BAJO CALIMA Y BAHÍA MÁLAGA (BCBM) REDD+ VCS CCB VALID 15

Document Prepared By Rainforest Alliance

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Summary:

This report represents the final validation report for the Bajo Calima y Bahía Málaga (BCBM) REDD+ Project in the Pacific region of Colombia. The project is part of the eight-project BioREDD+ program instituted in the Colombian Pacific with funding from USAID and implementation by multiple partners.

The proponents are the Consejo Comunitario de Bajo Calima and the Consejo Comunitario de La Plata-Bahia Malaga. The crediting period and project lifetime is 30 years.

The audit process was desk-based and field based and took place from October 2014 until April 2015. The audit team consisted of two Rainforest Alliance Senior Auditors and a local Colombian forestry expert, as well as a geospatial consultant who provided remote support.

The field audit occurred from October 15-18 and included stakeholder meetings with over 100 individuals representing leadership and membership from all consejos. The audit team traveled with technical and community development staff from the BioREDD+ program, who provided useful interpretation of the sequence of project development. The audit team conducted a re-sampling of the permanent plots used throughout the entire BioREDD+ program to measure forest carbon stocks, which was in turn used for calibration of a LiDAR model.

The field audit and resulting document review identified 33 VCS nonconformity reports (NCRs) and 9 CCB NCRs. NCRs are required to be corrected prior to successful validation.

The audit team also identified 3 Forward Action Requests (FARs) which shall be taken into account at future verification events. FARs are not required to be closed prior to validation and represent future areas of potential nonconformance, or in this case, a potential future safety risk that audit teams should account for in field audits.

The proponents submitted multiple rounds of evidence for closure of NCRs. On April 20, 2015, sufficient corrective actions and evidence had been submitted to enable all NCRs to be closed and to determine a positive validation conclusion.

The Rainforest Alliance audit team has determined to a reasonable degree of assurance positive conformance to the VCS Version 3, VCS VM0006 v2.1 methodology, VCS VT0005 tool, and the CCB Third Edition Standards. The *ex-ante* net emissions reduction is estimated at 14,961,575tCO2e, with an estimated issuance of 13,031,611VCUs, over the project lifetime. The validation statement is based upon the PD version 5.14 from 10 April 2015, and the AFOLU-Non-permanence risk report version 1.8 from 10 April 2015.

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1 INTRODUCTION

Rainforest Alliance certification and auditing services are managed and implemented within its RA-Cert Division. All related personnel responsible for audit design, evaluation, and certification/verification/validation decisions are under the purview of the RA-Cert Division, hereafter referred to as Rainforest Alliance or RA. Rainforest Alliance is an ANSI ISO 14065:2007 accredited validation and verification body; additionally, Rainforest Alliance is a member of the Climate, Community, and Biodiversity Alliance (CCBA) standards, and an approved verification body with a number of other forest carbon project standards. For a complete list of the services provided by the Rainforest Alliance, see http://www.rainforest-alliance.org/climate.cfm?id=international_standards.

Dispute resolution: If Rainforest Alliance clients encounter organizations or individuals having concerns or comments about Rainforest Alliance and our services, these parties are strongly encouraged to contact the local Rainforest Alliance regional office or the RA-Cert Division headquarters directly. Formal complaints or concerns should be sent in writing.

1.1 Objective

The purpose of this report is to document the conformance of the design of the Bajo Calima y Bahía Málaga (BCBM) REDD+ Project with the requirements of the Verified Carbon Standard V3 and the Climate, Community, and Biodiversity Standards, Third Edition. The project was developed by the Consejo comunitario de Bajo Calima and the Consejo Comunitario de La Plata-Bahia MalagaC, hereafter referred to as “Project Proponent”. The project was developed with the help of several implementation partners including Chemonics International LLC, Optim Consulting, USAID, and ecoPartners LLC. The report presents the findings of qualified Rainforest Alliance auditors who have evaluated the Project Proponent’s systems and performance against the applicable standard(s).

1.2 Scope and Criteria

Scope: The scope of the audit is to assess the conformance of the Bajo Calima y Bahía Málaga (BCBM) REDD+ Project in the Colombia against the Verified Carbon Standard V3 and the Climate, Community, and Biodiversity Standards, Third Edition. The objectives of this audit included an assessment of the project’s preliminary conformance with the standard criteria for validation. The project covers an area of 83,452 hectares. The land is under the tenure rights of the Consejo Communitario de Bajo Calima and the Consejo Communitario de La Plata-Bahia Malaga, two consejos with territorial rights recognized in the Colombian constitution. The project lifetime is 30 years and the crediting period is 30 years, and estimates a net GHG reduction of 14,961,575tCO2e over the course of the project lifetime, with an estimated generation of 13,031,611VCUs over the crediting period.

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

- Verified Carbon Standard Program Guide Version 3.5;
- Verified Carbon Standard Version 3.4;
- Verified Carbon Standard Agriculture, Forestry and Other Land Use (AFOLU) Requirements Version 3.4;
- Verified Carbon Standard AFOLU Non-Permanence Risk Tool Version 3.2;
- Verified Carbon Standard Program Updates
- VCS VM0006 v2.1
- Climate, Community and Biodiversity Standards, Third Edition, 2013
- Rules for the Use of the Climate, Community, and Biodiversity Standards. December 2013

Materiality: The project *ex ante* estimates that it will produce over 300,000 tC02e in reductions per year, hence it is a VCS Large Project and subject to a 1% materiality threshold.

1.3 Level of assurance

The assessment was conducted to provide a reasonable level of assurance of conformance against the defined audit criteria and materiality thresholds within the audit scope. Based on the audit findings, a positive evaluation statement reasonably assures that the project GHG assertion is materially correct and is a fair representation of the GHG data and information.

1.4 Summary Description of the Project

This project is an Agriculture, Forestry and Other Land Use (AFOLU) project under the Reducing Emissions from Deforestation and Degradation (REDD) project category. Specifically, the project is of the "Avoided Unplanned Deforestation & Degradation" (AUDD) project category.

The project is estimated to generate approximately 13,031,611 VCUs over 30 years. The project area is located in the collective territories of Bajo Calima and La Plata-Bahía Málaga in the Pacific coastal municipality of Buenaventura, in the Department of Valle de Cauca. Belonging to the biologically diverse Chocó-Darién bioregion, forests in the project area are important nationally and internationally for the ecosystem services they provide. The project area forests, however, have experienced a continued reduction in biomass due largely to illegal logging. These forests have historically been an important source of income for local families, who periodically harvest timber when the economic needs arise.

Changes to Colombian constitutional law in 1991 resulted in the recognition of the ancestral presence and possession of lands by communities of African descent on the Pacific coast. Subsequent legislation detailed in Section 1.3.5 granted land title to these communities. A component of this legislation, Law 70, also gave these communities the right to self-administration including rights of use of the natural resources present in their territories under the legal dispositions of Colombia.

Illegal timber extraction is historically an important source of income within the project zone and is the major focus of the REDD+ project. Following from the gradual degradation of forests caused by continual timber extraction, many forest areas are ultimately converted to agriculture and pasture. The project aims to alleviate these pressures on the forests through the support of governance capacity (including individual property titling, land-use planning and conservation zone demarcation), the generation of alternative economic activities and income sources, and through capacity building in administration and management. These project activities, beyond protecting local forests and biodiversity, contribute to social and economic development in one of the poorest areas of Colombia. The effectiveness of these activities is partially dependent on their long-term economic success and wide-spread adoption.

Since the project's inception, local communities have been actively participating in the project's formulation and implementation. The early involvement of participating communities has created awareness among community members and readiness for project implementation. Community support has culminated in the project's endorsement by the legal representatives of communities and the communities' General Assembly. These endorsements demonstrate the communities' long-term commitment to emissions reductions from avoided logging and deforestation.

The project objectives are threefold: (i) to mitigate climate change by reducing deforestation and forest degradation, and recuperation of already degraded forest lands; (ii) contribute to biodiversity conservation including High Conservation Values, and, (iii) foster sustainable development of local communities. Following is a more detailed description of each objective.

2 VALIDATION PROCESS

2.1 Method and Criteria

Audit Team Composition:

Auditor team names and positions	Auditor qualifications
Campbell Moore **Associate Manager, Carbon Services Unit, RA-Cert** **Lead Auditor** **cmoore@ra.org**	Campbell is a forester and carbon expert with professional experience in Africa and Southeast Asia. In his role as Carbon Technical Specialist with Rainforest Alliance he conducts audits against six forest carbon standards, supervises methodology assessments, manages RA accreditation, and acts as technical expert on carbon for RA-Cert globally. Campbell has participated in more than 35 AFOLU carbon audits. Previous professional experience includes consulting work for GIZ Philippines performing carbon stock assessments of different forest types including agroforestry and plantation systems, as well as work centered on reforestation in Sri Lanka for the Environmental Leadership and Training Initiative, and working with Climate Focus on LULUCF policy issues. Campbell received his Master of Forestry from the Yale University School of Forestry and Environmental Studies. Prior to his time at Yale, Campbell worked in The Gambia for over two years as a Peace Corps Volunteer designing and implementing a wide variety of forestry, agroforestry, and agricultural projects. In addition to his Master of Forestry degree, he holds a B.A. in Environmental Studies from St. Mary's College. Campbell is fluent in Pulaar and Wolof and has some experience with Spanish.
Fabian Lombo **Local expert advising audit team**	Fabian is a Colombian native with extensive knowledge of forestry practices in Colombia.
Nick Wilson **Geospatial expert advising audit team**	Nick is a remote sensing and spatial analysis expert who has worked a range of domestic and international projects focused on land cover and land use change issues. He provides technical expertise to the Rainforest Alliance on REDD+ project conformance to VCS methodologies, accuracy assessment, and remote sensing. He is also a lead developer of the UrbanFootprint Scenario Planning Model, an open-source modelling platform for assessing the impact of future land use and policy decisions. As a lead analyst on the Vision California project he helped develop long range, high resolution land use scenarios for the State of California. Nick has also worked extensively with the Idrisi Land Change Modeler, a common land cover model used for assessing REDD+ baselines. His field experience includes nearly 3 years as a Peace Core Volunteer in the West African nation of The Gambia where he worked with the Gambian Forest Service and the National Beekeepers Association of the Gambia. He holds a Master's degree in Geography from Clark University and a Bachelor's degree in International Development and Anthropology from Dalhousie University.
William Arreaga, **Consultant** **Auditor**	Guatemalan; Ing. Agr. RNR from San Carlos de Guatemala University, and M.Sc. from CATIE, Costa Rica. He is also involved in a MBA program on Financial Administration in Guatemala. William serves as lead auditor for FSC Forest Management, Chain-

Contact info: warreaga@ra.org	of-Custody, and legality services in Mesoamerica. His experience on carbon projects includes: the developing of two biomass allometric equations in Guatemala (natural forest and teak plantation); participation as a fellow at Winrock International (Norman Borlaug fellowship program) and as lead auditor in more than twenty validations and verifications (VCS, CFS, CCBA) in USA, México, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama, Ecuador and Uruguay. He had received formal training as carbon validator in Vermont, and as lead auditor against ISO 14001 in Guatemala. As Senior Associate of Verification Services (RA-Cert staff), he has been the point of contact of the carbon services in Mesoamerica Region Office, but also provides technical assistance to South America Region Office.
Lawson Henderson **Senior Internal Reviewer (RRA Reviewer)**	Carbon Coordinator with Rainforest Alliance (2012 – current). Education: B.S.F. in forest management from University of New Hampshire, 2005. Experience, Forest Management Associate with Rainforest Alliance, US Region (2008 to 2012). Chain of Custody Associate with Rainforest Alliance, US Region (2007-2008). Forest Land Surveyor for a private forest/civil engineering firm in Western Oregon for two years. Auditor on more than 20 FSC forest management and chain of custody audits and assessments. Lead auditor or auditor on 16 forest carbon projects, including 14 IFM projects. Performed VCS audits of ARR, IFM, & REDD forest carbon projects. Project manager on over 250 forest management and chain-of-custody projects. Completed Rainforest Alliance CoC Auditor Training in April 2008, Rainforest Alliance Carbon Verification and Validation Audit Training in March 2009, and Rainforest Alliance Lead Forest Management Auditor Training in June 2009. Successfully completed the Climate Action Reserve Lead Verifier Training for the Forest Project, and Urban Forest Project Protocol in September 2010, CAR Lead Verifier credentials renewed in June 2014. Successfully completed the ISO Quality Management Systems Lead Auditor Training Course (ISO 9001) in December 2010. ARB Lead Verifier credentials obtained in October 2012. Member of the Society of American Foresters and the Forest Guild.

The criteria used are the VCS Version 3 and the VM0006 v2.1 methodology and associated tools, as well as the CCB Standards 3rd Edition. Please see Section 1.2 above for full criteria. The method employed in the validation was desk-based and field based with an experienced Rainforest Alliance audit team consisting of two Senior Auditors, supported by a local expert for cultural and legal interpretation and translation. The evaluation of remote sensing methods and outputs, including use of LiDAR was supported by Nicholas Wilson, a content expert advising the audit team on this aspect of the audits.

The audit team conducted an extensive document review prior to the field audit, which was used to develop a risk-based sampling approach for the audit focusing on biophysical data, social data and community input, and legal conformance of the project. The CCB Public Comment process was initiated before the field audit to solicit additional input from both internal and external stakeholders, however no comments were received. This project is one of eight REDD+ projects in the Colombia Pacific instituted as part of the BioREDD+ project funded by USAID. The field audits of the eight BioREDD+ projects took place in mostly sequential field audits from October-December 2014. Many aspects of the projects are similar across all eight projects.

CCBA community indicators, right of use, baseline scenario, and additionality assessment was strongly informed by stakeholder interviews conducted by the audit team at all relevant levels from individual farmers and illegal loggers (agents of deforestation and degradation) to consejo councils and leadership to Ministry of Forestry officials and local government representatives. Please see relevant details below in Section 2.3.

Forest carbon stocks were evaluated across all eight BioREDD+ projects as a unit. This is because the estimation of carbon stocks was treated as a single inventory across all eight projects. Field plot data was used only for calibration and validation purposes of the LiDAR model used to estimate forest biomass. The audit team visited seven of fifteen 1 hectare permanent plots that were part of the project in a systematic sampling method which was representative of all projects in aggregate. The audit team also evaluated the LiDAR and remote sensing analyses and methods in aggregate across all projects. This was accomplished through an office visit by the geospatial expert supporting the audit team to the offices of GeoEcoMap in California, USA as well as in person meetings between Campbell Moore the project manager/lead auditor in Maryland USA with the principal of GeoEcoMap. Several supporting documents produced by GeoEcoMap are relevant across the entire BioREDD+ program and were evaluated as such.

Right of use, legal conformance, and additionality were assessed with the input of relevant government officials including those from INCODER (the agency responsible for permitting consejos and indigenous resguardos), the Ministry of Forestry of Colombia, and local corporations responsible for natural resource management at the departmental level in Colombia.

Following the field audit and office audit the audit team presented the proponents with a Draft Validation Audit Report identifying areas of conformance (to be confirmed in an updated PD presented after closure of NCRs) and areas of non-conformance for which the proponents shall take corrective action or provide additional evidence of conformance.

2.2 Document Review

The following documents were reviewed during the field audit and initial document review phase.

Ref	Title, Author(s), Version, Date	Electronic Filename
1	CCB PD summary in Spanish. BCBM. 2014	Resumen_BCBM oct 10
2	Acaba-Pepe project description v2.32. BCBM2015	BioREDD BCBM REDD+ Project Description v4.41
3	Response form BCBM. V1.27. 2015	BioREDD BCBM REDD+ NCR Response Form v1.33
4	Renjifo, L. M., A. M. Franco-Maya, J. D. Amaya-Espinel, G. H. Kattan y B. López-Lanús (eds.). 2002. Libro rojo de aves de Colombia. Serie Libros Rojos de Especies Amenazadas de Colombia . Instituto de Investigación de Recursos Biológicos Alexander von Humboldt y Ministerio del Medio Ambiente. Bogotá, Colombia.	Aves amenazadas Annex AD
5	RODRIGUEZ, José Vicente, 1998. Listas preliminares de mamíferos colombianos con algún riesgo a la extinción. Informe final presentado al Instituto de Investigación de	Mamíferos amenazados Annex AE

	Recursos Biológicos Alexander von Humboldt.	
6	RUEDA, José Vicente, 1998. Listas preliminares de anfibios colombianos con algún riesgo a la extinción. Informe final presentado al Instituto de Investigación de Recursos Biológicos Alexander von Humboldt.	Anfibios amenazados Annex AF
7	Castaño-Mora, O. V. (editora). 2002. Libro rojo de reptiles de Colombia.	Reptiles_amenazados Annex AG
8	Palacios, S., Galindo, G., Bernal, N.R., Cadena, C.E., Otero, J. y Cabrera, E. 2008 Planificación ecorregional para conservación de la biodiversidad del Pacífico continental. Planeación ambiental del sector hidrocarburos para la conservación de la biodiversidad en áreas de interés de la Agencia Nacional de Hidrocarburos en Colombia.	Capitulo 5a Annex AH
9	Política nacional para la gestión integral de la biodiversidad y sus servicios ecosistémicos. Ministerio de Ambiente, 2009	politica nacional.pdf Annex AI
10	Chaves, M.E. y Santamaría, M. (eds). 2006. Informe sobre el avance en el conocimiento y la información de la biodiversidad 1998-2004. Instituto de Investigación de Recursos Biológicos Alexander von Humboldt.	Chaves 2006.pdf Annex AJ
11	Brown, E., N. Dudley, A. Lindhe, D.R. Muhtaman, C. Stewart, and T. Synnott (eds.). 2013 (October). Common guidance for the identification of High Conservation Values. HCV Resource Network.	HCVCommonGuide_final5 Annex AK
12	Análisis Ecorregional para la construcción de un Plan de Conservación de la Biodiversidad en el Complejo Ecorregional Chocó-Darién. 2000	IPAC MMA 2000 Eco Mapping.pdf Annex AA
13	Análisis Ecorregional para la construcción de un Plan de Conservación de la Biodiversidad en el Complejo Ecorregional Chocó-Darién. 2008	Analisis Ecorregional Choco_WWF 2008.pdf Annex AB
14	Salazar-Holguín, F., J. Benavides-Molineros, O.L. Trespalacios-González y L.F. Pinzón (comp.). 2010. Informe sobre el Estado de los Recursos Naturales Renovables y del Ambiente, Componente de	Humboldt 2010 State of Biodiversity Annex AC

	Biodiversidad Continental - 2009. Instituto de Investigación de Recursos Biológicos —Alexander von Humboldtll. Bogotá, D.C., Colombia. 167 p.	
15	Plan de manejo Ramsar Delta Rio Baudo. WWF 2009	Plan de manejo Ramsar Delta Rio Baudo Annex AL
16	Zonificación Ecológica de Colombia. Ministerio del Medio Ambiente. 2000	IPAC MMA 2000 Eco Mapping IPAC MMA 2000 Eco Mapping (Server ecoPartners's conflicted copy 2015-02-04) Annex AO
17	Fishery demand-supply study. Bioredd+. 2013	Cap 1 Socioeconomico - Oferta – Demanda Diagnóstico socioeconómico pesca_Málaga Incentivos y Sanciones_La Plata Málaga Informe final comercialización piangua_Málaga ORDENAMIENTO DEL PNN URAMBABM FINAL
18	Monitoreo de cultivos de coca 2012. UNODC. 2013	1.Coca Plantation Survey (2012).pdf Annex BE
19	Evidencias por presencia de cultivos ilícitos de coca en zonas solicitadas por DPCI (Tierras Colectivas y Resguardos Indígenas). UNODC. 2013	2.UNODC (Sep 2103).pdf Annex BE
20	Socioeconomic study contract UAO-Chemonics International	UAO - Estudio Socioeconomico Annex AR
21	Diagnóstico socioeconómico, evaluación preliminar de proyectos alternativos productivos e identificación de prioridades de inversión social de los territorios colectivos de las comunidades negras del río raposo; del río yurumanguí; de córdoba, san cipriano y santa helena; del río mayorquín; del río cajambre; del río naya; del alto y medio dagua; del río anchicayá; de la cuenca baja del río calima; de bazán-la bocana; de españa-miramar y bahía málaga-la plata	Informe final consolidado en formato USAID - entregable 29 Nov-2013 Annex C
22	Informe final maderas y anexos. Programa BIOREDD+. 2014	File ESTUDIO MADERAS BIOREDD SEPT 16 2014 Annex X
23	Financial statements Fondo Accion 2014	Fondo Acción Estados Financieros Junio 2014
24	FPIC folder. Bioredd+ 2014	Taller de Formación Básica ACTA PT 170-10 Acta_asamblea_BM_aprobacion_planREDD ASISTENCIA PT 170-10 BR-PT-170 Asistencias Plan REDD+

		Calima_Málaga FPIC Guidelines_EN_final web Memorias TBFormación Proyectos REDD+ La Plata Annex G
25	Framework agreement Fondo Accion-CDD 2015	Framework Agreement BCBM (2) Annex AV
26	Carta de intención. BCBM 2013	Carta de Intención La Plata Bahia Málaga y Bajo Calima Annex AN
27	Non-permanence risk exhibits. BCBM 2015	BCBM Non-Permanence Risk Tool v1.4.pdf Opportunity Cost of Selective Logging v1.4.xls Riesgos BCBM.xls Annex AU
28	Project start date exhibits. BCBM 2015	1.Carta de Intencion BCBM 2.Acuerdo Marco 3.Hoja de Ruta 4.Capacitacion BC 5.Capacitacion BM 6.Extraordinary Assembly BM 7.Extraordinary Assembly BC 8.Conciliation Meeting 9.Taller de Formacion Basica en Proyectos REDD+ BCBM Justificacion Annex AX
29	Theory of change BCBM 2014	Theory of Change v3 – BCBM Annex D
30	Financial documents BCBM 2015	Financial Analysis - BCBM-Budget and Cashflow Presupuesto BCBM sep26 Annex F
31	Complaints and Grievances Protocols Bioredd+ 2015	Guia Mecanismo de Quejas y Reclamos CDD (v2).doc Annex H
32	Implementation plan BCBM 2014	PLAN REDD BC-BM Oct_23_2014_RevBORyHAMRG(v2) Annex O
33	GeoEcoMap different documents. 2014	GeoEcoMap_task1_revised.pdf GeoEcoMap_task2.pdf GeoEcoMap_task3.pdf GeoEcoMap_task6.pdf GeoEcoMap_task7_new.pdf GeoEcoMap_task8&9_new_13015.pdf GeoEcoMap_task12_final_2.pdf GeoEcoMap_task13_020115.pdf GeoEcoMap_Task14_MRV_020315.pdf GeoEcoMap_task16_020215.pdf GeoEcoMap_workplan_new.pdf GeoEcoMap_workplan_supplement.pdf Annex Z
34	Resolutions BCBM	R2244-04-12-2002-Bajo Calima Annex A

		R2802-13-12-2012-Bahia-Malaga-La-Plata Annex B Acuerdo CD 55 CVC Declara PNR La Sierpe Acuerdo CD 56 CVC Declara DMI La Plata Bahia Malaga Resolucion 1501 MADS Declara PNN Uramba Annex I

2.3 Interviews

The following stakeholders and BioREDD+ personnel were interviewed as part of the validation audit.

Name	Title
Jesús Murillo	Community member
Fredy Asprilla	Community member
Manuel Olave	Community member
Manuel García	Community member
Timoteo García	Community member
Wellington Condado	Community member
Benito García	Community member
Benito Candado	Community member
James Ortíz	Community member
Norillo Córdoba	Community member
Elmer García	Community member
Manuel Agacia	Community member
Frida Rosero	Community member
María Tejada	Community member
Elvia Rodríguez	Community member
Gonzalo Delgado	Community member
Aracely Angulo	Community member
Carlos Mondragón	Community member
Alex Alegría	Community member
Emilio Mondragón	Community member
Guillermo Riofrio	Community member
Luis Rivero	Community member
Frida Tamayo	Community member
Ingrid Paola	Community member
Aurelio Murillo	Community member
Cecilio Alegría	Community member
Ferney Valencia	Community member
Inile Valencia	Community member
Abelardo García	Community member
Humberto Calavari	Community member
Saúl Valencia	Community member
Nilson García Valencia	Community member
Carlos Andrés Hinojosa	Community member
Danilo Garcia	Community member
Ferney Valencia	Community member
Yesid Murillo	Community member

Manuel Olabe	Community member
Ángel García	Community member
Timoteo García Riasco	Community member
Aladino Mosquera	Community member
María Luisa Riascos	Community member
Marcos Jesús Jaramillo	Community member
María Angélica Moreno	Community member
Alejandro hurtado	Community member
Fernando	Community member
Rodrigo Mena	Community member
Oscar Ceballos	Community member
Sebastián Moreno	Community member
Gloria Roció Cáceres	Community member
Jennifer Rodríguez	Community member
Jhon Fredy Araya	Community member
Guillermo Rio Frio	Community member
Thomas Rivero	Community member
Nini Camacho	Community member
Ingrith Paola Camacho	Community member
Mario Quintero	Municipalidad Buenaventura representative
Jorge Oliveros	CVC Administración Ambiental
Juan Castro	INCODER
Luis Gomez	Fondo Acción
Natalia Arango	Fondo Acción
Mauricio	Fondo Acción
Maria Claudia Garcia	Ministerio de Medio Ambiente
Hernan Garcia	Humboldt Institute
Juan Andres Lopez	General Manager OPTIM, General Coordinator Bioredd program
Daniel Lopez	USAID Colombia
Peter Doyle	Chemonics Colombia/Bioredd
Greg Minnick	Chemonics South America representative
Kyle Holland	Ecopartner, Managing Director
Sassan Saatchi	Senior Scientist, Jet Propulsion Laboratory
Juan Saldariaga	CONIF consultant
Yolima Rodriguez	CONIF, monitoring consultant
Richard Gutierrez	GIS expert, Bioredd program
Mauricio Camacho	Plan REDD general coordinator
Helena Andrade	Manager M&E and community expert
Juan Carlos Riascos	Social expert, Bioredd program
Lenaida Camilo	Regional Coordinator, Bioredd program
Hector Sepulveda	Regional Coordinator, Bioredd program
Kelber Sagastume	Regional Coordinator, Bioredd program
Bernardo Orobio	Regional Coordinator, Bioredd program
Camila Marino	Climate Change Specialist, Bioredd program

2.4 Site Inspections

Location	Date
Colombia, Bogota, Opening meeting; interviews with government representatives; interviews with implementing partner staff	12-14 October 2014
Colombia, Bahia Malaga, meetings with community consejos;	15-16 October 2014

visitation of biodiversity plots; observation of productive activities	
Colombia, Bajo Calima, meetings with community consejos, resampling of forest inventory plot, observation of productive activities	17-18 October 2014
Colombia, Bogota, meetings with government officials	2-6 November 2014
USA, California, geospatial audit with GeoEcoMap	10-12 November 2014
USA, Maryland, continuation of geospatial audit with GeoEcoMap	14 November 2014

2.5 Public Comments

No public comments were received through the CCBA Public Comment process which was active from 14 October 2014 – 14 November 2014. The audit team interviewed a great variety and number of stakeholders whose input is included throughout this report.

2.6 Resolution of Any Material Discrepancy

Following the field audit, the audit team issued a draft validation report on December 15 to the proponent containing a total of 33 VCS nonconformity reports (NCRs), 8 CCB nonconformity reports, and 3 forward action requests (FARs). The proponent submitted a total of three rounds of corrective actions and associated evidence on February 5, 2015, March 18, 2015, and April 13, 2015. The audit team held a series of meetings from the end of the field audit in November through April 13 with BioREDD+ staff and consultants and external parties including Colombian government representatives to comprehensively evaluate conformance to the VCS and CCB Standards.

All NCRs were closed as a result of corrective actions submitted by the proponent. The FARs will remain open and be evaluated at the first verification event. The final validated PDD is version 5.14, dated 10 April 2015. The final validated AFOLU Non-Permanence Risk Report is version 1.9, dated 10 April 2015.

The following documents were reviewed in the process of evaluation of nonconformances.

Ref	Electronic Filename
1	GeoEcoMap Tasks including: GeoEcoMap_task8&9_new_13015.pdf GeoEcoMap_task12_final_2.pdf GeoEcoMap_task13_020115.pdf GeoEcoMap_Task14_MRV_020315.pdf GeoEcoMap_task16_020215.pdf GeoEcoMap_workplan_new.pdf GeoEcoMap_workplan_supplement.pdf

	GeoEcoMap_task1_revised.pdf GeoEcoMap_task2.pdf GeoEcoMap_task3.pdf GeoEcoMap_task6.pdf GeoEcoMap_task7_new (2).pdf
2	Native forest type comparison between project and reference areas.xlsx
3	Documentation for establishing reference region similarity criteria including: 2. LOCALIZACION PLANTACIONES FORESTAES EN COLOMBIA.bmp 3. ZONAS_RESERVA_FORESTA_PACIFICO.bmp 3_A. res_1926_2013.zip 4.A. ANUARIO_ESTADISTICO_MINERO_COLOMBIANO2013.pdf 4.LOCALIZACION HISTORICA DE LOS TITULOS_MINEROS_COMUNIDADES_NEGRAS.bmp 5.LOCALIZACION HISTORICA DE LOS TITULOS_MINEROS_COMUNIDADES_INDIGENAS.bmp 6. PARQUES NACIONALES NATURALES.bmp 7. RESGUARDOS_INDIGENAS.bmp 8.COMUNIDADES_NEGRAS.bmp 9.Pendientes.bmp 1. LOCALIZACION DE BASES MILITARES DE COLOMBIA.docx
4	Spatial Modeling Report v1.11.pdf
5	CONIF Forest inventory protocol- Protocolo completo - ajustado.pdf
6	Biodiversity monitoring SOPs Manual Monitoreo Vegetacion Parcelas Permanentes.pdf
7	Fondo Acción Estados Financieros Junio 2014.pdf

8	Supporting references including: Aves amenazadas.pdf Mamíferos amenazados.pdf Anfibios amenazados.pdf Reptiles_amenazados.pdf Capitulo 5a.pdf politica nacional.pdf Chaves 2006.pdf HCVCommonGuide_final5.pdf Plan de manejo Ramsar Delta Rio Baudo.pdf SBIA_Part_1.pdf SBIA_Part_2.pdf SBIA_Part_3.pdf IPAC MMA 2000 Eco Mapping.pdf IPAC MMA 2000 Eco Mapping (Server ecoPartners's conflicted copy 2015-02-04).pdf Humboldt 2010 State of Biodiversity.pdf
9	Environmental and Natural Resources of Colombian Pacific including files: PARTE6.pdf PARTE7.pdf PARTE1.pdf PARTE2.pdf PARTE3.pdf PARTE4.pdf PARTE5.pdf

10	Coca production surveys including files: 2.UNODC (Sep 2103).pdf 1.Coca Plantation Survey (2012).pdf
11	BioREDD BCBM REDD+ NCR Response Form v2.0.doc
12	BioREDD BCBM REDD+ Project Description v5.14.doc
13	Project start date FPIC documentation including: Carta de Intención La Plata Bahia Málaga y Bajo Calima.pdf Framework Agreement BCBM (2).docx 7.Extraordinary Assembly BC.pdf 8.Conciliation Meeting.pdf 9.Taller de Formacion Basica en Proyectos REDD+.pdf BCBM Justificacion.pdf 1.Carta de Intencion BCBM.pdf 2.Acuerdo Marco.pdf 3.Hoja de Ruta.pdf 4.Capacitacion BC.pdf 5.Capacitacion BM.pdf 6.Extraordinary Assembly BM.pdf Acta HojaRuta Btura Feb12.pdf Acta_LaPlataBahíaMálaga_Revisiónajuste_PLanREDD+_oct3_2014.docx Listado TFB LaPlataBM y Calima.pdf Memorias TBFormaci n Proyectos REDD+ La Plata.pdf Acta TALLER PLAN REDD+ BC-BM (V2).docx Acta TALLER PLAN REDD+ BC-BM (V2)-2.docx

	Acta AcuerdoMarco Btura Ene12.pdf IMG_20141009_212804.jpg IMG_20141009_212816.jpg IMG_20141009_212524.jpg IMG_20141009_212545.jpg IMG_20141009_212601.jpg IMG_20141009_212656.jpg IMG_20141009_212726.jpg BIOREDD Informe Taller CC Calima.pdf BIOREDD ListadosAsist Taller CC Calima.pdf BIOREDD Informe Taller La Plata Bahia Malaga.pdf BIOREDD ListadosAsist Taller LPBM.pdf decreto1745-19951.pdf FPIC Guidelines_EN_final web.pdf Memorias TBFormación Proyectos REDD+ La Plata.pdf ACTA PT 170-10.pdf Acta_asamblea_BM_aprobacion_planREDD.pdf ASISTENCIA PT 170-10.pdf BR-PT-170 Asistencias Plan REDD+ Calima_Málaga.pdf Convenio 169 OIT.pdf
14	Riesgos BCBM.docx
15	Annex_K_AP_BMBC_CONSEJOS.kml
16	Carbon Accounting Model, multiple versions including: VM0006 Accounting BCBM v11.38.xlsm VM0006 Accounting BCBM v8.18.xlsm

	VM0006 Accounting BCBM v11.47.xlsm
17	Right of Use documentation including: R2244-04-12-2002-Bajo Calima.pdf R2802-13-12-2012-Bahia-Malaga-La-Plata.pdf decreto1745-19951.pdf Ley 70 -- Obstacles and history UT Austin.pdf LEY_70_1993_AFRO[1].pdf Resolucion 1501 MADS Declara PNN Uramba.PDF Acuerdo CD 55 CVC Declara PNR La Sierpe.pdf Acuerdo CD 56 CVC Declara DMI La Plata Bahia Malaga.pdf Convenio 169 OIT.pdf
18	Non-Permanence Risk Documentation including: riesgos BC_BM.xlsx BCBM Non-Permanence Risk Tool v1.4.pdf Opportunity Cost of Selective Logging v1.4.xlsx BCBM Non-Permanence Risk Tool v1.9.pdf
19	Theory of Change documentation including: Theory of Change v3 - BCBM.xlsx
20	Financial Analysis documentation including: Presupuesto BCBM sep26.xlsx Financial Analysis - BCBM-Budget and Cashflow.xlsx
21	PLAN REDD BC-BM Oct_23_2014_RevBORyHAMRG(v2).docx
22	UAO - Estudio Socioeconomico.pdf

23	Informe final consolidado en formato USAID - entregable 29 Nov-2013.pdf
24	Timber study, including: APENDICE 1 Valores Madera, Costos de Extraccion y Movilizacion.pdf INFOFINAL MADERAS sep 15 rev13 .pdf
25	Socioeconomic analyses including: Informe final comercialización piangua_Málaga.pdf ORDENAMIENTO DEL PNN URAMBABM FINAL.pdf Cap 1 Socioeconomico - Oferta - Demanda.pdf Diagnóstico socioeconómico pesca_Málaga.pdf Incentivos y Sanciones_La Plata Málaga.pdf

VALIDATION FINDINGS

3 GENERAL

3.1 Summary Description of the Project (G1)

Section 1.1.1-1.1.5 adequately describes the project's climate, community, and biodiversity objectives. Objectives are specific, measurable, and distinct. Furthermore, objectives clearly relate to the theory of change model (file: Theory of Change v3.xlsx), developed by the project which links the CCB objectives to focal areas and resultant activities, outputs, short-term outcomes, long-term outcomes, and impacts. These are measurable and monitored over the project lifetime. This approach creates a transparent and complete system for defining objectives and measuring progress towards full implementation.

3.2 Project Location (G1 & G3)

G1.3

The PD describes the location of the project in conformance with the CCB Standards requirements. The ownership and control, geographic boundaries, physical parameters (soil, topography, and climate) are described in sufficient detail.

G1.4-G1.7

Project Area and Project Zone boundaries are unambiguously defined in the PD in Section 1.2.4 and 1.2.5. The Project Area is the entire area of forest in the participating consejos and the

Project Zone is the Project Area, plus the nonforest areas in the consejo which tend to be settlements and agricultural lands and are one of the main areas where project activities to reduce dependence on degradation and deforestation, will be implemented. Appropriate reference is made to the section of the PD containing the map of the Reference Region, the other important spatial domain. Section 1.3.8 describes the processes for delineation of HCVs including appropriate mapping of HCVs. Mangroves, and nearby La Sierpe National Park are identified as specific areas containing HCVs, and as such are identified in Figure 14,15, and 16. Project activities will take place in communities which are spread throughout the project area so there is no need for a separate map for project activities. Additionally, as the exact location of high conservation value species is unknown the project appropriately and conservatively maps these HCVs as existing throughout the project area. Conformance to these requirements has been demonstrated.

3.3 Conditions Prior to Project Initiation (G1)

G1.5-G1.6

Stakeholder identification and identification of communities, community groups, and other stakeholders are outlined in Section 2.7. The Consejos are the proponents themselves and have a traditional governance structure in which consent is expressed at the level of consejo governance board and the consejo General Assemblies which may include several hundred individuals at meetings. This project is part of the USAID funded BioREDD+ program which includes eight projects. The implementing partners of the project built upon earlier stakeholder identification through the prexisting USAID MIDAS program.

Initial consultation with communities started in 2012, depending on the community, and was formalized by the signature of an Hoja de Ruta, which functions as a formal agreement to explore the possibility of implementing a REDD project. The Hoja de Ruta was reviewed by the audit team and confirmed via community interviews. Following this process, consultation continued through a series of workshops and meetings, records of which were also reviewed by the audit team and independently confirmed in interviews. Consultation continued with the approval of the communities of a formal Letter of Intent and eventualy with the Plan de REDD+, a REDD+ Implementation Plan outlining specific steps, milestones, and duties of participating entities. All documentation was confirmed by the audit team. The process is described in depth in Section 2.7.3 of the PD.

Stakeholder identification within the consejo is simplified by the fact that the consejo as a whole (through General Assembly meetings) has initially determined whether to participate in the BioREDD+ program (expressed through a Letter of Intent) and continues to provide consent for all major steps in the project development. The audit team was able to confirm this through interviews with governance boards and community members in the project area, as well as through observation of documentary evidence provided by BioREDD+ including multiple training materials, attendance records at trainings and consultation workshops, etc. Consejo members confirmed participation in these workshops and in interviews generally strongly expressed the opinion that the project is “their” project rather than a project that is forced upon them. Individual

stakeholders within the communities have the right to not participate in the project as the project activities are incentive based wherein alternative livelihood activities are targeted at corteros (loggers) the main agents of degradation, yet corteros are not mandated to participate. All communities existing in the project area were identified as communities.

Communities, community groups, and other stakeholders have been identified in the PD appropriately.

3.4 Project Proponent (G4)

The proponents have been clearly and unambiguously identified as the Consejo Communitarios of Bajo Calima and Bahia Malaga. Section 1.4 of the PD identifies relevant contact persons for the proponents. Consejo communitarios in Colombia function as semi-autonomous reserves for peoples of Afro-Colombian heritage and are recognized in the Colombian Constitution of 1990 via Ley 70 de 1993. The proponents have pre-existing organizational structures including Governing Boards which are responsible for project implementation and benefit distribution.

The PD describes that the proponents have designated Fondo Accion (the environmental action and children's fund) as a Project Implementation Agent. Specific roles and responsibilities for Fondo Accion are defined. The audit team has observed that formal negotiations of roles and responsibilities are still being negotiated between Fondo Accion and the proponents, as confirmed in recent conversations. The audit team confirmed with the CCBA that the planned status of Fondo Accion is sufficient for validation purposes as the validation is an evaluation of the project plan. Conformance with these requirements has been demonstrated.

3.5 Other Entities Involved in the Project (G4)

G4.1

Section 1.5 of the PD identifies all other entities involved in the project other than the proponents. These entities represent consulting groups hired to develop the BioREDD+ program and are summarized in Table 7 along with contact person and responsibilities. Conformance has been demonstrated. Fondo para la Accion Ambiental y la Ninez (Fondo Accion) is identified as an official implementation partner, responsible for acting as a convener in future project implementation, benefit distribution, and coordination of verification audits. General roles and responsibilities for Fondo Accion are defined. The audit team has observed that formal negotiations of roles and responsibilities are still being negotiated between Fondo Accion and the proponents, as confirmed in recent conversations. The audit team confirmed with the CCBA that the planned status of Fondo Accion is sufficient for validation purposes as the validation is an evaluation of the project plan. Conformance has been demonstrated.

G4.2

Key technical skills are documented in Section 1.5 of the PD. The proponents, as afro-colombian consejos, do not have the technical skills required to implement the project without assistance. The PD identifies Fondo Accion as the responsible party for project implementation and successfully justifies Fondo Accion's qualifications including implementation of a similar large

REDD project in Colombia, management of a $44 million USD endowment, and implementation of multiple large programs. The experience of Fondo Accion is well justified.

3.6 Project Start Date

Section 1.6 identifies the project start date as 8/26/2013, which is based on the date in which the letter of intent (Annex L) was signed by the most recent signatory consejo. The audit team was able to review this letter in the field and confirmed with the community governance board that they had signed the letter of intention. The start date was faithfully replicated in the carbon accounting model. The proponent has provided a detailed justification of how the claimed project start date led to the generation of GHG emission reductions, including direct changes in forest management. The proponent has demonstrated that the Carta de Intencion, establishing the project start date was only the final step in a sequence of activities that led to community mobilization towards effective changes in forest governance leading to emissions reductions.

Initial MOUs with the communities, as well as socialization and capacity building meetings and exercises, all occurring prior to the project start date, are described in detail. The logical link between these meetings and agreements to changes in forest governance is adequately justified.

Finally, the consejo legal representatives have provided detailed explanation and justification for the timeline for early project implementation and how this justifies the project start date. This letter, signed by the consejo legal representatives, provides further justification independent from the BioREDD+ program.

3.7 Project Crediting Period (G3)

Section 1.7 identifies the project crediting period and project lifetime as 30 years which is in conformance with VCS requirements for minimum crediting periods for AFOLU projects. The project lifetime is divided into Phase 1 in which project activities are planned and with initial implementation, and Phase 2 in which implementation of project activities continues.

4 DESIGN

4.1 Sectoral Scope and Project Type

The project is a VCS AFOLU project falling under the category of REDD, avoiding unplanned deforestation/degradation (AUDD) of a mosaic nature. This is an eligible project type and based on the field audit is correctly identified.

4.2 Description of the Project Activity (G3)

Section 2.2 of the PD describes the project activities. Project activities are divided into thematic areas including Governance, Productive Activities, Alternative Livelihoods, and Other Activities.

Governance

- Strengthening of Land Tenure and Forest Governance

Consejo territory is deeded by the government and the right is built into the 1990 constitution of Colombia so land tenure is secure. The audit team confirmed this in meetings with INCODER, the responsible agency for land tenure management in Colombia. Tenure is communal with individuals being responsible for areas of 3-10 hectares for agriculture and other livelihood purposes. Communally owned forests however are poorly managed in all BioREDD+ project areas. Typically outside timber buyers incentivize poorer members of the communities to conduct logging activities for little economic gain. These activities over many years result in widespread degradation of the majority of the consejos.

The project seeks to help communities to strengthen their internal regulations with regard to benefit sharing, levies on productive activities, etc. The vision is that updated bylaws will be approved by the General Assembly.

Based on the field audit the audit team concludes that this approach is an important aspect of reducing degradation. Community members interviewed felt that the forest was currently poorly governed or not governed at all. Corteros (loggers) interviewed also nearly unanimously agreed that they preferred an alternative source of employment and felt that logging was a threat to their culture and long term livelihood (for example due to damage to downstream fisheries which are more important economically). As a result the audit team does not feel there is a risk of these activities being forced on the communities through the BioREDD program and upsetting a functional traditional land governance system. The logging activities for commercial sale are not traditional and are not preferred by community members, as confirmed in interviews by the audit team. Furthermore this risk is reduced by the fact that changes to internal rules must be approved by the General Assembly which can include all community members. It may also reduce deforestation by more formally titling agricultural lands within the consejo and spurring additional investment in these already deforested lands.

- Sustainable Forest and Land Use Management Plans and Demarcation of different land use areas

The project is working with the consejos and other governance organizations (for example the local corporations of Code de Choco or CVC) to update and harmonize forest management plans to include grazing areas, settlements, croplands, conservation areas, and forest harvesting areas. These plans will also be approved by the General Assembly. Forest reserve areas will be demarcated in heavily degraded areas to allow for natural regeneration. Additionally, a patrol team will be developed to monitor the perimeter to prevent encroachment in the consejo and to report on breaches of conservation commitments.

Based on interviews with community members the audit team concludes that these activities have the support of consejo members and that consejo members expect them to be effective in reducing deforestation/degradation.

Productive Activities

- Intensification of agriculture on existing agricultural land including Cocoa, Acai, and Chontaduro and Providing Alternative Livelihoods to Agents of Deforestation/Degradation

Investing in agricultural production is one of the key activities of the BioREDD+ program. The program seeks to provide technical support and training to consejo members who otherwise are agents of deforestation and degradation. The goal of the project activity is to increase the value of production on existing agricultural lands. Consejos in the Colombian Pacific, including Bajo Calima and Bahia Malaga, are typically in remote areas often with little or no road access and rely on rivers and the sea for transportation. As a result, consejos have little chance of competing with other regions of Colombia in the production of agricultural commodities and tend to resort historically to illegal coca production and more recently to illegal logging. The BioREDD+ program, intends to break this cycle through i) technical support to farmers, ii) land use planning within consejos to identify suitable agricultural areas, and iii) the creation of production and marketing chains to enable high value agricultural products from consejos to compete economically through the creation of Special Purpose Vehicles (SPVs). The SPVs will be responsible for creating value chains, acquiring equipment and material, and establishing trust accounts for each REDD+ productive activity (i.e. acai production). In essence the SPVs will act as a charitable business creating means for consejos to sell agricultural products and recoup maximum value from this to provide an attractive alternative to deforestation and degradation which is a result of poverty in the communities. Companies that are created based on each productive activity are planned to be partially owned by communities in the BioREDD+ program.

Other alternative activities that will be supported by the REDD project are ecotourism development in Bahia Malaga which already has some existing ecotourism and is a unique and beautiful location, and support to fisheries.

The audit team has confirmed through interviews that community members support the selection of productive/alternative livelihood activities. The activities have been collaboratively planned with the communities through the development of a REDD plan for each consejo which identifies the costs, opportunities, and expectations of participation in the REDD project. Importantly, the REDD plans build upon the pre-existing development plans that each consejo had, but never had sufficient funds to implement. In essence, the REDD plans and project activities are based on the pre-existing aspirations of the consejos with additional input from the BioREDD+ program.

- Other activities including social investments and training and capacity building

The project activities also include investments in infrastructure and human capital in the consejos which do not directly address drivers of deforestation and degradation, but in the audit team's opinion may serve to address underlying drivers such as poverty, poor health, etc. This includes investment in sanitation services, health care, food security, and access to electricity. Investment in human capital includes trainings through The National Training Service focused on accounting, financial analysis, markets, environmental management, leadership, etc. The audit team witnessed early mobilization of this project activity in the field as several of the BioREDD+ project leaders were traveling to an existing REDD+ project in Colombia managed by Fondo Accion for knowledge sharing and peer to peer capacity building.

The audit team believes, based on experience in other REDD projects, as well as interviews and observations in the field, that investment in capacity building and social and health infrastructure will serve to reduce underlying causes of deforestation and degradation and help prepare community members to participate meaningfully in the SPVs. Infrastructure investments may

indirectly support the reduction of GHGs, for example, although Bahia Malaga holds high ecotourism potential this is unlikely to be realized without investment in solid waste disposal and sanitation which currently are in a poor state and likely to dissuade some tourists from visiting the project area.

Summary of Evaluation of Project Activities

As the project activities have been collaboratively selected with input from the consejo members, are based upon pre-existing unfunded development plans in the consejos, and are approved by the governance entities of the consejos the audit team considers it to be a high probability that if properly funded that the project activities will be successful in reducing deforestation and degradation.

The project presents a Theory of Change model which clearly identifies project activities, expected outputs, outcomes and impacts as well as causal relationships. The relation to external conditions and problems are clearly described and the project activities logically follow from these descriptions. As stated before the audit team feels the logic inherent to the Theory of Change is sound based on observations and interviews in the field. Conformance has been demonstrated.

4.3 Management of Risks to Project Benefits (G3)

G1.10-G1.11

Section 2.3 of the PD describes management of risks to project benefits. The proponent provides a comprehensive and reasonable overview of risks. Climate change is identified as a risk primarily to communities. The PD rightfully points out that the communities exist in an extreme climate already with one of the highest rainfalls on earth and as such have traditional adaptation strategies implemented including stilt houses.

Human risks to climate benefits are logical and include lack of capacity and governance in the communities. Natural risks to climate benefits (carbon stocks) were evaluated using the VCS AFOLU Non-Permanence Risk Tool as a framework which is appropriate. Communities identified extreme weather and geological risks as potentially significant to carbon stocks. The audit team concurs with this assessment and although the audit team saw no forest damage in the project area the audit team did observe moderate loss of carbon stocks due to a significant storm at another location along the Colombian coast.

Activities implemented include the aforementioned project activities which work to address human risks to climate benefits. Natural risks cannot be reasonably mitigated other than through effective protection of the forest area so as to ensure sufficient natural regeneration to rebuild any forest carbon stocks which are lost as a result of a significant natural disturbance. Any loss event would be reported and quantified through the VCS's standard procedures for this.

Community risks are appropriately identified in the PD and include inequitable distribution of project benefits or community members not all benefiting from the project. The project intends that Fondo Accion will be a long term partner in project implementation and as such will work to develop benefit sharing mechanisms to ensure all community members benefit. This will include

monitoring of distribution of project benefits. Relevant monitoring indicators are identified in Section 8.3 of the PD and include among others:

-Effectiveness of the Grievance Mechanism measured in number of solved requests

-Number of families benefitting from Social Investments of the project

-Number of women benefiting from the Social Investments of the project

-Number of employed women in the value chains supported by the SPVs

-Number of households receiving technical assistance

The above monitoring indicators create a framework for ensuring that inequitable distribution will be detected. The audit team concludes that the community risks identified are appropriate as are the mitigation measures.

Biodiversity risks are appropriately described in the PD and the proponent claims that these risks are primarily outside of the control of the project or communities. The risks include timber prices or carbon prices which may reduce competitiveness of the REDD project, social/political instability in Colombia, and damage to migratory species habitat outside of the project area. The PD purports that if the Climate and Community risks are addressed the Biodiversity risks that are feasible to control will inherently also be addressed. The audit team finds this assertion to be credible. Biodiversity conservation in the project area is a direct result of forest conservation and reduced logging as the alternative nonforest land cover types (agriculture and grazing) hold relatively very low biodiversity and result in enduring reduced physical health of the ecosystem due to the heavy rainfall (siltation of rivers, loss of topsoil). The project has selected project activities that are relatively complementary towards the biodiversity of the area, focusing on tree crops (cocoa, chontaduro, acai, etc.) which serve to hold soil intact. Success in biodiversity conservation will be measured by monitoring of appropriate indicators.

Conformance with G1.10 and G1.11 has been demonstrated in the PD and in the field.

4.4 Measures to Maintain High Conservation Values (G3)

Section 2.4 of the PD identifies measures to maintain HCVs. HCVs 1-4 are identified in the PD. The project takes a conservative approach to HCV identification wherein if the exact location of an HCV is unknown, or if the presence of the HCV is unknown in the project area the HCV is assumed to exist throughout the project area. Several appropriate annexes are provided to justify the selection of HCVs including an endangered species list for birds, mammals, amphibians, reptiles, and endemic species references, evidence of megadiverse status of Colombia and finally HCV ID guidelines. The Humboldt Institute has been engaged by the BioREDD+ program to provide an initial assessment of biodiversity through the projects in the Colombian Pacific region as well as to design and provide input to a monitoring program. The audit team visited a biodiversity monitoring plot in Bahia Malaga, designed by the Humboldt Institute and the monitoring methods were described to the audit team including extensive camera trapping work which has already detected evidence of endangered species in the project areas. The evidence provided is appropriate for the purpose of HCV identification.

The approach of assuming HCVs exist if there is a possibility that they exist is reasonable given the very limited state of knowledge of biodiversity in the Colombian Pacific. A table is provided that clearly links the specific HCV to protection areas, limitations, justification of integration in the management plan, and resulting required trainings. Conformance has been demonstrated.

4.5 Project Financing (G1 & G4)

G1.12-G4.3

The project provides Annex F, "Presupuesto BCBM" and Financial Analysis BCBM Budget and Cashflow as evidence of conformance with G1.12. The proponent has provided a detailed budget and cash flow model projecting cash flow for twenty years from validation. The cash flow model demonstrates that the project will break even in year 2, which corresponds to 2016, or slightly over one year from the current risk assessment with the validation taking place in 2015. The audit team notes as well that for the first two years of project implementation from the start date in August 2013 the project was funded completely through the BioREDD+ using funds from USAID which covered all project development and validation costs. These funds continue to this day. As such 2015 is the only year in the project lifetime in which the project is expected to have costs greater than revenues.

The financial model depends heavily on funding from a single large investor. Although this funding is not yet secured, this is immaterial for the validation audit as the cash flow model is based on projected revenues and expenses.

The audit team has reviewed the inputs to the model in depth. The audit team tested individual calculations and formulae in the model and found no errors. The assumptions for values of carbon credits sold are very conservative (less than 75% of recent market value for VCS+CCB REDD credits). The costs expected in the model are projected based on detailed evaluations of project activities undertaken in a participatory manner with the communities (which are the proponents) and external organizations such as BioREDD+ and Fondo Accion which have demonstrated project management and implementation experience. As such the audit team considers the costs inputs to be credible. The monitoring costs form the largest single expense and appear conservative to the audit team based on their expert opinion. In summary, the financial model is based on sound reasoning and conservative inputs and demonstrates the healthy financial status of the project currently and the expected financial health *ex ante.*

4.6 Employment Opportunities and Worker Safety (G3)

Section 2.6 of the PD describes Employment Opportunities and Work Safety

G3.9

Fondo Accion is identified as the implementing partner responsible for employment training. The framework agreement with Fondo Accion clearly stipulates that Fondo Accion is responsible for facilitating appropriate training for project participants.

The audit team did identify during forest inventory sampling that community members that were participating were generally well trained. Conformance has been demonstrated.

G3.10

Fondo Accion is identified as the implementing partner responsible for ensuring equal opportunity employment as described in Section 2.6.2 of the PDD. Fondo Accion is a mission driven organization focused on poverty alleviation and natural resource management. Fondo has committed through the PD to implement hiring plans at the level of project implementation that match the equal opportunity employment provisions of Fondo Accion itself, which provides opportunities to women and minorities. Fondo Accion is equally committed in the PD to equitable distribution of benefits. Confirmation of implementation of this objective will be assessed at the verification audit, when specific project activities have been implemented at scale. Conformance has been demonstrated.

G3.11

The section describing conformance to laws and regulations related to worker's rights relies on Fondo Accion's participation in the project. Fondo Accion is in the advanced stage of negotiation with the consejos in determining the specific agreement they have with consejos as implementation partner. The audit team confirmed in a phone call with Fondo Accion that this process was not yet complete at the time of the validation. However, the audit team confirmed with the CCBA that as the validation is an assessment of the project plan, the specific agreement does not need to be signed until verification.

Section 3.1.1 of the PD identifies laws, regulations, and treaties pertaining to worker's rights. The list is comprehensive and was evaluated by a local Colombian consultant and deemed to be sufficient. Assurance has been provided in this section that the project will comply with these applicable laws and regulations.

G3.12

The proponent has identified a range of activities/occupations likely to result from implementation of the project. These are credible and reasonable and relate to the themes of activities to maintain carbon stocks (consejo boundary monitoring, carbon stock measurement), governance activities (consejo boundary monitoring, monitoring of degradation), productive activities (implementation of alternative income activities), and other (school construction, health, etc.).

For each activity risk factors have been identified and are classified as of biological, physical, or psychological origin.

Activities with the highest risks are identified and include measurement of forest carbon plots, biodiversity monitoring, demarcation of conservation areas, forest patrolling, ecotourism, and fishing.

The audit team finds the identification of occupations and corresponding risks to be credible and representative of the information that the audit team received while in the field from interviews about the type of likely occupations and probable risks. The audit team considers the forest patrols to be the highest risk activities due to the remote locations and the possibility of encounters with drug production areas.

The risk document identifies appropriate mitigation measures and equipment to be used. For example, the forest patrols will consist of crews of 8 people with means of transportation (boats or vehicles), computers, radios, cameras, uniforms and boots, and first aid kits and first aid training.

Likewise, fishing is another high risk activity will have the same equipment. In summary the assessment of risks to workers is complete and the mitigation measures identified are sufficient for validation and implementation shall be assessed at future verifications.

4.7 Stakeholders (G3)

G3.1

Section 2.7.4 of the PD describes the public comment period and the dissemination of relevant project documentation. The PD and relevant documentation has been made accessible to project stakeholders as confirmed during the field audit via interviews with participating communities. The community governance boards had to sign off on the PD and PD summary prior to public posting which resulted in delays to the field audit, thus providing solid evidence of conformance. Communities are also well informed through the REDD Plans which essentially take the PD and transform it into action items and expectations for all participants. The REDD plans are signed off by the consejo governance institutions. Conformance has been demonstrated and stakeholders are actively engaged with project documentation although no comments were received through the CCB Public Comment period. However, the audit team was able to confirm in field interviews that consejo members were aware of the project documentation and many members had a sophisticated understanding.

G3.2

Costs, risks, and benefits to communities has been communicated effectively to stakeholders. The audit team confirmed this through interviews with community members who spoke eloquently on these topics. In general the communities as a whole and individual community members face little risk from participation in the project as the project is incentive based and community members that conduct deforestation and degradation activities are not forced to participate. That said, all corteros (loggers) interviewed across all BioREDD+ projects, with the exception of a single stakeholder, expressed a desire to cease logging as they felt it was a poorly compensated and damaging activity. The audit team also was able to see documented consultation meetings the BioREDD+ program had held with communities to sensitize them to these issues.

G3.3

Stakeholders and community members were well informed of the audit visit and the audit process. Consejo leadership has to provide permission for all activities on consejo land including the visit by the audit team as well as visits by BioREDD+ staff. The audit team interviewed over 100 local stakeholders in a series of formal and informal meetings, interviews, and focus groups in this specific project and several hundred over the BioREDD+ program projects which are necessarily linked in some aspects. BioREDD+ staff respected auditor requests for confidential interviews.

G3.4, G3.5, G3.6

Communities have been fundamental in the project design process as confirmed by the audit team and described in Section 2.7.1 of the PD. The audit team confirmed that the BioREDD+ program did a very thorough job of stakeholder and community inclusion through i) interviews with community members who had a sophisticated understanding of not just their own project, but also REDD in general and who confirmed that they played a major role in project design, ii) observation of the fact that all decisions are approved by the traditional decision making structures of the consejos, iii) a well-documented paper trail of consultation including original and copied documentation from consultation meetings going back multiple years that were shared with the audit team. The agendas of these meetings included all relevant topics and demonstrated that consent was derived from the consejos. This was further evidenced by the fact that several consejos have chosen to leave the BioREDD+ program in other nascent projects indicating that the final decisions rested with the consejos which are in fact the proponents.

Women were included in public meetings during the audit process with regard to the REDD project and the project has designed specific monitoring indicators designed to measure their participation during project implementation (see PD Section 8.3.2). There are no other identified community groups or other stakeholders that the audit team could detect.

G3.7

The proponent in PD Section 2.7.1 explicitly acknowledges this CCB requirement and identifies measures in Annex AV to ensure that the project proponent (the consejo) and other entities involved in project implementation such as BioREDD+ and Fondo Accion, are not involved in harassment or discrimination.

Annex AV, the framework implementation agreement between Fondo Accion and the consejos requires as a condition in Section 8 of the agreement that there is no harassment or discrimination of any kind. Implementation of this condition will be assessed at future verifications.

G3.8

Section 2.7.5 of the PD describes the process for stakeholder conflict and grievance resolution. The proponent has developed a grievance mechanism in conformance with the CCB requirements. The grievance mechanism appropriately first attempts to resolve dispute internally. This approach is important as the consejos themselves are simultaneously the proponent and the primary stakeholders. The consejos have pre-existing systems of conflict resolution and the grievance process appropriately respects traditional custom and consejo regulations.

If resolution within the consejo is unsuccessful, the dispute can be brought to a third party mediator/arbitrator. The third party mediator selected is the Camara de Comercio de Buenaventura and the Defensoria del Pueblo as entities which can play the role of a third party for mediation when conflict resolution within a consejo fails. This selection is appropriate based on interviews with communities during the field audits. Communities often suggested these institutions as appropriate for this role. This third party can be used for mediation within a consejo, between consejos, or between the consejo and an implementing partner such as Fondo Accion. These same institutions can be used for arbitration in the case that the mediation step is unsuccessful.

The grievance mechanism is in conformance with the CCB requirements.

4.8 Commercially Sensitive Information

Section 2.8 of the PD describes commercially sensitive information as does the Annexes table following the table of contents. The annexes designated commercially sensitive and/or confidential are in conformance with VCS Standard 3.18.2. While some of these sources of information (for example models and computer code used to create carbon calculations) do relate to the baseline scenario or GHG reductions/removals these annexes are not considered "project documents" per the definition in the VCS Program Definitions V3.5 and hence are not required to be included. Additionally, relevant summary information is included in the PD in general.

5 LEGAL STATUS

5.1 Compliance with Laws, Statues, Property Rights and Other Regulatory Frameworks (G5)

G5.6

Section 3.1 of the PD describes the list of laws and regulations in Colombia that are relevant. The project provides assurance of conformance in the PD. The audit team also detected no evidence during the field audit to contradict this and confirmed with relevant individuals from the Ministry of Forestry, and INCODER, the institution responsible for titling consejos that the project was in conformance with laws and regulations. The consejos also hold legal authority over their own land and their Governance Boards have confirmed that the project activities do not violate their bylaws and are likely to strengthen them.

G5.7

The audit team met with the Director of Forestry for the Ministry of Environment of Colombia and confirmed that the project had the support of the Colombian federal government. The audit team also met with the relevant local corporation (CVC) which governs natural resource management in the region of the project area and confirmed that appropriate support existed. Finally, the audit team confirmed with the governance board of the participating consejos that the project had their support (they are the proponents). Conformance has been demonstrated.

5.2 Evidence of Right of Use (G5)

The audit team has confirmed that the project has described Right of Use appropriately in Section 3.2 of the PD. Right of Use #4 under VCS Standard 3.11.1 is selected and it is justified in the accompanying text that the proponents hold right of use as a result of their statutory and property rights in the land. Law 70 of 1993, which is guaranteed in the Colombian Constitution guarantees that the project area belongs to the community consejos. The proponent has provided the audit team with a copy of the original declaration from INCODER (the appropriate governmental agency in Colombia) establishing the consejos. Chapter IV of Law 70 gives the communities inalienable rights to their renewable resources and forests.

The audit team held a meeting with INCODER in Bogota in early November 2014 and confirmed that the consejos do hold right of use over the project area. Additionally the proponent has provided a legal opinion by competent Colombian law firm establishing conclusively the Right of Use is held by the proponent including in project areas that may contain mangroves which are designated *uso publico.* Conformance has been demonstrated.

5.3 Emissions Trading Programs and Other Binding Limits

Colombia does not have an emissions trading program which the project is a part of nor is there a binding limit on GHGs which is relevant.

5.4 Participation under Other GHG Programs

The PD asserts in Section 3.4 that the project has not been registered with other GHG programs. The audit team has confirmed his by checking the websites of other programs including Plan Vivo which is the only potentially applicable program which accepts REDD projects.

5.5 Other Forms of Environmental Credit

The project is not seeking other forms of environmental credit, as claimed by the PD. The audit team could find no evidence to contradict his assertion.

5.6 Projects Rejected by Other GHG Programs

The project has warranted that it has not been rejected by any other GHG programs. The audit team has found no evidence to contradict this and considers the assertion credible as very few other programs accept REDD projects.

5.7 Respect for Rights and No Involuntary Relocation (G5)

<u>G5.1</u>

The statutory and customary rights in the project area are identical given that the land is under traditional ownership through an Afro-Colombian consejo which is titled by the Colombian government. The tenure within the project area is communal other than small private areas for homesteads. The audit team detected no conflicts over land tenure through interviews in the project area and confirmed tenure with INCODER, the relevant governmental authority.

<u>G5.2</u>

Free, Prior and Informed Consent (FPIC) has been demonstrated in the project area.

- FPIC processes follow traditional decision making structures in the project area wherein consent is derived from the General Assembly which includes all consejo members who would like to participate. The General Assembly and/or the Governance Board has approved all relevant documentation and implementation. This was confirmed by the audit team both through interviews with several stakeholders in the project area and through review of signed documentation. This documentation includes the Hoja de Ruta

(Letter of Intent) identified by the PD as official confirmation from the stakeholders of FPIC. The audit team feels however that the FPIC process has been much broader (and better) than simply what is communicated in the Letter of Intent.

- The process of informing stakeholders was demonstrated to the audit team through an extensive history from the BioREDD+ program of consultations, the topics of the consultations, and attendees. The audit team reviewed both original and copied documents demonstrating consultation and information processes beginning over 1 year before the project start date. The audit team also confirmed through interviews that community members and other stakeholders felt appropriately consulted and felt ownership over the project.

- Finally, it is noted that FPIC comes directly from the stakeholders who are themselves the proponents and the BioREDD+ program is simply a facilitator.

- The audit team has observed multiple times that FPIC is ongoing throughout project implementation as evidenced by the fact that the communities needed to sign off on project documentation before it was submitted to the CCBA for public posting.

G5.3

The audit team detected no evidence that the project will lead to involuntary removal or relocation of any stakeholder or right holder, nor their activities. The project as currently designed takes an incentive based approach wherein agents of deforestation or degradation are to be offered more appealing ways to make a living as the approach for reducing activities that contribute to GHG emissions.

G5.5

The project does not contain any unresolved conflicts over lands as verified by the consejo leadership as well as the land tenure documentation from INCODER. The BioREDD+ program excluded any consejos from the program that had conflicts with regards to consejo boundaries.

5.8 Illegal Activities and Project Benefits (G5)

G5.4

G5.4 requires the identification of any illegal activities occurring in the project zone and evaluation of their impact on CCB benefits. The proponent has successfully evaluated illegal logging as the major illegal activity.

6 APPLICATION OF METHODOLOGY

6.1 Title and Reference of Methodology

VCS VM0006 v2.1 is the methodology applied and is a valid methodology under VCS. The proponent also uses the VCS VT0005 v1.0 tool, which is a valid tool under the VCS.

6.2 Applicability of Methodology

The proponent demonstrates conformance with the applicability conditions of VM0006 v2.1 in Section 4.2 of the PD.

- Condition 1: The proponent has provided the audit team with satellite imagery from more than ten years before the project start date to demonstrate that the land in the project area qualified as forest according to the Colombian national forest definition. The audit team reviewed the imagery provided at the office of GeoEcoMap, the consultancy that conducted LULC analysis and determined its validity for the purposes of this applicability condition.

- Condition 2: The proponent has justified that the project addresses drivers of deforestation and degradation that are identified as applicable under VM0006. The project drivers of deforestation and degradation in the baseline are illegal logging of timber for commercial sale and conversion of forest to cropland. These drivers are claimed to be unplanned and mosaic. The audit team has confirmed this in the field audit through direct observation and interviews with agents of deforestation/degradation and relevant regulatory agencies including the National Department of Forests, as well as the local corporations that hold local authority over the project area for resources management. Some minor areas of potential planned degradation or deforestation, in the form of small scale logging permits which had been approved by the local corporations in charge of regional land management, have been removed from the project areas appropriately. Objective confirmation of this was provided from the local corporations.

- Condition 3: This condition requires that the proponent select imagery from within 15 years of the project start date to assess deforestation in the historical reference period. The audit team has approved a methodology deviation permitting a longer historical reference period, after consultation with the VCS.

- Condition 4: The proponent has demonstrated conformance with this criterion in Section 4.5.3.4 of the PD by demonstrating that the overall classification accuracy of the LULC and forest cover maps is >70%. The audit team has reviewed the imagery used, output of classification, and accuracy assessment methods and results and determined that the proponent has achieved the required minimum accuracy. The audit team reviewed the results of the accuracy assessment at the office of GeoEcoMap, the consultancy hired to conduct the land cover analysis.

- Condition 5: The proponent has demonstrated to a reasonable degree of assurance that mangrove soils in the project area are unlikely to occur on peatlands or organic soils. To establish this, the proponent uses the FAO definition of organic soils as those containing more than 50% organic matter in the upper 80cm. This definition is conservative compared to those referenced in some other VCS methodologies which define organic soils as those with 60% or more of organic matter. The PD, Section 1.2.3.1 has been updated with evidence from a soil classification and measurement study done by a Colombian research institute (IGAC) which demonstrates that the SOM content of soils in

the project area range between 1.23 and 10.56%. This level of SOM is below the 50% threshold set by the FAO definition. Additionally the proponent cites other academic studies in similar mangrove systems in Colombia as having between 2 and 36% SOM which is also below the 50% threshold. The audit team also notes it would be conservative in a REDD project such as this to assume that SOM stocks in an area of organic soil were more similar to those in an area of mineral soils as this would greatly reduce the quantity of avoided emissions. If any lack of accuracy remains in the soil carbon analysis, this is counterbalanced by the greater conservativeness of the assumption that the mangroves do not occur on organic soils.

- Condition 6: The proponent identifies the project activities in Section 2.2 as well as specific outputs in the Theory of Change Model. These all conform to the requirements of applicability condition six.

Applicability Conditions from other Sources:

Per VCS AFOLU Requirements 3.1.11 all REDD projects which occur on wetlands shall also comply with the WRC requirements unless the expected emissions from the soil organic carbon pool or change in the soil organic carbon pool in the project scenario is deemed below *de minimis* as set out in Section 4.33 or can be conservatively excluded in which case the project shall not be subject to the WRC requirements. The project includes mangrove areas which are considered wetlands per VCS AFOLU Requirements 4.2.16. The proponent has elected to exclude the soil carbon pool from carbon accounting under the assumption that this approach is conservative as the SOC pool could be expected to decrease in the baseline scenario. The audit team agrees with this assumption as deforestation (the baseline scenario) would be expected to cause loss of soil carbon stocks which is a well-established pattern globally in tropical soils. Conformance has been demonstrated.

6.3 Methodology Deviations

The proponent has identified two methodology deviations in Section 4.3 of the PD.

1. Methodology Deviation to use a historical reference period longer than 15 years:

The VCS has released additional clarification for the interpretation of the VM0006 v2.1 methodology applicability conditions. Specifically, the VCS has officially removed the below requirements from the applicability conditions of the methodology:

• Accurate data on past LULC and forest cover in the reference region must be available for at least three points in time, with at least one remote sensing image (ie, data) from 0-3 years before the project start date, at least one image from 4-9 years before the project start date, and at least one image from 10-15 years before the project start date. No images older than 15 years can be used for the historical reference period. The classification accuracy of LULC and forest cover maps must be greater than 70%.

The VCS has acknowledged that these two requirements fall under data requirements for determining the baseline scenario and are therefore inappropriate for the applicability conditions section of the methodology.

As a result, the deviation from the requirement can be interpreted by the audit team as a methodology deviation.

Section 4.3 of the PD describes requested methodology deviations. In this section the proponent has requested an extension of the 15 year time limit for this project. The proponent has requested that the three time periods used to assess the historical reference period are from 23 years, 13 years, and 1 year before the project start date.

The proponent justifies this deviation based on the tradeoff between accuracy and conservativeness in project implementation, recognized and endorsed by the VCS in the VCS VVB Manual. Projects and VVBs may accept a less accurate measurement or monitoring technique or result if it is determined that this less accurate approach is more conservative.

<u>Auditor evaluation of the methodology deviation:</u>

The audit team has determined that the methodology deviation is appropriate for this project. Per VCS Standard 3.5.1, methodology deviations are acceptable when they relate to monitoring or measurement and do not negatively impact the conservativeness of the methodology. The deviation clearly relates to measurement of historic deforestation in the reference region in the historical reference period.

The audit team has also confirmed that usage of the longer historical reference period (23 years) is conservative and in some ways may lead to greater accuracy in measurement of historical land use change as compared to a 15 year historical reference period.

1) The proponent asserts that it was infeasible to find quality cloud-free imagery for the reference region and project area for the 15 year period required by the methodology. The audit team finds this assertion credible. The audit team confirmed this in interviews with the remote sensing consultancy, GeoEcoMap, hired to conduct the analysis. Additionally, the project area and broader region is one of the rainiest places on earth with an aseasonal climate leading to persistent cloud cover throughout the year. During the more than one month that the audit team spent in this region of Colombia for this audit and related audits of nearby REDD projects, the audit team did not experience a single day without extensive cloud cover.

2) The proponent demonstrates via historical land cover change analysis that the deforestation and degradation rates increased dramatically between timestep 2 and timestep 3 (2000-2012), as compared to the time period between timestep 1 and timestep 2 (1990-2000). The combined deforestation/degradation rate increased from 6,768 ha/year in the first time period to 8,341 ha/year in the latter time period. This results in a lower baseline deforestation and degradation rate applied to the project area in the baseline scenario as the rate is impacted conservatively by the earlier lower rates.

The audit team confirmed that deforestation/degradation rates increases significantly following the year 2000 via interviews in the field that stakeholders including consejo members, community

members, and relevant government officials from the local corporations responsible for local land use management. Following the year 2000, multiple companies came to the consejos and provided funding and material (chainsaws, etc.) to incentivize increases in logging. These companies were operating illegally in the region.

For the reasons cited above the methodology deviation is accepted by the audit team.

2. Methodology deviation to use LiDAR, via the VCS approved VT0005 Tool for Remote Sensing Biomass Measurements, rather than ground based inventories as required by VM0006 v2.1 Section 9.3.2 at future baseline updates.

The proponent has pioneered the approach of using LiDAR for estimation of biomass stocks of aboveground forest vegetation. To facilitate this, the proponent developed the VT0005 tool, which has been approved by the VCS for this purpose. The tool requires development of an allometric relationship between the LiDAR data and ground-based forest inventory plots. This allometric model can then be used to measure biomass of other forest areas with similar structure. As described elsewhere in this report the proponent has justified the usage of LiDAR for the first baseline update and has relied upon the expertise of Dr. Sassan Saatchi, a globally renowned LiDAR expert, for this purpose. The requested deviation is to allow this same procedure to be used in future baseline updates when biomass shall be re-measured. The only significant difference in the future, is that ground based inventories will not need to be used as the allometric models for using LiDAR have already been developed.

Auditor evaluation of the methodology deviation:

The audit team approves the methodology deviation. The deviation simply replaces a requirement of the approved VCS VM0006 methodology with the also VCS approved VT0005 tool which is a better reflection of the state of the art of technology for remote forest measurement. Several peer reviewed publications have demonstrated that LiDAR measurements can be more accurate that ground based inventories and have necessarily much higher sampling intensities. As a result the audit team considers the deviation to more accurate than the alternative. In addition, the audit team sees no reason why ground based inventories would be necessary at future baseline updates to create a new allometric model as the forest type is the same at both time points.

The deviation is approved.

6.4 Project Boundary

The project boundary has demonstrated conformance with the VCS requirements and with VM0006. The project crediting period is 30 years which exceeds the minimum crediting period for AFOLU projects. The project is claiming a longevity period (relevant for VCS AFOLU Non-Permanence Risk only) of 30 years and has justified this based on an approved management and implementation plan (REDD Plan) for the project which commits the project to maintaining carbon stocks and project activities beyond the crediting period. The REDD Plan has been formally approved by the consejo.

The project has selected carbon pools and GHG emission sources appropriately as well. The proponent has directly copied the relevant tables for pools and GHG sources from the VM0006 methodology and clearly identified which pools or emissions sources are included and excluded and why.

Conformance has been demonstrated.

6.5 Baseline Scenario (G2 & CM1)

The VM0006 methodology requires that the baseline scenario selected shall be the pre-project land use if this methodology is used. The PD appropriately selects the pre-project scenario which is that the project area would continue to be degraded and deforested due to illegal logging and conversion for agriculture continuing in a mosaic pattern.

The audit team finds this assertion to be credible based on observations of similar consejos in the same region of Colombia in which this is the land use pattern. Also this pattern is readily apparent in the project area as project activity implementation is still in a nascent stage. The audit team further confirmed this via extensive stakeholder interviews. Stakeholders did not see any other realistic baseline in the absence of the project other than continuation of the pre-project land use. In section 4.5.3 of the PD analysis of mobility, agents are identified as the local population which part time or full time conducts illegal logging activities to provide income and converts forest areas for small scale agricultural development. The field audit confirmed the identity of these agents and the audit team held multiple interviews with agents to confirm this. The baseline scenario was visually confirmed throughout the project area as well.

Appropriate spatial and non-spatial variables which can be explanatory with regard to degradation/deforestation patterns are identified along with an explanation of the relative contribution of the different drivers to both deforestation and degradation reported in Table 20. These relative contributions make sense from the field audit information and identify selective logging for commercial sale as the primary cause of emissions with conversion for small scale agriculture as the second cause. The vast majority of forest visited by the audit team was obviously degraded with clear evidence of logging so this conforms with the field audit.

The baseline scenario is justified and was selected through following the requirements of the VM0006 methodology.

<u>G2.1</u>

The project has conformed to this indicator by using the VM0006 methodology and VT0001 additionality tool appropriately.

<u>CM1.1</u>

The PD describes the communities' socioeconomic status and well-being in Section 4.5.1 of the PD. A focal issue/problem flow analysis approach based on Richard and Panfil (2011), a CCBA recommended methodology is used to identify factors which contribute to ongoing focal issues identified by the stakeholders as important. These include poverty, insufficient infrastructure and programs, and decline in ecosystem services and are described along with contributing factors, direct factors, and corresponding project intervention areas in Table 16 of the PD. Additional description of communities including community baseline conditions are provided in Section 1.3.4, 1.3.5, 1.3.6 of the PD. The community baseline is rooted in information collected in the socioeconomic study that was conducted early in BioREDD+ implementation and was conducted by Colombian Universities and foundations with expertise in socioeconomic monitoring. This

study, the "Timber Study" has been provided to the audit team and was reviewed. Conformance is demonstrated.

CM1.2

Ecosystem services and areas fundamental for meeting community needs are identified as HCVs in the project area. The audit team confirms this based on interviews and observations during the field audit. Community members are clearly reliant on the forest for provision of a healthy riverine environment as communities are heavily reliant on fishing. Additionally, given the very high rainfall of the region communities are reliant on the forest for flood control and mitigation. Community members also confirmed dependence on the forest for additional food sources, medicine and non-timber forest products. Conformance is demonstrated.

CM1.3

The PD correctly describes that in the absence of the project the deforestation and degradation would continue with a resulting reduction in the ecosystem services the communities rely on and a decrease in well-being in the communities. This is particularly true since the community members derive little economic benefit from logging and only rely on this income source due to lack of other opportunities.

B1.1-B1.3

The biodiversity baseline scenario is described in Section 4.5.2 of the PD and similar to the community baseline, follows a problem flow analysis approach. As the project area and the broader Colombian Pacific region is one of the most biodiverse areas on earth with currently limited cataloguing of diversity of species, the project has asserted it is infeasible to develop a highly descriptive species-based biodiversity baseline. The audit team agrees. The BioREDD+ program has invested in biodiversity monitoring already through a partnership with the Humboldt Institute which is designed to provide information crucial for monitoring overall trends of biodiversity over the project crediting period. Appropriate academic and other references are provided to substantiate the biodiversity of the region, which is already globally recognized.

Based on a significant increase in degradation rates during the second half of the historical reference period (2000-2011) the PD asserts that this provides a reasonable indicator that the baseline scenario is one of continued loss of biodiversity, HCVs, and ecosystem services due to unabated logging. The audit team concurs based on interviews and observations in the field audit. The assertion that increase/maintenance of biodiversity is directly linked to cessation/reduction of logging is credible and is based on field audit information which confirms this relationship which is in any event obvious in tropical forest. Table 17 describes focal issues, threats, and contributing factors and project interventions related to the biodiversity baseline scenario. In the baseline, it is projected that the project area loses all primary forest within the next few decades. Conformance with the CCB indicators has been demonstrated.

6.6 Additionality (G2)

The project uses the VCS VT0001 v3.0 tool to demonstrate additionality which is appropriate per the VM0006 Section 7 requirements. VT0001 uses a stepwise approach and conformance is described in that manner below:

Step 1a

The proponent identifies three alternative land use scenarios to the proposed REDD project. These include:

i) Continuation of the pre project land use of ongoing forest degradation from illegal selective logging for both commercial sale and domestic usage, combined with deforestation of easily accessible areas for subsistence and small scale agriculture. The audit team agrees that this scenario is consistent with that directly observed by the audit team and verified through stakeholder interviews in the project area and throughout the broader region.

ii) Cessation of illegal logging and similar activities resulting in deforestation in the project area through effective implementation of forest protection efforts by the Regional Environmental Authority, without registration as a VCS REDD project and carbon finance. The audit team agrees this scenario is credible and theoretically possible although it seems highly unlikely that the Regional Environmental Authority would suddenly decide to implement this after multiple decades of ineffective forest protection.

iii) Cessation of illegal logging and similar activities that cause deforestation in the project area through effective implementation of alternative livelihood activities within the project area which could serve to reduce deforestation and degradation in the absence of registration as a VCS REDD project and carbon finance. The audit team agrees this scenario is credible and theoretically possible. USAID has implemented some alternative livelihood projects in the project area in recent years, partly to reduce dependence by communities on illegal drug production. However, illegal logging has continued unabated. The audit team understands that these previous USAID funds have not been targeted through a performance based vehicle such as REDD and may also have not been at sufficient scale to significantly reduce deforestation and degradation.

Step 1b

The proponent demonstrates conclusively that all scenarios identified above are in conformance with enforced mandatory laws.

Scenario i), the pre-project land use, is not in conformance with some environmental laws, but these laws are systematically unenforced. The audit team confirmed through interviews with the local corporations (Corporacion del Narino, Code de Choco) responsible for local forest governance, that these organizations are unable to implement effective forest protection. Other stakeholders interviewed indicated that it was commonplace for illegal timber to be “laundered” by using timber transportation permits from one of a handful of small approved forest management areas for timber illegally sourced from large swathes of the Colombian Pacific region. Although the selective logging is illegal, the audit team confirmed that there were no effective disincentives to logging on the ground and evidence of the ongoing logging is ubiquitous and totally open. Consejos and resguardos do have legal right to manage non forest areas in their territories for agricultural production and the deforestation resulting from these activities is legal.

Scenario ii) implementation of effective enforcement of forest protection by local/regional governmental authorities, is in conformance with laws and regulations by virtue of being implemented by the government itself.

Scenario iii) implementation of alternative livelihood activities by an international development or other NGO can be assumed to be legal as this entity would have to seek approval from the Colombian government and relevant authorities to operation in the region.

Step 1c

The proponent has correctly selected scenario i) continuation of illegal logging and unplanned deforestation for subsistence and small scale agricultural production as the baseline scenario. The VM0006 methodology stipulates in Section 6 that the project shall select the pre-project land use as the baseline for this methodology to be applicable. This scenario matches the results of on the ground observations and stakeholder interviews collected by the audit team during the field audit. Traveling through the project area it is abundantly clear that illegal logging is ongoing, as evidenced by stumps, log yards, and boats transporting logs to buyers down the coast. Deforestation for small scale agricultural activities surrounds each community in the project area and exists as isolated settlements as determined by flying over project areas and/or river travel in the project area. Stakeholders, including local authorities, community leadership, and the actual agents of deforestation/degradation, confirmed that they expect these activities to continue unabated (as they have for the last couple decades) in the absence of effective implementation of the REDD project which will provide alternative livelihood options. The other alternative scenarios are theoretically possible and the audit team sees no evidence of their existence on the ground with the exception of some recent USAID funded projects which have not been specifically targeted at reducing deforestation/degradation, are not performance based, and as a result are not considered a more credible baseline than the existing land use at the project start date, which could be readily observed during the validation field audit.

Step 2

The PD skips step 2 and preferentially selects to conduct the Barriers Analysis. This is permitted per Step 1c of VT0001.

Step 3a

The PD provides a thorough and justified summary of barriers to the proposed REDD project including:

- investment barriers (i.e. no debt funding is available as the consejos are poor and community lands cannot be used for loan guarantee),
    - The audit team concurs with this assertion based on field audit. In addition the consejos are extremely poor and have suffered from instability due to conflicts with the FARC which have acted as a disincentive to investment in the project areas and the broader region.
- institutional barriers (i.e. uncertainty in REDD regulations as the REDD+ national strategy is being developed)
    - The audit team acknowledges that the uncertainty in REDD regulations would provide a disincentive for the communities to conserve the forest in the absence of the REDD project, however this is not relevant. The lack of

relevance of this individual part of the barriers analysis does not undermine the overall integrity of the analysis.

- technological barriers (i.e. facilities for commercialization of agricultural products do not exist in the absence of the REDD project)
    - There are major technological barriers to all aspects of project development and implementation in the absence of VCS related REDD finance. The consejo members are poorly educated with little resources. Without the expectation of REDD finance, and the additional help from implementing partners this finance expects to leverage (for example Fondo Accion as the planned implementing partner), the consejos would find it impossible to conduct any of the technical aspects of GHG emission avoidance implementation and quantification activities. Additionally, the consejos would likely be unable to implement the alternative livelihood activities of the project which include agricultural improvement and development of complex production and value chains. The audit team observed in the field audits that the current state of agriculture is low tech and lacking inputs which could greatly increase production.
- barriers from land tenure and property rights (i.e. communal land ownership provides limited incentive for conservation of forest stocks as rights to timber are not clearly defined)
    - The assertion that the rights to timber are not clearly defined is true based on community interviews. Corteros (loggers) currently treat the forest as an unregulated public resource and as such conduct logging in an unplanned and inefficient way. Outside timber buyers take advantage of this scenario through providing logging equipment as loans to poorer members of the consejos who are then indebted to the timber buyers and forced to continue logging. The forests are obviously degraded from this.
- lack of access to markets (i.e. lacking infrastructure, electricity, etc.)
    - The consejos are very remote with either minimal road access or access only by river/sea. Electricity is not present across the consejos in the more remote areas.
- lack of infrastructure (i.e. consejos have typically very limited road access and/or water access)
    - As described above, infrastructure in the project area does not lend itself to income generation activities other than logging and a small number of other relatively unprofitable agricultural activities. Communities have relied on illegal drug production in recent decades likely due to these limits.

<u>Step 3b</u>

The PD asserts that the barriers listed above would not prevent implementation of the baseline scenario as this scenario is the pre-project land use and as such these barriers are observably not preventing the baseline scenario.

<u>Step 4</u>

The proponent asserts that similar activities (investment in alternative livelihood activities like improved agricultural production chains as a means of reducing deforestation/degradation) do not exist in the region in general. The audit team concurs with this assertion based on stakeholder interviews with federal Ministry of Forestry representatives as well as representatives from the local corporations responsible for regional land management. This project represents one of the eight BioREDD+ REDD projects being developed in the Colombian Pacific region. In the validation audits of these eight projects the audit team spent two months traveling throughout the Colombian Pacific region. The audit team found no evidence of sophisticated agricultural production value chains in the project areas or in the broader region in consejos and resguardos. The USAID MIDAS program, identified appropriately by the PD in the Common Practice Analysis, laid the foundation for the later BioREDD+ program. The BioREDD+ program was developed with several of the specific communities that participated in the MIDAS program. The MIDAS program concluded in 2010, as confirmed by the audit team. As the MIDAS program transformed eventually into the BioREDD+ program the audit team does not view the MIDAS program as evidence that payment for environmental service programs are commonplace in the Colombian Pacific. The MIDAS program, as well as some other small scale development projects existing in the project areas, have focused on alternative livelihood activities. However, the audit team has observed that these projects tend to be small scale and have thus far been ineffective in reducing deforestation/degradation, and that it is unclear if any of these projects had reduction of GHG emissions as an objective. However, the audit team has issued a Forward Action Request (FAR) such that a future VVB should assess the degree to which reductions in deforestation/degradation at future verifications can be attributed to the specific REDD project activities. The audit team views the scale and nature of interventions proposed as part of the REDD project to be qualitatively different than these earlier interventions and hence considers implementation of alternative livelihood activities to reduce deforestation/degradation, at scale, to not be common practice.

The project activities are therefore considered additional.

G2.2

The PD justifies that project benefits would not have occurred in the absence of the project in Section 4.6.1-4.6.2. The justification rests on the assertion that the consejos are impoverished and as a result are unable to implement their development plans which would achieve community benefits in the absence of REDD finance. Biodiversity benefits are considered unlikely to occur in the absence of the project due to the expected continued trend of deforestation and degradation without the REDD project.

These assertions are generally credible based on the evidence collected by the audit team in the field. The audit team considers it self-evident that the pattern of deforestation/degradation would occur without the project and hence that biodiversity benefits are definitely additional.

Community benefits are considered likely to be additional as well and this is sufficient for validation. However a FAR has been issued as some of the project activities (i.e. cacao production) do exist in the project area prior to the implementation of the project. The additionality of community benefits comes from the increased scale of implementation and support with marketing and processes available through the Special Purpose Vehicles (SPVs) which the project will provide. The audit team agrees that this increased implementation will not occur in the absence of the project. The FAR is issued so that future verification auditors can

confirm that project activities which have been implemented are due to the REDD project rather than a pre-existing practice or other support.

7 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

7.1 Project Scale and Estimated GHG Emission Reductions or Removals

The project is correctly identified as a VCS Large Project, as the average annual emissions reductions are more than 300,000tC02e. The proponent provides a summary of the *ex ante* estimated GHG emissions reductions in the PD Section 5.1. The total *ex ante* emissions matches that reported in other sections of the PD (Section 2.2.2, Section 5.6.4).

7.2 Leakage Management

Section 5.2 of the PD indicates that as the major *ex ante* estimated source of leakage is activity shifting leakage in which the agents of leakage are the same agents of deforestation in the project area, that there is no differentiation between leakage management activities and project activities. The proponent lists the project activities/leakage mitigation measures in Section 5.2 in detail.

Based on the field audit the audit team has found positive evidence that leakage mitigation activities are likely to reduce activity shifting leakage from the project area. The project boundaries generally are farther from logging infrastructure (rivers, ports, and roads) than other parts of the consejos which somewhat mitigates the risk of leakage in any event. The communities have confirmed that currently community members do not travel across consejo boundaries to log in other areas because it is both physically very challenging due to the distance travelled and likely uneconomical. The audit team confirmed via multiple interviews with agents of degradation that agents do not prefer logging as an economic activity due to the difficult labor involved, low economic return, illegal nature of the activity, and destruction to their culture and commonly owned resources. The audit team conducted focus groups and nearly all loggers interviewed confirmed that the proposed project activities would be sufficient to cause them to stop logging if implemented. There is little risk of activity shifting of agriculture outside the project area as the consejo forms the project area and consejo members would lose land tenure by shifting outside of their consejo. The leakage management activities identified are in conformance with the relevant VCS and CCB requirements.

7.3 Baseline Emissions

<u>Reference Region Delineation</u>

The proponent uses a reference region as directed by the methodology to measure historical LULC changes used to create the baseline emissions scenario in the project area.

The proponent has demonstrated conformance to the similarity criteria defined in VM0006 v2.1 Section 8.1.1.2. Specifically:

- Minimum size requirements: As required, the proponent has demonstrated that the minimum size of the reference region is greater than 250,000 hectares. The reference region is 255,913 hectares and includes the project area and leakage areas.

- Unbiased boundaries requirements: The proponent has selected a reference region constructed only of other land use designations that are sufficiently similar to the project area. The reference region consists entirely of other Afro-Colombian consejos with similar cultural, social, governance and economic characteristics. The boundaries are defined by the consejo boundaries or naturally occurring boundaries (Pacific Ocean). All consejos in close proximity to the project area were selected until the 250,000 hectare threshold was met. Some consejos were excluded if the consejo did not meet other reference region definition criteria from VM0006. For example, if any part of a consejo did not meet the slope similarity thresholds then the entire consejo was excluded to avoid bias.

- Exclusion of restricted access areas: The proponent has demonstrated that all national parks, military installations and other conservation areas have been excluded from the reference region. The proponent justified the source of shapefiles of these areas to the audit team. All shapefiles were from appropriate government sources.

- Exclusion of planned deforestation areas: The proponent has demonstrated that no planned deforestation areas exist in the project area from logging or commercial agriculture. The proponent sourced this information from the Ministry of Forestry database on plantation location. The proponent has demonstrated the location of mining areas from the appropriate government agency (Geominas) for the end of the historical reference period via shapefiles from 2005 onward which is the only time period for which government data has been collected and the only time period in which mining in the Colombian Pacific is legal. The proponent has also collected all relevant information from the corporacion responsible for issuing permits for community and other logging concessions in the project area and reference region, CODECHOCO. The proponent submitted an official request to the Choco department for all records of any forest management plans in the region from 1991-2015. Any areas for which a “resolucion”, a harvesting permit, was issued were removed from both the project area and the reference region. This resulted in a change of 465 hectares in the reference region as a series of small forest management areas where planned degradation or planned deforestation may have occurred were removed from the reference region and project area.

  The proponent has transparently provided the audit team with a significant amount of documentation of this process including:

  -the official letter of request to CODECHOCO;

  -the report of the BioREDD+ staff member that went to the office of the corporacion to receive the data;

  -copies of the original resoluciones;

-updated maps of the reference regions and project areas depicting the areas that have been excluded;

-an excel file demonstrating the areas that have been excluded;

-contact information for the relevant individuals at the local corporation to facilitate independent confirmation by the audit team.

The proponent provided an in depth justification for selection of the reference region via supporting annexes referenced in the PD as well as in an in depth presentation to the audit team at the BioREDD+ office in Bogota. The audit team had the opportunity to question the justification of the reference region and probe for potential sources of bias. Information sources used for identifying the reference region were appropriate and includes:

-Basemap of 1:100,000 from IGAC which is public information and the appropriate source for Colombia. Basemap includes basic map information such as roads, hydrology, water bodies, relief, airports, etc.

-National Parks, military bases, indigenous reserves and consejos all come from la Sistema de Informacion Geografica Para La Planeacion Y El Ordenamiento Territorial (SIG-OT), a government run public access mapping information source. Forest reserve data comes from the Ministry of Forestry and includes all forest reserves designated from 1956 onward.

-Plantations come from the Ministry of Forestry and a plantation map was only available for 2009. However, the map indicates very few plantations and none in the entire Colombian Pacific region. Additionally the audit team observed no evidence of plantations during over one month in the field in the Colombian Pacific. The audit team concludes that the assumption that large plantations have not existed in the project area during the historical reference period to be credible.

-Slope information came from a DEM (Digital Elevation model) which is appropriate.

-Mining data came from Ingeominas, the government agency responsible for permitting mines. Mining was only permitted in the Colombian Pacific from 2005 onwards and the proponent included all data from 2005 appropriately.

The proponent has transparently provided the metadata for each Landsat scene used in the historical deforestation/degradation analysis in the reference region.

Carbon Stock Measurements

The BioREDD+ program, of which this project is one of eight projects uses field plot data to measure carbon stocks which are then estimated using LiDAR across a broader region.

Sampling Approach for Field Plots

The project is one of eight projects in the BioREDD+ program which are distributed across the Colombian Pacific region. As the field plots are used only to calibrate and validate the LiDAR data the BioREDD+ program has instituted a single forest inventory across all eight projects

consisting of 15 one hectare permanent sampling plots which are each surrounded with 8 systematically laid out temporary sampling plots of 0.25 ha each. Each permanent one ha plot is treated (for the purpose of LiDAR calibration and validation) as four 0.25 ha plots. In addition the program implemented 45 additional 0.25 ha plots in a single LiDAR transect for estimation of sampling and measurement errors and LiDAR calibration. The total used to develop and test the LiDAR model was 214 plots. The total inventory plots were representative of the diversity of the region as observed by the audit team and included both intact and degraded forests, as well as different forest types including terra firme (Colinas), freshwater swamp forests (guandal), and mangrove forests.

The audit team conducted resampling in 7 of 15 permanent 1 hectare plots using a systematic approach wherein the four corner subplots of each 1 hectare plot were remeasured by the audit team. This approach allowed the audit team to evaluate the full range of diversity in each plot (for example some plots contained multiple forest types) and to strategically pick up on any obvious discrepancies from the Standard Operating Procedures (SOPs) as the audit team had to crisscross the entire plot to reach each corner. In addition the audit team was able to verify the coordinates of the corner markers of each 1 hectare plot and as such detect errors in plot layout. Each 20 x 20m subplot was treated as an individual plot and the audit team compared data collected by the original inventory with the team's measurements. Discrepancies between data collected by the audit team and the original inventory were identified in most of the seven plots and included i) flawed DBH measurements from measuring below the top of the buttress on buttressed trees, ii) incorrect height measurements, and iii) recording errors in the data sheets. However, at the time the audit team did not consider these errors to be systematic or sufficiently large to be material. The audit team has conducted analyses on the data collected and not detected significant errors in the inventory data. Additionally, GeoEcoMap provided the audit team with an error propagation report (GeoEcoMap Task 16) which demonstrated via QA/QC re-measurements implemented systematically across 45 plots that measurement errors were insignificant and not material. Based on the information collected in the field the audit team has confirmed that the field data collected is valid under the VCS VM0006 methodology and VMT0005 tool.

Forest Inventory SOPs and In-Field Conformance to SOPs

The BioREDD+ program used the RAINFOR protocols as the SOPs for the forest inventory. These protocols were developed by a broad consortium of experts in South American tropical forests and are considered appropriate for use by BioREDD+. The audit team had the forest inventory team demonstrate implementation of the SOPs on the first plot that was visited in the inventory. Members of the original inventory team including individuals from CONIF (Corporacion Nacional de Investigacion y Fomento Forestal) were present at each visited plot. The demonstration of SOPs showed conformance with the printed SOPs and best practice. However, subsequent discrepancies in the implementation of SOPs were identified in some plots and included i) inconsistent tree labeling procedures, ii) inconsistent plot marking procedures. However, as described later in this section of this report, the proponent provided an uncertainty and error propagation report that demonstrated that these errors observed by the audit team were immaterial. The audit team did not see the original errors as systematic. Additionally, there is not a risk of these errors being repeated in future monitoring activities as future monitoring will use LiDAR rather than forest inventory measurements to measure carbon stocks.

Selection of Allometric Equation

GeoEcoMap selected the local model developed by Saldarriaga (2011) based on a comparison of this allometric model with three other models including two regional models (Saldarriaga 2014, Alvarez et al. 2012) and one commonly used global model (Chave et al. 2014). Biomass was estimated using the four models and although no significant difference was observed (ANOVA; P>0.5), the selected model produced the lowest average biomass values and was hence the most conservative, estimating biomass at between 3.9% and 10% lower than the other models. The sample used to develop the allometric models is representative of the entire BioREDD+ program area and includes 296 trees and 97 palms harvested in terra firme forest, flooded forest, and mangrove forest from sites in the northern and southern Colombian Pacific.

A model was developed from published data throughout Panama and Colombia for trees less than 10cm dbh with an r^2 of 0.91 which the audit team considers acceptable for usage.

It is considered good practice by the audit team that allometric models shall not be applied to trees with diameter or height measurements (or other input parameters) outside of the range of the sample that the allometric model was originally based on the. The maximum dbh of trees used in the sample to develop the Saldarriaga equation used by the project was 155.4cm. GeoEcoMap disagrees with this limitation and feels that this “good practice” status is misguided. As a result of conversations during the field audit, GeoEcoMap conducted and submitted to the audit team an analysis of the impact of including trees greater than the 155.4cm cut off in the biomass estimation and demonstrated it yielded a less than 1% impact (RMSE 1.58 Mg/ha) on the allometric model outputs and thus demonstrated that the impact of this is immaterial. Additionally, it is noted that only three of the plots included individuals with dbh greater than 155.4cm and in these plots the number of individuals is minimal.

Root to Shoot Ratio

The root to shoot ratio used is from Saatchi et al. (2011) who is the principal of GeoEcoMap, which is developed based on Mokany et al. (2006), a widely used root to shoot ratio, recognized both in VCS and IPCC publications. The audit team has conducted a simulation of estimated belowground biomass using the root to shoot equation developed by Saatchi et al. (2011) and Mokany et al. (2006) and determined that the Saatchi et al. (2011) equation results in higher estimates of belowground biomass for very small trees (<20cm dbh) but then results in lower (more conservative) estimates of belowground biomass for medium and large trees. This approach is more conservative than the commonly used Mokany equation and regardless comes from a valid source.

Non-tree Carbon Stocks

The BioREDD+ program used published literature from Panama, Costa Rica, and Peru to develop a relationship between the biomass of trees >10cm and shrub and liana biomass in the same forests. The program reports the model developed by this data transparently in the document GeoEcoMap Task 12. The VM0006 methodology does not require direct measurement of non-tree biomass and this approach is more in conformance with the VCS principle of Accuracy than if the proponent were to use default data from another location (which would be acceptable under VM0006) so the audit team accepts this approach.

Dead wood Carbon Stocks

The BioREDD+ program estimated the optional dead wood carbon stocks from field plots and later used this field level data with the LiDAR data to develop a predictive model estimating standing dead wood and lying dead wood in a given area based on the measurement of aboveground tree biomass. This approach is innovative and logical in degraded forests where the volume of dead wood is closely related to the amount of recent anthropogenic disturbance from logging which increases dead wood through damage to residual trees and from wood waste and slash left on the site. The actual initial deadwood measurements followed the RAINFOR protocols and included 462 point samples of deadwood spread across the full inventory area. VM0006 requires users to apply a biomass discount factor for standing dead wood due to the assumed loss of some branch biomass. Although the project does not use this approach the project instead includes only bole biomass which is more conservative as this discounts all branch biomass and is acceptable. Three decomposition classes were identified with corresponding reductions in wood density as required by VM0006. Actual measurements were based on diameter and length/height. The audit team has confirmed that the dead wood measurement methods conform to the VM0006 methodology and best practice.

Litter Carbon Stocks

The BioREDD+ program has included litter and stump biomass based on a published model from Sierra et al (2007) relating aboveground biomass to stump and litter biomass. These models are transparently presented in the PD in Table 35.

Soil Organic Matter

The proponent has chosen to conservatively exclude soil organic matter, as is permitted by the methodology. The audit team agrees this exclusion is conservative as SOM can be expected to be lower in the post deforestation/degradation degraded agriculture and degraded forest classes as compared to the intact forest.

Other Inputs and Parameters

The BioREDD+ program used a more conservative carbon fraction (CF=0.485) in estimation of forest and non-forest carbon stocks, than is referenced in VM0006 (CF=0.5) which is in conformance with the VCS principle of Conservativeness.

The proponent's calculation of plot level carbon stocks is transparently reported in GeoEcoMap Task 12 and conforms both to the VCS requirements and VM0006 v2.1.

<u>Sampling Approach with LiDAR</u>

The BioREDD+ program reports on the LiDAR methods in GeoEcoMap Task 8 & 9. Dr. Sassan Saatchi, the principal of GeoEcoMap is a global authority on the usage of LiDAR for remote estimation of forest carbon stocks and has used this technology and other remote sensing approaches to produce both regional and global maps of forest carbon stocks. The BioREDD+

program used 49 LiDAR transects to sample 83,000 hectares of forest within the eight BioREDD+ projects. Field inventory plots described above were located within LiDAR plots and served to calibrate and validate the LiDAR model. Each LiDAR transect was > 1,000 ha. The proponent uses 1 hectare permanent field sampling plots for calibration and validation of the LiDAR. This follows the recommendation of Asner and Mascaro (2014) with regard to using 1 hectare plot size for field plots, which the paper indicates were able to reach 90% agreement on carbon density estimations based on a large sample of 884 one hectare plots re-measured using LiDAR. The proponent also appropriately ensured randomness in the LiDAR transects by using randomly located central points for each transect and the direction of travel of the transect was also randomized ensuring representative coverage of the different forest and non-forest cover types. The LiDAR enables a high degree of accuracy in sampling with vertical accuracy of height (which is used to estimate carbon stocks) 25cm at 95% CI.

Once the LiDAR data was obtained, GeoEcoMap tested multiple forms of allometric model using different input values and finally selected mean Top Canopy Height (TCH) as the primary input type based on the parsimonious nature of this model and its similar performance to other tested models. The model was validated against approximately 1/3 of the ground plots.

In summary the methods used for the LiDAR estimation of biomass values follow best practice as defined in published scientific literature and conform to the rules of the VCS, the VT0005 tool, and VM0006 v2.1.

<u>Uncertainty and Error Propagation</u>

Summary of Error Propagation Approach

The proponent acknowledges the uncertainty inherent in carbon estimation using complex products with multiple input sources including input data, models, and other error sources. The proponent rightly acknowledges limitations of models and that residual noise is inevitable due to inevitable errors inherent in ground measurements, remote sensing imagery and processes, and statistical models. As a result the proponent uses a bootstrapping (resampling without replacement) approach to evaluating uncertainty and justifies this approach. Bootstrapping assumes that the observed data represents only one of many possible realizations of data and reconstructs a large number (1,000 in this case) of alternate realizations based on random resampling of the residuals, which serves to bracket the range of unobserved values. The proponent provides appropriate academic reference for the bootstrapping approach (Efron and Tibshirani, 1993). It is also noted by the audit team that Dr. Sassan Saatchi, who led the estimation of forest biomass including field measurements, LiDAR sampling, and remote sensing, and error propagation, is considered a foremost global authority on this approach and has produced significant published literature representing the state of the art.

Measurement Errors

The forest carbon stocks identified in the project do not come directly and only from the plot level measurements of aboveground biomass. The plot level data rather serves to calibrate and validate the AGB estimated by a model developed for the LiDAR sampling. The proponent used 30 plots for calibrating the actual LiDAR model (which estimates AGB from top canopy height per pixel—see below), with 15 plots retained for validation of the model. This sampling

intensity/approach was based on previously published methods from Asner and Mascaro (2014) which is considered among the state of the art approaches for using remote sensing data to estimate AGB. The proponent follows the recommendation of Asner and Mascaro (2014) with regard to using 1 hectare plot size for field plots, which the paper indicates was able to reach 90% agreement on carbon density estimations based on a large sample of 884 one hectare plots remeasured using LiDAR. In addition GeoEcoMap used a set of 45 systematically located 0.25 ha plots used to estimate the spatial uncertainty of the LiDAR estimation of biomass.

Three potential sources of measurement error were identified including diameter (D), height (h), and wood density (p). The audit team evaluated the forest inventory across all eight BioREDD+ projects and did find examples of measurement errors with regards to D and h. Examples of errors included i) direct measurement error, for example, when the inventory team failed to measure D fully above the buttress of a buttressed tree, ii) errors from misuse of inventory equation for example when the inventory team overestimated palm heights due to error in usage of the hypsometer, and iii) recording errors, for example when a tree was actually 145cm D but was recorded as 14.5 cm D. The errors were not systematic, yet were observed in each of the 8 (out of 15) 1 hectare permanent plots resampled by the audit team. However it should be noted that the number of individual trees measured in a 1 hectare plot is substantial (650+) so some level of error should be expected. The audit team has determined based on statistical comparison of the subsamples re-measured that these errors were not material in nature and were not biased. Furthermore, the proponent used an error propagation approach to estimate the cumulative impact of these errors following methods in published literature. QA/QC procedures were implemented for the 45 systematic sample plots laid out in a single LiDAR transect. A first forest inventory team measured all trees in each 0.25 ha plot and a second inventory team re-measured 10 randomly selected trees per plot to compare measurements. Errors were assessed through the following methods:

1. Errors and discrepancies with regard to D measurements were collected and biomass per plot was calculated using the selected allometric equations for team 1 and team 2 to assess significance of differences. Of the 429 trees resampled approximately 6-8 depicted great difference in measurement between the two teams. The resulting impact on biomass was both *de minimis* per VCS rules and less than the 1% materiality threshold applicable to this project.

2. Errors in tree height (h) were quantified using the same methods and also impacts on estimated biomass were measured. The project uses the subsample of tree heights (minimum 50 heights per 1 hectare plot) to develop a height-dbh relationship applied at the level of each permanent project area. This is appropriate given the edaphic, phylogenetic, and ecological differences across the BioREDD+ project areas which span the entire Colombian Pacific. GeoEcoMap developed two different height – dbh measurements using the replicated QA/QC measurements and presented the results to the audit team. Although there are some significant differences in tree measurements between the two groups there is nearly no bias observed (0.28m) and the height-dbh models developed are nearly identical and when applied in the allometric equation to estimate biomass across the 45 plots results in a difference of less than 0.5%, below *de minimis* per VCS rules and less than the 1% materiality threshold applicable to this project.

3. Errors associated with wood density (due to different species ID) were calculated and impacts on estimated biomass were measured. Wood density differences as a result of different species identification between the two inventory teams were also insignificant and had an RMSE=0.02 g/cm^3. In general the wood density measurements applied in the BioREDD+ projects are considered more reliable than those typically accepted in VCS projects as the BioREDD+ program used destructive sampling to develop their own wood density measurements per species per project rather than using academic literature sources which are typically quite variable and provide multiple options with greater variety than the (0.02 g/cm^3) figure cited above.

Errors from use of Allometric equation

GeoEcoMap selected the local model developed by Saldarriaga based on a comparison of this allometric model with three other models including two regional models (Saldarriaga 2014, Alvarez et al. 2012) and one commonly used global model (Chave et al. 2014). No significant differences were observed between the models yet the model that provided the lowest average estimate was used. The error in the allometric equation selected was approximately 4% over the 240 trees harvested to develop the equation. The cumulative percent error associated with error from allometric equations and error from measurements is approximately 2% (variable dependent on number of trees per plot), which is below the *de minimis* threshold applied by VCS.

Errors from LiDAR

GeoEcoMap asserts that due to the inherent lack of reliability of ground-based tree height measurement using hypsometer that the project used (and which is common practice) that these should not be considered “true” forest height measurements to compare the LiDAR height estimations too. It is well known and accepted that tree heights in tropical forests are notoriously difficult to estimate accurately due to the dense canopy, and in the audit team’s experience allometric equations which use only dbh as input are often considered preferable to avoid these measurement errors. The audit team agrees with this assertion based on professional experience and experience at the project site. However, in this case as the allometric model used for the LiDAR is based on Top Canopy Height (TCH) height data is important. GeoEcoMap performs a new ground classification of LiDAR point clouds using a random sample of LiDAR scenes and compares this with data provided by the commercial vendor to estimate measurement errors. The difference in the two samples is a result of differences in DEM provided by the commercial vendor and DEM provided through GeoEcoMaps own programming and visual examination. Tree canopy height is evaluated at the 1m pixel level and measurements are evaluated over 2500 pixels and result in 0.032m standard error at this scale. As a result GeoEcoMap concludes LiDAR height measurement error is negligible and can be ignored. The audit team accepts this assertion based on the minimal error, fact that VCS methodologies do not provide requirements at this level of specificity, and the fact that the method represents best practice at this time.

GeoEcoMap uses Top Canopy Height (TCH) measured by the LiDAR strips as the input data for the estimation of biomass. This approach follows best practice in published literature (Meyer et al. 2013; Asner and Mascaro 2014) cited by the proponent.

<u>Land Use Change and Baseline Rate of Deforestation/Degradation</u>

The proponent has justified a methodology deviation to assess historic land use change and the baseline rate of deforestation and degradation over a time period longer than that specified in the VM0006 methodology. VM0006 specifies 15 years whereas the proponent has used a historical reference period of 23 years.

Section 4.3 of the PD describes requested methodology deviations. In this section the proponent has requested an extension of the 15 year time limit for this project. The proponent has requested that the three time periods used to assess the historical reference period are from 23 years, 13 years, and 1 year before the project start date.

The proponent justifies this deviation based on the trade-off between accuracy and conservativeness in project implementation, recognized and endorsed by the VCS in the VCS VVB Manual. Projects and VVBs may accept a less accurate measurement or monitoring technique or result if it is determined that this less accurate approach is more conservative.

Auditor evaluation of the methodology deviation:

The audit team has determined that the methodology deviation is appropriate for this project. Per VCS Standard 3.5.1, methodology deviations are acceptable when they relate to monitoring or measurement and do not negatively impact the conservativeness of the methodology. The deviation clearly relates to measurement of historic deforestation in the reference region in the historical reference period.

The audit team has also confirmed that usage of the longer historical reference period (23 years) is conservative and in some ways may lead to greater accuracy in measurement of historical land use change as compared to a 15 year historical reference period.

1) The proponent asserts that it was infeasible to find quality cloud-free imagery for the reference region and project area for the 15 year period required by the methodology. The audit team finds this assertion credible. The audit team confirmed this in interviews with the remote sensing consultancy, GeoEcoMap, hired to conduct the analysis. Additionally, the project area and broader region is one of the rainiest places on earth with an aseasonal climate leading to persistent cloud cover throughout the year. During the more than one month that the audit team spent in this region of Colombia for this audit and related audits of nearby REDD projects, the audit team did not experience a single day without extensive cloud cover.

2) The proponent demonstrates via historical land cover change analysis that the deforestation and degradation rates increased dramatically between timestep 2 and timestep 3 (2000-2012), as compared to the time period between timestep 1 and timestep 2 (1990-2000). The combined deforestation/degradation rate increased from 6,768 ha/year in the first time period to 8,341 ha/year in the latter time period. This results in a lower baseline deforestation and degradation rate applied to the project area in the baseline scenario as the rate is impacted conservatively by the earlier lower rates.

The audit team confirmed that deforestation/degradation rates increases significantly following the year 2000 via interviews in the field that stakeholders including consejo members, community members, and relevant government officials from the local corporations responsible for local land use management. Following the year 2000, multiple companies came to the consejos and

provided funding and material (chainsaws, etc.) to incentivize increases in logging. These companies were operating illegally in the region.

For the reasons cited above the methodology deviation is accepted by the audit team. Conformance has been demonstrated.

The historical deforestation/degradation analysis demonstrated that deforestation and degradation rates both increased in the 2000-2012 period as compared to the 1990-2000 period. This matches qualitative data gathered by the audit team in interviews with deforestation/degradation agents and community members who confirmed that these rates have been rising over time with the introduction of better logging technology (chainsaws) and increasing demand. The LULC transition types observed during the historical reference also further confirm the baseline scenario as the most significant transitions are from primary forest to degraded forest and from degraded and primary forest to cropland. The deforestation and degradation rates are severe with an annual average deforestation rate of 1.1% and an annual average degradation rate of 2.2%.

The proponent has provided an in depth Spatial Modeling Report v1.11 to describe usage of the spatial model and conformance to the VM0006 requirements. The Spatial Modeling Report describes conformance to each specific step of relevant VM0006 sections, enabling clear evidence of conformance. The proponent has used the IDRISI Land Change Modeller program to develop the transition potentials and end LULC classes for the baseline scenario and emissions. The scarcity factor, which simulates the impacts of resource scarcity (forest scarcity in this case) on agent behaviour is calculated correctly and in conformance with VM0006. Final project and baseline scenario LULC maps are generated for each of the BioREDD+ project areas. Visual assessment of the maps provides evidence that the explanatory variables selected for the LULC transitions were correctly selected. Variables include those with well established relationships to deforestation and degradation patterns globally, and which are reasonable based off observations in the field audits, including:

-slope: audit team confirmed visually that deforestation and degradation is predisposed away from steep slope areas due to difficult access and poor soil quality for agriculture

-distance to urban centers: audit team confirmed that deforestation and degradation is concentrated near population centers as expected

-distance to roads: audit team confirmed in the field that byways along roads are typically deforested and that roads serve as timber conduits

-distance to timber routes and areas of influence: audit team confirmed, that logically, timber is exported from the project site via established timber routes and that degradation is more prominent near these routes due to ease of access. The routes were identified as part of a thorough socioeconomic and timber analysis conducted by Colombian research institutes.

-distance to timber collection centers (centros del copio) and areas of influence: These timber collection centers were also mapped based on the timber analysis study

-distance to rivers and or the ocean: the audit team confirmed that waterways are the primary means of transport for goods, people, and timber in the BioREDD+ projects.

The audit team geospatial expert held an extensive multi-day meeting with the technical consultancies that developed the baseline scenario, remote sensing analyses, LiDAR analyses, and spatial modelling.

7.4 Project Emissions

Section 5.4 of the PD reports on project emissions per VM0006.

Ex-Ante Effectiveness of Project Activities

Project activities fall under program areas coinciding with project activities identified in VM0006 including i) strengthening land tenure status, ii) sustainable land use plans, iii) property demarcation, iv) agricultural intensification, and v) alternative livelihoods. *Ex ante* maximal effectiveness of project activities is reported in Section 5.4.1.9. Adoption rates are identified in Section 5.4.1.10 and vary from 10% to 50% per annum dependent on project activity. The net result is that project activities reach maximal *ex ante* effectiveness at addressing drivers of deforestation in 2023 (90% effective), and drivers of degradation reach maximal effectiveness in 2023 (65% effective). The exercise is inherently hypothetical as efficacy of project activities depends greatly on funding which is uncertain and the audit team views it as such. However, based on stakeholder interviews conducted during the field audits the audit team has confirmed that generally agents of deforestation and degradation feel that the proposed project activities would ameliorate their need to deforest and degrade the forest if fully implemented. As such the audit team finds the 90% and 65% values of effectiveness estimates 10 years after the project start date to be credible if the project is fully implemented. The audit team has confirmed that the effectiveness rates reported in the PD match those in Annex U the accounting model where emissions reductions calculations take place.

Emissions from Project Activities

The PD reports no emissions resulting from implementation of project activities. The audit team detected no evidence that proposed project activities would result in emissions included in the scope of VM0006 for project emissions.

7.5 Leakage

Section 5.5 of the PD reports on leakage which comes from *ex ante* activity shifting leakage as well as *ex ante* market leakage. The proponent calculates leakage cancellation rates correctly according to VM0006 using the appropriate equations. As required by VM0006 8.3.2.1.4 leakage cancellation rates for logging is 100% as it is assumed that domestic demand for wood products and timber is inelastic.

Definition of Leakage Belts

The proponent describes the methods for defining the leakage belts in Section 5.5.2.3 of the PD. The methods were also described in detail by the consultant who conducted the geospatial

analyses to determine the leakage belts. These analyses followed the requirements of VM0006 and a 12,392 ha leakage belt has been defined. The leakage belts are built upon the assumption of an area of influence around centro del copios (logging storage centers) and that leakage belts occur where these areas of influence extend beyond the project boundary. In response to previous observations by the audit team that the leakage degradation appeared to be occurring outside the area of influence of the centros del copios, the proponent increased the leakage belt size several hundred percent to demonstrate conformance both with the VM0006 requirements and the VCS principle of conservativeness. The leakage belt as defined in the PDD has both a parsimonious shape surrounding most of the project area, and is focused on areas near the centros del copios which are logical places for leakage to occur such as near rivers and other timber transport routes. Conformance has been demonstrated.

Market Leakage

Section 5.55 of the PD indicates that a discount factor of 0.2 was applied to the net change in carbon stocks in the project area to account for market leakage per VCS requirements. The audit team confirmed this value was used in the accounting model.

7.6 Summary of GHG Emission Reductions and Removals

Section 5.6 of the PD summarizes *ex ante* GHG emissions reductions based on the requirements of the VM0006 methodology. Conformance has been demonstrated. The proponent has included the summary table required by VM0006 for calculated NERs (Net Emissions Reductions). NERs are transparently reported as 14,961,575tCO2e over the project crediting period. All 11 terms of equation 105 from VM0006 are reported transparently in the table and match with the final validated Accounting Model.

Section 5.6.4 correctly calculates the estimated VCU issuance as 13,031,611 VCUs over the project crediting period.

The PDD has transparently reported all assumptions data used in the calculation of VCUs. All data sources are either primary data or are derived from published scientific literature, as described throughout this report in each relevant section. The audit team has reviewed the data and parameters available at validation tables in the PD and confirmed that the appropriate data and parameters were utilized in quantification of VCUs.

The proponent has demonstrated conformance with the VM0006 methodology and the VT0005 tool in the quantification and summarization of GHG reductions and removals, as described throughout this report.

7.7 Climate Change Adaptation Benefits (GL1)

The project is not seeking recognition for exceptional climate change adaptation benefits.

8 COMMUNITY

8.1 Net Positive Community Impacts (CM2)

CM2.1

The project provides a detailed assessment of project positive impacts on stakeholders using the CCBA recommended theory of change methodology. The assumptions of changes in well-being are substantiated in the PD and were supported by stakeholders interviewed during the field audit. No interviewed stakeholders expressed a preference for the baseline community scenario which is expected given the substantial investment the project represents in the project area. The assessment of impacts is organized around each of the program areas which project activities are divided into. Conformance is demonstrated.

CM2.2

The PD identifies mitigation measures for negative impacts. The primary potential negative impact is inequitable benefit distribution. The responding mitigation measure is the designation of Fondo Accion as the responsible party for benefit distribution. Fondo has demonstrated experience in implementation of large complex projects including REDD projects. No other potential negative impacts are identified. The audit team as well cannot identify any other potential negative impacts given that logging is not preferred by the stakeholders, is minimally profitable, and holds no cultural importance. The PD correctly notes that the grievance mechanism will serve to detect any unanticipated negative impacts. The project is also following the World Bank safeguards and SBIA guidelines to mitigate any other potential negative impacts.

CM2.3-2.4

The PD adequately evaluates impacts to community HCVs and correctly assumes that the project activities will support these HCVs given that the project will serve to protect the forest resources which generate the HCVs. Community HCVs are entirely dependent upon maintenance of forest cover and intact forest. The audit team confirmed in interviews with participating communities that they saw this as one of the major benefits of the project, that it would help them protect their watersheds and the fish the rely upon heavily for both food and income. Conformance has been demonstrated.

8.2 Negative Offsite Stakeholder impacts (CM3)

CM3.1-CM3.3

Section 6.2 of the PD evaluates potential negative offsite stakeholder impacts. The primary potential negative impacts are from leakage impacting resources in surrounding consejos, loss of access to commodities from logging trucks (which deliver commodities such as food as well as removing timber) visiting the region less, and loss of revenue for corteros. The PD asserts that these negative impacts will be offset by alternative livelihood activities which serve to manage potential leakage. Impacts will also be offset by development of agricultural commodity production chains which can serve to maintain the flow of goods into the project area, and finally the same project activities will serve to provide alternative livelihoods for corteros. Corteros

interviewed nearly universally stated that they would prefer other sources of employment other than logging and that they felt that the risk of leakage was low given the long distances one would have to travel to log on another consejo and the fact that this would violate the territorial integrity of a sovereign consejo. Conformance is demonstrated.

8.3 Exceptional Community Benefits (GL2)

GL2.1

The project demonstrates conclusively through national law establishing the consejos that community members hold right of use. This was confirmed through review of the legislation establishing the consejo/resguardo system as well as meetings with INCODER, the government agency responsible for administration of consejos.

GL2.2

The project demonstrates that both short term and long term net positive well-being for smallholders is likely based on the existence of a broad array of impact indicators in the monitoring plan which will serve to detect this, and project activities which are explicitly directed at smallholders. With the exception of a minority of business people in some of the larger towns in the consejos, the vast majority of the population practise some sort of smallholder agriculture. Conformance is demonstrated.

GL2.3

The project has identified risks and benefits from participation in the project using a participatory approach. The project is innovative in that the communities are the proponents and as such have taken a great deal of responsibility in project design and are well informed about potential risks as verified by the audit team through interviews and documentation from a series of sensitization exercises focusing on this.

GL2.4-GL2.5

Vulnerable groups identified include women and the poor. It is acceptable that no vulnerable groups based on cultural identity were identified given that the consejos are ethnically and culturally quite homogenous. Several impact monitoring indicators are designed to measure participation of women and the poor. Women were present in the governing boards of each consejo visited. Project activities are targeted towards corteros which tend to be the poorest members of the consejos. This also will lead to the most effective reductions in emissions.

GL2.6-GL2.7

The benefit sharing mechanism is described with sufficient detail and it was designed with input from the communities. Additionally, information about the costs, benefits, and risks has been transparently shared with community members as the consejos themselves have to approve the project implementation budgets and select project activities.

GL2.8

The community members are fully involved in project design and the consejos have to approve all major aspects of project development and implementation. The communities are the proponents and as such the final authority in the project rests with them.

GL2.9

The community members are fully involved in project design and the consejos have to approve all major aspects of project development and implementation. The communities are the proponents and as such the final authority in the project rests with them.

The project has demonstrated conformance with the Exceptional Community Benefits Gold status indicators.

9 BIODIVERSITY

9.1 Net Positive Biodiversity Impacts (B2)

B2.1

The project uses a biodiversity problem flow model (Richards and Panfil, 2011), a CCBA recommended methodology, and successfully through a theory of change approach identifies likely changes in biodiversity. The assessment is comprehensive and thoughtfully executed with appropriate academic references and conforms to the audit team's understanding from the field audit.

B2.2

The *ex-ante* impacts of the project are positive for biodiversity as the project will serve to reduce deforestation and degradation. Conservation of intact tropical forest will serve to maintain the biodiversity reliant on that forest ecosystem. The proponent has provided appropriate scientific literature from the region to support both that the biodiversity of the region has not been fully catalogued and that biodiversity is directly related to forest cover for the majority of species.

B2.3

Appropriate measures are identified to mitigate negative impacts on biodiversity which are expected to be minimal. The primary risk to biodiversity identified by the project is a potential increase in fishing pressure as some of the Special Purpose Vehicles (SPV) designed to connect consejo members to value chains, may focus on marketing of fish. That said, the project, through conservation of the watershed, acts to improve the fish habitat over the baseline which somewhat mitigates this. Additionally, to mitigate this risk, the project has committed to training community members in the usage of appropriate fishing gear and techniques to maintain populations by respecting species life cycles and area closures. The proponent has provided a corresponding annex (Annex BA) demonstrating this commitment, which shall be assessed at future verifications.

B2.4

The PD demonstrates that no HCVs will be negatively impacted by the project with specific reference to the identified HCVs. The only potential HCV which could be negatively impacted is fisheries for the reasons stated above, however the proponent has identified mitigation measures which will be assessed at future verification audits.

B2.5-B2.6

The project warrants that no invasive species will be used in the project. The agricultural species proposed for use by the project are all either pre-existing in Colombia or in the project area and are not invasive.

B2.7

The PD warrants that no GMOs will be used. The audit team found no evidence to contradict this assertion and this will be verified in future field audits.

B2.8

The PD warrants that only organic fertilizers and pest control methods will be utilized by the project since these are the methods community members are familiar with. The project will not promote reliance on agricultural chemicals but if any are used safe operating procedures will be provided for future verification. The field audit confirmed that project participants wish to use organic agricultural methods. Conformance to this will be assessed in future verification audits.

B2.9

SOPs for waste product storage and disposal will be developed during the project implementation phase. This is acceptable for validation since the specific activities that would generate waste have not yet been identified to a great deal of certainty and any storage and disposal procedures at this point would be hypothetical to the point of uselessness. Conformance shall be assessed at future verifications but this is acceptable for validation.

9.2 Negative Offsite Biodiversity Impacts (B3)

B3.1-B3.3

The major potential source of negative offsite biodiversity impacts comes from leakage of logging to adjacent areas. The project attempts to mitigate this through providing alternative income generation activities for current agents of deforestation/degradation which would enable them to pursue alternate livelihoods. Interviews with community members confirmed that they felt the risk of leakage was low as it was considered generally, but not always, infeasible to log outside of their consejo territory. Consejo boundaries are frequently, but not always defined as ridge lines. Given the absence or roads and draft animals, logs are usually cut and floated out during the wet season for areas in swamp forest (guandal), or they are cut and hauled out by hand. The audit team agrees that it would be extremely difficult to haul timber by hand through the dense forest from adjacent consejos so the risk of leakage is likely quite low. Consejo members also confirmed that they currently do not see a problem of individuals from other consejos entering their territory to log as the repercussions could be significant given that consejos operate as

semiautonomous territories. Several positive offsite benefits for biodiversity could be expected from the project including soil conservation, reduced siltation of downstream aquatic resources, enhanced fisheries, support for migratory populations of animals, etc.

PD Section 7.1.1 contains the assertion that the project will only support fishing activities which promote sustainable fishing practices and which maintain fish stocks for the long term. The PD references Annex BA for this purpose. Annex BA contains a range of socioeconomic and ecological studies on the impacts of artisanal fishing practices in Bahia Malaga and Bajo Calima as well as studies for the sustainable commercialization of fishing resources such as piangua, and resolutions by the participating consejos with regards to sustainable fishing practices. Much of the studies are derived from other BioREDD+ program activities related to sustainable fisheries which will be leveraged by the REDD project. The data collected and the promotional activities around sustainable fisheries are sufficient for validation to demonstrate that the project is likely to have a neutral to minimal impact on fisheries. In combination with the unequivocal positive impacts on terrestrial biodiversity from forest conservation this is sufficient for validation to demonstrate likely net positive biodiversity impacts.

9.3 Exceptional Biodiversity Benefits (GL3)

The project is not seeking gold status for exceptional biodiversity benefits.

10 MONITORING

10.1 Description of the Monitoring Plan (CL4, CM4 & B4)

Monitoring procedures, roles and responsibilities are described sufficiently in Section 8 of the methodology and associated annexes. Section 8.1.1 clearly lays out the organization of monitoring roles and is in conformance with the anticipated plan expressed to the audit team during the field audit and afterwards by the consejos and Fondo Accion. Fondo Accion, as project implementation partner, is expected to liaise with communities and external partners such as funders and consultancies to oversee all aspects of project implementation and monitoring. Fondo Accion, as described elsewhere in this report has demonstrated experience with management of large and complex projects including REDD projects. Fondo Accion's qualifications include implementation of a similar large REDD project in Colombia, management of a $44 million USD endowment, and implementation of multiple large programs.

Monitoring will be conducted by biodiversity monitoring experts, climate monitoring experts, and community monitoring experts. All experts are anticipated to come from external consultancies to be hired by Fondo Accion in collaboration with the consejos. Consejo members will also participate heavily in monitoring as they have in project development.

Section 8.1.2-8.1.3 of the PD describes the data storage and management procedures. Project liaisons to be hired by Fondo Accion are responsible for generating, cataloguing and storing data collected in project implementation and monitoring. Data shall be stored through Fondo Accion's ISO certified management system. The audit team evaluated Fondo Accion's system while in Bogota and confirmed it to be adequate for storage of data for two years longer than the crediting period as required by VCS. Fondo Accion receives frequent funding from USAID and other financing institutions and is subject to periodic audits. The audit team has confirmed at the time

of validation that documents and data have already been transferred to Fondo Accion, and that Fondo is undergoing training with BioREDD+ staff to provide useful contextual knowledge for data.

The PD establishes that the project liaision is responsible for development of QA/QC protocols which is acceptable given that new data has not been generated yet. Additionally the PD establishes that the community, biodiversity, and remote sensing experts are responsible for an internal audit of approximately 10% of the measurements for data and parameters monitored, using a risk based assessment for selection. As data is collected, implementation of this will be evaluated in future verification audits.

Remote sensing procedures, including LiDAR, for future monitoring will follow the GeoEcoMap Task 14 monitoring plan which has been reviewed in depth by the audit team and evaluated over several meetings with GeoEcoMap and EcoPartners. The monitoring plan clearly identifies the data that shall be monitored, relevant SOPs, and responsibilities for collection of data. The monitoring plan relies on future usage of the VT0005 tool for generating biomass measurements of different LULC classes with LiDAR, which is in conformance with the VCS. The monitoring plan provides detailed procedures for LiDAR flights, processing, and usage of the models generated during the project development, and corresponding updating of carbon stocks of primary forests and degraded forests. LiDAR flights will only be flown at baseline updates, which is acceptable. Carbon stock changes during verifications between baseline updates will be calculated based on activity data (transitions from one LULC to another) such as conversion from primary forest to degraded forest or primary forest to agricultural land. As it is possible that some small scale selective logging occurring in primary forest LULCs could remain undetected until a baseline update when LiDAR would detect this. This would lead to temporary overcrediting during these verification events, which would then be aligned during a baseline update. Due to an NCR issued by the audit team around this issue the proponent has built into the monitoring procedures a model from a peer reviewed publication (Pearson et al 2014) which assumes a fractional loss of carbon stocks in the Primary Forest class related to the fractional change represented by the transition from the Primary Forest LULC to the Degraded Forest LULC, as determined by remote sensing. This approach leads to conservativeness during these verifications between baseline updates, and accuracy at the time of baseline updates when LiDAR will be used to update emissions factors and the “true” quantity of degradation in the Primary Forest LULC will then be known. At baseline updates the carbon stock value applied to Primary Forest LULCs and Degraded Forest LULCs will be updated using LiDAR data.

Detailed requirements are included in the Task 14 monitoring plan for all data sources, data processing, and data archiving. The Rainforest Alliance geospatial consultant and the lead auditor have reviewed these processes in depth and held multiple meetings with GeoEcoMap and EcoPartners. The final monitoring plan is expected to lead to results likely more accurate than most VCS REDD projects as it leverages state of the art technology.

The data and parameters available at validation are reported in Section 8.2 of the PD. The audit team has reviewed these data and parameters and confirmed that the required parameters from the VM0006 methodology are present and appropriate sources, descriptions, units, values, and justifications have been reported. The list is exhaustive and sufficiently detailed to enable replicable analyses in the future.

Data and parameters monitored are reported in Section 8.3 of the PD and are appropriately separated into climate, community, and biodiversity sections. The audit team has reviewed the climate section and confirmed that the appropriate data and parameters required by VM0006 have been reported.

A broad range of qualitative and social data and parameters are identified which will be used to demonstrate the net positive community and biodiversity benefits during project implementation. The monitoring indicators correspond directly to the theory of change model that has been presented and the anticipated project activities. Indicators are designed to detect and measure:

-community involvement and participation including of women and vulnerable groups;

-efficacy and implementation of training and capacity building;

-benefit distribution;

-adoption of agricultural interventions;

-employment;

-income generation;

-strengthening of governance;

-effectiveness of ongoing consultation and grievance mechanisms

A number of biodiversity indicators have also been identified and are designed to detect and measure:

-changes in forest cover;

-changes in forest biomass;

-tree species dynamics;

-populations of rare, endemic, and endangered species;

-health of mangrove swamps;

-hunting pressure

The monitoring plan and monitoring indicators developed for the project are sufficient, detailed and likely to be able to measure meaningful changes in climate, community, and biodiversity impacts over time. The plan demonstrates conformance to the VCS and CCB Standards.

10.2 Non-Permanence Risk Analysis

The proponent has submitted the Non-Permanence Risk Report v1.9, dated 10 April 2015 in Annex AU. The audit team has reviewed the report and determined that it conforms to the relevant VCS requirements. The risk rating is 14% and has been correctly calculated and VCUs have been discounted appropriately.

Risk Factor	Self Assessment Risk Rating	Findings (including description of any mitigation activities as required per VCS AFOLU Non-Permanence Risk Tool Section 2.1.2.2)	NCR/OBS
Internal Risks (VCS AFOLU Non-Permanence Risk Tool Section 2.2):			
Project Management: Shall be assessed using Table 1 of VCS AFOLU Risk Tool.	2	a) 0, justified. The proponent has justified that the GHG credits are not based on non-native species. The credits come from protection of native forest b) 0, justified. No credits have been previously issued. c) 2, justified. Proponent acknowledges the current management team does not have this entire skills set d) 0, justified. The management team maintains a presence in the project area.	
Financial viability: Shall be assessed using Table 2 of VCS AFOLU Risk Tool.	0	d) 0, justified. The project has justified that the expected cash flow breakeven point is less than four years from the current risk assessment. The proponent has provided a detailed budget and cash flow model projecting cash flow for twenty years from validation. The cash flow model demonstrates that the project will break even in year 2, which corresponds to 2016, or slightly over one year from the current risk assessment with the validation taking place in 2015. The audit team notes as well that for the first two years of project implementation from the start date in August 2013 the project was funded completely through the BioREDD+ using funds from USAID which covered all project development and validation costs. These funds continue to this day. As such 2015 is the only year in the project lifetime in which the project is expected to have costs greater than revenues. The financial model depends heavily on funding from a single large investor. Although this funding is not yet secured, this is immaterial for the validation audit as the cash flow model is based on projected revenues and expenses.	

		The audit team has reviewed the inputs to the model in depth. The audit team tested individual calculations and formulae in the model and found no errors. The assumptions for values of carbon credits sold are very conservative (less than 75% of recent market value for VCS+CCB REDD credits). The costs expected in the model are projected based on detailed evaluations of project activities undertaken in a participatory manner with the communities (which are the proponents) and external organizations such as BioREDD+ and Fondo Accion which have demonstrated project management and implementation experience. As such the audit team considers the costs inputs to be credible. The monitoring costs form the largest single expense and appear conservative to the audit team based on their expert opinion. In summary, the financial model is based on sound reasoning and conservative inputs and demonstrates that the project should reach breakeven less than four years from the current risk assessment. h) 0, justified. The project has secured more than 80% of the funding needed to cover the total cash out before breakeven.	
Opportunity cost: Shall be assessed using Table 3 of the VCS AFOLU Risk Tool.	-6	f) -4 justified. The proponent appropriately asserted that the project activity is expected to be more than 50% more profitable than the most profitable alternative scenario (continuation of illegal logging). The proponent has provided a cash flow model and an opportunity cost analysis to justify this selection. The project activity includes a broad range of income sources including revenues from sales of carbon credits, investment from carbon credit investors which have provided loans for project implementation to be repaid by transfer of credits, improved agricultural production and sales, etc. The sum of these activities is substantially more valuable than the revenues from continued illegal logging. The proponent has calculated the NPV of the project activity to be more than 100% greater than the NPV of the alternative scenario, using a discount rate of 10%, which is appropriate. h) -2, justified. The proponent has	

		successfully justified the project longevity score of 0 and that the project longevity is 60 years. Under Law 70, which gives the consejos legal title to the land in the consejo and autonomous governance rights, decisions of the consejo General Assemblies are considered legally binding. As the General Assembly has voted to approve the PD and project implementation plan (REDD Plan), which describe maintenance of the project area carbon stocks for 30 years after the end of the crediting period, the assertion that the project longevity is 60 years is justified.	
Project longevity: Shall be assessed using Table 4 of the VCS AFOLU Risk Tool.	15	The proponent has correctly calculated the project longevity as a score of 15, using the crediting period as the project longevity. 30-(30/2)=15	
Total Internal Risk: Shall be calculated using Table 5 of the VCS Risk Tool.	11	The proponent has correctly calculated the total internal risk score as 11.	
External risks (VCS AFOLU Non-Permanence Risk Tool Section 2.3):			
Land and resource tenure: Shall be assessed using Table 6 of the VCS Risk Tool.	0	b) 2, justified. The proponent has appropriately selected this risk score as the mangrove areas of the project area are considered to be held under *uso publico* although the proponent holds right of use and resource access rights. c) 0, justified. The consejo right to own the project area is enshrined in the Colombian Constitution. There are no land tenure conflicts. d) 0, justified. The consejo right to own the project area is enshrined in the Colombian Constitution. There are no land ownership conflicts. f) -2, justified. The consejo is required by law to manage the project area sustainably and has further approved the REDD Plan through a General Assembly vote which is legally binding.	
Community engagement: Shall be assessed using Table 7 of the VCS Risk Tool.	-5	a) 0, justified. The General Assembly has voted to participate in the project and FPIC has been demonstrated. The General Assembly is open to the entire population of the consejo and as such all community members have been consulted. b) 0, justified. No households outside the project boundary are reliant on the project area. The consejo has clearly enforced boundaries and individuals outside the	

		consejo are not permitted to use resources in the consejo. c) -5, justified. The project is seeking simultaneous validation under the CCB Standards which demonstrate net positive community benefit.	
Political risk: Shall be assessed using Table 8 of the VCS Risk Tool.	-2	. b) 4, justified. The proponent has correctly calculated the governance score as -0.32 using the most recent data. f) -2 justified. Colombia is implementing REDD+ readiness activities with the World Bank FCPF.	
Total external risks: Shall be calculated using Table 9 of the VCS Risk Tool.	0	The proponent has correctly calculated the total external risk score as 0.	
Natural Risks (VCS AFOLU Non-Permanence Risk Tool Section 2.4):			
Natural risks: Shall be assessed using Table 10 of the VCS Risk Tool.	3	The proponent uses the DesInventar online disaster tracking system which covers Colombia, Venezuela, Ecuador, Peru, and Bolivia. The DesInventar system is supported by the UN Office for Disaster Risk Reduction and the UN Development Programme have endorsed the system for tracking and recording disasters and the system is a valid resource for assessing natural risks in the project area. The system has files dating back to 1938 for some risk types. The proponent has appropriately submitted to the audit team the output of the analyses using Desinventar. <u>Fire</u>: 0, justified. The proponent has selected an insignificant risk rating for fire with likelihood between 50 and 100 years. The selection is justified based on the DesInventar system recording no incidents of forest fires in the project area and immediate region during its tracking period. The audit team considers this selection justified based on the field audit. The project area lies in the Colombian Pacific ecoregion which is composed entirely of wet tropical forest and is one of the rainiest places on earth. The audit team saw no evidence of forest fires while spending more than one month traveling through the region. Pest and Disease Outbreaks: 0, justified. The proponent has selected an insignificant risk rating for pests and disease outbreaks with likelihood between 50 and 100 years. The selection is justified based on the DesInventar system recording no incidents of	

		significant outbreaks in the project area and immediate region during its tracking period. The audit team considers this selection justified based on the field audit. The project area lies in the Colombian Pacific ecoregion which is composed entirely of wet tropical forest and is one of the most biodiverse forest regions on earth. The high species diversity of the project area reduces the risk that pest outbreaks would impact a significant proportion of the biomass in the forest as most tropical forest pests are species or genus specific. The audit team saw no evidence of pest outbreaks while spending more than one month traveling through the region. <u>Extreme Weather:</u> 2, justified. The proponent has selected an appropriate rating for extreme weather with an insignificant impact every 10 years or less. The proponent identifies flooding as the primary extreme weather risk. The audit team concurs that flooding is an extreme weather risk. The audit team also believes, based on observations in a small part of the project area that downbursts and strong localized wind events are present during thunderstorms. The audit team saw a small area of the project (approx. 20 hectares) that had been impacted by a wind event. Interviews with community members confirmed that these wind events due occur but are quite localized. The audit team saw no evidence of blowdowns or significant loss of forest carbon stocks while flying over the project area and the broader region. Despite the proponent not identifying the risk of wind events, given the large scale of the project area and the minor impacts observed in a localized area the audit team considers the selection to be justified. No mitigation factor is selected. <u>Geologic Events:</u> 1, justified. The proponent selects insignificant impacts with likelihood every 10 to less than 25 years. This is based on the DesInventar data which demonstrates that earthquakes occur approximately that frequency. The audit team concurs that these events are unlikely to cause significant impacts to forest carbon stocks. The project area is primarily on areas with gentle slopes which greatly reduces the risk of landslides and damage from earthquakes to forest. No mitigation factor is selected.	

11 VALIDATION CONCLUSION

The project has clearly conformed to the validation criteria for the VCS Version 3 and the CCB Standards Third Edition standard requirements, without qualification or limitation. Based on the PDD and the extensive field audit the audit team concludes that the project is likely to achieve the estimated GHG reductions and community and biodiversity benefits expected.

Based on Project's conformance with audit criteria, the auditor makes the following recommendation:		
Final Report Conclusions		
☒	Validation approved: *NCR(s) closed*	
☐	Validation not approved: *Conformance with NCR(s) required*	
Draft Final Report Conclusions		
☐	Validation approved: *No NCRs issued*	The Project Proponent has 7 days from the date of this report to submit any comments related to the factual accuracy of the report or the correctness of decisions reached. The auditors will not review any new material submitted at this time.
☒	Validation not approved: *Conformance with NCR(s) required*	
Draft Report Conclusions		
☐	Validation approved: *No NCRs issued*	The Project Proponent has 30 days from the date of this report to revise documentation and provide any additional evidence necessary to close the open non-conformances (NCRs). If new material is submitted the auditor will review the material and add updated findings to this report and close NCRs appropriately. If no new material is received before the 30 day deadline, or the new material was insufficient to close all open NCRs the report will be finalised with the NCRs open, and validation and/or verification will not be achieved. If all NCRs are successfully addressed, the report will be finalised and proceed towards issuance of a assessment statement.
☒	Validation not approved: *Conformance with NCR(s) required*	

CCB STANDARDS CRITERIA CHECKLIST:

GENERAL SECTION **CONFORMANCE**

G1. Project Goals, Design & Long-Term Viability (Required)	YES X__	NO __
G2. Without-Project Land Use Scenario/Additionality (Required)	YES X__	NO __
G3. Stakeholder Engagement (Required)	YES X__	NO __
G4. Management Capacity (Required)	YES X__	NO __
G5. Legal Status and Property Rights (Required)	YES X__	NO __

CLIMATE SECTION

CL1. Without-project Climate Scenario	YES X__	NO __
CL2. Net Positive Climate Impacts (Required)	YES X__	NO __
CL3. Offsite Climate Impacts (“Leakage”) (Required)	YES X__	NO __
CL4. Climate Impact Monitoring (Required)	YES X__	NO __
GL1. Climate Change Adaptation Benefits (OPTIONAL)	YES __	NO X__

COMMUNITY SECTION

CM1. Without-project Climate Scenario (Required)	YES X__	NO __
CM2. Net Positive Community Impacts (Required)	YES X__	NO __
CM3. Offsite Community Impacts (Required)	YES X__	NO __
CM4. Community Impact Monitoring (Required)	YES X__	NO __
GL2. Exceptional Community Benefits (OPTIONAL)	YES X__	NO __

BIODIVERSITY SECTION

B1. Without-project Biodiversity Scenario	YES X__	NO __
B2. Net Positive Biodiversity Impacts (Required)	YES X__	NO __
B3. Offsite Biodiversity Impacts (Required)	YES X__	NO __
B4. Biodiversity Impact Monitoring (Required)	YES X__	NO __
GL3. Exceptional Biodiversity Benefits (OPTIONAL)	YES __	NO X__

12 APPENDIX 1. NONCONFORMANCES

1.1 Nonconformance evaluation

Note: A non-conformance is defined in this report as a deficiency, discrepancy or misrepresentation that in all probability materially affects carbon credit claims. Non-conformance Request (NCR) language uses "shall" to suggest its necessity but is not prescriptive in terms of mechanisms to mitigate the NCR. Each NCR is brief and refers to a more detailed finding in the appendices.

NCRs identified in the Draft Report must be closed through submission of additional evidence by the Project Proponents before Rainforest Alliance can submit an unqualified statement of conformance to the GHG program.

VCS Nonconformity Reports (NCRs)

NCR#:	01/14
Standard & Requirement:	VCS VM0006 Applicability Conditions Section 4.1.1, Bullet 4
Report Section:	Section 6.2
Description of Non-conformance and Related Evidence:	
The VM0006 methodology requires that the LULC change analysis in the reference region during the historical reference period contain "No images older than 15 years [before the project start date]". All 8 BioREDD projects fail to comply with this criterion as the first image used is typically 23-24 years before the project start date.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	VCS Erratum & Clarifications statement for VM0006 Carbon Accounting for Mosaic and Landscape-scale REDD Projects, v2.1, 10 December 2014 BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 Annex U, Collection of GeoEcoMap tasks, including Tasks 1-16

Findings for Evaluation of Evidence:	The VCS has released additional clarification for the interpretation of the VM0006 v2.1 methodology applicability conditions. Specifically, the VCS has officially removed the below requirements from the applicability conditions of the methodology: Accurate data on past LULC and forest cover in the reference region must be available for at least three points in time, with at least one remote sensing image (ie, data) from 0-3 years before the project start date, at least one image from 4-9 years before the project start date, and at least one image from 10-15 years before the project start date. No images older than 15 years can be used for the historical reference period. The classification accuracy of LULC and forest cover maps must be greater than 70%. The VCS has acknowledged that these two requirements fall under data requirements for determining the baseline scenario and are therefore inappropriate for the applicability conditions section of the methodology. As a result, the deviation from the requirement can be interpreted by the audit team as a methodology deviation. Section 4.3 of the PD describes requested methodology deviations. In this section the proponent has requested an extension of the 15 year time limit for this project. The proponent has requested that the three time periods used to assess the historical reference period are from 23 years, 13 years, and 1 year before the project start date. The proponent justifies this deviation based on the trade-off between accuracy and conservativeness in project implementation, recognized and endorsed by the VCS in the VCS VVB Manual. Projects and VVBs may accept a less accurate measurement or monitoring technique or result if it is determined that this less accurate approach is more conservative. <u>Auditor evaluation of the methodology deviation:</u> The audit team has determined that the methodology deviation is appropriate for this project. Per VCS Standard 3.5.1, methodology deviations are acceptable when they relate to monitoring or measurement and do not negatively impact the conservativeness of the methodology. The deviation clearly relates to measurement of historic deforestation in the reference region in the historical reference period. The audit team has also confirmed that usage of the longer historical reference period (23 years) is conservative and in some ways may lead to greater accuracy in measurement of historical land use change as compared to a 15 year historical reference period. 1) The proponent asserts that it was infeasible to find quality cloud-free imagery for the reference region and project area for the 15 year period required by the methodology. The audit team finds this assertion

	credible. The audit team confirmed this in interviews with the remote sensing consultancy, GeoEcoMap, hired to conduct the analysis. Additionally, the project area and broader region is one of the rainiest places on earth with an aseasonal climate leading to persistent cloud cover throughout the year. During the more than one month that the audit team spent in this region of Colombia for this audit and related audits of nearby REDD projects, the audit team did not experience a single day without extensive cloud cover. 2) The proponent demonstrates via historical land cover change analysis that the deforestation and degradation rates increased dramatically between timestep 2 and timestep 3 (2000-2012), as compared to the time period between timestep 1 and timestep 2 (1990-2000). The combined deforestation/degradation rate increased from 6,768 ha/year in the first time period to 8,341 ha/year in the latter time period. This results in a lower baseline deforestation and degradation rate applied to the project area in the baseline scenario as the rate is impacted conservatively by the earlier lower rates. The audit team confirmed that deforestation/degradation rates increases significantly following the year 2000 via interviews in the field that stakeholders including consejo members, community members, and relevant government officials from the local corporations responsible for local land use management. Following the year 2000, multiple companies came to the consejos and provided funding and material (chainsaws, etc.) to incentivize increases in logging. These companies were operating illegally in the region. For the reasons cited above the methodology deviation is accepted by the audit team. Conformance has been demonstrated.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	02/14
Standard & Requirement:	VCS VM0006 Applicability Conditions Section 4.1.1, Bullet 6
Report Section:	Section 6.2
Description of Non-conformance and Related Evidence:	
The VM0006 methodology stipulates that this methodology shall not be used on project areas containing organic soils or peatlands. The PD does not present evidence to demonstrate that all areas containing mangroves comply with this applicability condition. Mangrove ecosystems typically occur on soils with high organic matter content, as well as on peatlands. Based on visual evidence collected during the field audits the audit team expects that much or all of the mangrove forests may not comply with this applicability condition, noting the absence of evidence of conformance from the proponents.	

Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	BioREDD BCBM REDD+ Project Description v5.0.docBioREDD BCBM REDD+ NCR Response Form v1.42.doc
Findings for Evaluation of Evidence:	The proponent has demonstrated to a reasonable degree of assurance that mangrove soils in the project area are unlikely to occur on peatlands or organic soils. To establish this, the proponent uses the FAO definition of organic soils as those containing more than 50% organic matter in the upper 80cm. This definition is conservative compared to those referenced in some other VCS methodologies which define organic soils as those with 60% or more of organic matter. The PD, Section 1.2.3.1 has been updated with evidence from a soil classification and measurement study done by a Colombian research institute (IGAC) which demonstrates that the SOM content of soils in the project area range between 1.23 and 10.56%. The audit team understands that some of the sampling for the IGAC study took place in the actual project area. The soil class which corresponds in IGAC maps to areas in the guandal and mangroves (RUB) is the class that is identified as having the highest SOM% of the soil classes in the project area, at 16.2%. This level of SOM is below the 50% conservative threshold. Additionally the proponent cites other academic studies in similar mangrove systems in Colombia as having between 2 and 36% SOM which is also below the 50% threshold. This evidence is sufficient to close the NCR.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	03/14
Standard & Requirement:	VCS Standard 3.7.1, VCS AFOLU guidance 3.2.1
Report Section:	Section 3.6
Description of Non-conformance and Related Evidence:	
The project start date shall be the date on which the project began generating GHG emission reductions. The AFOLU guidance clarifies for AFOLU projects that this shall have direct physical impacts on the ground such as preparing land for planting, changed forestry practices, etc. The proponent has not justified how the signed letter of intent leads to actual GHG emissions reductions starting on that date.	

Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	VCS Erratum & Clarifications statement for VM0006 Carbon Accounting for Mosaic and Landscape-scale REDD Projects, v2.1, 10 December 2014 BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 1.Carta de Intencion BCBM.pdf 2.Acuerdo Marco.pdf 3.Hoja de Ruta.pdf 4.Capacitacion BC.pdf 9.Taller de Formacion Basica en Proyectos REDD+.pdf BCBM Justificacion.pdf
Findings for Evaluation of Evidence:	Conformance has been demonstrated. The proponent has provided a detailed justification of how the claimed project start date led to the generation of GHG emission reductions, including direct changes in forest management. The proponent has demonstrated that the Carta de Intencion, establishing the project start date was only the final step in a sequence of activities that led to community mobilization towards effective changes in forest governance leading to emissions reductions. Initial MOUs with the communities, as well as socialization and capacity building meetings and exercises, all occurring prior to the project start date, are described in detail. The logical link between these meetings and agreements to changes in forest governance is adequately justified. Finally, the consejo legal representatives have provided detailed explanation and justification for the timeline for early project implementation and how this justifies the project start date. This letter, signed by the consejo legal representatives, provides further justification independent from the BioREDD program. Based on the logical justification and abundant documentation of early project action and implementation of activities leading to material changes in forest governance practices, the start date is justified and the non-conformance is closed.

NCR Status:	CLOSED
Comments (optional):	

NCR#:	04/14
Standard & Requirement:	VCS VM0006 Section 8.1.4.4
Report Section:	Section 7.3
Description of Non-conformance and Related Evidence:	
The VM0006 methodology requires that soil carbon stocks be measured directly by sampling in the forest LULC classes. Carbon stock values in non-forest LULC classes can be estimated using conservative default values from the literature. The proponent has not demonstrated compliance with this requirement by using default values for the soil carbon stocks in the forest LULC classes for all 8 BioREDD projects.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Reviewed 18 February 2015 BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc GeoEcoMap_Task14_MRV_020315.pdf Reviewed 18 March 2015 BioREDD BCBM REDD+ NCR Response Form v1.42.doc BioREDD BCBM REDD+ Project Description v5.0.doc
Findings for Evaluation of Evidence:	Findings from 18 February 2015 The proponent has requested a methodology deviation to use default values for soil carbon stocks in the forest LULC classes. This is a measurement deviation and as such is acceptable under the VCS if considered reasonable and conservative. The proponent claims that it was infeasible to conduct sufficient field measurements of SOM for the validation. A commitment is added to the PD in Section 4.3, and in, Annex AA, the MRV plan, noting that SOM will be measured and updated before the first verification. The procedures for estimating SOM are described in great detail and were designed by

	highly qualified individuals. The proponent claims that this deviation is conservative as the default literature values used for SOM are derived from measurements taken in 30cm depth. The proponent plans to measure SOM stock to a depth of 1 meter before the first verification. The assumption that the SOM changes represented by LULC change measured at 30cm depth will be more conservative than SOM changes measured at 1 meter depth is reasonable. The non-conformance is closed. <u>Findings from 18 March 2015</u> The proponent has chosen to conservatively exclude soil organic matter as an optional carbon pool. This approach is demonstrably conservative as SOM stocks are expected to decrease in the baseline scenario. The non-conformance was closed by the original approach suggested by the proponent and reviewed on 18 February 2015. The new approach of excluding SOM stocks remains in conformance.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	05/14
Standard & Requirement:	VCS VT0001 Additionality Tool Steps 1a-1c and VCS Standard Section 3.1.3
Report Section:	Section 6.6
Description of Non-conformance and Related Evidence:	
The VCS Standard Section 3.1.3 requires that methodologies shall be applied in full including, the full application of any tools or modules referenced in the methodology. VM0006 Section 7 requires that the VT0001 tool be used. Although Section 6 of VM0006 notes that “under this methodology, the most plausible baseline scenario for a project is the existing or historical changes in carbon stocks in the carbon pools within the project boundary”. The proponents appear to have interpreted this requirement such that steps 1a-1b of VT0001 can be skipped and that the user of the methodology shall go straight to step 1c of VT0001 and select the historical land use change as the baseline scenario. The audit team acknowledges that this aspect of VM0006 is confusing, but the actual intent of Section 6 of VM0006 is that the methodology shall only be used when the outcome of steps 1a-1c of VT0001 is the historic land use in the project area. This was confirmed with the VCS. As a result the proponents have not completed steps 1a-1b of the VT0001 in which alternative land use scenarios shall be evaluated.	

Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Reviewed 18 February 2015 BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc <u>Reviewed 18 March 2015</u> <u>BioREDD BCBM REDD+ NCR Response Form v1.42.doc</u> BioREDD BCBM REDD+ Project Description v5.0.doc
Findings for Evaluation of Evidence:	<u>Findings from 18 February 2015</u> The proponent has updated the PD such that Steps 1a-1c are complete. However, the non-conformance remains open as the proponent appears to have incorrectly conducted the analysis. The proponent identifies four alternative land use scenarios including: 1. Continuation of selective logging 2. Continuation of subsistence agriculture 3. Effective implementation of enforcement by the Regional Environmental Authority to cease illegal logging and activities resulting in deforestation and degradation without the project being registered as a VCS REDD project 4. Effective implementation of enforcement by the national or international NGOs to implement alternative livelihood, governance, and capacity building activities to reduce deforestation and degradation without the project being registered as a VCS REDD project. The NCR remains open however as the proponent has divided the pre-project land use into two scenarios including i) a scenario in which illegal selective logging (unplanned degradation) continues and ii) a scenarios in which subsistence agriculture resulting in unplanned deforestation continues. These are

	actually both just components of the pre-project land use, rather than differing scenarios. The project shall only have a single baseline scenario and the PD otherwise correctly treats i) and ii) as components of a single baseline scenario. If the proponent intends to select either i) or ii) the entire project shall be revised to be either an avoiding planned degradation or avoiding planned deforestation project, but not both as it currently is. The NCR also remains open as the proponent has removed scenario 3 and 4 in Substep 1a b) under the determination that these scenarios are not credible. However, the VT0001 tool requires that the project activity in absence of registration under the VCS (scenario 3 and 4) proceed through Substep 1b in the additionality analysis. These baseline scenario shall be selected in Substep 1c by eliminating scenarios generated in Substep 1a in a manner consistent with the VM0006 requirements. The scenarios generated in Substep 1a shall not be eliminated prior to Substep 1c. The NCR remains open. <u>Findings from 18 March 2015</u> The proponent has corrected the additionality analysis such that the alternative scenarios identified are credible and the VT0001 Version 3 tool is followed correctly and in full. Please see the additionality section of this report for full details on demonstration of conformance. The non-conformance is closed.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	06/14
Standard & Requirement:	VCS VT001 Step 4 Common Practice Analysis
Report Section:	Section 6.6
Description of Non-conformance and Related Evidence:	
A non-conformance has been identified as the PD Section 4, Step 4 describes only the common logging practice in the project area which is not required. The intent of the VT0001 common practice analysis is to assess the extent to which activities similar to the VCS AFOLU activity (i.e. REDD projects or forest conservation projects which reduce deforestation/degradation in similar manner as the project activities of governance, agricultural investment, etc.) exist in a defined geographical area near the project area. Sections 2.4.1-2.4.3 appear to not be evaluated by the PD.	

Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc
Findings for Evaluation of Evidence:	The proponent has revised the Common Practice Analysis to demonstrate conformance with the VCS requirements and the VT0001 requirements. The proponent asserts that implementation of similar projects to reduce deforestation and degradation in the region are rare. The only somewhat similar program is the MIDAS program funded by USAID (which also funded the development of this REDD project). The MIDAS program did focus on poverty alleviation and generating environmental benefits. The MIDAS program is described in the PD and the audit team investigated the program in depth during the field audit, including in interviews with USAID staff. The audit team can confirm however that the programs like the MIDAS program are uncommon. The project area and the broader region is politically and geographically isolated. The region is one of historic and recent social unrest, often of a violent nature. These obstacles have prevented the effective distribution of government and NGO capacity building and development aid to the region. The MIDAS program is also qualitatively different than the REDD project. Although the program does intend to generate environmental benefit, the program does not seek to reduce deforestation and degradation specifically through the means of the REDD project. The Common Practice Analysis is accepted and in conformance.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	07/14
Standard & Requirement:	VCS Principle of Accuracy
Report Section:	Section 7.3
Description of Non-conformance and Related Evidence:	

The VM0006 methodology specifies a carbon fraction (CF) 0.5 for dry matter in wood, although the proponents have the options of using more conservative values. Varying and inconsistent values are reported for the carbon fraction throughout the PD and supporting documents. For example, Section 8.2 of the PD identifies 0.5 as the CF, while the report on carbon stock calculations identifies CF of 0.485. It appears that the actual value used is 0.485 as this is cited in the relevant report from GeoEcoMap (task 8&9). Inconsistent CF values does not comply with the VCS principle of Accuracy and does not enable accurate quantification of VCUs at future monitoring events.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc GeoEcoMap_task8&9_new_13015.pdf
Findings for Evaluation of Evidence:	The non-conformance is closed. The proponent has clarified that, although VM0006 allows a 0.5 value to be used for the carbon fraction, the proponent has used 0.485 which is more conservative. This 0.485 value was cited consistently in the technical documentation and used in the carbon calculations as confirmed by interview and document review. The 0.5 value was cited only in the PD originally. This has now been corrected. The auditor has confirmed that the PD has been updated and only the 0.485 carbon fraction is reported in all project documentation.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	08/14
Standard & Requirement:	VCS Principe of Accuracy, VM0006 Appendix 1, Section 1.2, VCS Standard 3.16.2
Report Section:	Section 10.1
Description of Non-conformance and Related Evidence:	

Multiple measurement errors were identified during the resampling of forest inventory plots used for calibration of the LiDAR. These errors do not represent a non-conformance in the measurement of carbon for validation.
The errors do represent a non-conformance in the monitoring procedures as there is a high risk of material errors in future verifications if these errors are not corrected. The errors include the following:

1. Several trees were identified where the inventory team failed to measure above the buttress of the trees, as is universally recognized to be the appropriate measurement approach for buttressed trees. Allometric equations typically estimate biomass from the lowest point of the bole of the tree above the buttresses, so this can result in significant errors. In some cases the errors may have overestimated tree biomass by as much as 50%. Although multiple examples were encountered, the audit team has not observed this to be a systematic error at this point (4 plots remaining to measure) and it remains unclear whether this is a non-conformance in the measurement of carbon stocks at this point. However, this does represent a non-conformance to the identified SOPs, as well as to the climate monitoring plan which relies on those SOPs. The RAINFOR methods require measurement above the buffer and suggest the use of ladders to attain this level, and/or using a digital camera method as a last resort. At minimum the inconsistency in measurements at validation creates a high risk of material errors in subsequent verifications.
2. The inventory team has measured all trees on slopes on the downhill side of the tree which systematically results in a higher dbh measurement than measuring on the uphill side of the tree. To the audit team's knowledge, most or all major published allometric equations assume dbh measurement on the uphill side of the tree and most major published guidance on carbon measurements identify the uphill side of the tree as the appropriate measurement location. The audit team notes that the RAINFOR methods do advocate measuring on the downhill side of the tree. The non-conformance comes from the risk that the allometric models used for calculating carbon stocks are based upon measurements on the uphill side of trees on slopes.
3. The PD and supporting documents do not appear to identify QA/QC measures used to control quality across forest carbon stock measurements. This likely resulted in some of the errors in tree measurement that the audit team observed. Examples include a palm that was originally reported to be over 10m taller than its true height, three large trees in a single plot that were overestimated by approximately 50 cm each, and a large tree that was recorded in the database as 13.5cm. Local community members involved in the plots in which these errors occurred reported that they felt incompletely trained.
4. The plot in the Carmen del Darien project was recorded as being approximately 400 meters from its true location. This error resulted from a lack of communication between different parties on the appropriate datum to be used with the GPS with the end user of the data (GeoEcoMap) anticipating that WGS 1984 was used and the inventory team of the CDD plot using the Observatorio Bogota datum. As a result it is unclear how this plot was used to calibrate the LiDAR transect. The Climate Monitoring SOPs do not address this issue leading to a risk of future material errors in verifications.
5. The climate monitoring SOPs do not provide guidance on how future inventory teams shall deal with several issues encountered by the audit teams in the field. For example, missing stakes that mark the plot coordinates, trees where paint that marks the point of measurement have flaked off, trees where the dbh was not measured 30cm below the ID tag, trees where the original point of measurement is incorrect, trees with missing tags, etc. All of these issues were encountered by the audit team and are likely to create material errors in future verification events if specific SOPs are not developed and implemented.

Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	<u>Reviewed 18 February 2015</u> BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc Annex AA GeoEcoMap_task14_MRV_020315.pdf <u>Reviewed 18 March 2015</u> BioREDD BCBM REDD+ NCR Response Form v1.42.doc BioREDD BCBM REDD+ Project Description v5.0.doc Annex AA GeoEcoMarp_Task14_031215.pdf
Findings for Evaluation of Evidence:	<u>Findings from 18 February 2015</u> The assessment of the proponent's response is organized according to the numbering of the issues above: 1. The audit team noted that this item was not an NCR for validation of the emissions factors. This is because the audit team did not see this as a systematic pattern of errors. Additionally, the proponent has presented an error propagation report which has justified that the sum of these errors is not material or significant (GeoEcoMap task 16). The error propagation report is described in depth in this report and in summary it relied upon re-measurements of plots by different inventory teams and quantification of the impacts of discrepancies in measurements on carbon stock measurements. These errors were propagated into the LiDAR calibration (which was the sole purpose of the plots) and the effect was demonstrated to be insignificant. The NCR was issued due to the risk of material errors in the future during re-measurement of permanent plots and measurements of other plots for updating emissions factors. The proponent used the RAINFOR protocols as SOPs but had no specialized SOPs for this project when the procedures differed from the RAINFOR protocols. Additionally, community members of some communities that participated in the carbon stock measurements confirmed that they felt poorly trained in conducting the inventory measurements. The proponent has not responded to the NCR, which is based on the risk of errors in future monitoring events, nor has the proponent implemented corrective actions to reduce this risk. 2. As with number 1 above, the proponent has not responded to the actual NCR as it was issued nor have they implemented corrective actions to reduce these errors at future monitoring events.

	3. As with number 1 and 2 above the proponent has not responded to the actual NCR as it was issued nor have they implemented corrective actions to reduce these errors at future monitoring events. This aspect of the NCR is based on the lack of established QA/QC protocols. The proponent's response does not address this. 4. As with all issues described above, the proponent has not responded to the NCR in the context of implementing corrective actions that will reduce the risk of material errors in future monitoring events. Due to the error propagation report the NCR was not issued based on material errors in the inventory used for validation. 5. As with all issues described above, the proponent has not responded to the NCR in the context of implementing corrective actions that will reduce the risk of material errors in future monitoring events. Due to the error propagation report the NCR was not issued based on material errors in the inventory used for validation. Furthermore, the proponent has asserted that there will be no future field inventory measurements which is not in conformance with the VM0006 and contradicts the proponents MRV plan (GeoEcoMap Task 14). See NCR 09/14 <u>Findings from 18 March 2015</u> The proponent has now fully clarified and justified that there will be no more forest inventories implemented as part of a verification audit or a baseline update. Future carbon stocks will be estimated using LiDAR and applying the same biomass estimation models which have been otherwise evaluated in this validation audit and demonstrated to meet the requirements of the VCS VT0005 Tool for Measuring Aboveground Live Forest Biomass using Remote Sensing v1.0. The proponent has requested a methodology deviation such that specific requirements of the VM0006 methodology which stipulate that future baseline updates require re-measurement of forest biomass using ground based plots can be replaced by the VT0005 tool. The audit team has accepted the methodology deviation. The proponent has also now chosen to conservatively exclude soil organic matter, thus eliminating the need to measure soil carbon stocks as they had originally planned on doing prior to the first verification. As such, the proponent has justified that no forest inventory measurements will be required in future verifications or baseline updates. The NCR was originally issued because the forest inventory SOPs and monitoring plan were insufficiently detailed to prevent material errors in future inventories. As the proponent has justified the exclusion of any future forest inventories, the non-conformance is now closed.
NCR Status:	CLOSED

Comments (optional):	N/A

NCR#:	09/14
Standard & Requirement:	VCS Principle of Accuracy
Report Section:	Section 10.1
Description of Non-conformance and Related Evidence:	
While the forest inventory measurement procedures when fully implemented enable accurate carbon stock measurement, there is a high risk that these measurement procedures will result in underestimation of forest degradation in these plots in the future verification periods. The permanent plots are well marked with colored stakes and point of measurement lines painted on every tree. However, this is likely to influence the behaviour of agents of degradation such that they are less likely to conduct logging activities in the permanent plots, meaning the plots will not accurately represent the degradation occurring in the area. This risk was emphasized by a community member that emphasized that the fact that they are not currently logging the permanent plots shows their level of respect for the project.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Reviewed 18 February 2015 BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc Annex AA GeoEcoMap_task14_MRV_020315.pdf Reviewed 18 March 2015 BioREDD BCBM REDD+ NCR Response Form v1.42.doc BioREDD BCBM REDD+ Project Description v5.0.doc Annex AA GeoEcoMarp_Task14_031215.pdf
Findings for Evaluation of Evidence:	The proponent has noted in their response to this NCR that “no future field inventory measurements are planned” and implicitly, that therefore there is no need to develop specific field measurement SOPs which will serve to prevent future errors of the types observed by the audit team. This assertion contradicts the proponents own documentation and is not in conformance with the VM0006 methodology. Review of the MRV plan (GeoEcoMap Task 14) indicates that the assertion that permanent plots will not be used in the future is incorrect. The Executive Summary, page 5, states that “The methodology

	[presumably this means the MRV document?] will also show how to integrate remote sensing data specific for the region in monitoring tools and demonstrate how the remote sensing data can be integrated with existing permanent and temporary inventory plots to calculate annual carbon change” The MRV plan makes it clear that the proponent intends to update the carbon stocks and emissions factors before the first verification, which contradicts the assertion that no field inventory measurements are planned. Furthermore, additional ground based biomass plots are required to be re-measured as part of the baseline update which requires updating carbon stocks and emissions factors. (see new NCR 33/14) Additionally, the proponent has not accounted for the fact that the VM0006 methodology requires re-measurement of carbon stocks in areas experiencing ongoing degradation during the project scenario if PRAs indicate degradation is occurring. The NCR remains open. The errors observed by the audit team were justified in the error propagation report to be insignificant for the validation audit. The audit team found these errors deeply concerning but did not detect that they were systematic at this point. Based on this observation and the error propagation report, the audit team did not issue an NCR requiring the carbon stocks to be re-measured as the errors were determined to not be material. However, the audit team is confident that the errors and the lack of SOPs and training that appears to be the cause of these errors are a material risk to the accuracy of future carbon stock measurements to take place during the monitoring and updating of the baseline after 10 years. The technical groups assisting the proponent with the project have no long term agreement with the proponents covering the entire crediting period. At this point the project does not have effective SOPs or a monitoring plan for measurement of carbon stocks and updating of emissions factors. Several other aspects of the MRV Task 14 document are confusing or contradictory and shall be resolved and corrected including: 1. “The BioREDD project will be using the Verified Carbon Standard methodology…” There is no Verified Carbon Standard methodology. This VCS is a standard not a methodology. The proponent presumably means to say VM0006, however this is unclear as the proponent uses the word “methodology” generically through the document to refer to the VM0006, the MRV document itself and other documentation which is unclear. 2. Section 2.3 “The baseline revision will only apply to the temporal boundary of the project, reference and leakage areas”. This is incorrect. The baseline revision shall reassess all aspects of the VM0006 methodology that relate to establishing the baseline. <u>Findings from 18 March 15</u>

	The proponent has now fully clarified and justified that there will be no more forest inventories implemented as part of a verification audit or a baseline update. Future carbon stocks will be estimated using LiDAR and applying the same biomass estimation models which have been otherwise evaluated in this validation audit and demonstrated to meet the requirements of the VCS VT0005 Tool for Measuring Aboveground Live Forest Biomass using Remote Sensing v1.0. The proponent has requested a methodology deviation such that specific requirements of the VM0006 methodology which stipulate that future baseline updates require re-measurement of forest biomass using ground based plots can be replaced by the VT0005 tool. The audit team has accepted the methodology deviation. The proponent has also now chosen to conservatively exclude soil organic matter, thus eliminating the need to measure soil carbon stocks as they had originally planned on doing prior to the first verification. As such, the proponent has justified that no forest inventory measurements will be required in future verifications or baseline updates. The NCR was originally issued because the system of clearly marking permanent plots that were expected to be re-measured was expected to influence the behaviour of agents of deforestation and degradation in a way that could bias carbon stock data. The proponent has chosen a new approach which eliminates the need for re-measurement of these permanent plots and as a result the non-conformance is closed.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	10/14
Standard & Requirement:	VCS Standard 3.17.1
Report Section:	Section 10.1
Description of Non-conformance and Related Evidence:	
VCS Standard 3.17.1 requires that all documents and records are kept in a secure and retrievable manner for the project crediting period plus 2 years. Section 8.1.3.1.4 of the PDs identifies Fondo Accion as the entity responsible for data handling and retention. The audit team has confirmed that Fondo Accion has a robust system for this purpose, but that the relevant documentation and records is not currently stored with Fondo Accion.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation

Evidence Provided by Organization:	BioREDD BCBM REDD+ NCR Response Form v1.33.doc
Findings for Evaluation of Evidence:	The proponent has confirmed that all documentation and records have been transferred to Fondo Accion. The audit team held a meeting with Fondo Accion on February 25, 2015 and confirmed that documents and records had been transferred. The nonconformance is closed.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	11/14
Standard & Requirement:	VCS Standard 3.11.1, Right of Use
Report Section:	Section 5.2
Description of Non-conformance and Related Evidence:	
Based on conversations that the audit team had with INCODER, the entity responsible for titling the Afro Colombian consejos, the mangroves in the project area and in consejos fall under *uso public*o and may not technically be part of the territory of the consejos. This challenges the right of the consejos to claim right of use in the mangrove areas of the project areas. Upon further discussion with the proponent it appears there may be multiple conflicting laws or statues that govern whether the proponents can claim Right of Use for the mangroves in the project areas. The burden of proof for demonstrating conformance with the VCS Right of Use requirements falls to the proponents and remains unfulfilled if there are conflicting laws or regulations in the absence of appropriate clarification.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Programa BIOREDD Producto4.pdf BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc
Findings for Evaluation of Evidence:	The proponent has submitted a legal opinion clarifying the question of *uso publico*, and right of use for the mangrove areas in the project. The legal opinion was drafted by Uribe Martinez Otero Abogados S.A.S. Angela Rocio Uribe Martinez was the specific author of the legal opinion. The original conversations with INCODER that raised this NCR did not directly challenge the consejos right of use over the mangrove areas, but rather raised the fact that a single stakeholder at INCODER

	made this claim, which required clarifying legal analysis. The legal analysis provided confirms that the consejos hold Right of Use using VCS Rights of Use 1, 2, 4, and 7 from VCS Standard 3.11.1. The analysis confirms citing several specific constitutional decrees that the consejo or indigenous group owns the territory deeded to them under the government, but that waterways and mangroves sometimes may be classed as *uso publico.* However, the Corte de Constitucionalidad has confirmed that within these areas, the consejo still has preferential rights for sustainable resource utilization, for example fisheries, etc. The consejos additionally hold legal responsibility for the sustainable management and conservation of the mangrove areas. The legal opinion establishes that the consejos have the right to implement activities in the *uso publico* areas and as a result claim all the benefits generated by those activities. The legal opinion is on official letterhead and signed by the lawyer providing the opinion and is considered legitimate by the audit team. Conformance has been demonstrated.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	12/14
Standard & Requirement:	VCS VM0006 Section 8.1.1.2
Report Section:	Section 7.3
Description of Non-conformance and Related Evidence:	
The proponent has not demonstrated full conformance with the similarity criteria identified in VM0006 Table 3, taking into account the historical reference period. The intent is such that these similarity criteria shall be assessed throughout the length of the historical reference period as this is the time period in which the baseline deforestation rate is calculated and logically the reference region shall be similar to the project area throughout this period to serve as a good reference. The proponent has assessed and justified similarity for drivers of deforestation between the project area and the reference region at the end of the historical reference period, but has not assessed or justified similarity for drivers of deforestation throughout the historical reference period. Specifically the proponent has not evaluated whether areas of planned deforestation, planned degradation, and mining were occurring in the reference region before the end of the historical reference period.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation

Evidence Provided by Organization:	BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc Annex AT Shapefiles of historical reference period Ministerio de Ambiente y Desarrollo Sostenible Resolucion No. 1926 30 December 2013
Findings for Evaluation of Evidence:	The proponent has provided additional description in Section 5.3.1 of the PD to better justify the analysis of similarity criteria in the reference region during the historical reference period. The proponent has clarified that for mining the data set used to exclude areas from the reference region is from INGEOMINAS (confirmed by the audit team during the field audit) and includes all areas with active mining from 2005-2012. The proponent asserts that no mining was permitted in the Colombian region prior to 2005. The shapefiles used for this analysis are from the government. With regard to other sources of planned deforestation/degradation the proponent has cited resolution 1926 from 2013 which is the first time an official planning process and registry was created for land use conversion in the Colombian Pacific. The proponent has collected all relevant information from the corporacion responsible for issuing permits for community and other logging concessions in the project area and reference region, CODECHOCO. The proponent submitted an official request to the Choco department for all records of any forest management plans in the region from 1991-2015. Any areas for which a “resolucion”, a harvesting permit, was issued were removed from both the project area and the reference region. This resulted in a change of 465 hectares in the reference region as a series of small forest management areas where planned degradation or planned deforestation may have occurred were removed from the reference region and project area. The proponent has transparently provided the audit team with a significant amount of documentation of this process including: -the official letter of request to CODECHOCO -the report of the BioREDD+ staff member that went to the office of the corporacion to receive the data -copies of the original *resoluciones* -updated maps of the reference regions and project areas depicting the areas that have been excluded -an excel file demonstrating the areas that have been excluded -contact information for the relevant individuals at the local corporation to facilitate independent confirmation by the audit team. Based on the information provided and the adjustments made to the reference regions the nonconformance is closed.

NCR Status:	CLOSED
Comments (optional):	

NCR#:	13/14
Standard & Requirement:	VCS VM0006 Section 8.1.1.2
Report Section:	Section 7.3
Description of Non-conformance and Related Evidence:	
The proponent has not demonstrated conformance with all similarity criteria in VM0006 Table 3. Specifically, the methodology requires that the proportion of native forest types be the same in the reference region and project area +/-10%, as differences in forest types may impact land-use change dynamics. The proponent has not completed this analysis or provided evidence of conformance to this criterion.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Annex AS Native forest type comparison between project and reference areas.xlsx BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc Reviewed on 18 March 2015 Land Configuration Comparison Methodology v1.0.docx NCR13_14-class_LULC_map.pdf
Findings for Evaluation of Evidence:	The approach described by the proponent is sufficient to close the non-conformance and demonstrate similarity of forest types within the reference region and the Annex AS summary excel file is helpful in this regard. However, the analysis is insufficiently described. For example, the proponent has not described the definitions of the different slope categories, which classes in the 14 LULC class map were aggregated to form the “old growth”, “degraded”, and “guandal” classes, nor has the proponent provided the audit team with the map of the 14 LULC classes. For these reasons the NCR remains open.

	Updated Findings from 18 March 2015 The proponent has submitted a concise yet detailed description of the methodology used which resolves the original uncertainty about aggregation of classes into old growth, degraded, and guandal classes, provides the actual 14 class map, and describes in detail the slope and aspect class definitions. The analysis is sufficiently detailed to demonstrate that the proportion of each forest type within the reference region is within 10% of the proportion in the project area. The nonconformance is closed.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	14/14
Standard & Requirement:	VCS Standard 3.18.2; VCS Principle of Transparency
Report Section:	Section 4.8
Description of Non-conformance and Related Evidence:	
A nonconformance has been identified as at minimum the carbon stock values of each LULC class shall be included in the PD to cohere with the VCS Principle of Transparency and as the current approach of only including the carbon stocks of a single (unidentified LULC class) in Section 1.3.3 of the PD treats carbon stocks as if they are confidential which does not conform to the VCS.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc
Findings for Evaluation of Evidence:	The proponent appears to be unclear about the NCR and the requirement. The proponent has inserted the weighted average carbon stocks across all LULC classes in Section 1.3.3. A reader of the PD is much more likely to be interested in the carbon stocks per LULC class as is clearly presented in Table 30 of the PD. As this is now clearly presented in Table 30 of the PD the nonconformance is closed.
NCR Status:	CLOSED

Comments (optional):	

NCR#:	15/14
Standard & Requirement:	VCS Non-Permanence Risk Tool; Project Management risk factor c)
Report Section:	Section 10.2
Description of Non-conformance and Related Evidence:	
The proponent has selected risk factor c) in Table 1 (Project Management) which shall be selected in cases where the management team does not have significant experience in relevant project implementation. The proponent appears to have selected this in error as the proponent is claiming that Fondo Accion does have significant experience. Additionally, the proponent has not provided justification for Fondo Accion having the relevant experience and there is currently no long term agreement between the proponent and Fondo Accion that will ensure Fondo Accion actually participates in the project.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc Annex AU BCBM Non-Permanence Risk Tool v1.4
Findings for Evaluation of Evidence:	The proponent has clarified that the selection of risk factor c) (value 2) is correct, which increases the risk rating and is more conservative. The proponent is acknowledging that the management team does not have the listed skills set based on the fact that Fondo Accion is still in the process of assigning management roles and bringing on technical staff to help manage the project. The proponent intends to update this score at verification. The nonconformance is closed.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	16/14
Standard & Requirement:	VCS Non-Permanence Risk Tool; Financial Viability, risk factor c), risk factor h)

Report Section:	Section 10.2
Description of Non-conformance and Related Evidence:	
The proponent has selected risk factor c) and risk factor h) in Table 2 (Financial Viability), however the proponent has provided no documentation or other evidence to support these claims as the proponent has not provided evidence of a cash flow model. Additionally, the proponent appears to misunderstand the requirement of the risk tool as the proponent states that the project will start generating revenues at year 4. The risk tool requires the proponent to estimate when the project will reach breakeven point which is different than simply generating revenue.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc Annex AU BCBM Non-Permanence Risk Tool v1.4 Annex F Financial Analysis - BCBM-Budget and Cashflow.xlsx
Findings for Evaluation of Evidence:	The proponent has provided a detailed budget and cash flow model projecting cash flow for twenty years from validation. The cash flow model demonstrates that the project will break even in year 2, which corresponds to 2016, or slightly over one year from the current risk assessment with the validation taking place in 2015. The audit team notes as well that for the first two years of project implementation from the start date in August 2013 the project was funded completely through the BioREDD+ using funds from USAID which covered all project development and validation costs. These funds continue to this day. As such 2015 is the only year in the project lifetime in which the project is expected to have costs greater than revenues. The financial model depends heavily on funding from a single large investor. Although this funding is not yet secured, this is immaterial for the validation audit as the cash flow model is based on projected revenues and expenses. The audit team has reviewed the inputs to the model in depth. The audit team tested individual calculations and formulae in the model and found no errors. The assumptions for values of carbon credits sold are very conservative (less than 75% of recent market value for VCS+CCB REDD credits). The costs expected in the model are projected based on detailed evaluations of project activities undertaken in a participatory manner with the communities (which are the proponents) and external organizations such as BioREDD+ and Fondo Accion which have demonstrated project management and

	implementation experience. As such the audit team considers the costs inputs to be credible. The monitoring costs form the largest single expense and appear conservative to the audit team based on their expert opinion. In summary, the financial model is based on sound reasoning and conservative inputs and demonstrates that the project should reach breakeven less than four years from the current risk assessment.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	17/14
Standard & Requirement:	VCS Non-Permanence Risk Tool; Opportunity Cost, risk factor d)
Report Section:	Section 10.2
Description of Non-conformance and Related Evidence:	
The proponent selects risk factor d) but provides no documentation or justification for the selection. The Risk Tool requires the proponent to compare the project activity to the most profitable alternative scenario as defined by scenarios generated in Step 1a of the VT0001 Additionally Tool. However, the proponent has failed to complete step 1a of the VT0001 and as such cannot complete the required analysis for the Risk Report until these alternative scenarios are created.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Opportunity Cost of Selective Logging v1.4.xlsx BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc Annex AU BCBM Non-Permanence Risk Tool v1.4 Annex F Financial Analysis - BCBM-Budget and Cashflow.xlsx
Findings for Evaluation of Evidence:	The proponent has amended their selection so that now they select risk factor f) (score -4) based on the assertion that the project activity is expected to be more than 50% more profitable than the most profitable alternative scenario (continuation of illegal logging). The proponent has provided a cash flow model and an opportunity cost analysis to justify this selection. The project activity includes a broad range of income sources including revenues from sales of carbon credits, investment from carbon credit

	investors which have provided loans for project implementation to be repaid by transfer of credits, improved agricultural production and sales, etc. The sum of these activities is substantially more valuable than the revenues from continued illegal logging. The proponent has calculated the NPV of the project activity to be 471% of the NPV of the alternative scenario, using a discount rate of 10%, which is appropriate. The audit team accepts this assertion. The opportunity cost analysis is detailed and based on the best available data for assessing the quantity of timber that would be produced in the alternative scenario. This data comes from a rigorous timber study implemented by a collaboration of Colombian research institutes. Additionally, the audit team confirmed in the field that communities receive little revenue from logging activities. The majority of the value is captured by the buyers of the timber, which are based in cities along the coasts away from the consejos. Loggers in consejos are typically among the poorest individuals in the consejos as confirmed by direct observation and interview. Conformance has been demonstrated.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	18/14
Standard & Requirement:	VCS Non-Permanence Risk Tool; Opportunity Cost, mitigation factor g)
Report Section:	Section 10.2
Description of Non-conformance and Related Evidence:	
The proponent selects mitigation factor g) which shall only be selected if the proponent is a non-profit organization. The proponent provides as justification the fact that Fondo Accion is a non-profit organization. However, Fondo Accion is not the proponent.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by	BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15

Organization:	BioREDD BCBM REDD+ NCR Response Form v1.33.doc Annex AU BCBM Non-Permanence Risk Tool v1.4
Findings for Evaluation of Evidence:	The proponent has updated the Non-Permanence Risk Report and removed the mitigation score and acknowledged that the proponent is not a non-profit organization. Conformance is demonstrated.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	19/14
Standard & Requirement:	VCS Non-Permanence Risk Tool; Project Longevity, risk factor b)
Report Section:	Section 10.2
Description of Non-conformance and Related Evidence:	
The proponent fails to perform the required calculation for the Project Longevity risk factor selection in the Non-Permanence Risk Tool. The VCS requires the proponent to determine whether a legal agreement is or is not in place to continue the management practice. If an agreement is in place the risk rating = 24 – (project longevity/5). If no agreement is in place the risk rating = 30 – (project longevity/2). The audit team understands that there is not legal agreement to continue the management practice in the consejo. The audit team also understands that the project longevity is 30 years as defined by the crediting period. This would indicate that the calculation under risk factor b) shall be performed. Additionally the Risk Report does not provide a subtotal for the project longevity part of the risk assessment. Finally, until evidence is submitted to demonstrate the legitimacy of the 60 year project longevity per the requirements of the VCS AFOLU Non-Permanence Risk Tool 2.2.4, 1)-5) claimed in the PD, this shall be removed from the PD in all locations.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by	Annex M REDD Plan

Organization:	BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc Annex AU BCBM Non-Permanence Risk Tool v1.4 <u>Additional documentation reviewed on 14 April 2015</u> <u>Annex AU BCBM Non-Permanence Risk Tool v1.9, version April 10 2015</u>
Findings for Evaluation of Evidence:	<u>Update on 18 February 2015</u> The proponent has successfully justified the project longevity score of 0 and that the project longevity is 60 years. Under Law 70, which gives the consejos legal title to the land in the consejo and autonomous governance rights, decisions of the consejo General Assemblies are considered legally binding. As the General Assembly has voted to approve the PD and project implementation plan (REDD Plan), which describe maintenance of the project area carbon stocks for 30 years after the end of the crediting period, the assertion that the project longevity is 60 years is justified. However, the NCR remains open as the proponent has not demonstrated full conformance with 2.2.4 3) of the VCS AFOLU Non-permanence Risk Tool which requires that both management and financial plans be submitted to local government covering the full project longevity period. The REDD Plan/implementation plan does not qualify as a financial plan as it includes no details on funding for the years 31-60 of the project longevity. This financial plan for years 31-60 is also required to be submitted to local government. The non-conformance remains open. <u>Update on 14 April 2015</u> The proponent has revised the PDD and supporting documentation so that the longevity period is now only 30 years. The proponent is no longer claiming the lower risk rating, and as such the nonconformance is closed as this approach is more conservative and clearly demonstrates conformance to the VCS requirements. An updated AFOLU Non-Permanence Risk Report (v1.9) has been submitted which clearly acknowledges the project longevity as 30 years and has increased the risk rating appropriately to 14%. Conformance has been demonstrated.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	20/14
Standard & Requirement:	VCS Non-Permanence Risk Tool; Land Tenure and Resource Access/Impacts, risk factor a)

Report Section:	Section 10.2
Description of Non-conformance and Related Evidence:	
The proponent has selected risk factor a) which shall be selected when ownership and resource access/use rights are held by the same entity. The audit team understands from an interview with INCODER, which gives title to the consejos that the mangrove areas fall under "uso publico" and therefore are not owned by the consejos.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc Annex AU BCBM Non-Permanence Risk Tool v1.4
Findings for Evaluation of Evidence:	The proponent has corrected the risk report to now select risk factor b) based on the fact that the consejos do not own the mangrove areas, although they do have right of use in these areas. The proponent has also now selected mitigation factor f) which shall be selected when there is a legally binding commitment to continue management practices that protect carbon stocks over the project crediting period. The audit team has confirmed that under Law 70 that there is a mandate upon the consejos to conserve the mangrove areas. Conformance is demonstrated.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	21/14
Standard & Requirement:	VCS Non-Permanence Risk Tool; Community Engagement, mitigation factor c)
Report Section:	Section 10.2

Description of Non-conformance and Related Evidence:	
The proponent selects mitigation factor c) which provides a -5 mitigation score. This selection is justified. However, the proponent has incorrectly calculated the subtotal as 0 when it should be -5 due to this mitigation score.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc Annex AU BCBM Non-Permanence Risk Tool v1.4
Findings for Evaluation of Evidence:	The proponent has updated the total community engagement score such that it is now -5 which is correct. Conformance is demonstrated.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	22/14
Standard & Requirement:	VCS Non-Permanence Risk Tool 1.1.3; Natural Risks;
Report Section:	Section 10.2
Description of Non-conformance and Related Evidence:	
The proponent is required by Section 1.1.3 of the Risk Tool to provide documentation and sound justification for all risk factors selected in the Non-Permanence Risk Report. The proponent has provided no justification for the selection of risk factors for all natural risk categories (fire, pests and diseases, extreme weather, geological risk, and other natural hazards). The proponent has also not provided justification for mitigation factors that were selected. Finally, the proponent did not use the risk report template in full. As a result the reporting of the proponent for natural risk is unclear and confusing and does not allow the reader to identify which natural risk factors was selected, and which mitigation measure was selected. Only	

the combined score is reported by the proponent.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc Annex AU BCBM Non-Permanence Risk Tool v1.4
Findings for Evaluation of Evidence:	The proponent has updated the PD and Non-Permanence Risk Report to assess and justify all natural risks and risk factor selections. The proponent uses the DesInventar online disaster tracking system which covers Colombia, Venezuela, Ecuador, Peru, and Bolivia. The DesInventar system is supported by the UN Office for Disaster Risk Reduction and the UN Development Programme have endorsed the system for tracking and recording disasters and the system is a valid resource for assessing natural risks in the project area. The system has files dating back to 1938 for some risk types. The proponent has appropriately submitted to the audit team the output of the analyses using Desinventar. Conformance is demonstrated.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	23/14
Standard & Requirement:	VCS Non-Permanence Risk Tool; Template use
Report Section:	Section 10.2
Description of Non-conformance and Related Evidence:	

The proponent did not use the risk report template in full. As the risk rating claimed by the proponent is less than 10% the proponent shall clarify in the risk report that 10% is selected. Additionally the proponent has not completed Section 4.2 of the template which requires the calculation of total VCUs.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc Annex AU BCBM Non-Permanence Risk Tool v1.4
Findings for Evaluation of Evidence:	The proponent has corrected the risk report so that it is used in full and used correctly including the calculation of total VCUs. The risk rating has increased to 14% due to actions taken to address other NCRs. Conformance is demonstrated.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	24/14
Standard & Requirement:	VCS Standard 3.1.3
Report Section:	6.2 Applicability of Methodology
Description of Non-conformance and Related Evidence:	
The proponent has used the VCS Tool for Remote Sensing biomass Measurement. This Tool is in the second assessment stage of validation and is not yet a valid tool to use under the VCS	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s)

	referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	None. NCR closed following confirmation of tool acceptance by VCS
Findings for Evaluation of Evidence:	The VCS VT0005 Tool for measuring above ground live forest biomass using remote sensing v1.0 was approved under the VCS on 6 March 2015. Conformance has been demonstrated.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	25/14
Standard & Requirement:	VCS AFOLU Requirements 3.1.11
Report Section:	6.2 Applicability of Methodology
Description of Non-conformance and Related Evidence:	
Per VCS AFOLU Requirements 3.1.11 all REDD projects which occur on wetlands shall also comply with the WRC requirements unless the expected emissions from the soil organic carbon pool or change in the soil organic carbon pool in the project scenario is deemed below *de minimis* as set out in Section 4.33 or can be conservatively excluded in which case the project shall not be subject to the WRC requirements. The project includes mangrove areas which are considered wetlands per VCS AFOLU Requirements 4.2.16. The proponent has not demonstrated that the emissions from the soil organic carbon pool or change in these emissions are below *de minimis* (per AFOLU 4.3.3) or that they can otherwise be conservatively excluded. In absence of this demonstration the proponent is not in conformance with the VCS AFOLU Requirements Section 3.4.3 or Section 3.7.2, Sections 4.2.16-4.2.22, Sections 4.3.22-4.3.25, Sections 4.4.10-4.4.19, Sections 4.5.25-4.5.35, Sections 4.6.19-4.6.22.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation

Evidence Provided by Organization:	<u>Reviewed on 18 February 2015</u> BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc Annex AZ VM0006 Accounting BCBM v11.38.xlsm <u>Reviewed on 18 March 2015</u> BioREDD BCBM REDD+ NCR Response Form v1.42.doc
Findings for Evaluation of Evidence:	The proponent has conducted a calculation of the *ex-ante* estimated emissions reductions from the soil carbon pool in the project scenario to demonstrate that changes in this pool can be considered insignificant (0.1% of GHG benefit) across the entire project area including the area of mangroves. This approach would be more conservative than simply assessing the *ex-ante* changes in soil carbon stocks in the mangrove area. However, the audit team has noted that the project has not actually measured soil carbon stocks. The proponent has instead requested a methodology deviation (approved) allowing them to use conservative literature values, adjusted for local conditions, and then to subsequently update the soil carbon stocks prior to the first verification. In light of this fact the calculation of insignificance of the expected change in soil carbon stocks in the mangrove areas cannot be considered sufficient as it is based on a built in assumption that soil carbon stocks in the mangrove forests are the same as those in the non-mangrove forests. This assumption is incorrect based on typical mangrove edaphic conditions and the audit team observations. The non-conformance remains open. <u>Findings from 18 March 2015</u> The proponent has elected to exclude the soil carbon pool from carbon accounting under the assumption that this approach is conservative as the SOC pool could be expected to decrease in the baseline scenario. The audit team agrees with this assumption as deforestation (the baseline scenario) would be expected to cause loss of soil carbon stocks which is a well-established pattern globally in tropical soils. Conformance has been demonstrated.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	26/14
Standard & Requirement:	VCS Principle of Accuracy

Report Section:	Multiple Sections
Description of Non-conformance and Related Evidence:	
Multiple discrepancies were observed in the reporting of carbon stock values for the BCBM project. In the PD, Section 1.3.3, the total carbon stocks identified are 244.98tC/ha. Only this value is reported without identifying which land cover type (degraded forest or intact forest) this represents. Furthermore, the value in 1.3.3 does not correspond to any supporting documents. Values in supporting documents are contradictory. Annex V, the VM0006 Accounting model v8.18 reports in the Parameters tab that the AGT stocks are 154.285tC/ha. This value does not correspond to the values reported in Table 9.3 in GeoEcoMap Task 8&9, the source of this value. Task 8&9 reports the "AGB mean" biomass as 137.848tC/ha in Table 9.3. Table 9.3 does not clarify whether the "AGB mean" values are for all aboveground carbon pools, or only for AGT. The 154tC/ha value does however correspond to Table 10.1 of GeoEcoMap Task 12 as do the other values reported in Annex V for other LULC classes.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc Annex AA GeoEcoMap_task8&9_new_13015.pdf GeoEcoMap_task12_final_2.pdf Annex V VM0006 Accounting BCBM v11.38.xlsm
Findings for Evaluation of Evidence:	The proponent has clarified that the 137.848tC/ha figure in Table 9.3 of task 8&9 was an error and was not updated information. Table 9.3 has been corrected. The proponent has subsequently updated Table 9.3 which is now in alignment with the value reported in the PD, in Table 10.1 of Task 12 and in the Accounting Model. The nonconformance is closed.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	27/14
Standard & Requirement:	VCS Principle of Consistency, Accuracy
Report Section:	7.1 Project Scale and Estimated GHG Emission Reductions/Removals
Description of Non-conformance and Related Evidence:	
Discrepancies were observed in the GHG calculations between the PD and supporting documents including: Table 57 of the PD reports the total *ex ante* VCUs over the crediting period as 15,313,514 while key supporting documents identify this value as 14,817,399 (VM0006 Accounting BCBM v8.18 tab Report-Credit Generation, Column N). The incorrect value (15,313,514) is perpetuated throughout the report. Table 56 reports the *ex-ante* net GHG emissions reductions as 16,959,039 whereas key supporting documents identify this value as 16,408,076 (VM0006 Accounting BCBM v8.18 tab Report-Credit Generation, Column J). The incorrect value (16,959,039) is perpetuated throughout the report.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc Annex V VM0006 Accounting BCBM v11.47.xlsm
Findings for Evaluation of Evidence:	The nonconformance is closed open as the proponent has updated all sections of the PD with the correct number of VCUs, which were not consistent with the accounting model. All other required corrections have been made and the supporting documentation and PD are otherwise clear that the *ex-ante* VCUs are expected to be 13,031,611 VCUs over 30 years.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	28/14
Standard & Requirement:	VCS Principle of Accuracy

Report Section:	Multiple Sections
Description of Non-conformance and Related Evidence:	
Discrepancies exist in the PD where references from other BioREDD+ projects are erroneously cited. For example, Section 5.5.1, Section 5.3.5.1, Section 5.3.5.2, Section 5.3.5.4, Section 5.3.7, Section 5.4.2, Section 5.5.2.4, Section 5.6.2, and Section 5.6.4 all refer to VM0006 Accounting ACAPA-BMF v10.15xlsm which is for another project.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	BioREDD+ Bajo Calima & Bahia Malaga REDD+ Project VCS PD Version 4.27, 18 February 2015
Findings for Evaluation of Evidence:	The audit team has confirmed that the proponent has removed the erroneous references to other BioREDD+ projects in the final PD. Conformance is demonstrated.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	29/14
Standard & Requirement:	VCS 3.16.3
Report Section:	Section 10.1
Description of Non-conformance and Related Evidence:	
As currently described, the monitoring plan is lacking information on methods and frequency for measurement of aboveground tree biomass. Monitoring indicators in Section 8.3 stipulate that aboveground tree biomass is to be measured annually using LiDAR. This approach would be very robust, however, interview with GeoEcoMap staff has indicated that it is uncertain at which frequency the LiDAR will be used, or even if it will be used in the future to update carbon stock data from aboveground tree biomass in all LULC classes. The current supplemental monitoring plan documents from GeoEcoMap (Task 13) do not clearly state whether or if LiDAR shall be used in	

the future for this purpose and the methods indicated are confusing and inconsistent. The survey method described in P.32 has problems described in another NCR. Table 3.6 of GeoEcoMap indicates that for measuring biomass loss in a given LULC class that some combination of Landsat, ALOS-2 PALSAR, LiDAR, and/or surveys and forest inventory methods shall be used. There is no guidance on when or if a certain method shall be used. The level of detail is insufficient such that a future entity trying to conduct monitoring according to this document would likely be unable to follow the methods. This restricts future monitoring to those with personal knowledge of GeoEcoMap's methods and intentions which does not meet the requirements of VCS Standard 3.16.3.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Reviewed on 18 February 2015 GeoEcoMap_Task14_MRV_021015.pdf Reviewed on 18 March 2015 GeoEcoMap_Task14_MRV_031215.pdf
Findings for Evaluation of Evidence:	Findings from 18 February 2015 Based on review of the MRV plan (GeoEcoMap Task 14) as well as discussions with various members of the BioREDD+ team there remains substantial confusion about what will be monitored, when, how, and how it conforms to VM0006 requirements. The non-conformance remains open. Findings from 18 March 2015 The proponent has submitted an updated monitoring plan (GeoEcoMap Task 14, dated 12 March 2015) that clearly identifies the monitoring priorities, steps, and methods. -Ground based inventory plots will no longer be used as part of the monitoring. The proponent has requested a methodology deviation (approved) such that the VT0005 tool will be used to update biomass stocks at future baseline updates, as required by the VM0006 methodology. The VT0005 tool is

	specifically designed for this process, and this specific project, and was approved by the VCS. -The proponent has now chosen to conservatively exclude the soil carbon pool. The proponent asserts that this pool could be expected to decrease in carbon stocks in the baseline scenario. The audit team agrees as preservation of the forest area in the project scenario prevents oxidation of soil carbon associated with soil disturbance from deforestation and degradation in the baseline. -The proponent has now clarified that they will use the VT0005 tool and LiDAR flights to update the carbon stocks and emissions factors at each baseline update. The LiDAR will use the same allometric models which were validated during this validation process and which will continue to be valid during the rest of the project crediting period. -The proponent will use a conservative model to update the emissions factors of primary forest remaining as primary forest in verification years when no LiDAR flights are flown. At subsequent baseline updates the carbon stocks and emissions factors will be updated with precision. The model selected to discount carbon stocks in primary forests is based on peer reviewed literature and is likely to lead to highly conservative results. The nonconformance is closed.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	30/14
Standard & Requirement:	VCS Principle of Accuracy and Transparency
Report Section:	Section 10.1
Description of Non-conformance and Related Evidence:	
The survey approach for measuring project scenario emissions from degradation as described in GeoEcoMap Task 13 is not an appropriate method for this project P. 32 of GeoEcoMap Task 13 states that “emissions due to illegal logging will be tracked by conducting surveys surrounding the project, leakage and reference areas annually or every two years.” If >10% of the surveys indicate that illegal logging is taking place temporary sample plots will be allocated to identify changes in biomass stocks. No details are provided for the survey methodology including sampling approach, sampling intensity, how the surveys will be able to spatially delineate the impacted area, etc. Furthermore the survey approach is of questionable validity in light of the VCS principle of Accuracy, given that illegal logging is the main driver of GHG emissions and that until	

the project activities are fully implemented, is likely to continue to some degree. Indeed the audit team has confirmed in all BioREDD+ project areas that illegal logging is ongoing at the time of the field audit which is more than 1 year after the project start date. Finally, given that the agents of degradation that would be conducting the illegal logging are also the proponents, the idea of a self-survey to evaluate whether degradation is occurring, which would result in the proponents losing carbon finance if said degradation were occurring, is not credible or in conformance with the VCS principle of Transparency.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	GeoEcoMarp_Task14_031215.pdf
Findings for Evaluation of Evidence:	The proponent has responded by claiming that any degradation occurring in the project and leakage areas will be quantified using remote sensing LULC change analyses as described in the MRV report (GeoEcoMap Task 14). However, GeoEcoMap Task 13 correctly acknowledges that "In general remote sensing approaches may not be able to detect selective and illegal logging where a small number of trees are extracted by local communities. However, for consistency with project documents, we will rely on degradation defined and detected by the remote sensing approach as part of the monitoring activities and will not include any ground surveys in the future monitoring activities." The proponent has still not developed an implementable approach for measuring project scenario emissions from degradation in the project areas and leakage areas. Using remote sensing will not enable the proponent to detect impacts of selective logging. Based on the field audit, selective logging is ongoing in all BioREDD+ projects. The nonconformance remains open. <u>Update from 15 April 2015</u> LiDAR flights will only be flown at baseline updates, which is acceptable. Carbon stock changes during verifications between baseline updates will be calculated based on activity data (transitions from one LULC to another) such as conversion from primary forest to degraded forest or primary forest to agricultural land. As it is possible that some small scale selective logging occurring in primary forest LULCs could remain undetected until a baseline update when LiDAR would detect this. This would lead to temporary overcrediting during these verification events, which would then be aligned during a baseline update. Due to an NCR issued by the audit team around this issue the proponent has built into the monitoring procedures a model from a peer reviewed publication (Pearson et al 2014) which assumes a fractional loss of carbon stocks in the Primary Forest class related to the fractional change

	represented by the transition from the Primary Forest LULC to the Degraded Forest LULC, as determined by remote sensing. This approach leads to conservativeness during these verifications between baseline updates, and accuracy at the time of baseline updates when LiDAR will be used to update emissions factors and the "true" quantity of degradation in the Primary Forest LULC will then be known. At baseline updates the carbon stock value applied to Primary Forest LULCs and Degraded Forest LULCs will be updated using LiDAR data. The nonconformance is closed.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	31/14
Standard & Requirement:	VCS Principle of Accuracy
Report Section:	Multiple sections
Description of Non-conformance and Related Evidence:	
The PD uses a system of supporting annexes which are internally referenced within the PD and are well organized. However, some crucial documents provided to the audit team including all supplemental monitoring materials and much of the supporting technical documentation developed by GeoEcoMap, as well as the non-permanence risk report, are not referenced in the PD and not included in the annex system. This creates a risk that these documents may be lost from future verifications or treated as unofficial documentation.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	BioREDD+ Bajo Calima & Bahia Malaga REDD+ Project VCS PD Version 4.27, 18 February 2015
Findings for Evaluation of Evidence:	The proponent has now updated the system of Annexes such that the key technical documentation developed by GeoEcoMap, as well as the non-permanence risk report are clearly referenced in the PD and are recorded in the system of Annexes. Conformance is demonstrated.
NCR Status:	CLOSED

Comments (optional):	

NCR#:	32/14
Standard & Requirement:	VCS VM0006 8.3.2
Report Section:	Section 7.5
Description of Non-conformance and Related Evidence:	
The proponent describes the methods for defining the leakage belts in Section 5.5.2.3 of the PD. The methods were also described in detail by the consultant who conducted the geospatial analyses to determine the leakage belts. While these analyses followed the requirements of VM0006 the a non-conformance was identified as the audit team identified that the leakage belts as currently defined do not match the patterns of degradation that occur in the project areas. The leakage belts are built upon the assumption of an area of influence around centro del copios (logging storage centers) and that leakage belts occur where these areas of influence extend beyond the project boundary. However the audit team does not find the area of influence to be credible given that remote sensing imagery from the proponent clearly indicates that corteros conduct logging activities much farther from the centros del copio than the leakage belt delineation suggests	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	<u>Reviewed on 18 February 2015</u> BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc <u>Reviewed on 18 March 2015</u> BioREDD BCBM REDD+ Project Description v5.0.doc BioREDD BCBM REDD+ NCR Response Form v1.42.doc Leakage Area Methodology_EN v1.3.pdf
Findings for Evaluation of Evidence:	The proponent has generically described the updated approach for defining the leakage belts in the documentation provided to the audit team. The newly defined leakage belt is several times larger and appears much more consistent with degradation patterns observed in the field as well as in historic deforestation/degradation patterns.

	The nonconformance is closed.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	33/14
Standard & Requirement:	VCS VM0006 Section 9.3.2, Section 9.3.9
Report Section:	
Description of Non-conformance and Related Evidence:	
The MRV document, GeoEcoMap Task 14, which was not presented to the auditors during the original document review which accompanied the field audit, indicates that emissions factors and carbon stocks for all LULC classes and transitions will be measured once more prior to the first verification (to reduce the uncertainty discounts) and following this will not be updated for the rest of the crediting period. This is not in conformance with the VM0006 methodology. Specifically Section 9.3.2 stipulates that "carbon stock densities must be re-measured at least once before every baseline update using ground-based biomass inventories, as described in Section 8.1.4.4…[once new carbon stock densities are available] values for the emissions factors must be updated…" Section 9.3.9 also indicates that "Baseline updates must follow the procedures in Section 8". In this section a list of exceptions to the procedures of Section 8 are described. Selecting to not re-measure carbon stocks and update emissions factors is not among these exceptions. The methodology is unambiguous that carbon stocks and emissions factors shall be updated at each baseline update and that these shall be updated using ground based plots.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	GeoEcoMap Task 14
Findings for Evaluation of Evidence:	The proponent has requested a methodology deviation which has been accepted by the audit team. The

	audit team approves the methodology deviation. The deviation simply replaces a requirement of the approved VCS VM0006 methodology with the also VCS approved VT0005 tool which is a better reflection of the state of the art of technology for remote forest measurement. Several peer reviewed publications have demonstrated that LiDAR measurements can be more accurate that ground based inventories and have necessarily much higher sampling intensities. As a result the audit team considers the deviation to more accurate than the alternative. In addition, the audit team sees no reason why ground based inventories would be necessary at future baseline updates to create a new allometric model as the forest type is the same at both time points. The nonconformance is closed.
NCR Status:	CLOSED
Comments (optional):	

VCS & CCB Forward Action Requests (FARs)

The VCS has recently adopted FARs as a system for identifying areas of likely or possible nonconformance in future audits. For example, areas of project implementation proposed at validation that may lead to nonconformances at a future verification. FARs serve to flag these issues for future VVBs as well as to help projects identify improvements that can be made to project implementation prior to these issues manifesting as nonconformances.

FAR#:	01/14
Standard & Requirement:	VCS Additionality Requirements
Report Section:	Relevant for future verification
Description of potential future Non-conformance and Related Evidence:	
The project plans to scale up project activities including productive agricultural activities that already exist in the project area. Future VVBs are reminded to verify that project activities witness at a future verification are attributable to the REDD project rather than a different development project or a pre-existing land use practice.	
Corrective Actions:	Organization may implement corrective actions to demonstrate that the risk of a future non-conformance has been resolved with the requirement(s) referenced above.

Timeline for Conformance:	Prior to Verification
Evidence Provided by Organization (Optional):	PENDING
Findings for Evaluation of Evidence (Optional:	PENDING
FAR Status:	OPEN
Comments (Optional):	

FAR#:	02/14
Standard & Requirement:	No specific requirement. FAR is issued to ensure safety of future auditing teams
Report Section:	Relevant for future verification
Description of potential future Non-conformance and Related Evidence:	
Future auditing teams for verification should be aware of the risk of instability and conflict in much of the Colombian Pacific region. At the time of the validation audit separatist groups (the FARC) and paramilitary groups were active in or near all the majority of BioREDD projects.	
Corrective Actions:	Organization may implement corrective actions to demonstrate that the risk of a future non-conformance has been resolved with the requirement(s) referenced above.
Timeline for Conformance:	Prior to Verification
Evidence Provided by Organization (Optional):	PENDING
Findings for Evaluation of Evidence (Optional:	PENDING
FAR Status:	OPEN
Comments (Optional):	

FAR#:	03/14
Standard & Requirement:	CCB 3rd Edition G1.10
Report Section:	4.3 Relevant for future verification
Description of potential future Non-conformance and Related Evidence:	

The proponent identifies various human-induced risks and associated mitigation strategies related to the project's climate, community and biodiversity benefits as described in section 2.3 of the PD. The mitigation measures presented therein are satisfactory, however due to the aspirational nature of many project activities such as trainings and capacity building regarding income generation activities, specific risk mitigation measures on human-induced risks to climate and community benefits have not been clearly articulated yet at validation. For example, the proponent states that "Project activities work with local stake holders on improved planting and processing techniques for foodstuffs ,which will help locals adapt to changing climate and social conditions.", but no detail is provided on the exact measures that will be taken. This is largely the result of pending discussions and plans with communities and implementing partners. Future verifiers are reminded to review the detail and appropriateness of mitigation measures related to human-induced risk once project activities have been more concretely defined with the communities.	
Corrective Actions:	Organization may implement corrective actions to demonstrate that the risk of a future non-conformance has been resolved with the requirement(s) referenced above.
Timeline for Conformance:	Prior to Verification
Evidence Provided by Organization (Optional):	PENDING
Findings for Evaluation of Evidence (Optional:	PENDING
FAR Status:	OPEN
Comments (Optional):	

CCBA Nonconformity Reports (NCRs)

NCR#:	01/14
Standard & Requirement:	CCB Standards 3rd Edition, multiple requirements
Report Section:	Multiple Sections
Description of Non-conformance and Related Evidence:	
The PD's for all eight projects describe in great detail the roles that Fondo Accion will play as a Project Liaison. This is used to demonstrate conformance with several CCB indicators including: G4.2—key technical and managerial skills of the management team G4.3—financial health of implementing organization G3.8—grievance mechanism G3.9—worker training G3.10—equal opportunity employment G3.11—compliance with laws and regulations relevant to workers G3.12—occupational hazards and risk minimization	

GL2.6—description of benefit sharing mechanism Fondo Accion is only guaranteed to participate in the project through March 2015 so cannot be relied upon to demonstrate conformance with these indicators in the absence of an extension of this participation.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Email communication with CCBA
Findings for Evaluation of Evidence:	The CCBA has confirmed that as the validation is simply an assessment of the project plan and the plan to include Fondo Accion in all of these roles is clear, the nonconformance can be closed.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	02/14
Standard & Requirement:	CCB Standards 3rd Edition G3.12
Report Section:	Section 4.6
Description of Non-conformance and Related Evidence:	
G3.12 requires the proponent to “assess occupations that might arise through implementation of the project and pose a risk to worker safety” and to describe related mitigation measures. The PD’s only generally describe Fondo Accion’s risk management plan. The PD’s do not provide a risk assessment of likely future occupations identifying risks and mitigation measures. While future occupations are not all known, some are, including rangers/forest guards, which is a risky occupation and is not evaluated. Additionally, as it is unclear whether many workers, for example forest guards, will be employed by Fondo Accion or by the proponents, the relevance of Fondo’s risk management plan is not clear.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s)

	referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Reviewed on 18 February 2015 riesgos BC_BM.xlsx Reviewed on 18 March 2015 Riesgos BCBM.docx
Findings for Evaluation of Evidence:	Updated on 18 February 2015 The proponent has identified a range of activities/occupations likely to result from implementation of the project. These are credible and reasonable and relate to the themes of activities to maintain carbon stocks (consejo boundary monitoring, carbon stock measurement), governance activities (consejo boundary monitoring, monitoring of degradation), productive activities (implementation of alternative income activities), and other (school construction, health, etc.). For each activity risk factors have been identified and are classified as of biological, physical, or psychological origin. Activities with the highest risks are identified and include measurement of forest carbon plots, biodiversity monitoring, demarcation of conservation areas, forest patrolling, ecotourism, and fishing. The audit team finds the identification of occupations and corresponding risks to be credible and representative of the information that the audit team received while in the field from interviews about the type of likely occupations and probable risks. The audit team considers the forest patrols to be the highest risk activities due to the remote locations and the possibility of encounters with drug production areas. The risk document identifies appropriate mitigation measures and equipment to be used. For example, the forest patrols will consist of crews of 8 people with means of transportation (boats or vehicles), computers, radios, cameras, uniforms and boots, and first aid kits and first aid training. Likewise, fishing another high risk activity will have the same equipment. Although the risks document is comprehensive, the document has failed to identify one of the most probable risk events in a region where the majority of transportation is by boat. The risk document does not identify drowning as a risk, nor does it guarantee that workers will have access to flotation devices.

	Updated on 18 March 2015 The audit team has reviewed the updated risk analysis and mitigation measure document (BioREDD+ Bajo Calima y Bahia Malaga (BC-BM) REDD+ Project) and confirmed that the proponent now officially acknowledges the need and warrants that fisherman participating in project activities will have access to flotation devices to control the risk of drowning. The non-conformance is closed.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	03/14
Standard & Requirement:	CCB Standards Third Edition G3.8
Report Section:	Section 4.7
Description of Non-conformance and Related Evidence:	
The grievance process as described in the PD does not identify an effective "neutral third party" for mediating grievances in "stage two" of the grievance mechanism. The PD notes "Secondly, Grievances that cannot be resolved by the above-mentioned internal procedures will be referred to a Mediation Body. These cases would be considered Grave Conflicts that require a response from the President and Legal Representative of the Governing Board of the Community Council, and representative from Fondo Acción. For such conflicts, a response will be provided within 45 calendar days. The Assignments Manual produced within the first three months of the project will contain more detailed procedures for listening to the conflicting parties and establishing a Mediation Body." All of the entities or individuals identified to form the third party (consejo President, Legal Representative, Governing Board, and Fondo Accion representative) are involved in the project and are not third parties. This approach also does not provide for an effective mediation body for resolving conflicts between multiple consejos participating in the project, or between a consejo and an implementing partner.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Annex H Guia Mecanismo de QuejasReclamos BCBM (3).docxBioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc

Findings for Evaluation of Evidence:	The proponent has updated the PD and the Grievance Process document in response to the NCR. The project now has identified the Camara de Comercio de Buenaventura and the Defensoria del Pueblo as entities which can play the role of a third party for mediation when conflict resolution within a consejo fails. This selection is appropriate based on interviews with communities during the field audits. Communities often suggested these institutions as appropriate for this role. This third party can be used for mediation within a consejo, between consejos, or between the consejo and an implementing partner such as Fondo Accion. These same institutions can be used for arbitration in the case that the mediation step is unsuccessful. The grievance process is in conformance with the CCB Standards 3rd Edition.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	04/14
Standard & Requirement:	CCB Standards 3rd Edition, G5.4
Report Section:	Section 5.8
Description of Non-conformance and Related Evidence:	
G5.4 requires the identification of any illegal activities occurring in the project zone and evaluation of their impact on CCB benefits. The proponent has successfully evaluated illegal logging as the major illegal activity. However, the PD does not evaluate coca production which is considered very likely to occur in some project zones based on community interviews.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc
Findings for Evaluation of Evidence:	The proponent has now acknowledged in Section 3.8 of the PD, “Illegal activities and project benefits” that there are some sparse coca plantations in the project area and zone. The proponent also asserts that the amount of coca production has been decreasing over time. The proponent cites the UNODC

	reports on coca production in Colombia (2012 report) to substantiate this. The audit team sees no evidence that project benefits would be derived from illegal activities. To the contrary, the project activities will provide alternative agricultural opportunities to illegal activities and should serve to help reduce reliance on coca production. In fact, USAID, which has funded the project development, has been active in the region promoting alternatives to coca production for some years. This aspect of the Nonconformance is closed. The audit team reviewed the most recent UNODC report on coca production in Colombia (2013 Coca Cultivation Survey, UNODC). The report confirms that coca production dropped steadily in Colombia from about 2005 until 2011 and since that time period has remained stable at a low level. The remote maps areas of coca production in the Colombian Pacific and shows that the project area is primarily an area with no coca production, other than a minority of the project area in which the cultivation density is the lowest severity measured by UNODC with 0.1-1.0 ha/km2 of coca. The proponent has both acknowledged this illegal activity and demonstrated that it is immaterial using what the audit team believes is the best available data—reports from the United Nations. The nonconformance is closed.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	05/14
Standard & Requirement:	CCB Standards 3rd Edition, B2.2
Report Section:	Section 9.2
Description of Non-conformance and Related Evidence:	
One of the major productive activities described in some of the PDs, and for which communities have expressed significant enthusiasm, is the commercialization of fisheries. The relevant PDs do not evaluate the biodiversity risks of increased fishing pressure in the assessment of net positive biodiversity impacts of the project.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence

	above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	PENDING BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc Annex H, including: Cap 1 Socioeconomico - Oferta - Demanda.pdf Diagnóstico socioeconómico pesca_Málaga.pdf Incentivos y Sanciones_La Plata Málaga.pdf Informe final comercialización piangua_Málaga.pdf ORDENAMIENTO DEL PNN URAMBABM FINAL.pdf
Findings for Evaluation of Evidence:	The proponent has updated the PD in Section 7.1.1 with the assertion that the project will only support fishing activities which promote sustainable fishing practices and which maintain fish stocks for the long term. The PD references Annex BA for this purpose. Annex BA contains a range of socioeconomic and ecological studies on the impacts of artisanal fishing practices in Bahia Malaga and Bajo Calima as well as studies for the sustainable commercialization of fishing resources such as piangua, and resolutions by the participating consejos with regards to sustainable fishing practices. Much of the studies are derived from other BioREDD+ program activities related to sustainable fisheries which will be leveraged by the REDD project. The data collected and the promotional activities around sustainable fisheries are sufficient for validation to demonstrate that the project is likely to have a neutral to minimal impact on fisheries. In combination with the unequivocal positive impacts on terrestrial biodiversity from forest conservation this is sufficient for validation to demonstrate likely net positive biodiversity impacts. Future audit teams will assess the implementation of sustainable fishing activities at future verification events.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	06/14
Standard & Requirement:	CCB Standards 3rd Edition, G1.12, G4.3
Report Section:	Section 4.5
Description of Non-conformance and Related Evidence:	

The project provides Annex F, "Presupuesto BCBM" as evidence of conformance with G1.12. However a nonconformance has been identified as the PD claims the project has secured the necessary financing through 2022. The audit team is under the impression that this is not accurate given that the anticipated funding from an external stakeholder is not yet secured. Additionally, there are some errors in Annex F which undermine the utility of the evidence including several "#REF!" invalid cell references. Additionally, Section 2.5 notes that the financial mechanism will be implemented by Fondo Accion, which per its current agreement with the proponents is only involved until March 2015. The financial health of implementing organizations is not described in the PD as required by G4.3.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Annex AV Implementation Framework Annex O REDD Plan Fondo Accion Financial Statements
Findings for Evaluation of Evidence:	The proponent has described the financial health of Fondo Accion which is the proposed implementing partner and is in very secure financial health. Fondo Accion has an endownment of $44 million. The proponent has clarified that they have not in fact secured funding through 2022. However, the proponent has developed a budget based upon a likely funding source. Indicator G1.12 states that projected revenues can be considered. The nonconformance is closed.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	07/14
Standard & Requirement:	CCB Standards 3rd Edition, G3.7
Report Section:	Section 4.7
Description of Non-conformance and Related Evidence:	

The PD does not appear to describe measures needed and taken to ensure the proponent and implementing groups are not involved in harassment or discrimination.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	Annex AV Framework Agreement BCBM (2).docx BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc
Findings for Evaluation of Evidence:	The proponent has revised the PD Section 2.7.1 to explicitly acknowledge this CCB requirement and identifies measures in Annex AV to ensure that the project proponent (the consejo) and other entities involved in project implementation such as BioREDD+ and Fondo Accion, are not involved in harassment or discrimination. Annex AV, the framework implementation agreement between Fondo Accion and the consejos requires as a condition in Section 8 of the agreement that there is no harassment or discrimination of any kind. Implementation of this condition will be assessed at future verifications. The nonconformance is closed.
NCR Status:	CLOSED
Comments (optional):	

NCR#:	08/14
Standard & Requirement:	CCB Standards 3rd Edition, G1.9
Report Section:	Section 3.6
Description of Non-conformance and Related Evidence:	
The CCBA definition of start date is the start of implementation of activities that will directly cause the projects expected climate community or biodiversity benefits.	

Similarly to the corresponding VCS NCR, the proponent has not justified how the signed letter of intent leads to "the start of implementation of activities" starting on that date.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	VCS Erratum & Clarifications statement for VM0006 Carbon Accounting for Mosaic and Landscape-scale REDD Projects, v2.1, 10 December 2014 BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 1.Carta de Intencion BCBM.pdf 2.Acuerdo Marco.pdf 3.Hoja de Ruta.pdf 4.Capacitacion BC.pdf 9.Taller de Formacion Basica en Proyectos REDD+.pdf BCBM Justificacion.pdf
Findings for Evaluation of Evidence:	The proponent has provided a detailed justification of how the claimed project start date led to the generation of GHG emission reductions, including direct changes in forest management. The proponent has demonstrated that the Carta de Intencion, establishing the project start date was only the final step in a sequence of activities that led to community mobilization towards effective changes in forest governance leading to emissions reductions. Initial MOUs with the communities, as well as socialization and capacity building meetings and exercises, all occurring prior to the project start date, are described in detail. The logical link between these meetings and agreements to changes in forest governance is adequately justified. Finally, the consejo legal representatives have provided detailed explanation and justification for the timeline for early project implementation and how this justifies the project start date. This letter, signed by the consejo legal representatives, provides further justification independent from the BioREDD program. Based on the logical justification and abundant documentation of early project action and implementation of activities leading to material changes in forest governance practices, the start date is justified and the non-conformance is closed.

NCR Status:	CLOSED
Comments (optional):	

NCR#:	09/14
Standard & Requirement:	CCB 3rd Ed. G1.10
Report Section:	4.3
Description of Non-conformance and Related Evidence:	
The proponent has provided an incomplete description of risks posed to the climate benefits to be delivered by the project as requested by indicator G1.10. In section 2.3.1 of the PD the proponent presents a narrative on "Climate Risk" and identifies ways in which the communities involved in the project are adapted to natural risk posed by climate change. While this information is generally valuable it does not relate to risks to climate benefits. The proponent however has provided a short identification of natural risks, as identified in the VCS risk tool (with only geological and extreme weather risks identified). However, this simple identification does not rise to the level of detail required by the CCB standards with regards to identification of risks and corresponding mitigation measures. In sum, the proponent's analysis related to risks to climate benefits is incomplete as it does not sufficiently identify or relate natural risks to the project's climate benefits.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	BioREDD BCBM REDD+ Project Description v4.28. Issue date 17 Feb 15 BioREDD BCBM REDD+ NCR Response Form v1.33.doc
Findings for Evaluation of Evidence:	The proponent has provided updated text in the PD to further explicate the natural and human induced risks to the climate benefits of the project. The proponent has specifically supplemented the additional analysis of the natural risks with a deeper explanation of the data sources for the natural risks which includes the DesInventar system.

	The proponent uses the DesInventar online disaster tracking system which covers Colombia, Venezuela, Ecuador, Peru, and Bolivia. The DesInventar system is supported by the UN Office for Disaster Risk Reduction and the UN Development Programme have endorsed the system for tracking and recording disasters and the system is a valid resource for assessing natural risks in the project area. The system has files dating back to 1938 for some risk types. The proponent has appropriately submitted to the audit team the output of the analyses using Desinventar.
NCR Status:	CLOSED
Comments (optional):	