VCS FINAL VALIDATION REPORT

WILDLIFE WORKS KASIGAU CORRIDOR REDD PROJECT PHASE I – RUKINGA SANCTUARY

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VCS PROJECT VALIDATION REPORT

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Det Norske Veritas (U.S.A.), Inc. (DNV) has performed a validation of the "The Kasigau Corridor REDD Project Phase I – Rukinga Sanctuary" (hereafter called "the project") in Kenya on the basis of Voluntary Carbon Standard 2007.1 (VCS), as well as criteria for consistent project operations, monitoring and reporting. This validation report summarizes the findings of the validation.

The validation consisted of the following three phases: i) a desk review of the project design, the baseline and the monitoring plan, ii) follow-up interviews with project stakeholders and the issuance of the finding list, and iii) the resolution of outstanding issues and the issuance of the final validation report and opinion.

The total emission reductions from the project are estimated to be 4 525 767 tCO2e over the 30-year crediting period (1 January, 2005 to 31 December, 2034). This includes project emissions, the total confidence deduction, a 20% leakage deduction applied to years 2011-2034, and the VCS AFOLU buffer deductions currently assessed at 20%. This estimate assumes the baseline does not change during the baseline reevaluation.

In summary, it is DNV's opinion that the "The Kasigau Corridor REDD Project Phase I – Rukinga Sanctuary" as described in the VCS Project Document dated 31 January 2011 meets all relevant VCS 2007.1 requirements and correctly applies the VCS approved methodology element VM0009 – Methodology for Avoided Mosaic Deforestation of Tropical Forests Version 1.0.

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Abbreviations

AFOLU Guidelines	Agriculture, Forestry and Other Land Uses Section of Guidelines for National Greenhouse Gas Inventories 2006
CAR	Corrective Action Request
CCBA	Climate Community and Biodiversity Alliance
CDM	Clean Development Mechanism
CL	Clarification Request
CO_2	Carbon Dioxide
DNA	Designated National Authority
DNV	Det Norske Veritas
DR	Document Review
EB	Executive Board
GHG	Greenhouse Gas(es)
GPG LULUCF	Intergovernmental Panel on Climate Change's Good Practice Guidance for Land-Use Land Use Change and Forestry
GWP	Global warming potential
m	Meters
MED	Methodology Element Documentation
MoV	Means of Verification
PD	Project Document
REDD	Reduced Emissions from Deforestation and Degradation
SCS	Scientific Certification Systems
tCO_2e	Tonnes CO_2 equivalent
VCS	Voluntary Carbon Standard
VCSA	VCS Association
VCU	Voluntary Carbon Unit
WBCSD	World Business Council for Sustainable Development
WRI	World Resources Institute

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1 INTRODUCTION

Wildlife Works, Inc. (Wildlife Works) has commissioned Det Norske Veritas (U.S.A.), Inc. (DNV) to validate the "Kasigau Corridor REDD Phase I – Rukinga Sanctuary" in Kenya. This report provides a description of the steps involved in conducting the validation and the findings of the validation based on the Voluntary Carbon Standard 2007.1 (VCS), as well as criteria for consistent project operations, monitoring and reporting.

The validation team consisted of the following personnel:

Role/Qualification	*Last Name*	*First Name*	*Country*
Project manager	Stevenson	Samuel	USA
VCS Validator / VCS REDD AFOLU Expert	Smith	Gordon	USA
Technical reviewer	Pinjuv	Guy	USA

1.1 Objective

The purpose of a validation is to have an independent third party assess the project design. In particular, the project's baseline, monitoring plan, and the project's compliance with the VCS 2007.1 are validated. This is to ensure that the project design, as documented, is reasonable and meets the identified criteria. Validation is a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reductions.

1.2 Scope and Criteria

The validation scope is defined as an independent and objective review of the VCS Project Description (VCS PD). The VCS PD is reviewed against the criteria stated in the Voluntary Carbon Standard 2007.1 (VCS), and the approved VCS methodology VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests, version 1.0.

The validation is not meant to provide any consulting for the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

1.3 VCS Project Description

The "Kasigau Corridor REDD Project Phase I – Rukinga Sanctuary" has been developed by Wildlife Works Inc., a project proponent based in California, USA. The project is implemented on land known as the Rukinga Sanctuary, which is wholly owned by the Rukinga Ranching Co., Ltd. The leasehold on the title will be due for renewal in 2038, at which point it can be renewed once again for up to 99 years under Kenyan law.

The project proponent is Wildlife Works, Inc. and the project developer is Wildlife Works Carbon LLC. DNV has confirmed that Wildlife Works, Inc. has the right to all and any reductions generated by the Project during the Project Crediting Period /2/.

The project is 30 169 hectares with an average canopy cover of 39%, with mature tree heights ranging from 5-10 meters (m), and therefore conforms to the latest VCS definition of "forest" /26/ (see pg 13).

The main project activity is to prevent deforestation caused by subsistence farming activities. The objective of the project activity is to prevent the conversion of forest to cropland for annual crops, typically maize that ultimately results in net greenhouse gas (GHG) emissions into the atmosphere. The primary agents of deforestation are the growing population of the local Taita and Kamba people living in the Reference Area. Agricultural clearing in the Reference and Leakage Areas is permanent and cultivation activities do not shift.

The project start date is 1 January, 2005, which is the date Wildlife Works assumed financial responsibility for the project area and began specific GHG mitigation activities within the project area **/4/**. The selected crediting period is from 1 January, 2005 to 31 December, 2034. The total emission reductions from the project are estimated to be 4 525 767 tCO2e over the 30-year crediting period. This includes project emissions, total confidence deduction, a 20% ex-ante leakage deduction applied to years 2011-2034 as per VM0009 and the VCS AFOLU buffer deductions currently assessed at 20%. This estimate assumes the baseline does not change during the baseline re-evaluation.

1.4 Level of Assurance

DNV provides reasonable assurance that the emission reduction estimations for the "Kasigau Corridor REDD Project Phase I – Rukinga Sanctuary Project" are conservative and meet the VCS criteria and approved methodology, VM0009.

Estimating a leakage rate at the project outset is highly uncertain. Wildlife Works has determined an ex-ante leakage rate for the project crediting period at 20% and it is our assessment given a lack of past project data that this is appropriate given the conditions of the project and find the assessment to conform to the requirements in the approved methodology VM0009.

To ensure complete transparency, DNV has included any clarification or corrective actions that were raised in this validation report in Appendix A.

2 METHODOLOGY

The validation consisted of the following three phases:

- A desk review of the project design and the baseline and monitoring methodology.
- Site visit and interviews with project stakeholders.
- The resolution of outstanding issues and the issuance of the final validation report and opinion.

In order to ensure transparency, a validation protocol was customized for the project. The protocol used shows in a transparent manner the criteria, means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

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

The validation protocol consists of two tables. The different columns in these tables are described in Figure 1. The completed validation protocol for the "Kasigau Corridor REDD Project Phase I – Rukinga Sanctuary"" is enclosed in Appendix A to this report.

Findings established during the validation can either be seen as a non-fulfilment of validation protocol criteria or where a risk to the fulfilment of project objectives is identified. Corrective Action Requests (CAR) are issued where:

- Mistakes have been made with a direct influence on project results.
- Validation protocol requirements have not been met.
- There is a risk that the project would not be accepted as a VCS project or that emission reductions will not be certified.

The term Clarification (CL) may be used where additional information is needed to fully clarify an issue.

Validation Protocol Table 1: Requirement Checklist				
Checklist Question	***Reference***	***Means of verification (MoV)***	***Comment***	***Draft and/or Final Conclusion***
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organized in seven different sections. Each section is then further sub-divided. The lowest level constitutes a	*Gives reference to documents where the answer to the checklist question or item is found.*	*Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.*	*The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions*	*This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question (See below).A request for Clarification (CL) is*

checklist question.			*reached.*	*used when the validation team has identified a need for further clarification.*

Validation Protocol Table 2: Resolution of Corrective Action Requests and Requests for Clarification			
Draft report corrective action requests and requests for clarifications	***Ref. To Table 1***	***Project participants' response***	***Final conclusion***
If the conclusions from the draft Validation are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	*Reference to the checklist question number in Table 1 where the Corrective Action Request or Clarification Request is explained.*	*The responses given by the project participants during the communications with the validation team should be summarized in this section.*	*This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 1, under "Final Conclusion..*

Figure 1: Validation Protocol Tables

2.1 Review of Documents

The project document /1/, dated 31 January, 2011 and previous versions for "Kasigau Corridor REDD Phase I – Rukinga Sanctuary" was submitted by Wildlife Works, Inc., along with additional background documents related to the project design and baseline, which were assessed as part of the validation. The project documentation followed the guidance set out in VCS 2007.1.

The following table lists the documentation that was assessed during the validation:

Documents provided that relate directly to the project:

/1/ Wildlife Works Carbon LLC, *VCS PD for* Kasigau Corridor REDD Project Phase I – Rukinga Sanctuary" with VCS template and supporting document, 31 January, 2011 and previous versions.

/2/ "Carbon Rights Agreement" between Wildlife Works Inc. and Rukinga Ranching Company – 15 Febuary 2009.

/3/ Leasehold title to Rukinga Ranch – 1 January, 1971.

/4/ Re: - Management Authority for Rukinga Ranch (1 January, 2005).

/5/ Audit Report of Wildlife Works EPZ by Kenya National Environmental Management Authority – December, 2006.

/6/ Shareholder list, Rukinga Ranching Company – Effective from AGM meeting minutes on 9 December, 2009.

/7/ Rukinga Ranch Company/ Wildlife Works Inc. / Wildlife Works EPZ financial statements and projections – As of 13 January, 2011.

/8/ CCB validation report conducted by Scientific Certifications Systems – 20

December, 2009.

/9/ Image Classification Protocol (as of 14 January, 2011).

/10/ How to Use the Classification Tool (as of 14 January, 2011).

/11/ Logistic regression model for deforestation (as of 14 January, 2011).

/12/ Field measurement protocol – Standard Operating Procedure Biomass (as of 14 January, 2011).

/13/ Field measurement protocol – Standard Operating Procedure Soils (as of 14 January, 2011).

/14/ Soil lab report of measured soil carbon concentrations (Rukinga 1m Soil Analysis, 14 January, 2011).

/15/ Forest Biomass Data (Rukinga Carbon trees Shrubs Grass v7.xlsm, 14 January, 2011).

/16/ Forest biomass sampling quality control comparisons (QC report.xlsx, 14 January,2011).

/17/ Data used to develop tree biomass allometric equations (AllometricFormulasPower.xlsx, 14 January, 2011).

/18/ Letters to shareholders of Rukinga Ranching Co. Ltd. Pertaining to an Extraordinary General Meeting of Rukinga Ranching Co Ltd. To be held at Free World Country Club, Voi at 10:00am Wednesday December 9th, 2009.

/19/ Wildlife Works Inc. Tool for AFOLU Non-Permanence Risk Analysis and Buffer Determination for the Kasigau Corridor REDD Project, Phase I – Rukinga (14 January, 2011).

/20/ Rukinga return analysis v4.xlsx (27 January, 2011)

/21/ Leakage Model Expanded (14 January, 2011).

/22/ Grid Data RefArea flaggedPointsv2.xlsx (14 January, 2011).

Background documents related to the design and/or methodologies employed in the design or other reference documents:

/23/ Approved VCS methodology: "VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests version 1.0" 11 January, 2011.

/24/ VCS Association, *Voluntary Carbon Standard 2007.1*, November 2008.

/25/ VCSA, VCS Sectoral Scopes (http://www.v-c-s.org/sectoral_scopes.html)

/26/ VCSA, *Guidance for Agriculture, Forestry and Other Land Use Projects, 18* November, 2008.

/27/ VCSA, *Tool for AFOLU Non-Permanence Risk Analysis and Buffer Determination*, 18 November, 2008

/28/ VCSA, *Update to the VCS 2007.1: Tool for Non-Permanence Risk Analysis and Buffer Determination,* 8 September, 2010.

/29/ VCS VT0001 *Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities Version 1.0, 21 May, 2010.*

/30/ CAR *Forest Project Protocol version 3.2* August 31, 2010

2.2 Follow-up Interviews

During 10-14 January, 2011, DNV performed interviews with project stakeholders at the project site in Rukinga, Kenya to confirm selected information and to resolve issues identified in the document review. Representatives of Wildlife Works, Inc. were interviewed. The main topics of the interviews are summarized in Table 1.

Table 1 Interview Topics

Interviewed Organization	Interview Topics
Wildlife Works, Inc.	✓ Project start date. ✓ Demonstration of additionality. ✓ Emission reduction estimates. ✓ Monitoring plan. ✓ Baseline determination. ✓ Buffer determination. ✓ Leakage rates. ✓ Resources, training, procedures of management structure.

Table 2. Participants at Project Site (Rukinga, Kenya)

Name	Position	Organization
Mike Korchinsky	President	Wildlife Works, Inc.
Jeremy Freund	VP, Carbon Development	Wildlife Works Carbon LLC
Rob Dodson	General Manager	Wildlife Works, Inc.
Patrick Kabatha	Biodiversity Specialist	Wildlife Works, Inc.
Hassan Sachedina	VP, Conservation Enterprise	Wildlife Works Carbon LLC
Laura Crown	Office Manager	Wildlife Works, Inc.

2.3 Resolution of Any Material Discrepancy

To guarantee the transparency of the validation process, the concerns raised by DNV and the response provided by the project proponent and the consultant are documented in Table 2 of the Validation Protocol in Appendix A.

3 VALIDATION FINDINGS

3.1 Project Design

The project avoids deforestation and forest degradation caused by clearing for subsistence agriculture. Clearing is often preceded by degradation in the form of removal of larger trees with dense wood during illegal charcoal making operations. The project encompasses a variety of activities to monitor and protect project lands, provide local people with alternative ways of sustaining themselves, and providing sustainably produced charcoal.

Quantification of deforestation was performed by human interpretation of a time series of LANDSAT images of the reference area, classifying each point of a sample as forest, non-forest, built, cloud/shadow or no image. Methods described in approved VCS Methodology VM0009, Version 1.0 were used to statistically weight each forest state observation and calculate a logistic curve representing cumulative baseline deforestation over time.

Starting vegetation and soil carbon stocks were measured within the project area. Vegetation sampling was stratified by vegetation type. Soil carbon was measured using unstratified random sampling. Destructive sampling of trees and shrubs was used to construct allometric equations to predict tree biomass as a function of diameter and shrub biomass as a function of height. Loss of soil carbon was estimated by measuring carbon stocks in farmed fields and finding the difference between stocks in fields and in undisturbed forest.

The project avoids deforestation within the project boundary by controlling project lands through ranger patrols and relationships between Wildlife Works staff and members of surrounding communities. The project provides alternatives to subsistence agriculture to avoid leakage in the form of displacing land clearing from within the project boundary to outside the project boundary. The project is developing a sustainable charcoal production program to avoid displacement of charcoal production from within the project boundary to other locations.

Baseline emissions are calculated as a function of the baseline area predicted to be deforested each year, multiplied by the carbon stock per hectare in woody biomass, soil carbon loss as a decay function since conversion to agriculture. The project avoids emissions to the extent that monitored deforestation is less than predicted baseline deforestation, adjusted for changes in biomass carbon stocks.

The project is eligible for crediting under the VCS because it meets the applicability requirements of approved VCS Methodology VM0009 as explained in section 3.2.1 below.

DNV finds that the project does conform to VCS AFOLU guidance /26/, as well as conforming to the applicability requirements of VCS Methodology VM0009. DNV also finds that the project proponent has appropriately defined a reference area, appropriately measured deforestation over time within the reference area, and appropriately monitored starting biomass and soil carbon stocks within the project boundary. DNV has also confirmed that the project is implementing leakage mitigation activities and has performed baseline measurements needed to quantify whether or not leakage occurs over time.

Project Boundary

The project area covers 100% (30,169 hectares) of the Rukinga Sanctuary. At the time of the project start date, 93% of the project area was forested for 10 years prior to the project start date. The project boundary was confirmed by DNV by reviewing the two documents provided by Wildlife Works, the leasehold title to Rukinga Ranch /2/ and the Carbon Rights Agreement between Wildlife Works Inc. and Rukinga Ranching Co. /3/.

Project Duration, Crediting Time and Project Start Date

Wildlife Works took financial responsibility for all conservation activities within the Rukinga Sanctuary (Project Area) on 1 January, 2005. As such, the project start date and project crediting period is 1 January, 2005 – 31 December, 2034. Although Wildlife Works was performing conservation activities centered around the ecofactory prior to 2005, all activities were located outside of the Project Area and thus do not affect the project start date or project crediting period of Phase I of this project. DNV confirmed

that the project start date and project crediting period was determined properly through reviewing the contract signed between Wildlife Works EPZ and Rukinga Ranching Company, Ltd. /4/ and the Carbon Rights Agreement /2/. A 30-year crediting period was selected, with 1 January, 2005 as the start date. The project will therefore end on 31 December, 2034.

Project Ownership

DNV can confirm the project ownership by Wildlife Works by reviewing two documents provided by Wildlife Works /2/ and /3/. In addition, DNV can confirm that the project is not included in any emission trading program and is not subject to binding greenhouse gas (GHG) emissions limits /1/.

Project Eligibility Under the VCS

This project has not applied to nor been rejected by other GHG crediting systems.

3.2 Baseline

The project falls into sectoral scope 14 as defined by VCS /24/ . The project start date is 1 January, 2005. The project applies a new VCS methodology VM0009 "VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests Version 1.0" /25/, which was approved on 11 January, 2011. The project baseline is constructed according to the approved methodology. The project proponent elected to use the linear model baseline alternative provided within VM0009.

3.2.1 Applicability

DNV was able to verify that the project meets all applicability criteria of the methodology through document review and interviews **/1/**:

- DNV confirmed that in fact the primary driver of deforestation is the conversion of forest to cropland for annual crops and harvesting of wood to support the illegal charcoal trade by visiting the project site. Evidence of forest conversion to agriculture was evident both in the reference area and in the immediate surroundings of the project area. The existence of an illegal charcoal trade was very evident through makeshift roadside charcoal sellers.
- DNV confirmed that the project area has been tropical dryland forest for at least 20 years with the review of Landsat imagery dating back to 1987.
- DNV confirmed that the project area meets the FAO 2010 and residing designated national authority's (DNA) definition of "forest" for the project country for a minimum of 10 years prior to the project start date /24/.
- DNV confirmed that the project is located in a semi-arid tropical region through its site visit to Rukinga, Kenya.

- DNV confirmed that the project is not mandated by any enforced law, statute, or other regulatory framework by reviewing the relevant laws and regulations outlined in the project document, leasehold title, management authority agreement, and the audit report performed by the Kenya National Environmental Management Authority **/1/ /3/ /4/ /5/**.
- DNV confirmed by reviewing soil maps (**/1/** section 6.5) and field observation that the project area does not contain organic or peat soils.
- DNV confirmed that the reference area meets the requirements outlined in section 6.3.1 and 6.3.2 of the approved VCS methodology, "VM0009, "Methodology for Avoided Mosaic Deforestation of Tropical Forests."
- DNV confirmed that as of the project start date, historic imagery in the reference region exists, with sufficient coverage to meet the requirements of section 6.4.2 of VM0009.
- DNV confirmed that a wide range of project activities have been implemented to mitigate deforestation by addressing the agents and drivers of deforestation as described in section 10.1 of VM0009 (see section 6.1 in Project Document).
- DNV confirmed that the project start date and end date and crediting period are clearly defined in the Project Document (see Section 6.3) **/1/**.
- DNV confirmed that the project proponent has access to the leakage area by randomly visiting a leakage plot used to create the leakage model during the site visit.
- DNV confirmed that no activity-shifting leakage had occurred prior to the estimation of the lag period **/1/**.
- DNV confirmed that the project area does not include lands designated for legally sanctioned logging activities by reviewing the title for the Rukinga Sanctuary /3/ **/4/**.

3.2.2 Baseline Scenario

The selected baseline scenario is ongoing deforestation from subsistence agriculture. The rate of deforestation was calculated by defining a reference area that is near the project area and has similar conditions and drivers of deforestation and then observing the proportion of the reference area that is deforested at each of several points in time, ranging from 1987 to 2005.

DNV concludes that the selected baseline scenario appropriately applies to the project area because:

- There are settlements to the west and north of the project area and active deforestation is occurring on the outskirts of these settlements.

- There is a major highway near the eastern boundary of the project area and validators observed large amounts of locally produced illegal bush charcoal for sale and being transported along this highway.
- Observations of time-series land cover images show rapid deforestation continuing to occur within the reference region.
- Prior to the project start date, subsistence farmers had begun clearing land for farms within the project area, near the western boundary of the project, with the settlement apparently terminated by coordination with local village leaders and increased ranger patrolling of project lands beginning around the time of the project start.

It is DNV's opinion that the selection of the continuation of the pre-project practice of the conversion of forest to cropland as the baseline scenario is deemed to be appropriate.

3.2.2.1 The Cumulative Deforestation Model

A pilot study estimated the variance of land cover state observations. The project calculated that fewer than 1 900 observation points would be needed to meet statistical precision goals. The project elected to observe 2 000 points. Points were assigned by GIS software, in a regular grid pattern within the project boundary. LANDSAT imagery was obtained for the area, for 11 different years from 1987 to 2005. To build the Cumulative Deforestation Model, imagery was used from 1987 until the project start date (2005). For some years, images from different times within the year were tiled to create complete or relatively complete coverage of the project area. The project developed an image interpretation protocol and the protocol was used to guide classification of each point at each time for which imagery was obtained. 8 821 vegetation state observations were made.

In the region where the project is located, most deforestation occurs in a mosaic pattern. A key element of the methodology is having a consistent decision rule for distinguishing (a) areas of forest with nearby deforested fields, from (b) remnant patches of trees among fields that are classified as deforested. The image classification protocol states that if the forest fragment is surrounded by cleared area and the point is within a forest fragment but is less than one field width from the edge of the fragment, the point is classified as deforested.

Points that switched back and forth between forest and non-forest were identified. 164 points were flagged as having unlikely state transitions. Imagery for each flagged point was reviewed, and inconsistencies were removed.

Each vegetation state observation was given a weight, using the procedure described in VM0009. A commercial statistical software package was used to fit a logistic curve to the

observed changes in forest state over time. The statistical uncertainty in the logistic model is 5.9% at the 95% confidence level.

Population was tested to see if it added explanatory power to the model. Population did not add power and was left out of the final deforestation model.

As allowed by the methodology, the project developer elected to be credited according to a linear deforestation rate that is cumulatively less than the logistic model at all times within the project life.

3.2.2.2 The Soil Carbon Loss Model

Soil carbon stocks were measured to a one-meter depth in undisturbed forest within the project boundary and in fields near the project that had been in agricultural use for at least 10 years. The average carbon stock was calculated for forest soil and for agricultural soil and the difference assumed to be the loss resulting from deforestation and conversion to agriculture. The observed 45% loss of forest soil carbon is within the common range of soil loss given in published studies of other locations around the world. Carbon loss was assumed to occur at a declining exponential rate, starting from the date of deforestation. The exponential rate was chosen to match the rate graphed in Figure 10 of Methodology VM0009.

During the validation process, the project proponent and validator became aware of an inconsistency in stated soil loss rates between the text of the approved methodology VM0009 Version 1.0 and the rate graphed in Figure 10 of the methodology. The validator will work with the methodology developer to write a corrected version of the methodology that eliminates this inconsistency.

3.2.2.3 Baseline Scenario for Selected Carbon Pools

The project developer has elected to count aboveground and belowground carbon in live trees and shrubs, aboveground and belowground carbon in herbaceous vegetation, and carbon in the top meter of soil.

No commercial harvesting of wood for long-lived wood products occurs within the project area. Very small amounts of wood are retained in subsistence use. Branches are used in wattle-and-daub walls of farm huts. Few trees are suitable for using as posts, and few posts are used in local construction or farming.

The cumulative deforestation model provides the baseline rate of deforestation for the project area. When a hectare is deforested, the carbon in woody biomass is assumed to be emitted to the atmosphere as CO2.

The project is expected to reduce burning of stumps during clearing, which may reduce emission of methane from the burning. However, the project does not claim avoided

methane from biomass burning as an emission reduction. Not claiming the avoided emission is conservative. Relatively small amounts of biomass are burned during land clearing in this area. Tree trunks appear to be left to decompose on site, used for domestic fuel, or removed prior to deforestation during illegal charcoal production. The project counts decomposition as emission and done not claim to reduce total wood fuel and charcoal emissions. Most tree branches are moved to the edges of fields to function as fencing. Because the amount of biomass burned is small, not counting avoided methane emissions from burning does not cause material inaccuracy in emissions accounting.

Woody debris decomposition rates in the area are not well documented. When asked how long some individual pieces of woody debris on tree measurement plots had been dead, local field staff gave estimates ranging from six to eighteen months for Class Two and Class Three woody debris. Pieces that local staff identified as being dead for at least 12 months were very light—for example, a few kilograms for a 20-cm diameter, 4-meter long tree trunk. Decomposition of buried dead wood is even less well documented. Soil sampling pits in forest revealed significant amounts of tough, live roots between 0.5 and 2 cm in diameter. However, hand tilling soil within a year of deforestation did not appear to be impeded by roots. As is common, it appears that decomposition of buried dead wood is faster than decomposition of aboveground dead wood.

Especially when trees with dense wood (and presumably slower decomposing wood) are removed for charcoal before land clearing for farming, it appears that little carbon stock remains in woody debris one year after clearing. Counting woody debris pieces on a couple of sites gave densities on the order of 20 pieces per hectare greater than 15-cm in diameter. Even if the points where woody debris was counted had unusually high woody debris mass, it is unquestionable that within one year of deforestation the carbon stock in the remaining wood is substantially less than the carbon stock in the dead wood in undisturbed forest. Because the project elected not to count avoided emissions from woody debris in the forest, it is conservative not to count any carbon that may remain stored in biomass that survives more than a year after deforestation.

Soil carbon stocks in undisturbed forest and in fields that had been cleared at least 10 years previously were measured by sampling. The difference between the average soil carbon stock in forest and the average soil carbon stock in tilled fields was taken to be the soil carbon loss on clearing. Soil carbon loss dynamics are not well documented in this ecosystem. As noted above, the soil carbon loss function used to calculate soil emissions after deforestation was set to match Figure 10 in the approved methodology.

3.2.3 Project Boundary

The project area covers 100% (30,169 hectares) of the Rukinga Sanctuary. At the time of the project start date, 93% of the project area was forested for 10 years prior to the project

start date. The project boundary was confirmed by DNV by reviewing the two documents provided by Wildlife Works, the leasehold title to Rukinga Ranch /2/, the Carbon Rights Agreement between Wildlife Works, Inc. and Rukinga Ranching Co. /3/.

3.2.4 Additionality Assessment

As per the approved VCS methodology, "VM0009 – Methodology for Avoided Mosaic Deforestation of Tropical Forests Version 1.0," the additionality of the project is demonstrated through the latest version of the VT0001 VCS Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities /24/.

Identification of Alternative Land-use Scenarios

DNV has confirmed that the alternative land use scenarios identified by Wildlife Works are appropriate. It was also determined that the identified alternative land uses are consistent with enforced mandatory laws and regulations.

DNV confirmed that the project is not mandated by any enforced law, statute, or other regulatory framework by reviewing the relevant laws and regulations outlined in the project document, leasehold title, management authority agreement, and the audit report performed by the Kenya National Environmental Management Authority **/1/ /3/ /4/ /5/**.

Investment Analysis

DNV confirmed the project proponent's simple cost analysis. DNV reviewed the financial statements for Wildlife Works and has confirmed that the project proponent has been spending approximately USD$300 000-$400 000 per year without any significant income to offset the costs to implement mitigation activities such as school building, scholarships, ranger patrols, and reforestation of deforested indigenous forests **/7/**. It is therefore DNV's conclusion that without the revenue from the sale of GHG credits, the project activities are economically unsustainable

Step 4: Common Practice Analysis

Though it is common practice to protect wilderness areas and provide sustainable development support for rural African communities in Africa, governments and donor agencies do not have a history of protecting the private lands. This project is the first AFOLU Project Activity of its type in Kenya. As such, it can be reasonably concluded that the project is not common practice.

In summary, it is demonstrated that the project activity is not a likely baseline scenario due to the need of financial revenues to offset mitigation activities, and that the emission reductions are additional to what would have happened in the absence of the project activity.

3.2.5 Leakage

Following methodology VM0009, the project developer has randomly located plots for measuring leakage. Baseline amounts of degradation and deforestation have been measured on these plots. The needed number of plots was calculated using the observed variance of forest state observations across the reference area.

Leakage model parameters were calculated from the field measurements and compared to the cumulative deforestation model. The leakage lag was calculated as the difference between the deforestation curve and the leakage curve, and was given in the Project Document.

As required by the methodology VM0009, leakage is measured empirically post project start date from the shifted leakage curve. At the time of the next verification of offsets generated by the project, the leakage plots can be re-measured and the change in degradation and deforestation calculated. These measurements and calculations are expected to support quantification of the amount of leakage, if any, that has occurred. Thus leakage will be empirically assessed during the next verification cycle.

As part of the project validation, the validator is to assess the project proponent's leakage ex-ante estimation that is likely to occur during the life of the project. Leakage is defined as displacement of deforestation from within the project area to outside the project area. This project will quantify leakage by measuring the rate of deforestation observed over time within the leakage area. The leakage area is selected as equivalently accessible to drivers of deforestation that would have deforested the project area. Any deforestation on the leakage area that is greater than the baseline rate of deforestation is counted as leakage.

The project is implementing a variety of leakage mitigation activities that are providing alternative livelihoods to local people. Leakage mitigation activities include employment in a clothing factory, work on project monitoring and Rukinga sanctuary protection, development projects through a local women's center, a sustainable charcoal program, schooling, and other activities. These activities are scheduled to be expanded in the future, using funding from the sale of the initial tranche of offsets generated by the project. DNV does not have data on the complete number of people who benefit from leakage mitigation activities, and does not know if these people would have cleared forest for subsistence agriculture in the absence of the project. Also, it is not possible to know for certain the scale at which leakage mitigation activities will be implemented in the future.

If leakage mitigation activities are less than the displaced demand for land, leakage is likely to occur. The current baseline deforestation is 955 hectares per year within the project area. If each farm were to clear 2.5 hectares (the area estimated by the project proponent), this would mean that the project should avoid the establishment of 382 new farms each year to avoid leakage. If the baseline rate of deforestation is adjusted down in the future, clearing for fewer farms would need to be avoided.

We have been unable to find historical leakage observations for any other REDD projects and have no historical data on which to make actuarial projections for this project. As a reference point, we assessed The Climate Action Reserve's default leakage risk for crop displacement activities is identified as 24 percent /30/. As noted, we do not have data on the exact number of people involved in leakage mitigation activities, and do not know the extent to which leakage mitigation activities will be implemented over the life of the project. Also, DNV is unable to determine if people involved in leakage mitigation activities would have cleared forest if they did not participate in leakage mitigation activities.

In the absence of past project data, any estimate of future leakage thus needs to rely on the conditions observed during site visitation, knowledge of other ecosystems, assessment of the agents and drivers of deforestation when judging the appropriateness of ex-ante leakage estimation of this project.

Estimating a leakage rate at the project outset is highly uncertain. Wildlife Works has determined an ex-ante leakage rate for the project crediting period at 20% and it is our assessment that this is appropriate given the conditions of the project and is consistent with values proposed by The Climate Action Reserve. DNV thus finds the leakage assessment to conform to the requirements in the approved methodology VM0009.

3.3 Monitoring Plan

The project applies the approved VCS "VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests Version 1.0." The monitoring plan is in accordance with the methodology. The monitoring plan specifies how to measure and document real, achieved emission reductions over the life of the project. As required by the methodology VM0009, leakage will be measured ex post from the shifted leakage curve.

All the variables defined in VCS, "VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests Version 1.0" are measured in order to determine and account for emission reductions. Each carbon pool monitored is a separate variable, with the exception that the project has elected to count large and small live trees together.

The baseline is calculated ex-ante. The current baseline is reported in the project document.

Although VCS addresses leakage separately from monitoring, it is useful to consider this project's leakage monitoring as a part of the overall monitoring program. The project document reports computation of a "lag" variable, used to find correspondence between the baseline deforestation model curve and the observed degradation and deforestation measured on leakage plots. Remeasurement of the leakage plots in the future, calculation of total degradation and deforestation on the leakage area, and adjustment by the lag factor will yield a cumulative actual deforestation number that can be compared to the baseline deforestation proportion for the date of the leakage measurement.

At future times when offsets are to be verified, the project developer will map any deforestation that may occur within the project boundary. Biomass carbon stocks will be re-measured using the same protocols as used for the original measurement. Change in carbon stocks within the project area are included in the calculation on net emission reductions as the CPE term of Equation 34 of the approved methodology. Project emissions may be positive (emissions) or negative (a sink resulting from forest growth).

Consistent with the VCS requirements for grouped projects, the data management systems used by Wildlife Works, Inc. are centralized. The general responsibility and authority for registration, monitoring, measurement and reporting activities are defined in the VCS PD. Wildlife Works Inc. has a contract with the landowner, Rukinga Ranching Co. Ltd., to measure, monitor, report, and register offsets generated by avoiding deforestation within the project area. The agreement was ratified in a general meeting of the shareholders of the landowning company. DNV has reviewed this documentation /2/.

The parameters being monitored were discussed with the project proponent. The project proponent has developed sufficient guidance for image classification and monitoring carbon in soils and biomass in order to ensure that reliable field data is collected /9//12//13/.

The frequency of the data collection depends on the specific parameter included in the monitoring plan. DNV found that these are in line with the requirements of the methodology, VM0009.

3.4 Calculation of GHG Emissions and Reductions

DNV considered the VCS Standard /24/, VCS AFOLU guidance /26/, VCS approved methodology VM0009 /23/, conditions observed during site visitation, and knowledge of other ecosystems and forest projects when judging the appropriateness of GHG emission reduction calculations of this project. DNV concludes that all significant emission sources are included in project emission calculations. Calculation equations are published in VM0009. DNV reviewed the calculations in detail and, with the corrections made in response to the CARs, calculations are correctly applied as specified by the VM0009. Factors used in calculations are stated in the project document and are derived from local

measurements, VM0009, or widely-referenced public sources. Equations for specifying statistical confidence intervals are specified in VM0009. Statistical confidence intervals are calculated for the baseline deforestation function, allometric equations developed to predict tree biomass, and carbon stocks estimated from sampling. As with any sampling, unbiased measurement and classification errors are expected to increase the statistical error observed in sampling. DNV found no potential sources of bias in counting, other than the conservative exclusions described above. Statistical confidence levels meet required precision levels.

The GHG Sources Determination

GHG sources that are counted are live trees aboveground and belowground biomass, shrub aboveground and belowground biomass, herbaceous aboveground biomass, and soil carbon. Emissions that are negligible or conservatively omitted include woody debris, methane from biomass burning, and fuel consumed in land management. Any sink in long-term wood products is negligible. Credible justification of the selection of the carbon pools are included within the Project Document and DNV assessed that selection conforms to the requirements set out in VM0009.

The Correctness and Transparency of Formulas and Factors Used

The approaches to estimate emission reductions for years 2005-2010 are described in the VCS Project Document. DNV can confirm that the approaches conform to the requirements in the VCS approved methodology "VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests Version 1.0."

Estimated Cumulative Project Lifetime Emission Reductions

As part of the project validation, the validator is to express its estimate of a conservative amount of offsets the project is likely to generate through the life of the project. The project proponent estimates that the project will generate 4 525 767 metric tons CO2e of offsets over the project life. This estimate is calculated using by:

- Extending the current baseline deforestation rate through the project life,
- Assuming that the carbon stock within the project boundary does not change (there is no net tree growth or loss, soil carbon stock change, and no deforestation within the project area), and
- Assuming 20% leakage in years 2011-2034.
- Applying a 20% AFOLU buffer deduction through the entire project crediting period.

There is a high likelihood that at least one of these three factors will change over the project life. The baseline deforestation rate has limited chance of increasing because

approximately 95% of the project area is assumed to become deforested by the end of the project life. The baseline could be revised downward if less deforestation is observed over time in the reference area. If the baseline deforestation rate is revised down, the project would generate fewer offsets, all other things remaining unchanged. The carbon stock within the project area could rise or fall over time. A portion of the project area had been deforested in the past and is now re-growing, and is likely to have carbon stock increase. However, even if this formerly deforested area increases to the carbon density of the average stock of the forest in the project area, it would be only about a 6% increase in the total project carbon stock. It is possible that because of drought or disturbance the existing forest carbon stock could decline. Increasing carbon stock within the project area would increase the number of offsets generated by the project, and decreasing carbon stock would decrease the number of offsets generated. There is a chance that the leakage mitigation activities executed by the project will not succeed in mitigating all the demand for land displaced by the project, and leakage may occur. The project may not receive credit for positive leakage, so if there is any leakage it can only reduce the amount of offsets generated by the project.

DNV is to express its opinion as to a conservative amount of offsets the project is likely to generate over the project lifetime. To be conservative, the estimate must be a number such that it is likely that the project will not generate less than the estimated amount of offsets. We note that the factors that could result in increased generation of offsets are highly unlikely to cause an increase in offset generation greater than a few percent. At the same time, it is possible that the factors that could result in the project generating fewer offsets could result in a large reduction in benefits. We have been unable to find historical leakage observations for any other REDD projects and have no historical data on which to make actuarial projections for this project.

In the absence of project data, estimating a leakage rate at the project outset is highly uncertain. Wildlife Works has determined an ex-ante leakage rate for the project crediting period at 20% and it is our assessment that this is appropriate given the conditions of the project and is consistent with values proposed by the Climate Action Reserve.

DNV therefore can confirm that the calculation equations and input values are proper as described above, and hence can confirm that the emission reduction estimates are proper, which are on the average 4 525 767 tCO2e per year over the selected 30 year crediting period.

3.5 Environmental Impact

The environmental and socio-economic impacts of the project activities have been assessed within the context of the Audit report conducted by the Kenya National Environmental Management Authority in December, 2006 /5/ and the Climate,

Community, and Biodiversity Alliance (CCBA) validation that Wildlife Works, Inc. underwent in 2009 with Scientific Certifications Systems (SCS) /8/. DNV has reviewed all documentation pertaining to the environmental audit and the CCBA validation. In summary, DNV concluded that no negative environmental or socio-economic impacts are expected from project activities.

3.6 Comments by Stakeholders

The relevant stakeholders identified for this project activity include members of the Taita community, the Duruma tribe, and local employees tasked with the implementation and maintenance of the Rukinga REDD project. A local stakeholder process was carried out by soliciting public comments through the internet and postings on local area notice boards. DNV reviewed all comments and found that the process complies with VCS requirements. In addition, DNV reviewed the CCBA project validation report conducted by SCS in 2009 /8/ and stakeholder comments received during the CCBA process /8/. The project area underwent a CCBA project validation on 22 December, 2009. Feedback from such stakeholders regarding the REDD project was very positive /8/.

4 VALIDATION CONCLUSION

Det Norske Veritas (U.S.A.), Inc. (DNV) has performed a validation of the "The Kasigau Corridor REDD Project Phase I – Rukinga Sanctuary" in Kenya on the basis of Voluntary Carbon Standard 2007.1 (VCS), as well as criteria for consistent project operations, monitoring and reporting.

The project proponent is Wildlife Works, Inc. DNV has confirmed that Wildlife Works, Inc. has the right to all and any reductions generated by the Project during the Project Crediting Period 1 January, 2005 – 31 December, 2034.

The review of the project design documentation and the subsequent follow-up interviews have provided DNV with sufficient evidence to determine the fulfillment of stated criteria.

The project correctly applies the approved VCS methodology element VM0009 – Methodology for Avoided Mosaic Deforestation of Tropical Forests Version 1.0.

The main project activity is to prevent deforestation caused by slash and burn and subsistence farming activities. The project results in reductions of GHG emissions that are real, measurable and give long-term benefits to the mitigation of climate change and have clear socio-economic benefits to the communities surrounding the project area. Emission reductions attributable to the project have been shown to be additional to any that would occur in the absence of the project activity.

The total emission reductions from the project are estimated to be 4 525 767 *tCO2e over the 30-year crediting period (1 January, 2005 to 31 December, 2034). This includes project emissions, total confidence deduction, a 20% leakage deduction applied to years 2011-2034 as per VM0009, and the VCS AFOLU buffer deductions currently assessed at 20%. This estimate assumes the baseline does not change during the baseline reevaluation.*

Estimating a leakage rate at the project outset is highly uncertain. Wildlife Works has determined an ex-ante leakage rate for the project crediting period at 20% and it is our assessment given a lack of past project data that this is appropriate given the conditions of the project and find the assessment to conform to the requirements in the approved methodology VM0009.

The approaches to estimate emission reductions are assessed to conform to the requirements in the VCS and approved methodology VM0009.

Adequate training and monitoring procedures have been implemented.

In summary, it is DNV's opinion that the "The Kasigau Corridor REDD Project Phase I – Rukinga Sanctuary" in Kenya as described in the VCS PD of 31January, 2011, meets all relevant VCS 2007.1 requirements and correctly applies the VCS approved methodology element VM0009 – Methodology for Avoided Mosaic Deforestation of Tropical Forests Version 1.0.

APPENDIX A

Validation Protocol

Table 3 Requirements Checklist

Checklist Question	Ref	MoV*	Comments	Draft Concl	Final Concl
A. *General Description of Project Activity* *The project design is assessed.*					
A.1. Project Boundaries *Project Boundaries are the limits and borders defining the GHG emission reduction project.*					
A.1.1. Are the project's spatial and temporal boundaries clearly defined?	**/1/**	DR	Section 5.2 - The project area covers 100% (30,169 ha) of the Rukinga Sanctuary. At the time of the project start date, 93% of the project area was forested for 10 years prior to the project start date. The project boundary was confirmed by DNV by reviewing the two documents provided by Wildlife Works, the leasehold title to Rukinga Ranch **/2/**, the Carbon Rights Agreement between Wildlife Works Inc. and Rukinga Ranching Co. **/3/**.		OK
A.2. Technology to be employed *Validation of project technology focuses on the project engineering, choice of technology and competence/ maintenance needs. The validator should ensure that environmentally safe and sound technology and know-how is used.*					
A.2.1. Does the project design reflect current good practices?	**/1/**	DR, I	The project design outlines current best practices for implementing the project activities. While onsite, DNV witnessed fully operational nurseries, ranger force, a local GIS analyst, and engagement with the		OK

Checklist Question	Ref	MoV*	Comments	Draft Concl	Final Concl
			community surrounding the project area.		
A.2.2. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies?	***/1/***	DR, I	The project proponent uses state of the art GIS and modelling techniques.		OK
A.2.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	***/1/***	DR, I	Wildlife Works is working with the REDD Focal Point within the Government of Kenya on future REDD legislation to include sub-national nesting rules.		Ok
A.2.4. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	***/1/***	DR, I	Yes – Procedures outlined within the *How to Use the Classification Tool* (as of 14 January, 2011), Standard Operating Procedure Biomass (as of 14 January, 2011), Standard Operating Procedure Soils (as of 14 January, 2011) are sufficient.		OK
A.2.5. Does the project make provisions for meeting training and maintenance needs?	***/1/***	DR, I	Yes – Procedures outlined within the, *How to Use the Classification Tool* (as of 14 January, 2011), Standard Operating Procedure Biomass (as of 14 January, 2011), Standard Operating Procedure Soils (as of 14 January, 2011) are sufficient.		OK
B. Project Baseline *The validation of the project baseline establishes whether the selected baseline methodology is appropriate and whether the selected baseline represents a likely baseline scenario.*					
B.1. Baseline Methodology *It is assessed whether the project applies an appropriate baseline methodology.*					
B.1.1. Is the baseline methodology previously approved by the VCS?	***/1/***	DR, I	Yes – VM0009 *Methodology for Avoided Mosaic Deforestation of Tropical Forests*		OK

Checklist Question	Ref	MoV*	Comments	Draft Concl	Final Concl
			Version 1.0.		
B.1.2. Is the baseline methodology the one deemed most applicable for this project and is the appropriateness justified?	***/1/***	DR, I	Yes – VM0009 was developed specifically for this project.		OK
B.2. Baseline Determination *The choice of baseline will be validated with focus on whether the baseline is a likely scenario, whether the project itself is not a likely baseline scenario, and whether the baseline is complete and transparent.*					
B.2.1. Has the baseline been determined using conservative assumptions where possible?	***/1/***	I	As with any sampling, unbiased measurement and classification errors are expected to increase the statistical error observed in sampling. DNV found no potential sources of bias in counting, other than the conservative exclusions described above. Statistical confidence levels meet required precision levels. **CAR 5** The coefficients for the deforestation model given in the PD must be corrected to match the coefficients produced by the model and used in calculations of cumulative deforestation. **CAR 6** The PD should describe the method used to determine bulk density of disturbed soil samples, and document that the protocol	CAR 5, 6, 7	OK

Checklist Question	Ref	MoV*	Comments	Draft Concl	Final Concl
			is well established. **CAR 7** The PD should specify the acceptable degree of error allowed in forest measurements, and how errors larger than acceptable amounts shall be dealt with.		
B.2.2. Has the baseline been established on a project-specific basis?	**/1/**	DR, I	Yes – The baseline is specific to the characteristics of the reference region that have similar drivers of deforestation.		OK
B.2.3. Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations?	**/1/**	DR	The PD identifies possible risks that could have an impact on the project baseline, including change in legislation. The government of Kenya has shown support for the project and has no recent history of expropriation of private conservation lands.		OK
B.2.4. Is the baseline determination compatible with the available data?	**/1/**		See section 3.2		OK
B.2.5. Is it demonstrated/justified that the project activity itself is not a likely baseline scenario?	**/1/**		Encroachment of subsistence farming (the primary driver of deforestation) to the borders of the project area were evident. It was demonstrated to DNV that the project activity, conservation of forest, was not a likely baseline scenario in the project area.		OK
B.2.6. Have the major risks to the baseline been identified?	**/1/**	DR	Yes – The following risks have been identified: change in legislation, income, crop failure, invasion of cattle grazers due		OK

Checklist Question	Ref	MoV*	Comments	Draft Concl	Final Concl
			to famine in adjacent communities, drought, wildlife, cash crops, and fire		
B.2.7. Are all literature and sources clearly referenced?	/1/	DR	Yes - Factors used in calculations using literature and sources are clearly widely-referenced public sources.		OK
C. Duration of the Project/ Crediting Period/project proponent *It is assessed whether the temporary boundaries of the project are clearly defined.*					
C.1.1. Are the project's starting date and operational lifetime clearly defined and reasonable?	/1/	DR, I	The project start date is 1 January, 2005, which is the date Wildlife Work,s Inc. assumed financial responsibility for the project area and began specific GHG mitigation activities. The selected crediting period is from 1 January, 2005 to 31 December, 2034. **CAR 3** The justification of the project start date must conform to VCS requirements.	CAR 3	OK
C.1.2. Is the assumed crediting time clearly defined?	/1/	DR, I	The selected crediting period is from 1 January, 2005 to 31 December, 2034.		OK
C.1.3. Is the project proponent identified and has it been confirmed to be an individual or organization that has overall control and responsibility for a greenhouse gas project?	/1/	DR, I	Yes – Wildlife Works, Inc. is the project proponent for this project. Wildlife Works, Inc. assumed financial responsibility for the project area and began specific GHG mitigation activities on 1 January, 2005 when the company entered into an agreement with Rukinga Ranching Company, Ltd.		OK

Checklist Question	Ref	MoV*	Comments	Draft Concl	Final Concl
D. Monitoring Plan *The monitoring plan review aims to establish whether all relevant project aspects deemed necessary to monitor and report reliable emission reductions are properly addressed (blue text contains requirements to be assessed for optional review of monitoring methodology prior to submission and approval by CDM EB).*					
D.1. Monitoring Methodology *It is assessed whether the project applies an appropriate baseline methodology.*					
D.1.1. Is the monitoring methodology previously approved by the VCS?	***/1/***	DR	Yes – VM0009 *Methodology for Avoided Mosaic Deforestation of Tropical Forests Version 1.0.*		OK
D.1.2. Is the monitoring methodology applicable for this project and is the appropriateness justified?	***/1/***	DR	Yes – The monitoring methodology was developed specifically for this project.		OK
D.1.3. Does the monitoring methodology reflect good monitoring and reporting practices?	***/1/***	DR	Yes – VM0009 outlines sufficient practices for a monitoring methodology.		OK
D.1.4. Is the discussion and selection of the monitoring methodology transparent?	***/1/***	DR	Yes – VM0009 outlines sufficient practices and is transparent.		OK
D.2. Monitoring of Project Emissions *It is established whether the monitoring plan provides for reliable and complete project emission data over time.*					
D.2.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the greenhouse gas emissions within the project boundary during the crediting period?	***/1/***	DR, I	Yes – Procedures outlined within the *How to Use the Classification Tool* (as of 14 January, 2011), Standard Operating Procedure Biomass (as of 14 January, 2011), Standard Operating Procedure Soils (as of 14 January, 2011) are sufficient		OK

Checklist Question	Ref	MoV*	Comments	Draft Concl	Final Concl
D.3. Monitoring of Leakage *It is assessed whether the monitoring plan provides for reliable and complete leakage data over time.*					
D.3.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining leakage?	**/1/**	DR, I	Yes – Procedures outlined within the, *How to Use the Classification Tool* (as of 14 January, 2011), Standard Operating Procedure Biomass (as of 14 January, 2011), Standard Operating Procedure Soils (as of 14 January, 2011) are sufficient.		OK
D.4. Monitoring of Baseline Emissions *It is established whether the monitoring plan provides for reliable and complete project emission data over time.*					
D.4.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining baseline emissions during the crediting period?	**/1/**	DR, I	Yes – Procedures outlined within the, *How to Use the Classification Tool* (as of 14 January, 2011), Standard Operating Procedure Biomass (as of 14 January, 2011), Standard Operating Procedure Soils (as of 14 January, 2011) are sufficient.		OK
D.4.2. Is the choice of baseline indicators, in particular for baseline emissions, reasonable?	**/1/**	DR, I	The selected baseline scenario is ongoing deforestation from subsistence agriculture. The rate of deforestation was calculated by defining a reference area that is near the project area and has similar conditions and drivers of deforestation and then observing the proportion of the reference area that is deforested at each of several points in time ranging from 1987 to 2005. The parameters of the cumulative		OK

Checklist Question	Ref	MoV*	Comments	Draft Concl	Final Concl
			deforestation model are in line with the requirements outlined in VM0009.		
D.4.3. Will it be possible to monitor / measure the specified baseline indicators?	**/1/**	DR, I	All the variables defined in VCS, "VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests Version 1.0" are measured in order to determine and account for emission reductions. Each carbon pool monitored is a separate variable, except that the project has elected to count large and small live trees together.		OK
D.4.4. Will the indicators give opportunity for real measurements of baseline emissions?	**/1/**	DR, I	At future times when offsets are to be verified, the project developer will map any deforestation that may occur within the project boundary. Biomass carbon stocks will be re-measured using the same protocols as used for the original measurement.		OK
D.5. Environmental Impacts and Stakeholders Comment *It is checked to determine if any additional environmental permits are required and if sufficient documentation of environmental impacts are provided.* *It is checked if any comments received from stakeholders are summarized properly*					
D.5.1. Are any additional environmental permits needed for the project activity? If yes, is there any approval documentation provided?	**/5/**	DR, I	The environmental and socio-economic impacts of the project activities have been assessed within the context of the Audit report conducted by the Kenya National		OK

Checklist Question	Ref	MoV*	Comments	Draft Concl	Final Concl
			Environmental Management Authority in December, 2006. DNV has reviewed all documentation pertaining to the environmental audit.		
D.5.2. Any comments received from stakeholders should be summarized in the VCS PD.	**/8/**	DR, I	A local stakeholder process was carried out by soliciting public comments through the internet and posting on local area notice boards. DNV reviewed all comments and found that the process complies with VCS requirements.		OK
D.6. Project Management Planning *It is checked that project implementation is properly prepared for and that critical arrangements are addressed.*					
D.6.1. Is the authority and responsibility of project management clearly described?	**/1/**		Yes – Procedures outlined within the, *How to Use the Classification Tool* (as of 14 January, 2011), Standard Operating Procedure Biomass (as of 14 January, 2011), Standard Operating Procedure Soils (as of 14 January, 2011) are sufficient.		OK
D.6.2. Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?	**/1/**		Yes – Procedures outlined within the, *How to Use the Classification Tool* (as of 14 January, 2011), Standard Operating Procedure Biomass (as of 14 January, 2011), Standard Operating Procedure Soils (as of 14 January, 2011) are sufficient.		OK
D.6.3. Are procedures identified for training of monitoring personnel?	**/1/**		Yes – Standard Operating Procedure Biomass (as of 14 January, 2011), Standard Operating Procedure Soils (as of 14 January, 2011) are sufficient.		OK

Checklist Question	Ref	MoV*	Comments	Draft Concl	Final Concl
D.6.4. Are procedures identified for maintenance of monitoring equipment and installations?	/1/		Yes – Standard Operating Procedure Biomass (as of 14 January, 2011), Standard Operating Procedure Soils (as of 14 January, 2011) are sufficient.		OK
D.6.5. Are procedures identified for monitoring, measurements and reporting?	/1/		Yes – Standard Operating Procedure Biomass (as of 14 January, 2011), Standard Operating Procedure Soils (as of 14 January, 2011) are sufficient.		OK
D.6.6. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	/1/		Yes – Standard Operating Procedure Biomass (as of 14 January, 2011), Standard Operating Procedure Soils (as of 14 January, 2011) are sufficient.		OK
D.6.7. Are procedures identified for review of reported results/data?	/1/		Yes – Standard Operating Procedure Biomass (as of 14 January, 2011), Standard Operating Procedure Soils (as of 14 January, 2011) are sufficient.		OK
E. Calculation of GHG Emissions by Source *It is assessed whether all material GHG emission sources are addressed and how sensitivities and data uncertainties have been addressed to arrive at conservative estimates of projected emission reductions.*					
E.1. Project GHG Emissions *The validation of ex-ante estimated project GHG emissions focuses on transparency and completeness of calculations.*					
E.1.1. Are all aspects related to direct and indirect GHG emissions captured in the project design?	/1/	DR, I	GHG sources that are counted are live tree aboveground and belowground biomass, shrub aboveground and belowground biomass, herbaceous aboveground biomass, and soil carbon. Emissions that are negligible or conservatively omitted		OK

Checklist Question	Ref	MoV*	Comments	Draft Concl	Final Concl
			include woody debris, methane from biomass burning, and fuel consumed in land management. Any sink in long-term wood products is negligible. Credible justification of the selection of the carbon pools are included within the PD and DNV assessed that it was in line with the requirements set out in VM0009.		
E.2. Leakage *It is assessed whether leakage effects i.e. change of emissions which occurs outside the project boundary and which are measurable and attributable to the project) have been properly assessed and estimated ex-ante.*					
E.2.1. Are potential leakage effects beyond the chosen project boundaries properly identified?	**/1/**		Following methodology VM0009, the project developer has randomly located plots for measuring leakage. Baseline amounts of degradation and deforestation have been measured on these plots. The needed number of plots was calculated using the observed variance of forest state observations across the reference area. **CAR 10** Please provide a justification for the estimation of the ex-ante leakage rate for the project crediting period as per the requirements of VM0009 (pg 69, pg 70).	CAR 10	OK

Checklist Question	Ref	MoV*	Comments	Draft Concl	Final Concl
E.3. Baseline Emissions *The validation of ex-ante estimated baseline GHG emissions focuses on transparency and completeness of calculations.*					
E.3.1. Have the most relevant and likely operational characteristics and baseline indicators been chosen as the reference for baseline emissions?	**/1/**	DR, I	DNV finds that the project proponent has appropriately defined a reference area, appropriately measured deforestation over time within the reference area, and appropriately monitored starting biomass and soil carbon stocks within the project boundary.		OK
E.3.2. Are the baseline boundaries clearly defined and do they sufficiently cover sources and sinks for baseline emissions?	**/1/**	DR, I	DNV finds that the project proponent has appropriately defined a reference area, appropriately measured deforestation over time within the reference area, and appropriately monitored starting biomass and soil carbon stocks within the project boundary.		OK
E.3.3. Are the GHG calculations documented in a complete and transparent manner?	**/1/**		The approaches to estimate emission reductions for years 2005-2010 are described in the VCS Project Document. DNV can confirm that the approaches conform to the requirements in the VCS approved methodology "VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests Version 1.0" and that a conservative approach has been taken. **CAR 4**	CAR 4	OK

Checklist Question	Ref	MoV*	Comments	Draft Concl	Final Concl
			The factor for the root:shoot ratio for trees should be from the appropriate vegetation type for the project location. The vegetation type should be taken from an authoritative public source. **Accepted and Corrected.** The FAO Africover dataset classifies the Project Area as Tropical Dry Shrubland for which the root:shoot ratio for Trees is 0.4. We have changed our root:shoot ratio for Large and Small Trees to 0.4.		
E.3.4. Are uncertainties in the GHG emission estimates properly addressed in the documentation?	**/1/**	DR, I	The statistical uncertainty in the logistic model is 5.9% at the 95% confidence level.		OK
E.3.5. Have the project baseline(s) and the project emissions been determined using the same appropriate methodology and conservative assumptions?	**/1/**	DR, I	The approaches to estimate emission reductions for years 2005-2010 are described in the VCS Project Document. DNV can confirm that the approaches conform to the requirements in the VCS approved methodology "VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests Version 1.0" and that a conservative approach has been taken		OK

Checklist Question	Ref	MoV*	Comments	Draft Concl	Final Concl
E.4. Emission Reductions *Validation of ex-ante estimated emission reductions*.					
E.4.1. Will the project result in fewer GHG emissions than the baseline scenario?	***/1/***	DR, I	The total emission reductions from the project are estimated to be 4 525 767 tCO_2e over the selected 30-year crediting period (1 January, 2005 to 31 December, 2034). This includes project emissions, the total confidence deduction, 20% ex-ante leakage estimate, and the VCS AFOLU buffer determination of 20%. **CAR 8** The table of NERs and uncertainty calculations should be updated in the PD to reflect the amounts and final calculations as verified. **CAR 9** Equations for baseline emissions are not properly applied in the spreadsheet "Rukinga NER analysis v4.xlsx." The incorrectly applied equations address above and belowground biomass of trees and non-tree vegetation, and soil. The incorrectly applied equations are numbered in the methodology as equations 21, 23, 24, 26, and 26. The error is that when calculating 2006 emissions (column D in the spreadsheet), cumulative emissions as of the prior period are not subtracted from the cumulative emissions	CAR 8, 9	OK

Checklist Question	Ref	MoV*	Comments	Draft Concl	Final Concl
			of the current monitoring period. The terms in the equations that are missing from the calculations are for monitoring period m-1 (for biomass) and i-1 (for soil). Numbers for these terms must be added to the calculations. These terms appear to be properly included and counted in subsequent years, in columns E through AG of the spreadsheet. In the spreadsheet, this error is manifested in cells D24, D25, D28, D29, and D33.		
E.5. ISO 14064-2:2006 clause 5.2: *Does the VCS PD contain the following essential elements?*	**/1/**				
E.5.1. Does the VCS PD contain the following essential elements as set out in ISO 14064-2:2006 clause 5.2.					
E.5.1.1. Project title, purpose(s) and objective(s)?	**/1/**		**CL 1** Please include a reference to the final approved VCS methodology, "VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests." **CL 2** Please finalize all references to documents, including the title, version, and date. **CL 3** Within the *AFOLU Non-Permanence Risk Analysis and Buffer Determination*, a reference to the project name should be	CL 1-3	OK

Checklist Question	Ref	MoV*	Comments	Draft Concl	Final Concl
			included within the title.		
E.5.2. Type of GHG project.	/1/		Yes – The project activity falls under VCS sectoral scope 14 (AFOLU) REDD Mosaic Deforestation.		OK
E.5.3. Project location, including geographic and physical information, allowing for the unique identification and delineation of the specific extent of the project.	/1/	DR	Project location and delination of the specific extent of the project is made clear.		OK
E.5.4. Conditions prior to the project initiation	/1/	DR	Section 6.1		OK
E.5.5. A description of how the project will achieve GHG emission reductions and/or removal enhancements	/1/	DR	Section 61		OK
E.5.6. Project technologies, products, services and the expected level of activity.	/1/	DR, I	Project activities include: 1) Wildlife Works Sustainable Development Initiatives 2) Organic Greenhouse 3) Dryland farming scheme 4) REDD Forest and Biodiversity monitoring 5) Ranger force team 6) Ecotourism 7) School construction and bursary scheme		OK
E.5.7. Aggregate GHG emission reductions and removal enhancements, stated in tonne of CO2e, likely to occur from the GHG project.	/1/	DR, I	The total emission reductions from the project are estimated to be 7,542,945 tCO_2e over the selected 30 year crediting period (1 January 2005 to 31 December 2034). This includes project emissions and the total confidence deduction but does not include the VCS AFOLU buffer determination of 20% and assumes leakage to be 0.		OK
E.5.8. Identification of risks that may substantially affect the project's GHG emission reduction or removal	/1/	Dr	Section 1.11 - Yes – The following risks have been identified: Change in legislation,	CAR 2	OK

Checklist Question	Ref	MoV*	Comments	Draft Concl	Final Concl
enhancements.			income, crop failure, invasion of cattle grazers due to famine in adjacent communities, drought, wildlife, cash crops, and fire **CAR 2** It is our assessment that the buffer determination is a medium and the final buffer withholding percentage should be should be 20% (see Section 3.7"*Buffer Risk Determination" in DNV VCS Verification Report / Verification Statement Revision 1 31 January 2011*)		
E.5.9. Roles and responsibilities, including contact information of the project proponent other project participants, relevant regulator(s) and/or administrators of any GHG Program(s) to which the GHG project subscribes.	**/1/**	DR	Section 1.15 – The project proponent is Wildlife Works Inc. Appropriate contact information is included within the project document.		OK
E.5.10. Any information relevant for the eligibility of a GHG project under a GHG Program and quantification of GHG emission reductions or removal enhancements, including legislative, technical, economic, sectoral, socio-cultural environmental, geographic, site-specific and temporal information.	**/1/**	DR, I	The project area covers 100% (30,169 ha) of the Rukinga Sanctuary. At the time of the project start date, 93% of the project area was forested for 10 years prior to the project start date. The project boundary was confirmed by DNV by reviewing the two documents provided by Wildlife Works, the leasehold title to Rukinga Ranch **/2/**, the Carbon Rights Agreement between Wildlife Works Inc. and Rukinga Ranching Co. **/3/**.		OK

Checklist Question	Ref	MoV*	Comments	Draft Concl	Final Concl
E.5.11. A summary of environmental impact assessment when such an assessment is required by applicable legislation or regulation.	**/1/**		The environmental and scoio-economic impacts of the project activities have been assessed within the context of the Audit report conducted by the Kenya National Environmental Management Authority in December DNV has reviewed all documentation pertaining to the environmental audit.		OK
E.5.12. Relevant outcomes from stakeholder consultations and mechanisms for on-going communication.	**/1/**		A local stakeholder process was carried out by soliciting public comments through the internet and posting on local area notice boards. DNV reviewed all comments and found that the process complies with VCS requirements.		OK
E.5.13. Chronological plan for the date of initiating project activities, date of terminating.	**/1/**		The project start date is 1 January 2005, which is the date Wildlife Works Inc. assumed financial responsibility for the project area and began specific GHG mitigation activities. The selected crediting period is from 1 January 2005 to 31 December 2034.		OK
E.5.14. Notification of relevant local laws and regulations related to the project and demonstrate compliance with them.	**/1/**	DR, I	Section 1.10 – Wildlife Works Inc. documents the relevant local laws and regulations and was found to be in compliance with these regulations.		OK
E.5.15. Does the VCS PD contain a Proof of Title which includes either a legislative right, right under local	/1/	DR, I	Section 8.1 – Rukinga Ranching Company Ltd has legal title to the project area land.	CL 4	OK

Checklist Question	Ref	MoV*	Comments	Draft Concl	Final Concl
common law, ownership of land, or a contractual arrangement with the owner of the land			A copy of the title deed was provided to DNV. Wildlife Works Inc acquired the carbon rights from the landowner in 2009. **CL 4** It would help to communicate to the reader if the PD were to include a graphic that lists the organizations involved in the project (Rukinga Ranching, WW Inc, WW EPZ, WW Sanctuary, WW Carbon) shows the relationship between them.		

APPENDIX B

Resolution of Corrective Action and Clarification Requests

Table 4 Resolution of Corrective Action and Clarification Requests

Draft report corrective action requests and requests for clarifications		Summary of project participants' response	Final conclusion
CAR 1 The monitoring report must be a stand alone document from the project documentation. (VCS Program Normative Document: Double Approval Process Version 1.1 Section 6.2.1) Title page should be included with monitoring period (Jan 1 2005- December 31, 2010), client name, date, name of project, and version number on front cover.		**Accepted.** Monitoring report broken out as a standalone document. The document is entitled 'VCS Monitoring Report Version 1.0'	CAR closed.
CAR 2 It is our assessment that the buffer determination is a medium and the final buffer withholding percentage should be should be 20% (see Section 3.7"*Buffer Risk Determination" in DNV VCS Verification Report / Verification Statement Revision 1 31 January 2011*)		**Accepted and changed to 20%.**	(see Section 3.7"*Buffer Risk Determination" in DNV VCS Verification Report / Verification Statement Revision 1 31 January 2011*) CAR closed.
CAR 3 The justification of the project start date must conform to VCS requirements.		**Accepted and completed. The following text was inserted into Section 5.2 in the PD.** "Wildlife Works took financial responsibility for all conservation activities within the Project Area as of January 1st 2005, as a result of the agreement between Wildlife Works and Rukinga Ranching Company, Ltd., the	The January 1, 2005 project start date is valid because Wildlife Works Inc. took financial responsibility for the project land in 2005 and began implementing project actions within the project area only after this.

Draft report corrective action requests and requests for clarifications		Summary of project participants' response	Final conclusion
		landowner, a copy of which was provided to the Validators. Wildlife Works began conservation activities, centered around our ecofactory, prior to 2005, but those activities were located outside the Project Area. The VCS rule for AFOLU projects starting after Jan 1 2002 is that they have no specific time requirement for validation and verification. Language exists in the MED to clarify the type of project activities that qualify a project for a historical project start date. Wildlife Works fully conforms to these MED requirements."	Prior to 2005, conservation activities implemented by Wildlife Works Inc. were implemented outside the project area. CAR closed
CAR 4 The factor for the root to shoot ratio for trees shall be from the appropriate vegetation type for the project location. The vegetation type should be taken from an authoritative public source.		**Accepted and corrected.** The FAO Africover dataset classifies the Project Area as Tropical Dry Shrubland for which the root:shoot ratio for Trees is 0.4. We have changed our root:shoot ratio for Large and Small Trees to 0.4.	The sources used for the root to shoot ratios and vegetation types are appropriate. CAR closed.
CAR 5 The coefficients for the deforestation model given in the PD must be corrected to match the coefficients produced by model and used in calculations of cumulative deforestation.		**Accepted and corrected.** The coefficients previously listed in the PD were the result of an obsolete version of the grid classification data file. The new and correct coefficients now match the CDM model.	Coefficients in the PD were changed and now match outputs of the statistical program used to calculate the coefficients of the logistic model of deforestation. The linear model coefficients also were changed, and meet the criteria that the cumulative deforestation predicted by the linear model is less that the

Draft report corrective action requests and requests for clarifications		Summary of project participants' response	Final conclusion
			cumulative deforestation predicted by the logistic model in each year of the project life. Further, the linear coefficients were revised to reflect the clarification of the methodology, that the accrual of offsets is at a constant rate, starting from the carbon stock within the project boundary at the time of the start of the project. This clarification avoids the assumption that, in the first year of the project, the cumulative baseline deforestation within the project rises to match the cumulative deforestation in the reference area. CAR closed.
CAR 6 The PD shall describe the method used to determine bulk density of disturbed soil samples, and document that the protocol is well established.		**Accepted and completed. Text inserted into the PD:** "The Bulk Density method used by the outside laboratory that performed the soil testing for the PD is an official FAO methodology for measuring Bulk Density of disturbed soil samples." A copy of the FAO approved protocol was provided to the Validators.	The addition of the following language on page 66 is sufficient: "The Bulk Density method used by the outside laboratory that performed the soil testing for the PD is an official FAO methodology for measuring Bulk Density of disturbed soil samples" CAR closed.
CAR 7 The PD shall specify the acceptable degree of error		Accepted and done. Text inserted into the PD: Quality Control (QC) for Biomass plots was conducting	Quality control guidance was inserted into Section 13.14 of the

Draft report corrective action requests and requests for clarifications		Summary of project participants' response	Final conclusion
allowed in forest measurements, and how errors larger than acceptable amounts shall be dealt with.		using the following protocol; 1. An independent QC team not involved in the original plot sampling of each plot is given coordinates for the plot centers for 5% of the original plots. The Independent QC team is also given blank plot data recording sheets, plot radius for each carbon pool, a copy of the plot sampling "Standard Operating Procedure – Biomass", dbh tape, compass and long tape, and sent out to measure the plots as though they were doing it for the first time. 2. The QC team returns to headquarters with data sheets which are given to a third party analyst, who are neither on the original nor the QC plot team, for comparison against the original plot data sheets. 3. Any discrepancies are noted, and when all sheets have been compared, the two plot teams are brought together with the VP African Field Operations or his deputy the Operations Manager to discuss and explain any significant variances (±15%) 4. The monitoring team lead is informed if more than 1 QC plot contains significant discrepancies from the original data sheets, and further QC plots may be required to establish the extent of the quality errors. 5. The Monitoring Team Lead and/or senior carbon staff makes a determination as to whether a plot needs to be revisited: For a given plot, the number of trees that fall outside the	PD. CAR closed.

Draft report corrective action requests and requests for clarifications		Summary of project participants' response	Final conclusion
		±15% threshold for change since original measurement is counted. If greater than 10% of trees in that plot fall outside the threshold, and QC has been performed on the plot within 1 year from original measurement, the plot must be re-measured. If QC has been performed on a plot greater than 1 year after original measurement, the threshold described above shall be relaxed to 15%.	
CAR 8 The table of NERs and uncertainty calculations should be updated in the PD to reflect the amounts and final calculations as verified.		**Accepted and updated.** The table of NERs now matches the final calculations as verified.	CAR closed.
CAR 9 Equations for baseline emissions are not properly applied in the spreadsheet "Rukinga NER analysis v4.xlsx". The incorrectly applied equations address above and belowground biomass of trees and non-tree vegetation, and soil. The incorrectly applied equations are numbered in the methodology as equations 21, 23, 24, 26, and 26. The error is that when calculating 2006 emissions (column D in the spreadsheet) cumulative emissions as of the prior period are not subtracted from the cumulative emissions of the current monitoring period. The terms in the equations that are missing from the calculations are for monitoring period m-1 (for biomass) and i-1 (for soil). Numbers for these terms must be added to the calculations. These terms appear to be properly included and counted in subsequent years, in columns E through AG of the		**Alternative Changes Applied** After discussing this CAR with the validators, it was agreed that this CAR is not applicable. However, it led to some clarifying language in the PD to ensure that a conservative linear deforestation rate was used.	The project baseline is constructed according to the approved methodology. The project proponent elected to use the linear model baseline alternative provided within VM0009. As allowed by the methodology, the project developer elected to be credited according to a linear deforestation rate that is cumulatively less than the logistic model at all times within the project life. CAR Closed.

Draft report corrective action requests and requests for clarifications		Summary of project participants' response	Final conclusion
spreadsheet. In the spreadsheet, this error is manifested in cells D24, D25, D28, D29, and D33.			
CAR 10 Please provide a justification for the estimation of the ex-ante leakage rate for the project crediting period as per the requirements of VM0009 (pg 69, pg 70).		**Accepted and competed.** The following language was added to the Section 11.3 'Estimation of Ex-ante NERs' in the PD: The project activities described in detail in Section 10 Leakage and Section 6.1 Baseline Scenario Overview, were specifically designed to mitigate deforestation and human-wildlife conflict, and therefore by default serve to mitigate leakage and uphold project permanence. Wildlife Works is of the opinion that the project will suffer little to no leakage, due to our exceptional attention to leakage mitigation. However, in the absence of precedent for estimating ex-ante leakage emissions, Wildlife Works chose to use a conservative value of 20%. Applying this factor to gross NERs yields an estimate of total net NERs over the project lifetime of: Ex-Ante NERs=7,542,945-(7,542,945*0.20) Ex-Ante NERs=**6,034,356** This analysis is available as a spreadsheet and accounts for an estimate of 20% leakage. It includes project emissions and a total confidence deduction. A chart of the projected NERs over the life of the project is presented below. Actual leakage values will be measured empirically at each monitoring period, and will vary from these conservative ex-ante estimates.	Estimating a leakage rate at the project outset is highly uncertain. Wildlife Works has determined an ex-ante leakage rate for the project crediting period at 20% and it is our assessment that this is appropriate given the conditions of the project and is consistent with values proposed by The Climate Action Reserve. DNV thus finds the leakage assessment to conform to the requirements in the approved methodology VM0009. CAR 10 Closed.

Draft report corrective action requests and requests for clarifications		Summary of project participants' response	Final conclusion
CL 1 Please include a reference to the final approved VCS methodology, "VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests."		**Completed.** Included a reference to the final approved VCS methodology, "VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests." Abbreviated to MED after the first instance.	CL closed.
CL 2 Please finalize all references to documents including the title, version, and date.		**Completed.**	CL closed.
CL 3 Within the *AFOLU Non-Permanence Risk Analysis and Buffer Determination*, a reference to the project name should be included within the title.		**Completed.**	CL closed.
CL 4 It would help to communicate to the reader if the PD were to include a graphic that lists the organizations involved in the project (Rukinga Ranching, WW Inc, WW EPZ, WW Sanctuary, WW Carbon) shows the relationship between them.		**Accepted and completed.** Graphic added in section 5.3.2	CL closed.
CL 5 Please fix the typo on page 45 bullet point 2 from "lara" to "laws".		**Done.**	CL closed.
CL 6 Page 26. "No Image" bullet: Before the last two words, insert "not"?		**Done.**	CL closed.

Draft report corrective action requests and requests for clarifications		Summary of project participants' response	Final conclusion
CL 7 Page 43. Capitalize "co" in CO2e.		**Done**	CL closed.
CL 8 Page 43. Section 6.6.4. First paragraph is truncated and incomplete.		**Done**	CL closed.
CL 9 Page 76. What are the units for the total area? Hectares?		**Accepted.** Changed table values to ha to match total. Changed unit of measure to ha.	CL closed.