): Given the difference in distribution of volume across size classes, please explain how the information used in the FMDP is representative of the project area as characterized by the Carbon Stock Report and the validation sampling.	
Date issued:	17 April 2013
Project proponent response/actions and date: Table 40 in the PD has been edited in order to improve clarity, particularly in regards to comparison of the 'validation' and 'FMDP' dataset. Unfortunately it is not possible to identify the exact location of the field inventory mentioned in the FMDP. However, the forest inventory as specified in the Forest Carbon Stock report is representative of the same area specified in the FMDP and April River Harvest Report, as there was only a single carbon strata identified in the project area, therefore measurements taken anywhere in the FMA should be representative of forest type in other areas. This relationship was shown to be statistically significant after excluded areas were removed from the FMA. – 5 June 2013	
Clarification (CL): Table 40 does not relate to this item. How can it be proven that the field inventory covered the same area as the project area? What about all the areas that were excluded from the project area? Is there any kind of statement that can be attained from Bruno or another member of the survey team? Please confirm that all possible strata where the previous inventory was conducted are also included in the project. Were any previously identified strata excluded from the project area?	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
As discussed during the fieldtrip Brunoh was part of the original forest inventory team as well as our forest inventory team. He confirmed during our inventory and the field trip that he was part of the original inventory and that he stayed at Wagu (near Igai) and April River during the original inventory. He also confirmed siilar locations (i.e. over the back of April river station village) where the original team conducted the field survey. Gidean, the land owner chairman also confirmed this to be true and remembers the field inventory and Brunoh being part of the team. The Forest Authority (Goodwill Amos) confirmed that Low Altitude forest is the frorest type sort after for timber harvest and FMAs. Areas of swamp forest and woodland are not considered to be productive forest and are not included int he volume surveys for the estimation of harvestable volume.	
Evidence used to close CL: Personal communications with Brunoh an d Gideon while on the site visit confirm the statements made by the project proponent in this response. It should be noted that the inventory at hand was conducted nearly 20 years ago and it is likely that GPS points were not taken and given the vastness of the project area and the obvious difficulties in operating a logging project on peat soils and steep terrain, it is reasonable to concluded that the forest inventory was purposely directed at areas where the timber was reachable and desirable. This issue is addressed.	
Date closed:	25 August 2013

241. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 45)

VCS Criteria: VM0010 v1.2, 8.1.1 Calculation of carbon stocks in commercial timber volumes - Estimation of the merchantable volume of trees must be based on locally derived allometric equations or yield tables. If locally derived equations or yield tables for each species are not available it is acceptable to use relevant regional, national or default data. Yield tables or allometric equations shall be used to convert field measurements of diameter (DBH, at typically 1.3 m [4.3 ft.] aboveground level or above buttress where they exist), and total height H of each tree in the sample plots to merchantable volume. It is acceptable to combine DBH and allometric equations if field instruments (e.g. a relascope) that measure the volume of each tree directly have been used. The estimate of merchantable volume for each species j at the sample plot level will be calculated as: (See the methodology for required calculations - eqn 1. See also footnote 7)
Evidence Used to Assess Conformance: PD Section 4.1.5
Findings: PD 4.15. All species biomass (m3/ha) are estimated with the same equation (footnote #33). Reference indicates it is used by PNG Forest Inventory Planning System. This equation produces volume estimates (m3/ha). Carbon Stock Report - Says that an equation by Chave 2005 is used to estimate biomass. This is a

volume equation, multiplied by a density. No rationale is given for the use of one vs. the other. I suspect they are using the equation referenced in the PD because it is consistent with the calculations in the FMDP.	
Non-conformity report (NCR): A volume (m3/ha) equation is referenced in the PD as being the equation to estimate merchantable timber volumes. Please provide more detailed information on the source of this equation (footnote 33) and, ideally, a copy of any documentation of it.	
Date issued:	17 April 2013
Project proponent response/actions and date: Refer to response to NCR 70 and associated links to references for the volume equation. These references were provided by Prof Simon Saluei of PNG Forest Research Institute. Additional references have been added to the PD to improve transparency around this equation. – 5 June 2013	
Evidence used to close NCR: The referenced publications indicate that the merchantable volume equation provided by the Papua New Guinea Forest Authority produces gross volumes (i.e. volumes are not already discounted for estimated wood waste). Item is addressed.	
Date closed:	17 July 2013

242. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 45)

VCS Criteria: VM0010 v1.2, 8.1.1 Calculation of carbon stocks in commercial timber volumes - Estimation of the merchantable volume of trees must be based on locally derived allometric equations or yield tables. If locally derived equations or yield tables for each species are not available it is acceptable to use relevant regional, national or default data. Yield tables or allometric equations shall be used to convert field measurements of diameter (DBH, at typically 1.3 m [4.3 ft.] aboveground level or above buttress where they exist), and total height H of each tree in the sample plots to merchantable volume. It is acceptable to combine DBH and allometric equations if field instruments (e.g. a relascope) that measure the volume of each tree directly have been used. The estimate of merchantable volume for each species j at the sample plot level will be calculated as: (See the methodology for required calculations - eqn 1. See also footnote 7)		
Evidence Used to Assess Conformance: PD Section 4.1.5, Annex 5		
Findings: PD 4.15. All species biomass (m3/ha) are estimated with the same equation (footnote #33). Reference indicates it is used by PNG Forest Inventory Planning System. This equation produces volume estimates (m3/ha) Carbon Stock Report - Says that an equation by Chave 2005 is used to estimate biomass. This is a volume equation, multiplied by a density. No rationale is given for the use of one vs. the other.		
Non-conformity report (NCR): Please provide a comparison of the volume portion of footnote 33 equation and the Chave eqn. as a means of assuring they are consistent with one another.		
Date issued:	17 April 2013	
Project proponent response/actions and date: Please see NCR56 where this request is also addressed. – 5 June 2013		
Non-conformity report (NCR): Pending the outcome of NCR 56 which is still open.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
A comparison between the Chave equation and the volume approach as described in the methodology CP-AB was conducted. This comparison was conducted in excel and is provided in response to NCR56. The analysis found that application of the Chave equation meets the thresholds and does not lead to the consistent over estimation of the aboveground biomass.		
Evidence used to close NCR: AllometricValidation_20130625.xlsx; Annex 9_Forest Carbon Stock Calculations.docx - This is covered under item 56 above and is repetitive here. This item can be closed.		
Date closed:	19 August 2013	

243. Clarification (VM0010 IFM-LtPF v1.2, VM0010, Line 45)

VCS Criteria: VM0010 v1.2, 8.1.1 Calculation of carbon stocks in commercial timber volumes - Estimation of the merchantable volume of trees must be based on locally derived allometric equations or yield tables. If locally derived equations or yield tables for each species are not available it is acceptable to use relevant regional, national or default data. Yield tables or allometric equations shall be used to convert field measurements of diameter (DBH, at typically 1.3 m [4.3 ft.] aboveground level or above buttress where they exist), and total height H of each tree in the sample plots to merchantable volume. It is acceptable to combine DBH and allometric equations if field instruments (e.g. a relascope) that measure the volume of each tree directly have been used. The estimate of merchantable volume for each species j at the sample plot level will be calculated as: (See the methodology for required calculations - eqn 1. See also footnote 7)		
Evidence Used to Assess Conformance: PD Section 4.1.5, Annex 5		
Findings: PD 4.15. All species biomass (m3/ha) are estimated with the same equation (footnote #33). Reference indicates it is used by PNG Forest Inventory Planning System. This equation produces volume estimates (m3/ha). Carbon Stock Report - Says that an equation by Chave 2005 is used to estimate biomass. This is a volume equation, multiplied by a density. No rationale is given for the use of one vs. the other. Additionally, the Chave equation being used does not consider height.		
Clarification (CL): Height is not measured in as required in the protocol, nor are direct measurements of volume taken. Please address and explain the use of allometric equations driven only by DBH and identify this as a deviation.		
Date issued:	17 April 2013	
Project proponent response/actions and date: Please also see responses to NCR 56 and NCR 242. PNGs volume equation and the allometric used (i.e. Chave) do not utilize height. Both were compared and the Chave equation was found to be a good fit although consistently provided a lower estimate and therefore the use of Chave estimates are conservative. We believe we have now demonstrated sufficiently, transparently, accurately and conservatively the biomass and volume of the forest in the Project Area. – 5 June 2013		
Clarification (CL): Pending the outcome of NCR 56 which is still open.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
A comparison between the Chave equation and the volume approach as described in the methodology CP-AB was conducted. This comparison was conducted in excel and is provided in response to NCR56. The analysis found that application of the Chave equation meets the thresholds and does not lead to the consistent over estimation of the aboveground biomass.		
Evidence used to Assess Conformance: Annex 9_Forest Carbon Stock Calculations.docx; ProjectDescription_AprilSalumei_V1.3.docx. - The use of the DBH only equation has been justified. It is clear that the inclusion of height as a parameter in the Chave et al equation does improve its predictive capability (i.e. Coefficient of Determination is equivalent between the two equations for wet forest stands). However, this has not been included in the PD as a methodology deviation as requested in the original CL.		
Clarification (CL): Given that VM0010 V1.2 requires a measurement of total height, please explain and identify the use of the Chave et al equation driven only by DBH as a methodology deviation in PD Section 2.6.		
Date issued:	26 August 2013	
Project proponent response/actions:	**Date Received:**	06 September 2013
NA – Updated PD provided on 06 September 2013 and 18 September 2013		
Evidence used to close CL: Confirmed the use of the Chave et al equation driven only by DBH has been included as a methodology deviation in PD Section 2.6. However, this section states "The inclusion of height as a parameter in the Chave et al equation does improve its predictive capability		

(i.e. Coefficient of Determination is equivalent between the two equations for wet forest stands)." Please revise to indicate that use of height does not improve predictive capability. This was communicated to the client via email on 16 September 2013. The updated PD was provided on 18 September 2013 and the appropriate revision was made. Item is addressed.	
Date closed:	19 September 2013

244. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 47)

VCS Criteria: VM0010 v1.2, 8.1.1 Calculation of carbon stocks in commercial timber volumes - Mean merchantable volume per unit area of species j in stratum i in the baseline scenario, m3 * ha-1 will be used to develop the timber harvest plan (Box 1). The timber harvest plan sets the allowable mean extracted volume from this merchantable volume based on legal limits. Once the timber harvest plan is complete and volume is calculated the Biomass Conversion and Expansion Factors (BCEF) method shall be used to determine the carbon stock in harvested biomass. This method is appropriate as forest inventory data and allowable harvest must be based on volume estimates to which expansion factors can be readily applied. The selected BCEF must have a minimum DBH compatible with the minimum DBH defined in the timber harvest plan (Box 1).		
Evidence Used to Assess Conformance: PD. 4.1.5, Carbon Calculator		
Findings: Harvested Area of 196k hectares divided by 40 yr cycle = 4917 ha per year of harvest. 4917 * 93.54 m3/ha = 460k m3/yr. This is the harvest plan used. 93.54 comes from the old FMDP and is already questioned in a previous NCR. They seem to rely on the previous plans (FMDP) to address all of the other issues required in providing a "planned timber harvesting schedule" which is required as noted in Box 1 of Methodology. Box 1 reads that a timber harvest plan, stipulated from the legal right to harvest, is to be used to develop a "detailed planned timber harvesting schedule" and lists specific components that the stipulated plan and the "detailed planned...schedule" must have. The PD is very sparse on this.		
Non-conformity report (NCR): Please See Box 1 of Methodology. Box 1 requires that a timber harvest plan, stipulated from the legal right to harvest, have certain characteristics. The FMDP is lacking with respect to items (a) - trees per hectare, (b) - demarcation of non-harvest areas (i.e., slope, rivers, etc.), (c) - no delineation of annual operating areas.		
Date issued:	17 April 2013	
Project proponent response/actions and date: A new Sub-section has been inserted into Section 4.1.2 of the PD, titled 'Development of the Timber Harvest Plan', in order to provide greater clarity on the timber harvest plan. This includes a number of maps which provide clarity on how the non-operable area was defined. – 5 June 2013		
Clarification (CL): PD states "The merchantable volume estimates were derived from Table 4 of the FMDP, and the Table on page 9 of the April River Timber Harvest Plan. Both plans show a total merchantable volume per hectare of 38.23 m3 ha-1 of trees in the 20 – 29cm diameter class, and 55.312 m3 ha-1 of trees in the 50cm diameter class (Figure 26). " Please correct the typo in the 20-29 cm diameter class.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
The typo was corrected and diameter class is now correctly listed 20-49cm. Change is highlighted in green in Section 4.1.2 of the PD.		
Clarification (CL): Change Not Made. Section 2.3 of VVB Manual states that "If non-material errors are found in the project documents, VVBs should ensure that such errors are addressed by the project proponent where practicable." Thus, the CL still stands.		
Date issued:		
Project proponent response/actions:	**Date Received:**	06 September 2013
As a result of changes in response to NCR 239 all reference to extraction of timber 20-49cm has been removed. Changed text in the PD has been highlighted blue. Therefore this NCR is no longer relevant.		
Evidence used to close CL: ProjectDescription_AprilSalumei_V1.4.docx - Confirmed that all references to extraction of timber 20-49cm have been removed from the PD as indicated. Item is		

addressed.	
Date closed:	13 September 2013

245. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 47)

VCS Criteria: VM0010 v1.2, 8.1.1 Calculation of carbon stocks in commercial timber volumes - Mean merchantable volume per unit area of species j in stratum i in the baseline scenario, m3 * ha-1 will be used to develop the timber harvest plan (Box 1). The timber harvest plan sets the allowable mean extracted volume from this merchantable volume based on legal limits. Once the timber harvest plan is complete and volume is calculated the Biomass Conversion and Expansion Factors (BCEF) method shall be used to determine the carbon stock in harvested biomass. This method is appropriate as forest inventory data and allowable harvest must be based on volume estimates to which expansion factors can be readily applied. The selected BCEF must have a minimum DBH compatible with the minimum DBH defined in the timber harvest plan (Box 1).	
Evidence Used to Assess Conformance: PD. 4.1.5, Carbon Calculator	
Findings: Harvested Area of 196k hectares divided by 40 yr cycle = 4917 ha per year of harvest. 4917 * 93.54 m3/ha = 460k m3/yr. This is the harvest plan used. 93.54 comes from the old FMDP and is already questioned in a previous NCR. They seem to rely on the previous plans (FMDP) to address all of the other issues required in providing a "planned timber harvesting schedule" which is required as noted in Box 1 of Methodology. Box 1 reads that a timber harvest plan, stipulated from the legal right to harvest, is to be used to develop a "detailed planned timber harvesting schedule" and lists specific components that the stipulated plan and the "detailed planned...schedule" must have. The PD is very sparse on this.	
Non-conformity report (NCR): In addition, Box 1 requires that a "detailed planned timber harvesting schedule" be developed for each land parcel in the project area and lists specific criteria. The provided information is lacking with respect to items (c), (d), and (e). In addition, please clarify that the operating area of 196,000 hectares excludes any non-harvestable areas such as might be created due to steep slopes, rivers/water, or other legal, regulatory, and environmental constraints. This plan should also include matters related to timing. For example, it seems unlikely that the proposed timber harvest of 460,000 m3/yr could have been implemented in 2009 without the development of certain infrastructure.	
Date issued:	17 April 2013
Project proponent response/actions and date: A new Sub-Section has been inserted into Section 4.1.2 of the PD, titled 'Development of the Timber Harvest Plan', in order to address these issues. See also Figures 29 - 34, which show how the operable area was determined. In regards to timing, our plan assumes that timber harvesting occurs in the same year as infrastructure development. Discussions with experts in PNG suggest that separate teams are allocated to the different tasks of logging and infrastructure, which permits logging to occur while an advance team sets up the infrastructure. – 5 June 2013	
Non-conformity report (NCR): The PD now includes a timber harvest plan that was derived from the FMDP and includes non-operable areas delineated by soil types and slopes. The timber Harvest plan also includes volume per Ha to be extracted and a schedule. The areas to be harvested in the first 10 years are derived from area and not necessarily from actual operable areas. However it is hard to know exactly where the harvesting would have occurred, rather the point is to model the fact that a certain amount of land would be harvested in each year of the cutting cycle. In regards to timing of the harvest, since this information is not explicitly available in the FMDP, please provide a signed statement from the experts consulted in order to document the aspect of concurrent harvest and access operations.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
During the site visit the validators observed both road construction and timber harvest operations side by side from the helicoper which flew over an operational FMA in the proxy area. This visual evidence is considered adequate and representative of the concurrent harvest and access operations.	
Evidence used to close NCR: The Validator agrees that both road construction and timber harvest	

operations were observed side by side from the helicopter which flew over an operational FMA in the proxy area. The validator also agrees that this visual evidence is considered adequate and representative of the concurrent harvest and access operations. In determining the operable areas, a model is being used that is taking into account the needed factors (slope, inundation, etc.). The location of the operable areas as predicted by the model and shown on the map does not affect the rate of harvesting that is expected to occur. The AAC and area control techniques result in annual harvested areas that are equivalent over the crediting period. Item is addressed.	
Date closed:	25 August 2013

246. Clarification (VM0010 IFM-LtPF v1.2, VM0010, Line 47)

VCS Criteria: VM0010 v1.2, 8.1.1 Calculation of carbon stocks in commercial timber volumes - Mean merchantable volume per unit area of species j in stratum i in the baseline scenario, m3 * ha-1 will be used to develop the timber harvest plan (Box 1). The timber harvest plan sets the allowable mean extracted volume from this merchantable volume based on legal limits. Once the timber harvest plan is complete and volume is calculated the Biomass Conversion and Expansion Factors (BCEF) method shall be used to determine the carbon stock in harvested biomass. This method is appropriate as forest inventory data and allowable harvest must be based on volume estimates to which expansion factors can be readily applied. The selected BCEF must have a minimum DBH compatible with the minimum DBH defined in the timber harvest plan (Box 1).	
Evidence Used to Assess Conformance: PD. 4.1.5, Carbon Calculator	
Findings: Harvested Area of 196k hectares divided by 40 yr cycle = 4917 ha per year of harvest. 4917 * 93.54 m3/ha = 460k m3/yr. This is the harvest plan used. 93.54 comes from the old FMDP and is already questioned in a previous NCR. They seem to rely on the previous plans (FMDP) to address all of the other issues required in providing a "planned timber harvesting schedule" which is required as noted in Box 1 of Methodology. Box 1 reads that a timber harvest plan, stipulated from the legal right to harvest, is to be used to develop a "detailed planned timber harvesting schedule" and lists specific components that the stipulated plan and the "detailed planned...schedule" must have. The PD is very sparse on this.	
Clarification (CL): For clarity, it is strongly suggested that the OPO consider a separate section and/or document which expressly discusses, in detail, a timber harvest plan specific to the project area.	
Date issued:	17 April 2013
Project proponent response/actions and date: A new Sub-section has been inserted into Section 4.1.2 of the PD, titled 'Development of the Timber Harvest Plan', in order to address this issue. – 5 June 2013	
Evidence used to close CL: The PD now includes a timber harvest plan that was derived from the FMDP.	
Date closed:	17 July 2013

247. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 48)

VCS Criteria: VM0010 v1.2, 8.1.1 Calculation of carbon stocks in commercial timber volumes - Therefore, the carbon stock of timber harvested per unit area for species j in stratum i will be calculated from this mean volume of extracted timber: (See the methodology for required calculations - eqn 3)	
Evidence Used to Assess Conformance: PD 4.1.5	
Findings: The results of VM0010 Equation 3 are not references in the PD.	
Non-conformity report (NCR): Please reference results of Eqn 3 calculations in the PD, noting that those results are in Calculator Tab "VM0010-8.1.1 (2)"	
Date issued:	17 April 2013
Project proponent response/actions and date: Following text was added for Equation 3: 'The result for this calculation can be found on the tab 'VM0010-8.1.1(2) in our Master Calculation spreadsheet' and highlighted in yellow. – 5 June 2013	
Evidence used to close NCR: Reference provided in PD. Issue is addressed.	
Date closed:	17 July 2013

248. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 48)

VCS Criteria: VM0010 v1.2, 8.1.1 Calculation of carbon stocks in commercial timber volumes - Therefore, the carbon stock of timber harvested per unit area for species j in stratum i will be calculated from this mean volume of extracted timber: (See the methodology for required calculations - eqn 3)	
Evidence Used to Assess Conformance: PD 4.1.5	
Findings: GHG emission reduction/removal quantification is not referenced in the PD.	
Non-conformity report (NCR): More generically, please note in the PD the location of all outputs that are provided in the Calculator spreadsheet.	
Date issued:	17 April 2013
Project proponent response/actions and date: Throughout the PD, whenever an equation that results in an output is provided, immediately after a sentence has been added that explains exactly where in the calculation spreadsheet the output is located. For example, after the equation BL-PL3, the following sentence has been added: "The output from this equation is located in column Q of the 'VM0007 BL-PL' worksheet of the Master Calculation Spreadsheet." This has been done throughout the PD. – 5 June 2013	
Evidence used to close NCR: References found. Issue is addressed.	
Date closed:	17 July 2013

249. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 48)

VCS Criteria: VM0010 v1.2, 8.1.1 Calculation of carbon stocks in commercial timber volumes - Therefore, the carbon stock of timber harvested per unit area for species j in stratum i will be calculated from this mean volume of extracted timber: (See the methodology for required calculations - eqn 3)	
Evidence Used to Assess Conformance: PD 4.1.5	
Findings: Quantification includes all trees ≥ 20 cm DBH, which does not correlate to the timber harvest plan.	
Non-conformity report (NCR): The allocation of volume (and carbon) is based, in part, on the Table provided on page 9 of Annex 10. This table is replicated in tab VM0010-6(2) of calculator. The % values are only for diameter's > 50 cm. However, the harvest schedule is based on all diameters to 20cm. Please correct the species allocation to correctly pair with the diameter limits in use for the timber harvest plan. Consider using a species breakdown specifically for each size class. If this is not done, please explain why lumping size classes to determine species mix is relevant. This correction will have impacts beyond this NCR and into other equations. Please correct in all relevant cases.	
Date issued:	17 April 2013
Project proponent response/actions and date: For the merchantable volume calculations in the timber harvest plan, it was assumed that commercial trees above 50cm DBH would be used for sawn timber, plywood and export logs, as stated in the FMDP and the April River Timber Harvest Plan. Trees with a DBH between 20 - 49cm are assumed to be processed locally for sawnwood for housing and other local uses. The minimum and maximum diameters for harvesting were based on requirements of the PNG Harvesting Code of Practice, as well as discussions with experts, who suggested that timber is often harvested for pulpwood as well as sawlogs (Forest Research Institute and University of Melbourne). Harvesting of pulpwood was clearly envisioned in the FMDP and April River plans, whereby the logging companies provided forest inventory data for species between 20 - 49 cm DBH (see Figure 28). However the Annual Allowable Cuts specified in the FMDP and the April River Timber Harvest Plan were calculated based on their assessed volume of 50Cm+ trees. This is because harvesting of pulpwood timber, while not officially permitted in the Harvesting Code of Practice, is generally accepted practice by the PNG Forest Authority. The project proponent has minutes of meetings with PNG Forest Authority officials where this 'quasi-legal' practice is confirmed. It is acknowledged that the inclusion of tree species between 20 - 49cm DBH in the merchantable volume calculations represents a methodology deviation. Therefore this deviation has been noted in Section 2.6 of the PD. Volume by species listed in the FMDP/April River Harvest Plan has already been calculated in the	

Calculator, in the worksheets titled '8.1.1(2)'; '8.1.1(3)' and '8.1.2'. – 5 June 2013	
Evidence used to close NCR: NCR 239 is closed. Issue is closed as this same question was asked previously and once this is settled, this issue will no longer be relevant.	
Date closed:	17 July 2013

250. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 48)

VCS Criteria: VM0010 v1.2, 8.1.1 Calculation of carbon stocks in commercial timber volumes - Therefore, the carbon stock of timber harvested per unit area for species j in stratum i will be calculated from this mean volume of extracted timber: (See the methodology for required calculations - eqn 3)	
Evidence Used to Assess Conformance: PD 4.1.5	
Findings: Detail is lacking regarding the derivation of the species breakdown.	
Non-conformity report (NCR): Please provide greater detail on the derivation of the species breakdown referenced above, including technical details on the survey conducted in 1993 by Unitech Consultants.	
Date issued:	17 April 2013
Project proponent response/actions and date: The only detail we have on this inventory is that which is described in Section 4 of the April River Timber Harvest Plan (Annex 10). Despite our best efforts, enquiries with the local authorities did not shed any light on the nature of this forest inventory. Given the length of time that has lapsed this this inventory was conducted (20 years), it seems unlikely that any additional information about this inventory will come to light. Given that we validated this field inventory with "with limited sampling within the project area" as is permitted under Section 8.1.1 of VM0010, then we consider we are still in compliance with the methodology, despite the lack of specific detail about this initial inventory. – 5 June 2013	
Evidence used to close NCR: Personal communications with the staff that performed this original inventory confirm that the limited sampling done in the field was sufficient to validate the inventory used. It is clear that almost all species present would be applicable for removal in the baseline scenario and that identification to the species level is extremely difficult in PNG, even for career foresters (Bruno). Information contained in the carbon stock report shows that the inventory done is in line with the work done previously and therefor the inventory work used to derive the Timber Harvest Plan is reasonable given the age of the original inventory and the level of precision used in PNG for ID of species. Issue is addressed.	
Date closed:	17 July 2013

251. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 49)

VCS Criteria: VM0010 v1.2, 8.1.1 Calculation of carbon stocks in commercial timber volumes - Not all of the harvested biomass leaves the forest because the timber harvested has two components: 1) wood removed to market (extracted timber) and, 2) wood remaining in the forest as a result of harvest (see Section 8.1.2). Therefore, the mean carbon stock of extracted timber per unit area for species j in stratum i will be calculated from the mean volume of extracted timber multiplied by density and carbon fractions. (See the methodology for required calculations - eqn 4)	
Evidence Used to Assess Conformance: PD. 4.1.5, Carbon Calculator	
Findings: Methodology applied.	
Non-conformity report (NCR): Please provide a copy of the reference material containing the wood density and BCEF factors (previous item) and offer a short rationale as to its appropriateness.	
Date issued:	17 April 2013
Project proponent response/actions and date: Assumed wood density was calculated on a weighted average basis, to the contribution to Annual Allowable Cut as listed in the FMDP. A total of 25 tree species (including one 'other' category) were therefore used to calculated the weighted wood density figure, as shown in the 'WdDensity' tab of the calculator. The reference data for all wood density figures are also listed on this tab. References included the IPCC Good Practice Guidance for Land Use, Land Use Change and Forestry, Annex 3A (http://www.ipccnggip.iges.or.jp/public/gpglulucf/gpglulucf_files/Chp3/Anx_3A_1_Data_Tables.pdf), or alternatively, the World Agroforestry Centre Wood Density Database	

(http://www.worldagroforestry.org/sea/products/afdbases/wd/index.htm). The source of the BCEF data was cited in Section 4.1.5 of the PD, which states: "A BCEF of 2.339 t dm-1 m3 was assumed, from Markland and Schoene, 2006. In the absence of country specific data, this report provides a regional figure for Oceania which includes PNG." The report can be downloaded from: ftp://ftp.fao.org/docrep/fao/010/ah849e/ah849e00.pdf The 'source' cell in the calculator has been updated to correctly reference this document. – 5 June 2013		
Non-conformity report (NCR): This link does not work, and the authors cannot be used to locate the document. Please send the relevant excerpts from this document to verifiers for review.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
The link was checked and was successfully downloaded so no changes have been made to the reference source. For ease of review the FAO document is provided with this NCR. The Biomass expansion factor is listed in this document in Table 5.7 on page 20.		
Non-conformity report (NCR): Wood densities have been validated. The link for Markland and Schoene, 2006 was found to be in working order. The document was reviewed and it indicates that the assumed BCEF of 2.339 t dm-1 m3 are "presented for the plausibility analysis only and should not be used as regional and sub-regional conversion and expansion factors." It also appears that the BCEF is for growing stock vs. removals. The factor that would be used as per PCC 2006 INV GLs AFOLU Chapter 4 Table 4.5 is 1.67, which would be much more conservative. Please justify how the use of the Markland and Schoene, 2006 BCEF is both appropriate and conservative. Else apply the appropriate BCEF for removals from IPCC 2006 INV GLs AFOLU Chapter 4 Table 4.5.		
Date issued:		
Project proponent response/actions:	**Date Received:**	06 September 2013
BEF of 1.67 was applied as specified in the Table 4.5 for volume extracted.		
Evidence used to close NCR: VCS_7_10_Calculator_AprilSalumei_M1_06092013.xlsx - Confirmed the BCEFr of 1.67 has been applied as indicated. The BCEFr of 1.67 applies to growing stock levels of 80 to 120 m3/ha. ESI identified this BCEFr in the Round 3 NCR based on the growing stock defined in the FMDP and April River timber harvest plan (93.54 m3/ha) as these values were used in accounting. The inventory indicates that the growing stock level is 136.83 m3/ha (for trees 20+ cm DBH) which coincides with a BCEFr of 1.44. The VEX,j,i│BSL currently used for accounting is 37.70 m3/ha, which coincides with a BCEFr of 3.11. IPCC 2006 INV GLs AFOLU Chapter 4 Table 4.5 does not define minimum diameters for growing stock. Thus, use of the median value of 1.67 has been accepted. Item is addressed.		
Date closed:	15 September 2013	

252. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 51)

VCS Criteria: VM0010 v1.2, 8.1.2 Calculation of dead wood (logging slash) generated in the process of timber harvest - Therefore, the change in carbon stock in the dead wood pool in stratum i in land parcel p is calculated as the difference between the total carbon stock of the harvested biomass and the carbon stock of the extracted timber. (see methodology for required calculations - eqn. 5)	
Evidence Used to Assess Conformance: PD 4.1.6 and VM0010-8.1.2 tab of Calculator	
Findings: Calculator tab VM0010-8.1.2 is not referenced in the PD.	
Non-conformity report (NCR): Please reference Calculator tab VM0010-8.1.2. in PD.	
Date issued:	17 April 2013
Project proponent response/actions and date: Following text was added under 4.1.6 in the PD: 'This calculation can be found under tab 'VM0010-8.1.2" in our Master Calculation spreadsheet.' Changes were highlighted in yellow. – 5 June 2013	
Evidence used to close NCR: Reference found Issue is addressed.	

Date closed:	17 July 2013

253. Clarification (VM0010 IFM-LtPF v1.2, VM0010, Line 55)

VCS Criteria: VM0010 v1.2, 8.1.3 Calculation of baseline carbon sequestered in wood products - Therefore, the carbon stock of extracted timber that is immediately emitted to the atmosphere at the time of harvest is calculated as: (see methodology for required calculations - eqn. 7)	
Evidence Used to Assess Conformance: PD 4.1.1.7 VM0010-8.1.1 (3)	
Findings: SLF is not defined in the PD.	
Clarification (CL): Please define the term SLF in the PD.	
Date issued:	17 April 2013
Project proponent response/actions and date: Following text was added and highlighted in yellow: fraction of biomass carbon from the short lived wood product pool that is assumed to be emitted to the atmosphere immediately at the time of harvest for wood product k, dimensionless – 5 June 2013	
Evidence used to close CL: Reference found page 14 of PD. Issue addressed.	
Date closed:	17 July 2013

254. Clarification (VM0010 IFM-LtPF v1.2, VM0010, Line 59)

VCS Criteria: VM0010 v1.2, 8.1.3 8.1.4. Change in carbon stocks due to forest regrowth after harvest - Therefore, carbon sequestration resulting from forest regrowth after timber harvest is calculated as: (see methodology for required calculations - eqn. 10)	
Evidence Used to Assess Conformance: PD 4.1.1.8, Calculator VM0010-8.14-5	
Findings: PD indicates a growth model was used to get relative growth rate at one point. But, later, what is actually used is the observed growth on one particular permanent sample plot (PSP) which was used to develop the growth model. Why?	
Clarification (CL): Why was the growth model referenced in the PD not used to estimate the RGR? Please elaborate.	
Date issued:	17 April 2013
Project proponent response/actions and date: The growth model of 1t C per ha per year was used to estimate RGR in the calculator, as show in cell E22 of the 'VM00010 (inputs)' tab. This is the same growth model depicted in Figure 40 for the Central Highlands, and the same model mentioned in Section 4.1.8 of the PD. It is unclear how the PD and the calculator conflict. – 5 June 2013	
Evidence used to close CL: RGR figure is found in the referenced cell (E22) and found in the VM00010 inputs. Issue is addressed.	
Date closed:	17 July 2013

255. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 59)

VCS Criteria: VM0010 v1.2, 8.1.3 8.1.4. Change in carbon stocks due to forest regrowth after harvest - Therefore, carbon sequestration resulting from forest regrowth after timber harvest is calculated as: (see methodology for required calculations - eqn. 10)	
Evidence Used to Assess Conformance: PD 4.1.1.8, Calculator VM0010-8.14-5	
Findings: PD indicates a growth model was used to get relative growth rate at one point. But, later, what is actually used is the observed growth on one particular permanent sample plot (PSP) which was used to develop the growth model. Why?	
Non-conformity report (NCR): Assuming the approach taken (selecting 1 PSP - measured growth) to inform equation 10 is continued. Please provide additional supporting evidence for the selection of the single PSP used. For example, species composition, age, soils, etc. That the PSP is physically close to the project area is insufficient. It should be "close" in terms of forest condition.	
Date issued:	17 April 2013
Project proponent response/actions and date: A copy of the journal paper from which the information about the PSPs were derived is provided to the auditor in the supporting documentation. Unfortunately the journal paper does not provide sufficient supporting information to distinguish between the different PSPs in regards to species composition, age etc. The paper presented 'growth rates after selective harvesting' for six different PSPs across PNG, as presented in Figure 2 of the	

paper and reproduced in Figure 40 of the PD. Given the lack of additional information about these PSPs, proximity to the Project Area is the only variable upon which to judge the comparability of growth estimates (noting that all growth estimates were from previously logged sites). We used Google Earth to measure the distance from the nearest edge of the project area to the edge of the Province in which the PSP (for which growth rates were available) was located. In terms of distance, these were: Southern Highlands: 13.20km; West New Britain: 586 km; Morobe: 383 km; New Ireland: 799km; East New Britain: 839 km; Madang: 97.59km. Given the very close proximity of the Southern Highlands Province to the project area, particularly in relation to the other PSPs, we believe that growth rates from this PSP is the most appropriate figure to be used to estimate growth rates in the project area. It should also be noted that visual inspection of the forest in the Southern Highlights reveals that the forest types and topography are similar to those observed in the Project Area. – 5 June 2013	
Evidence used to close CL: Direct observation of the Southern Highlands area during the site visit confirms that this area is the most similar in terms of physical attributes to the project area. It is felt that any differences would be minor and the use of this reference for the purpose of regrowth estimation is most likely the best info available for PNG. Further, according to the reference paper, this region is the lowest growth potential of all the sites used, thus showing that it is the most conservative of the PSP data available. Issue is addressed.	
Date closed:	17 July 2013

256. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 61)

VCS Criteria: VM0010 v1.2, 8.1.5 Calculation of baseline scenario greenhouse gas emissions from change in carbon stocks - Therefore, the net change in carbon stock from wood products and logging slash across all parcels within the first year of harvest in the baseline is calculated as: (see methodology for required calculations - eqn. 11)	
Evidence Used to Assess Conformance: 4.1.9 PD and Calculator VM0010-8.1.4-5	
Findings: There is a typo in the definitions of variables and parameters of equation 11.	
Non-conformity report (NCR): Please correct typo in definitions of variables and parameters of equation 11.	
Date issued:	17 April 2013
Project proponent response/actions and date: These changes have been made under Equation 11 for first year calculations and highlighted in yellow. – 5 June 2013	
Evidence used to close NCR: Typo corrected. Issue addressed.	
Date closed:	17 July 2013

257. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 61)

VCS Criteria: VM0010 v1.2, 8.1.5 Calculation of baseline scenario greenhouse gas emissions from change in carbon stocks - Therefore, the net change in carbon stock from wood products and logging slash across all parcels within the first year of harvest in the baseline is calculated as: (see methodology for required calculations - eqn. 11)	
Evidence Used to Assess Conformance: 4.1.9 PD and Calculator VM0010-8.1.4-5	
Findings: VM0010-8.1.4-5 columns E and F and G appear to be incorrect and "off" 1 year in calculating the lag effect. In particular, cells E12, F13, and G22 should be zero.	
Non-conformity report (NCR): VM0010-8.1.4-5 columns E and F and G appear to be incorrect and "off" 1 year in calculating the lag effect. In particular, cells E12, F13, and G22 should be zero. There are related impacts of these changes.	
Date issued:	17 April 2013
Project proponent response/actions and date: It should be noted that the 'project year' column is intended to mean 'project year ending'. So a project year of '1' refers to the end of the calendar year 1 of the project, and timber harvesting is assumed to occur at the beginning of the year. Therefore the area in column E refers to the area of forest that was harvested at the beginning of the project year, therefore by the end of the year, it will have been '1 year since harvest'. Therefore we can confirm that the years are not incorrectly calculated, nor are the 'off' by one year. To improve clarity, the 'Project Year' column has been re-labeled 'Project year (ending)' throughout the calculator. In addition, column E has been re-labeled 'Area - < 1 year since harvest'. – 5 June	

2013	
Evidence used to close NCR: Explanation confirmed. The calculator was updated to reflect this clarity. Issue is addressed.	
Date closed:	17 July 2013

258. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 62)

VCS Criteria: VM0010 v1.2, 8.1.5 Calculation of baseline scenario greenhouse gas emissions from change in carbon stocks - The net change in carbon stock from wood products and logging slash across all parcels the years 2 – 10 since harvest in the baseline are calculated as: (see methodology for required calculations - eqn. 12)	
Evidence Used to Assess Conformance: 4.1.9 PD and Calculator VM0010-8.1.4-5	
Findings: Equation 12 is mislabeled as Equation 11 in the PD.	
Non-conformity report (NCR): Equation 12 is mislabeled as Equation 11 in the PD. Please Correct.	
Date issued:	17 April 2013
Project proponent response/actions and date: This equation number has been changed to 12 and changes highlighted in yellow. – 5 June 2013	
Evidence used to close NCR: Change confirmed. Issue addressed.	
Date closed:	17 July 2013

259. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 63)

VCS Criteria: VM0010 v1.2, 8.1.5 Calculation of baseline scenario greenhouse gas emissions from change in carbon stocks - The net change in carbon stock from wood products across all parcels the years 11 – 20 since harvest in the baseline are calculated as per equation 13 below. Note that there will be no more emissions from decay of logging slash in these parcels (see methodology for required calculations - eqn. 13).		
Evidence Used to Assess Conformance: 4.1.9 PD and Calculator VM0010-8.1.4-5		
Findings: Definitions of Eqn. 13 contains an error.		
Non-conformity report (NCR): Definitions of Eqn. 13 contains an error. Please correct definitions to match definitions in methodology.		
Date issued:	17 April 2013	
Project proponent response/actions and date: One Parameter has been removed to match definition in VM0010 v1.2 – 5 June 2013		
Clarification (CL): Change not made. Please address.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
Additional parameter has been removed and changes highlighted green for ease of review		
Clarification (CL): This change was not made. ⟦ΔC⟧_(WP100,i,p\BSL) definition does not match that of the methodology. Section 2.3 of VVB Manual states that "If non-material errors are found in the project documents, VVBs should ensure that such errors are addressed by the project proponent where practicable." Thus, the CL still stands.		
Date issued:		
Project proponent response/actions:	**Date Received:**	06 September 2013
Definition has been corrected. Change has been made and highlighted blue. Please see page 147 of the PD.		
Evidence used to close NCR: ProjectDescription_AprilSalumei_V1.4.docx - ⟦ΔC⟧_(WP100,i,p\BSL) definition has been updated to match that of the methodology as indicated. Item is addressed.		
Date closed:	13 September 2013	

260. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 82)

VCS Criteria: VM0010 v1.2 - 8.2.2 Forest disturbance in the project scenario - 8.2.2.1b Natural

Disturbance – Non-Fire For non-fire natural disturbance it is assumed that a disturbance event in the project scenario would also have occurred in the baseline. Project emissions are therefore equal to the non-fire natural disturbance to biomass absent in the baseline case (harvested and removed) but present in the project case. It is conservatively assumed that the natural disturbance is a stand-replacing disturbance, and that the biomass change as a result of the natural disturbance is emitted in the year of disturbance. Where non-fire natural disturbances occur ex post in the project area, the area disturbed shall be delineated. (see methodology for calculations - eqn 23)	
Evidence Used to Assess Conformance: PD 4.2.4	
Findings: Anecdotal evidence has not been provided that supports ex-ante estimates of natural non-fire disturbance of zero.	
Non-conformity report (NCR): Please provide the details of anecdotal evidence that ex-ante estimate of natural non-fire disturbance is zero.	
Date issued:	17 April 2013
Project proponent response/actions and date: In accordance with the methodology ex-ante estimates of disturbance in the Project Area have now been included in the analysis. The figures used in the estimate have been based on historical land use change in the Project Area. – 5 June 2013	
Evidence used to close NCR: This was covered in a previous NCR. Issue is addressed with the revision of the LULC analysis.	
Date closed:	17 July 2013

261. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 97)

VCS Criteria: VM0010 v1.2, 8.3 Leakage - 8.3.1 Activity shifting leakage - At each verification, documentation must be provided covering the other lands controlled by the project proponent where leakage could occur, including, at a minimum, their location(s), area and type of existing land use(s), and management plans.	
Evidence Used to Assess Conformance: Section 4.3 PD	
Findings: Documentation regarding other projects under the control of the project proponent which demonstrates that activity shifting leakage will not occur have not been provided.	
Non-conformity report (NCR): Please provide documentation as noted in the methodology regarding other projects under the control of the project proponent which demonstrates that activity shifting leakage will not occur.	
Date issued:	17 April 2013
Project proponent response/actions and date: The NEC approval Letter (Annex 3) clearly provides Government approval to Rainforest Project Management for development of four other REDD Projects (see clause 7). Three of these areas are currently defined as FMA areas, the fourth (Pile Pile) is currently not classified as any potential land use. The Project Proponent is not in control of other areas and the landowners do not own other lands. It is not possible to "buy and sell' lands in PNG as they are owned by the communities. RMPL is only interested in the protection of forest lands through the development of REDD+ projects. These areas are listed in the Monitoring Report, a map is provided of the locations listed as FMAs. The landowner boundaries of the fourth area 'Pile Pile' has not been formally mapped to date. The NEC decision defines the land use of the four areas listed in the NEC decision as REDD+ project activities and therefore the 3 FMA areas cannot be harvested for timber. They will now defined in the PNG FA database as REDD+ areas. To date no management plans have been developed as they are in the early stages of REDD+ VCS development. A map and shapefile of the area is provided in folder 261. – 5 June 2013	
Evidence used to close NCR: This explanation and maps are adequate to satisfy this NCR since this issue was covered previously and in a separate NCR. Personal communication with project owners and proponents also confirms this item. Issue addressed.	
Date closed:	17 July 2013

262. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 100)

VCS Criteria: VM0010 v1.2, 8.3.2 Market leakage Leakage due to market effects is equal to the net emissions from planned timber harvest activities in the baseline scenario multiplied by an appropriate leakage factor (see methodology for calculations - eqn 27).	
Evidence Used to Assess Conformance: PD 4.3.2 and Master Calculation Spreadsheet	
Findings: The Forest Trends (2006) study, which provides support for market shifting leakage analysis, has not been provided.	
Non-conformity report (NCR): Please provide a copy of Forest Trends (2006) study which provides support for market shifting leakage analysis.	
Date issued:	17 April 2013
Project proponent response/actions and date: This document has now been provided. – 5 June 2013	
Evidence used to close NCR: The document was provided and reviewed. PML_PMP calculations and average were confirmed and found to be a correct representation. Issue is addressed.	
Date closed:	17 July 20113

263. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 101)

VCS Criteria: VM0010 v1.2, 8.3.2 Market leakage The leakage factor (see Box 2) is determined by considering where in the country logging will be increased as a result of the decreased timber supply caused by the project. If the ratio of merchantable biomass to total biomass is higher in the project area, it is likely that additional logging will be performed in these areas as a result of reduced logging in the project area in the project scenario. The leakage factor is thus defined as a dimensionless number with values between 0 and 1 assigned ex ante on the basis of a comparison between the ratio of merchantable biomass to total biomass across all strata in the base year, and the ratio of merchantable biomass to total biomass of the country's forest estate where harvesting would likely be displaced to.	
Evidence Used to Assess Conformance: PD 4.3.2 and Master Calculation Spreadsheet	
Findings: The Project deviates from the methodology in that they use the ratio of AAC area to total FMA area as a replacement for the ratio of merchantable volume to total volume. The PD needs to explicitly identify this as a deviation. The approach taken substitutes an "acre-driven" leakage rate for a required "biomass" driven leakage "rate." This is akin to an AAC calculated using area control versus volume control. The two may work out the same but only if the forest resource is similar. The methodology aims to use the characteristics of the forest resource and the deviation ignores this. They should either provide more detail and clarification or suggest a conservative alternative.	
Non-conformity report (NCR): Please show how the approach taken is related to monitoring and/or measurement (i.e., does not require a methodology revision) and then list the approach taken to estimate the Market shifting leakage factor as a methodology deviation in section 2.6 of PD.	
Date issued:	17 April 2013
Project proponent response/actions and date: We can confirm that the approach used to calculate the market leakage factor represents a 'Methodology Deviation' in accordance with Section 3.5.1 of the VCS Standard. This is because the approach represents is a deviation from the data and parameters available at validation, as well as the data and parameters available in the monitoring plan. We can confirm that the substituted leakage factor 'does not negatively impact the conservativeness of the quantification of emission reductions or removals'. An explanation of the method of calculation of the Market Leakage factor is provided in Section 4.3.2, where it is identified that this approach represents 'a slight deviation from the methodology'. To better document this deviation, the modification has been listed accordingly in Section 2.6 of the PD ('Methodology Deviations'). The approach is conservative and appropriate, as the aim of the market effects leakage factor is to consider how much biomass will be lost from elsewhere in the country, due to reduced logging in the project area. Our assessment is that logging could potentially be displaced to anywhere in PNG. Unfortunately data on the ratio of merchantable biomass relative to the total biomass for FMAs in PNG was not available, with a shortage of forest inventory data being a widely acknowledged problem in	

PNG (for example, Shearman et al, 2008; Forest Trends, 2006). In the absence of merchantable volume data, we used available information on the volume of timber that can sustainably be harvested from most FMAs in PNG, as recommended by an Inter-Agency Forestry Review Committee set up under the auspices of the Department of the Prime Minister and National Executive Council, and described in a report published by Forest Trends (2006). This Review was instigated in response to the requirements of the The World Bank in 1999. In our view, the results of this independent and highly respected investigation provides the most reliable estimate of the area of forest that would likely be logged due to leakage from the April Salumei project area. The results indicate that the merchantable volume (i.e. AAC) that can be extracted from the Project Area are much lower than the merchantable volume (AAC) that can be extracted from most other concessions in PNG, on a per hectare basis (i.e. AAC per hectare of the concession). We believe this serves as a conservative alternative to the merchantable volume:total volume approach. It should be noted that the data used to derive the relationship was from FMAs where the Committee provided a recommendation on the sustainable AAC (concessions where the AAC was reported based on Timber Concessionaires AAC estimates were excluded from the calculation). The ratio excluded plantations. The input data was rechecked against the Forest Trends report. The following corrections were made to ensure consistency, and to ensure that the most conservative recommendations of the Review team were applied consistently for all FMAs (i.e. the AAC used is the recommended value assuming that 'fragile' forest is not harvested. Previously the values assuming 'fragile' forest is harvested was assumed). In addition, four FMAs that were previously excluded from the calculation were included, as recommended AAC values were located in the report (these are: Musa Pongani, Ioma Block 5, Tuwapu, Heikko Gulf Province). – 5 June 2013

Non-conformity report (NCR): The approach taken is a parameter available at validation and is based on measurements. Therefore this proposed deviation does not necessitate a methodology revision. However, full acceptance of this deviation is reliant upon the results of NCR 264. Issue is pending item 264.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
As stated please see response to Item 264.		
Evidence used to close NCR: Item 264 has been addressed. This item can be closed.		
Date closed:	23 September 2013	

264. Clarification (VM0010 IFM-LtPF v1.2, VM0010, Line 101)

VCS Criteria: VM0010 v1.2, 8.3.2 Market leakage The leakage factor (see Box 2) is determined by considering where in the country logging will be increased as a result of the decreased timber supply caused by the project. If the ratio of merchantable biomass to total biomass is higher in the project area, it is likely that additional logging will be performed in these areas as a result of reduced logging in the project area in the project scenario. The leakage factor is thus defined as a dimensionless number with values between 0 and 1 assigned ex ante on the basis of a comparison between the ratio of merchantable biomass to total biomass across all strata in the base year, and the ratio of merchantable biomass to total biomass of the country's forest estate where harvesting would likely be displaced to.
Evidence Used to Assess Conformance: PD 4.3.2 and Master Calculation Spreadsheet
Findings: The Project deviates from the methodology in that they use the ratio of AAC area to total FMA area as a replacement for the ratio of merchantable volume to total volume. The PD needs to explicitly identify this as a deviation. The approach taken substitutes an "acre-driven" leakage rate for a required "biomass" driven leakage "rate" . This is akin to an AAC calculated using area control versus volume control. The two may work out the same but only if the forest resource is similar. The methodology aims to use the characteristics of the forest resource and the deviation ignores this. They should either provide more detail and clarification or suggest a conservative alternative.
Clarification (CL): Please provide clarification and detail that the substituted leakage factor used is both correct and conservative. Alternatively, provide a conservative substitute. In particular, the

alternative suggested assumes that volume "lost" to this project may be shifted elsewhere on an acre for acre basis rather than on a cubic meter for cubic meter basis.	
Date issued:	17 April 2013
Project proponent response/actions and date: We can confirm that the substituted leakage factor is conservative. We also reviewed all inputs to the calculated leakage factor, and checked consistency of all inputs, and we can confirm that the leakage factor is correct. Adjustments made during the review are described further below. An explanation of the method of calculation of the Market Leakage factor is provided in Section 4.3.2, where it is identified that this approach represents 'a slight deviation from the methodology'. To better document this deviation, the modification has been listed according to Section 2.6 of the PD ('Methodology Deviations'). The approach is conservative and appropriate, as the aim of the market effects leakage factor is to consider how much biomass will be lost from elsewhere in the country, due to reduced logging in the project area. Our assessment is that logging could potentially be displaced to anywhere in PNG allocated as an FMA. Unfortunately data on the ratio of merchantable biomass relative to the total biomass for FMAs in PNG was not available, with a shortage of forest inventory data being a widely acknowledged problem in PNG (for example, Shearman et al, 2008; Forest Trends, 2006). In the absence of merchantable volume data, we used available information on the volume of timber that can sustainably be harvested from most FMAs in PNG, as recommended by an Inter-Agency Forestry Review Committee set up under the auspices of the Department of the Prime Minister and National Executive Council, and described in a report published by Forest Trends (2006). This Review was instigated in response to the requirements of the The World Bank in 1999. In our view, the results of this independent and highly respected investigation provides the most reliable estimate of the area of forest that would likely be logged due to potential leakage from the April Salumei project area. The results indicate that the merchantable volume (i.e. AAC) that can be extracted from the Project Area are much lower than the merchantable volume (AAC) that can be extracted from most other concessions in PNG, on a per hectare basis (i.e. AAC per hectare of the concession). We believe this serves as a conservative alternative to the merchantable volume:total volume approach. It should be noted that the data used to derive the relationship was from FMAs where the Committee provided a recommendation on the sustainable AAC (concessions where the AAC was reported based on Timber Concessionaires AAC estimates were excluded from the calculation). The ratio excluded plantations. The input data was rechecked against the Forest Trends report. The following corrections were made to ensure consistency, and to ensure that the most conservative recommendations of the Review team were applied consistently for all FMAs (i.e. the AAC used is the recommended value assuming that 'fragile' forest is not harvested. Previously the values assuming 'fragile' forest is harvested was assumed). In addition, four FMAs that were previously excluded from the calculation were included, as recommended AAC values were located in the report (these are: Musa Pongani, Ioma Block 5, Tuwapu, Heikko Gulf Province). – 5 June 2013	
Non-conformity report (NCR): Confirmed that an explanation of the method of calculation of the Market Leakage factor is provided in Section 4.3.2 as indicated. The additional text, Forest Trends_Review of Logging Concessions in PNG.pdf, and the response here adequately support that the substituted leakage factor used is both correct and conservative. Data contained in the Forest Trends report was reviewed and found that the inputs were correct. The leakage factor used was confirmed to be calculated correctly, but it cannot be confirmed to be conservative since it uses the lowest factor allowable under the methodology. Please confirm that the total project offsets are or are not calculated including the 'fragile areas' as referenced in the Forest Trends Report. If 'fragile areas' are included in project offset calculations in the IFM project area, then please revise the ratio calculations to include the fragile areas in the Annual Allowable Cut as Recommended by Review. Please confirm from the PNG Forest Authority, that the needed information to conduct this analysis, as stated in the methodology is not available and therefor the alternative approach is deemed the best information available for this purpose.	
Date issued:	17 July 2013

Project proponent response/actions:	**Date Received:**	31 July 2013
CL1: The Forest Trends report defines fragile forests as follows: "Fragile forests are forest types such as those that suffer inundation or on limestone karst that have been identified as unable to support logging on a forty year cycle as the conditions will not ensure rehabilitation within this period and logging should either be excluded all together or conducted on a longer cycle. The response provided incorrectly stated that fragile forest were excluded. We have included the fragile forest in both the Project calculations and the Leakage calculations. Evidence of this can be demonstrated with the concession titled Musu Pongani which is described on page 9 of the Forest Trends report. This description states that the AAC is 34,000cubic meters but the AAC with the fragile areas taken out should be 17,000 cubic meters. We have applied 34,000 cubic meters in our calculations. Another example is Vailala. The report states that the sustainable harvest if the fragile areas were to protected would be 20,000 cubic meters (see footnote 20, page 16). We have used this figure in our calculations. CL2: As demonstrated during the field audit the Project Proponent has a strong working relationship with both the Forest Authority and the PNGForest Research Institute. The Project Proponent and these National Forest bodies have worked together to collect all necessary information to conduct the calculations. The Project Proponent requested the information from both agencies and Goodwill Amos (PNGFA) and Prof. Simon Saluei (PNGFRI) both confirmed that this information is not available. Subsequently the Calculations were conducted from available national reports.		
Non-conformity report (NCR): CL1: Based on the removal of the non-operable areas outlined in PD Section 4.1.2, total project offsets do not appear to calculated by including "fragile forests." That is, areas of inundation, peat, and excessive slope have been excluded from the operable areas. Further review of the leakage factor analysis (PML_PMP Tab of Calculator), indicates that only the two FMAs identified in the client's response were AACs that included fragile forest area, while the remainder of the areas did not include the fragile forest values. Independent calculation, indicates that the leakage factor will not change if fragile forests are excluded from the analysis. However, Section 2.3 of VVB Manual states that "If non-material errors are found in the project documents, VVBs should ensure that such errors are addressed by the project proponent where practicable." Thus, the analysis should be updated for consistency. Please note CL 2 below. CL2: The verifier agrees that the Project Proponent has a strong working relationship with both the Forest Authority and the PNG Forest Research Institute. However, the response does not suffice as evidence the that the needed information to quantify the Market Effects Leakage Factor, as stated in the methodology is not available. Each of the concessions used in the analysis should have both a DOS and a FMA, which should include values for total available standing merchantable timber. Merchantable volumes can be converted to biomass volumes using BEFs and WDs. In light of this, the verifier cannot, with reasonable assurance, confirm that the current approach is using the best information available for this purpose Please provide a signed statement or email from the PNGFA indicating that DOSs and FMAs do not exist for the concessions used in the Market Effects Leakage Factor Analysis. Else, use the merchantable timber volumes presented in these documents to quantify a Market Effects Leakage Factor following the approach in Box 2 of VM0010 V 1.2		
Date issued:		
Project proponent response/actions:	**Date Received:**	06 September 2013
CL1: The excel spreadsheet was corrected to include only the volume after the fragile forest were excluded. This resulted in the correction to the Musa Pongani concession only. This change did not change the leakage factor. CL2: An Emial has been provided from teh PNG FA confirming that DOS for other FMA are not publicaaly available, nor are Timber Harvest Plans for operational FMAs as they are commercial in confidence.		
Evidence used to close NCR: VCS_7_10_Calculator_AprilSalumei_M1_06092013.xlsx; Email from Simon Saulei; Discussions with the project proponent - CL1: Confirmed the spreadsheet has been updated as indicated. CL2: Email was reviewed. It includes a statement from the PNGFA that says "the DOS would not be made public unless the National Forest Board has endorsed its release."		

Further discussion with the project proponent indicates that "made public" in this statement is referring to release to timber harvest companies so they may put together their management/development plans. The verifier has had multiple discussions with the project proponent on this issue, and it is clear that they have made several attempts to obtain this data from the PNGFA with no success. Additionally, thorough internet research conducted by the verifier also supports the claim that DOS and FMA information is not publically accessible. The authors of the Forest Trends report were able to obtain information for their report because the PNGFA was going to be sanctioned by the FAO, and there were also a potential for Australia to halt funding, if the information was not made available by the PNGFA. In light of this, the verifier can, with reasonable assurance, confirm that the current approach is using the best information available for this purpose. Item is addressed.	
Date closed:	15 September 2013

265. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 106)

VCS Criteria: VM0010, v1.2, 8.4.1 Project Verified Carbon Units - 8.4.1.1. Adjustment for uncertainty - Uncertainties arising from the measurement and monitoring of carbon pools and greenhouse gases shall always be quantified. Errors in each pool shall be weighted by the size of the pool so that projects may reasonably target a lower precision level in pools that only form a small proportion of the total stock. For both the baseline and the with-project case the total uncertainty is equal to the square root of the sum of the squares of each component uncertainty and is calculated at the time of reporting through propagating the error in the baseline stocks and the error in the project stocks. Therefore, total uncertainty for LtPF project is calculated as: (see methodology for calculations - eqn 29)	
Evidence Used to Assess Conformance: PD 4.5.1, Calculator, VM0010-8.4, Annex 9 (Statistical Analysis)	
Findings: OPO used the 17 temporary plots as the basis for the variance estimates of aboveground biomass (and, by proxy, for merchantable volume). The assumption was made that this same variance could be used on the FMDP information which was used to establish harvest schedules and subsequent carbon sequestration levels.	
Non-conformity report (NCR): Please provide additional discussion and detail justifying the use of the temporary plots installed for validation of the FMDP volumes as a proxy for variance of the FMDP estimates. In particular address the points raised in previous NCR's regarding the size class differences and any differences in species distribution. In particular, simply because the FMDP showed a lower merchantable m3/ha, does not provide strong evidence that the variance structure observed in the temporary plots is a reasonable proxy. Please address and provide substantive detail.	
Date issued:	17 April 2013
Project proponent response/actions and date: Justification for the sample size has been discussed elsewhere in other NCRs in particular 278,279,280 and 281. In relation to the query on the most recent IPCC guidelines (see 8.4.1.1 in the VM0010 methodology) the project does not use pre-existing data in our estimates. We simply used the old existing data as evidence of the validity of our estimate. As we have used new inventory data the conditions set out in Section 8.4.1.1 do not apply. – 5 June 2013	
Evidence used to close NCR: The response adequately addresses this NCR. It is confirmed that the project does not use pre-existing data in its estimates of merchantable or total volume - these are based on field measurements. Uncertainty is quantified at the 95% confidence interval where the estimated variance exceeds +/- 15 percent from the mean. Item is addressed.	
Date closed:	17 July 2013

266. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 106)

VCS Criteria: VM0010, v1.2, 8.4.1 Project Verified Carbon Units - 8.4.1.1. Adjustment for uncertainty - Uncertainties arising from the measurement and monitoring of carbon pools and greenhouse gases shall always be quantified. Errors in each pool shall be weighted by the size of the pool so that projects may reasonably target a lower precision level in pools that only form a small proportion of the

total stock. For both the baseline and the with-project case the total uncertainty is equal to the square root of the sum of the squares of each component uncertainty and is calculated at the time of reporting through propagating the error in the baseline stocks and the error in the project stocks. Therefore, total uncertainty for LtPF project is calculated as: (see methodology for calculations - eqn 29)	
Evidence Used to Assess Conformance: PD 4.5.1, Calculator, VM0010-8.4, Annex 9 (Statistical Analysis)	
Findings: OPO used the 17 temporary plots as the basis for the variance estimates of aboveground biomass (and, by proxy, for merchantable volume). The assumption was made that this same variance could be used on the FMDP information which was used to establish harvest schedules and subsequent carbon sequestration levels.	
Non-conformity report (NCR): Please examine the default uncertainty values given in the most recent IPCC guidelines (see 8.4.1.1 in the VM0010 methodology) and compare these to the estimates being used here. A conservative approach should be used.	
Date issued:	17 April 2013
Project proponent response/actions and date: This relates (or is actually part of NCR 265). Please see NCR 265 for response. – 5 June 2013	
Evidence used to close NCR: The response to item 265 adequately addresses this NCR. It is confirmed that the project does not use pre-existing data in its estimates of merchantable or total volume - these are based on field measurements. Uncertainty is quantified at the 95% confidence interval where the estimated variance exceeds +/- 15 percent from the mean. Item is addressed.	
Date closed:	17 July 2013

267. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 118)

VCS Criteria: VM0010, v1.2, 9.1 Data and Parameters Available at Validation		
Evidence Used to Assess Conformance: Not in MR		
Findings: OF, SLF, WW should be listed in MR.		
Non-conformity report (NCR): Please ensure all parameters shown in VMD0010, Section 9.1 are explicitly listed in Monitoring Report Section 3.1.2.		
Date issued:	17 April 2013	
Project proponent response/actions and date: Missing parameters have been added in section 3.1.2 and changes highlighted in yellow – 5 June 2013		
Non-conformity report (NCR): It appears some parameters are still missing "BCEFr", "OF,SLF,WW", "Ggi", etc. Please address.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
All parameters were in the report they were just in a slightly different order than presented in the methodology. The parameters have been reordered to be the same as the methodology for ease of review. Those paramters that hve changed order have been highlighted green. Please note that the methodology does not report the paramter COMF in the Monitoring tables. We have added this paramter as it is used in Equation 21.		
Clarification (CL): Confirmed that all parameters shown in VMD0010, Section 9.1 are now listed in Monitoring Report Section 3.1.2. Item is addressed pending Item 251 (BCEFr will change).		
Date issued:		
Project proponent response/actions:	**Date Received:**	06 September 2013
BCEFr figure was updated in the PD in Table 47, page 141 of the PD. It was also updated in the Monitoring report at Section 3.1.2 page 41.		
Evidence used to close CL: Monitoring Report_v1.3.docx; ProjectDescription_AprilSalumei_V1.5.docx - Confirmed that BCEFr values were updated		

appropriately in both the PD and the Monitoring Report. Item is addressed.	
Date closed:	15 September 2013

268. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 139)

VCS Criteria: VM0010, v1.2, 9.3 Description of the Monitoring Plan -The following parameters must be monitored in this methodology: • Illegal logging PRA • Result of limited illegal logging survey • Area burnt in stratum i at time t (Aburn,i,t) • Area potentially impacted by illegal logging in stratum i (ADIST_IL, i) • Total area of illegal logging sample plots in stratum i (APi) • Merchantable biomass as a proportion of total aboveground tree biomass for stratum i (PMPi) • Area covered by stratum i (Ai) • Diameter at breast height of tree (DBH) These parameters will be required at each verification and are used in equations 20, 21 and 23.	
Evidence Used to Assess Conformance: Monitoring Report Section 3.3 (Monitoring Plan); PD Section 5: 5.11.2 is the specific task list relative to VM0010.	
Findings: Result of limited illegal logging survey not listed in Table 52.	
Non-conformity report (NCR): Please list "Result of limited illegal logging survey" in PD Table 52.	
Date issued:	17 April 2013
Project proponent response/actions and date: This item had previously been listed as 'Illegal PRA' in Table 52. This has now been changed to 'Results of limited illegal logging survey' in order to improve clarity. – 5 June 2013	
Evidence used to close NCR: Addressed. Table 52 is now table 55 and lists "Result of limited illegal logging survey".	
Date closed:	17 July 2013

269. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 139)

VCS Criteria: VM0010, v1.2, 9.3 Description of the Monitoring Plan -The following parameters must be monitored in this methodology: • Illegal logging PRA • Result of limited illegal logging survey • Area burnt in stratum i at time t (Aburn,i,t) • Area potentially impacted by illegal logging in stratum i (ADIST_IL, i) • Total area of illegal logging sample plots in stratum i (APi) • Merchantable biomass as a proportion of total aboveground tree biomass for stratum i (PMPi) • Area covered by stratum i (Ai) • Diameter at breast height of tree (DBH) These parameters will be required at each verification and are used in equations 20, 21 and 23.	
Evidence Used to Assess Conformance: Monitoring Report Section 3.3 (Monitoring Plan); PD Section 5: 5.11.2 is the specific task list relative to VM0010.	
Findings: OPO is using AAC acres instead of merchantable biomass. Note that an earlier NCR was issued related to this. Also, the PD should explain this substitution.	
Non-conformity report (NCR): Please note in Table 52 and associate any information as to how the required "merchantable biomass as a ….(PMPi)" is being proxied by the Annual Allowable Cut as a proportion of total FMA area. Note Item 265 above related to this item.	
Date issued:	17 April 2013
Project proponent response/actions and date: Table 52 (now Table 51) has been updated with this modified method of calculation of PMP, and the method has also been noted as a deviation from the methodology, as requested in other NCRs. – 5 June 2013	
Non-conformity report (NCR): PD Table 52 is now PD Table 55 and not Table 51 and Table 55 has not been updated as indicated. Thus, the NCR still stands. Please address.	
Date issued:	17 July 2013

Project proponent response/actions:	**Date Received:**	31 July 2013
The Table is now table 56 and a summary of the text predented as a deviatiopn is provided in this table. Text is highlighted green.		
Evidence used to close NCR: ProjectDescription_AprilSalumei_V1.3.docx - PD Table 56 has been updated as indicated. Item is addressed.		
Date closed:	25 August 2013	

270. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, Line 140)

VCS Criteria: VM0010, v1.2, 9.3 Description of the Monitoring Plan -9.3.1 Scope of monitoring and the monitoring plan - Monitoring is required to: a) determine changes in forest carbon stocks and greenhouse gas emissions from project activity; b) confirm project activity; and c) determine changes in forest carbon stocks and greenhouse gas emissions from disturbance and illegal logging. In some project cases monitoring may also be implemented to update stratification. It is a requirement that the monitoring plan presented in the VCS-PD shall address the monitoring of project implementation, the monitoring of actual carbon stock changes from project activity, and estimation of ex-post net carbon stock changes from disturbance and illegal logging.		
Evidence Used to Assess Conformance: Monitoring Report Section 3.3 (Monitoring Plan); PD Section 5: 5.11.2 is the specific task list relative to VM0010.		
Findings: While very similar, the monitoring plan sections of the PD and the MR are slightly different. As per the methodology, the monitoring plan should be located in the PD. So, these comments are based on the version in the PD.		
Non-conformity report (NCR): The Monitoring Plan portions of the Monitoring Report and the PD are slightly different (See Table 47 PD, Table 23 MR as examples). Please consolidate the monitoring plan into one location (the PD, as required in the methodology).		
Date issued:	17 April 2013	
Project proponent response/actions and date: Changes have been made in the tables in Monitoring Report and PD and changes have been highlighted in yellow. – 5 June 2013		
Non-conformity report (NCR): Confirmed that the Monitoring Plan Sections of both PD and Monitoring Report now match and that the changes have been made as indicated. However, Monitoring Report Section 3.3.4 states "A summary of identified monitoring components can be found in Table 23 below." Table 23 does not include a summary of identified monitoring components. Please update the quoted text accordingly and ensure that all text references to tables and figures in both the Monitoring Report and the PD are appropriate. Please identify all changes made.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
This was simply a cross-referencing issue. The correct table was immediately below the text as stated. The Table reference has been corrected in the text in this sectiopn and highlighted green.		
Clarification (CL): Confirmed that the incorrect reference to Table 23 was appropriately changed to refer to Table 21 in Monitoring Report Section 3.3.4. However, several text references to tables in the Monitoring Report are still not correct. Section 2.3 of VVB Manual states that "If non-material errors are found in the project documents, VVBs should ensure that such errors are addressed by the project proponent where practicable." Please ensure that all text references to tables in the Monitoring Report are appropriate. Please identify all changes made.		
Date issued:	26 August 2013	
Project proponent response/actions:	**Date Received:**	06 September 2013
All identified references have been corrected. Changes have been highlighted blue.		
Evidence used to close CL: Confirmed that all text references to tables in the Monitoring Report are appropriate. Item is addressed.		
Date closed:	23 September 2013	

271. Opportunity for Improvement (VM0010 IFM-LtPF v1.2, VM0010, Line 141)

VCS Criteria: VM0010, v1.2, 9.3 Description of the Monitoring Plan -9.3.1 Scope of monitoring and the monitoring plan - The description of the monitoring plan in the VCS-PD will include the following for each of these monitoring tasks: a) technical description of the monitoring task; b) a list of data and parameters to be collected; c) overview of data collection procedures; d) quality control and quality assurance procedure; e) data archiving; and f) organization and responsibilities of the parties involved in all the above.	
Evidence Used to Assess Conformance: Monitoring Report Section 3.3 (Monitoring Plan); PD Section 5	
Findings: Note separate Tasking orders are provided for VM0007 and VM0010. It is confusing how the Monitoring Section switches from "general, combined" material (VM0007 and VM0010) to separate sections. It would be much cleaner if there was a complete VM0007 MP section and VM0010 MP section.	
Opportunity for Improvement (OFI): Please consider breaking the Monitoring Plan into two complete packages within the PD (one for VM0007 and one for VM0010). The approach taken is confusing.	
Date issued:	17 April 2013
Project proponent response/actions and date: We will take your suggestion on board and will consider breaking the monitoring plan into two separate packages for the next monitoring period – 5 June 2013	
Evidence used to close NCR: Addressed. This was an OFI so not required. The project proponent has opted to consider this for the next monitoring period.	
Date closed:	17 July 2013

272. Clarification (VM0010 IFM-LtPF v1.2, VM0010, line 150)

VCS Criteria: VM0010, v1.2, 9.3.3 Monitoring of project implementation, Information must be provided, and recorded in the VCS-PD, to establish that - • commonly accepted principles of forest inventory and management are implemented	
Evidence Used to Assess Conformance: 5.11.2 PD. Carbon Stock Report Annex 1 - Field Manual	
Findings: The project monitoring process was found to follow generally accepted methods where a plot is established of a known area and all trees of a given size range are measured within the plot. Horizontal distances were corrected for slope, DBH measurements were found to be appropriate and done according to generally accepted principals. Tree ID was carried out by a professional forester located in PNG. No issues were found during the course of the field measurements. Several reasons were given in Field Manual for relocating plots including steep slope, water course presence, more than 1 forest strata/class. It is not clear that the project boundary excludes such areas (previous NCR listed). If the plots purposefully excluded ground that is in the project boundary, they are biased. In the "Loading Plots.." section of manual, they indicate that "plot locations" are to be positioned every 200m but earlier plots are referenced as on 1 km grid.	
Clarification (CL): P.20 Annex 1 of Carbon Stock Report (Field Manual) indicates that plots may be relocated for 4 reasons. This would imply that those reasons indicate forestland that is excluded from the project. Please clarify that the project boundary did in fact exclude steep slopes (> 30 degrees), water courses and non-forest land cover classes.	
Date issued:	17 April 2013
Project proponent response/actions and date: The carbon stock report was revised in order to improve clarity that plots are only relocated if the plot includes any non-forest land cover classes. We can confirm that the project boundary excluded steep slopes, water courses and non-forest land cover classes. These were excised from the project boundary using the 'Erase' tool in ArcGIS, based on PNGRIS data on slope, location of rivers, and non-forest and ineligible land cover classes (e.g. woodland, swampland, low montaine, seral forest and peat). – 5 June 2013	

Evidence used to close CL: Addressed. Change made to state one stratum was used.	
Date closed:	17 July 2013

273. Clarification (VM0010 IFM-LtPF v1.2, VM0010, line 150)

VCS Criteria: VM0010, v1.2, 9.3.3 Monitoring of project implementation, Information must be provided, and recorded in the VCS-PD, to establish that - • commonly accepted principles of forest inventory and management are implemented	
Evidence Used to Assess Conformance: 5.11.2 PD. Carbon Stock Report Annex 1 - Field Manual	
Findings: The project monitoring process was found to follow generally accepted methods where a plot is established of a known area and all trees of a given size range are measured within the plot. Horizontal distances were corrected for slope, DBH measurements were found to be appropriate and done according to generally accepted principals. Tree ID was carried out by a professional forester located in PNG. No issues were found during the course of the field measurements. Several reasons were given in Field Manual for relocating plots including steep slope, water course presence, more than 1 forest strata/class. It is not clear that the project boundary excludes such areas (previous NCR listed). If the plots purposefully excluded ground that is in the project boundary, they are biased. In the "Loading Plots.." section of manual, they indicate that "plot locations" are to be positioned every 200m but earlier plots are referenced as on 1 km grid.	
Clarification (CL): Please clarify what is meant by "more than one forest strata" in the field manual as elsewhere only 1 strata is recognized.	
Date issued:	17 April 2013
Project proponent response/actions and date: The field manual supplied was developed as a general field manual is used for different projects. We have removed the sentence with 'more than one strata' in section 5 to reflect that only one forest strata was measured in the Project Area. – 5 June 2013	
Evidence used to close CL: The response sufficiently addressed the CL. Confirmed that the confusing sentence was removed from the Field Inventory Manual as indicated. Item is addressed.	
Date closed:	17 July 2013

274. Clarification (VM0010 IFM-LtPF v1.2, VM0010, line 150)

VCS Criteria: VM0010, v1.2, 9.3.3 Monitoring of project implementation, Information must be provided, and recorded in the VCS-PD, to establish that - • commonly accepted principles of forest inventory and management are implemented	
Evidence Used to Assess Conformance: 5.11.2 PD. Carbon Stock Report Annex 1 - Field Manual	
Findings: The project monitoring process was found to follow generally accepted methods where a plot is established of a known area and all trees of a given size range are measured within the plot. Horizontal distances were corrected for slope, DBH measurements were found to be appropriate and done according to generally accepted principals. Tree ID was carried out by a professional forester located in PNG. No issues were found during the course of the field measurements. Several reasons were given in Field Manual for relocating plots including steep slope, water course presence, more than 1 forest strata/class. It is not clear that the project boundary excludes such areas (previous NCR listed). If the plots purposefully excluded ground that is in the project boundary, they are biased. In the "Loading Plots.." section of manual, they indicate that "plot locations" are to be positioned every 200m but earlier plots are referenced as on 1 km grid.	
Clarification (CL): Please clarify what is meant in "Loading Plots..." section of Field manual by "A plot location should be positioned every 200m". This is inconsistent with earlier reference that plots are to be 1km apart.	
Date issued:	17 April 2013
Project proponent response/actions and date: Loading plots into the GPS refers to uploading the co-ordinates from ArcGIS into the handheld GPS. This text has been corrected. Location of plots was 200m between each plot. appropriate corrects to the Field Manual were made. – 5 June 2013	
Evidence used to close CL: Addressed. 200 M confirmed and language is now clear regarding loading of plots.	

Date closed:	17 July 2013

275. Clarification (VM0010 IFM-LtPF v1.2, VM0010, line 150)

VCS Criteria: VM0010, v1.2, 9.3.3 Monitoring of project implementation, Information must be provided, and recorded in the VCS-PD, to establish that - • commonly accepted principles of forest inventory and management are implemented	
Evidence Used to Assess Conformance: 5.11.2 PD. Carbon Stock Report Annex 1 - Field Manual	
Findings: The project monitoring process was found to follow generally accepted methods where a plot is established of a known area and all trees of a given size range are measured within the plot. Horizontal distances were corrected for slope, DBH measurements were found to be appropriate and done according to generally accepted principals. Tree ID was carried out by a professional forester located in PNG. No issues were found during the course of the field measurements. Several reasons were given in Field Manual for relocating plots including steep slope, water course presence, more than 1 forest strata/class. It is not clear that the project boundary excludes such areas (previous NCR listed). If the plots purposefully excluded ground that is in the project boundary, they are biased. In the "Loading Plots.." section of manual, they indicate that "plot locations" are to be positioned every 200m but earlier plots are referenced as on 1 km grid.	
Clarification (CL): Please explain the total number of plots (17) and how that corresponds to a 1KM or 200m grid pattern.	
Date issued:	17 April 2013
Project proponent response/actions and date: The 1km grid pattern was incorrectly reported in the field manual. The plots were located along randomly located transects at 200m intervals. The field manual has been corrected. – 5 June 2013	
Evidence used to close CL: The response clarifies that the plots were located along randomly placed transects at 200m intervals. The site visit also confirmed this. Confirmed that the Field Manual has been corrected. Item is addressed.	
Date closed:	17 July 2013

276. Clarification (VM0010 IFM-LtPF v1.2, VM0010, line 150)

VCS Criteria: VM0010, v1.2, 9.3.3 Monitoring of project implementation, Information must be provided, and recorded in the VCS-PD, to establish that - • commonly accepted principles of forest inventory and management are implemented	
Evidence Used to Assess Conformance: 5.11.2 PD. Carbon Stock Report Annex 1 - Field Manual	
Findings: The project monitoring process was found to follow generally accepted methods where a plot is established of a known area and all trees of a given size range are measured within the plot. Horizontal distances were corrected for slope, DBH measurements were found to be appropriate and done according to generally accepted principals. Tree ID was carried out by a professional forester located in PNG. No issues were found during the course of the field measurements. Several reasons were given in Field Manual for relocating plots including steep slope, water course presence, more than 1 forest strata/class. It is not clear that the project boundary excludes such areas (previous NCR listed). If the plots purposefully excluded ground that is in the project boundary, they are biased. In the "Loading Plots.." section of manual, they indicate that "plot locations" are to be positioned every 200m but earlier plots are referenced as on 1 km grid.	
Clarification (CL): Please clarify whether the non-forest ground truth plots were used for classification training purposes only, or if they were used in an accuracy assessment. If used in an accuracy assessment, please specify the sampling design used.	
Date issued:	17 April 2013
Project proponent response/actions and date: GPS locations reported in the field were used for training purposes for local villagers to continue monitoring in the future. They were not used in the accuracy assessment. The Field Manual has been updated to remove confusion as to the purpose of the GPS locations taken. – 5 June 2013	
Evidence used to close CL: The response clarifies that the non-forest ground truth plots were used for classification training purposes only. The Field Manual is clear as to the purpose of the GPS	

locations taken. Item is addressed	
Date closed:	17 July 2013

277. Clarification (VM0010 IFM-LtPF v1.2, VM0010, line 150)

VCS Criteria: VM0010, v1.2, 9.3.3 Monitoring of project implementation, Information must be provided, and recorded in the VCS-PD, to establish that - • commonly accepted principles of forest inventory and management are implemented		
Evidence Used to Assess Conformance: 5.11.2 PD. Carbon Stock Report Annex 1 - Field Manual		
Findings: The project monitoring process was found to follow generally accepted methods where a plot is established of a known area and all trees of a given size range are measured within the plot. Horizontal distances were corrected for slope, DBH measurements were found to be appropriate and done according to generally accepted principals. Tree ID was carried out by a professional forester located in PNG. No issues were found during the course of the field measurements. Several reasons were given in Field Manual for relocating plots including steep slope, water course presence, more than 1 forest strata/class. It is not clear that the project boundary excludes such areas (previous NCR listed). If the plots purposefully excluded ground that is in the project boundary, they are biased. In the "Loading Plots.." section of manual, they indicate that "plot locations" are to be positioned every 200m but earlier plots are referenced as on 1 km grid.		
Clarification (CL): Regarding Table 33 in the monitoring report: CL: "Please clarify the source of the difference between the No Data values for 2009 and 2012. Please provide shapefiles that will allow for verification of the values presented in Table 33".		
Date issued:	17 April 2013	
Project proponent response/actions and date: Following footnote was added: "This data was derived from satellite imagery and no data represents continuous cloud cover over the project area". Related shapefiles are supplied in folder 277 – 5 June 2013		
Clarification (CL): Confirmed the footnote was added as indicated. However, the values presented in Monitoring Report Tables 33 and 34 could not be verified using the provided shapefiles. Please provide shapefiles (or specifically identify which out of those provided) that will allow for verification of the values presented in Monitoring Report Tables 33 and 34.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
Spatial LULC change files for the IFM and REDD areas are provided in folder 277 in response to this NCR. The figures relating to area_ha and changeclass are reported in the relevant tables of the Monitoring report refered to.		
Clarification (CL): The provided shapefiles were reviewed and they now support the values presented in Monitoring Report Tables 33 and 34. However, imagery the shapefiles are based on could not be located. While it is clear that imagery has been provided for one of the proxy areas as requested, the verifier could not locate imagery for the project in a location on the EAS fileserver. Without at least a sample of this imagery, the verifier cannot confirm the reported values for ex post area disturbed with reasonable assurance. Please identify where this imagery resides. If it cannot be located, please provide a sample of satellite imagery for the project area for the years 2009 and 2012.		
Date issued:	26 August 2013	
Project proponent response/actions and date: the LandSAT mosaic images for the Project Area 2009 and 2010 are provide in folder labelled 277– 06 September 2013		
Evidence used to close CL: Monitoring Report_v1.3.docx; ProjectDescription_AprilSalumei_V1.5.docx; 2009_mosaic_final.tiff; 2012_mosaic_final.tiff; 2012_RapidEye_mosaic_7x7lp_ds.tif; LULC Shapefiles - LULC shapefiles were overlain and the provided imagery was reviewed. The imagery was found to support the LULC shapefiles. The ex-post area disturbed values in the LULC shapefiles correlate to VCS_7_10_Calculator_AprilSalumei_M1_06092013.xlsx. However, the values in Monitoring Report Table 34 do not correlate to either the shapefiles or the calculator. Please update Monitoring report		

Table 34 to be consistent with the calculator and the LULC shapefiles. Also, the footnote of PD Table 22 needs to be revised to be consistent with IFMBoundary_Final.shp which reports 196,714 HA vs. 196,723 HA. Lastly, please revise Monitoring Report Table 33 to match the format of Monitoring Report Table 34. Currently, Table 33 does not include ex-post values that are used in accounting. When, revising, be sure that the values are consistent with the calculator and the LULC shapefiles. This was communicated to the client via email on 16 September 2013. Updated documents were provided on 18 September 2013 and the verifier has confirmed the revisions were made. The values for "No Change," "No Data," and "Total" in Table 34 are slightly off when compared to the verifier's independent calculations from the LULC shapefile. However, these values are not used in ex-post accounting and, thus, are acceptable. Item is addressed.	
Date closed:	19 September 2013

278. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, line 151)

VCS Criteria: VM0010, v1.2, 9.3.3 Monitoring of project implementation, Information must be provided, and recorded in the VCS-PD, to establish that - • standard operating procedures (SOPs) and quality control/quality assurance (QA/QC) procedures for forest inventory including field data collection and data management shall be applied. Use or adaptation of SOPs already applied in national forest monitoring or available from published handbooks or from the IPCC GPG LULUCF 2003 is recommended	
Evidence Used to Assess Conformance: 5.10 PD	
Findings: No reference is made to check-cruising or independent validation of measurements. Should be addressed. This is SOP.	
Non-conformity report (NCR): Please address why forest inventory plot measurements were not independently checked (check-cruising) as this is a SOP in forest inventory.	
Date issued:	17 April 2013
Project proponent response/actions and date: We used the third party validation by ESI as our means of independently checking the forest inventory. This approach found the required level of accuracy had been met. To improve our systems however we have added the additional requirement for internal project validation of forest inventory to our Field inventory Manual. This revision is highlighted in yellow in this document for ease of review. – 5 June 2013	
Evidence used to close NCR: Client response; Field inventory Manual - ESI's field validation did find that the required level of accuracy had been met. Confirmed that the additional requirement for internal project validation of forest inventory was added to the Field inventory Manual. Item is addressed.	
Date closed:	17 July 2013

279. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, line 153)

VCS Criteria: VM00100, v1.2 - 9.3.4 Stratification This methodology requires that an ex ante stratification of the project area in the project scenario is described in the VCS-PD as documented in the timber harvest plan, or developed by project proponents through sampling in the project area. The monitoring plan may include sampling to adjust the number and boundaries of the strata defined ex ante where an update is required because of: a) unexpected disturbances occurring during the project crediting period affecting differently various parts of an originally homogeneous stratum and/or b) forest management activities that are implemented in a way that affects the existing stratification in the project scenario. Established strata may also be merged if the reasons for their establishment have disappeared.	
Evidence Used to Assess Conformance: Forest Carbon Statistical Analysis Report.	
Findings: While it may be reasonable to consider accessibility in terms of plot locations, such considerations must be balanced with an explanation as why this does not bias results.	
Non-conformity report (NCR): Please justify that consideration of access-related issues is not cause for concern regarding potential bias in plot locations.	
Date issued:	17 April 2013

Project proponent response/actions and date: We have addressed this issue in NCR 278, 280 and 281. – 5 June 2013		
Non-conformity report (NCR): Pending items 280, and 281.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
Refer to relevant responses to 280 and 281		
Evidence used to close NCR: Items 280 and 281 have effectively been addressed. Thus, this item can be closed.		
Date closed:	25 August 2013	

280. Clarification (VM0010 IFM-LtPF v1.2, VM0010, line 153)

VCS Criteria: VM00100, v1.2 - 9.3.4 Stratification This methodology requires that an ex ante stratification of the project area in the project scenario is described in the VCS-PD as documented in the timber harvest plan, or developed by project proponents through sampling in the project area. The monitoring plan may include sampling to adjust the number and boundaries of the strata defined ex ante where an update is required because of: a) unexpected disturbances occurring during the project crediting period affecting differently various parts of an originally homogeneous stratum and/or b) forest management activities that are implemented in a way that affects the existing stratification in the project scenario. Established strata may also be merged if the reasons for their establishment have disappeared.		
Evidence Used to Assess Conformance: Forest Carbon Statistical Analysis Report.		
Findings: While it may be reasonable to consider accessibility in terms of plot locations, such considerations must be balanced with an explanation as why this does not bias results.		
Clarification (CL): While the statistical analysis does show no difference between the biomass inventory and other biomass survey information (and PSP information), the standard deviation suggests that the sample size was likely insignificant to reasonably conduct such a test. (i.e., the test had very little power or beta). Please address.		
Date issued:	17 April 2013	
Project proponent response/actions and date: Our biomass estimates are calculated to the 95% confidence interval and we apply uncertainty calculations and required deductions in accordance with the VCS methodology selected. We acknowledge that the Project Site does pose challenges in conducting a forest inventory without bias; however, our approach and statistical analysis of the data present a conservative approach and demonstrate that we have not over-estimated the carbon stock in the project area. We have applied the required calculations to demonstrate the validity of the sample size both pre and post field inventory which is presented in Annex 9. – 5 June 2013		
Clarification (CL): It is understood that the project is applying uncertainty calculations and required deductions in accordance with the VCS methodology selected. However, the statement that the "statistical analysis of the data present a conservative approach and demonstrate that we have not overestimated the carbon stock in the project area" is not supported by Annex 2 of Annex 9; specifically, the comparison to the PSP data indicates overestimation by a magnitude of 8.6 %. Please explain how this demonstrates conservativeness and explain why the biomass survey estimates differ so greatly between Tables 3 and 4. This is not clear in Annex 2 of Annex 9 and no methods are detailed as to how the comparison to the PSP data was calculated.		
Date issued:	17 July 2013	
Project proponent response/actions:	**Date Received:**	31 July 2013
Clarifying text has been added to Annex2 of Annex9 in relation to the variations between figures presented in Table 3 and Table 4. In summary the volume equation used in PNG is repoted to be accurate over 50cm in DBH and therefore only trees above this DBH threshold were compared in the		

analysis. The analysis between the PSP and the Project Inventory included all trees above 20cm DBH which is the range appropriate for the allometry used. The National specific wood density values are now used and therefore the averages are closer than the 8.6% noted in the ESI response. However it should be noted that this statistical analysis was to deomonstrate no significant difference in the means, not the relative difference. In summary the inventory was conducted to the level of accuracy required by the methodology was the mean was not found to be significantly different to inventories conducted in PNG is similar forest types (PSP data) nor to volume estimates from an inventory conducted in the same project area in the late 1980's (volume data). Additional clarifying text (highlighted green) has been added to Annex 2 of Annex 9 to more clearly describe the comparative analysis.		
Clarification (CL): Confirmed that clarifying text has been added to Annex 2 of Annex 9 as indicated. The updated analysis now adequately demonstrates that the carbon stock in the project area has not been overestimated. It is now also clear why the biomass survey estimates differ so greatly between Tables 3 and 4. Methods of the analysis are now adequately detailed and are supported Biomass Statistical Analysis.xlsx. Item is addressed pending updating the spreadsheet for the appropriate p values.		
Date issued:		
Project proponent response/actions:	**Date Received:**	06 September 2013
The p values have been corrected to be consistent between the spreadsheet and the report and the z-tables. Documents have been supplied with the NCR to check.		
Evidence used to close CL: Biomass Statistical Analysis.xlsx; ForestCarbonStatisticalAnalysis.docx – Confirmed that p values have been updated in Biomass Statistical Analysis.xlsx as indicated. The values are now consistent between Biomass Statistical Analysis.xlsx and ForestCarbonStatisticalAnalysis.docx. Item is addressed.		
Date closed:	13 September 2013	

281. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, line 154)

VCS Criteria: VM0010, v1.2 - 9.3.5 Monitoring of actual carbon stock changes Carbon stocks will be measured according to the stock assessment equations in this methodology with field sampling based on forest inventory methods. Various sources exist to assist with the design of a verifiable forest field inventory based on best practice for sampling, data management and analysis (Box 3).	
Evidence Used to Assess Conformance: Forest Carbon Stock Report, Statistical Analysis, and Calculator	
Findings: The concern here, as is often the case, is that it doesn't take very many plots (if they are in similar forest types) to get a total estimate that has a small error. This may just mean the samples were placed "well". Pick 3 plots in very similar forest types of a large area and you will get a very tight estimate. Put a 100 in that are placed representatively across the project and you might not....you might actually see that there is more variability than a small sample obtains by happenstance.	
Non-conformity report (NCR): Please address the issue of providing a sample size large enough to not only meet confidence interval requirements but also one that has adequate power and that covers an adequate cross-section of the project. The plots as identified cover a small cross section of the project.	
Date issued:	17 April 2013
Project proponent response/actions and date: We have addressed this issue in NCR 278, 279 and 280. – 5 June 2013	
Non-conformity report (NCR): Pending item 280. Also, why was the info regarding local customs and security issues removed from Annex 9? This was information supporting the decisions on plot locations/distribution. Please include in the current version of Annex 9 the discussion found in the previous version of Annex 9 relating to local customs, security issues, and plot location/distribution.	
Date issued:	17 July 2013

Project proponent response/actions:	**Date Received:**	31 July 2013
Please refer to response to NCR 280. Text on accessibility was not removed and can be found in Section 1 Introduction consistent with previous versions provided. No text relating to this issue was removed or added to.		
Evidence used to close NCR: ForestCarbonStatisticalAnalysis.docx - Item 280 has been addressed. Further, the information supporting the decisions on plot locations/distribution was found to be in Section 1 of Annex 2 of Annex 9 as indicated. Item is Addressed.		
Date closed:	25 August 2013	

282. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, line 155)

VCS Criteria: VM0010, v1.2 - In the project area (or areas) the inventory plan must be specified in the VCS-PD and include: a) adequate forest stratification, sample size estimation methods and consider uncertainty; and b) a sampling framework including sample size, plot size, plot shape and information to determine plot location.	
Evidence Used to Assess Conformance: Forest Carbon Stock Report, Statistical Analysis, and Calculator	
Findings: A live version of Appendix 1 - Target Number of Forest Plots Prior to Fieldwork has not been provided for review.	
Non-conformity report (NCR): Please provide Appendix 1 - Target Number of Forest Plots Prior to Fieldwork in Excel format for verification purposes.	
Date issued:	17 April 2013
Project proponent response/actions and date: This workbook has been provided in folder 282. – 5 June 2013	
Non-conformity report (NCR): Review of Winrock Sampling Calculator _AS.xlsx and associated text in Annex 9 brought forth several issues. First, Appendix 1 of the updated Carbon Stock report is blank - please update Appendix 1 to show a screenshot of the Winrock Sampling Calculator as was the case in the original version of the Carbon Stock Report. Second, Section 2.1.1 of the updated carbon stock report states "Using the Winrock Sampling Calculator (Appendix 1), it was determined that a total of 18 plots were required to meet the accuracy limits of +/- 15% of the mean at the 95% confidence interval (Table 2). However, Winrock Sampling Calculator _AS.xlsx indicates that a total of 19 plots were required to meet the accuracy limits - please revise the quoted text and similar text in Section 2.2.2 accordingly. Also, this means that the number of plots required as specified by the Winrock Calculator was not met - please address. This also means that Carbon Stock report Table 2 is incorrect - please update to include the Low Montane Stratum. Third, Carbon Stock Report Appendix 2 is incomplete: please complete. Also, Annex 1 of the Carbon Stock report is out of place in the document - please update accordingly. Fourth, Appendix 2 is incorrectly referred to in Carbon Stock Report Section 2.4 as including Pictures showing the techniques employed in the field by the field crew and locally trained villagers: please revise Section 2.4 to refer to Appendix 3. Fifth, the Table of Contents in the Carbon Stock Report is not current - please update accordingly.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
Annex 9 has been updated based on the use of the CDM tool as requested in NCR235, therefore the Winrock Calculator is no longer used. The screenshots are no longer valid. However the CDM calculator is supplied with this NCR in its place. The text regarding the Winrock calculator hsa been removed and the CDM calculator is now referenced to Tables 2 and 4 where the number of required plots are listed. The number matches the number of plots visited in the field. the report has had a thorough review and all editorial mistakes found have been corrected.	
Evidence used to close NCR: PlotTool.xlsx; Annex 9_Forest Carbon Stock Calculations.docx - Annex 9 and the CDM plot calculator were reviewed and the validator found that all issues outlined in the Round 2 NCR have been addressed. This item can be closed.	
Date closed:	25 August 2013

283. Non-Conformity Report (VM0010 IFM-LtPF v1.2, VM0010, line 157)

VCS Criteria: VM0010, v1.2 - Carbon stock changes over time must be estimated by taking measurements in plots at each monitoring event. Monitoring events shall take place at intervals of 5, or preferably 3 years. For intermittent years it is good practice to use extrapolations of trends as they have occurred up till that moment. Monitoring reports can use such extrapolated parameter values for the determination of net emissions by sources and removals resulting from the project.	
Evidence Used to Assess Conformance: PD Section 5.11.2	
Findings: IFM Project is conservatively ignoring future growth. Thus, future monitoring is really to look at deforestation or degradation events. It is unlikely that field inventory approaches will be able to provide this. Yet, it is forest field inventory approaches that are referenced.	
Non-conformity report (NCR): As an IFM-Protected Forest project, future monitoring should be sensitive enough (or approached in an appropriate manner) to detect forest carbon stock changes due to illegal logging and other disturbances. Please explain in detail how forest field inventory procedures as described in 5.11.2 of the PD (Monitoring of Actual Carbon Stock Changes) will be sensitive enough to detect these differences.	
Date issued:	17 April 2013
Project proponent response/actions and date: In order to clarify, additional text has been added under the heading titled 'Stratification' in Section 5.11.2 of the PD. The text states that: "Stratification and change detection will occur according to the procedures specified in Steps 1, 2 and 3 in Section 5.11." Inclusion of this cross-reference back to the monitoring procedures in Section 5.11 (Monitoring under VM0007) implies greater specificity in regards to the resolution of imagery using to detect disturbances in the Project Area. Specifically, Section 5.11 states that: "Medium resolution remotely sensed spatial data will be used (30m x 30m resolution or less, such as Landsat, Resourcesat-1 or Spot sensor data) of the LU/LC analysis." As described in Section 5.11.2, once disturbance has been detected: "carbon stocks will be re-measured in the affected area according to the stock assessment equations in listed in the methodology with field sampling based on forest inventory methods specified in Section 3.8." The cross-reference to the field procedures specified in Section 3.8 was also added to improve clarity on exactly how the field procedures would take place. This methodology of detection of carbon stock changes is considered appropriate to detect these differences, as evidenced by the detection of deforestation that occurred during the monitoring period. These were detected with sufficient accuracy to enable a helicopter to land in the affected area during the audit! - 5 June 2013	
Non-conformity report (NCR): Confirmed that the additional text has been added under the heading titled 'Stratification' in Section 5.11.2 of the PD as indicated. It is now clear in the PD how the carbon stock changes over time will be monitored and it is evident that the procedures will be sensitive enough to meet the requirements of the methodology. However. PD Section 5.11.2 states "Stratification and change detection will occur according to the procedures specified in Steps 1, 2 and 3 in Section 5.11., in order to adjust the number and boundaries of the strata defined ex ante where an update is required because of the following 'trigger events':" It is evident that this quoted text should be referring to PD Section 5.11.1 vs. PD Section 5.11. Please revise the quoted text accordingly.	
Date issued:	17 July 2013
Project proponent response/actions:	**Date Received:** 31 July 2013
Request update of cross reference has been made and highlighted green. This change has made no material difference to the PD as the reader was directed to the upper level heading which provides an introduction to the detail required for stratification providing context.	
Evidence used to close NCR: ProjectDescription_AprilSalumei_V1.3.docx - Confirmed that the appropriate revision has been made as indicated. Item is addressed.	
Date closed:	25 August 2013

284. Clarification

VCS Criteria: VCS Standard, V3.3 - 3.18.2 The project description shall include the following: 2) The title and reference of the methodologies applied to the project (including the version number), a demonstration that the project activity or activities meet the applicability conditions of the methodology(s) applied to the project, a definition of the project boundary and identification of GHG sources, sinks and reservoirs as well as sources of leakage, a description of the baseline scenario, a demonstration of additionality, and a description of any methodology deviations applied to the project. With respect to the demonstration of additionality, sufficient information shall be provided so that a reader can reproduce the analysis and obtain the same results.	
Evidence Used to Assess Conformance: PD Section 3.1.1	
Findings: PD Table 21 currently indicates that version 2.0 of BL-PL was used for the project. However, the most current version of BL-PL is Version 1.2.	
Clarification (CL): PD Table 21 currently indicates that version 2.0 of BL-PL was used for the project. However, the most current version of BL-PL is Version 1.2. Please update PD Table 21 accordingly and ensure that version 1.2 of BL-PL is referred to in all documents. Please identify the location of all updates that are made in addressing this CL.	
Date issued:	17 July 2013
Project proponent response/actions and date: The correct version of the BL-PL module applied has been updated in Table 21 and highlighted green for ease of review.	
Evidence used to close CL: Confirmed that the appropriate revision has been made as indicated. Item is addressed.	
Date closed:	25 August 2013