VERIFICATION OF THE "INDIA SUNDARBANS MANGROVE RESTORATION" PROJECT

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Summary:

This report describes the verification audit of the "India Sundarbans Mangrove Restoration" project ("the project"), a reforestation project located in India, against the VCS Version 3 and all applicable requirements therein, for the monitoring period from 28 September 2010 to 28 February 2015. The verification was conducted by means of document review, follow-up interviews and site inspection, and the resolution of outstanding issues. The verification included: evaluating whether the provisions of the monitoring methodology and the monitoring plan were consistently and appropriately applied; and assessing the collection of evidence supporting the reported data for conformity to the protocol. As part of the verification 24 findings were raised: 16 Non-Conformity Reports, seven New Information Requests and one Opportunities for Improvement. These findings are described in Appendix A of this report. In summary, the audit team is able to verify with a reasonable level of assurance that the GHG removals generated by the project, quantified in accordance with the verification criteria, amount to 88,331 tonnes CO_2 equivalent. SCS verified that the non-permanence risk rating of the proposed project activity for this verification is 15% which is to be applied to the change in carbon stocks at this verification (i.e. equal to 13,250 tCO_2e). The amount of VCUs to be issued would be 75,081 tCO_2e. There are no uncertainties associated with the verification conclusion.

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1 INTRODUCTION

1.1 Objective

The objective of the verification was to conduct an independent assessment of the "India Sundarbans Mangrove Restoration" project ("the project") to determine whether the quantification of GHG emission reductions or removals for the project during the period 28 September 2010 to 28 February 2015 ("the monitoring period") complies with the verification criteria, as set out in the guidance documents listed in Section 1.2 of this report.

1.2 Scope and Criteria

In accordance with Section 4.3.4 of ISO 14064-3:2006, the scope was defined as follows:

- The project and its baseline scenarios;
- The physical infrastructure, activities, technologies and processes of the project;
- The GHG sources, sinks and/or reservoirs that are applicable to the project;
- The types of GHGs that are applicable to the project; and
- The reporting period, as discussed in Section 5 of this report.

In accordance with Section 5.3.1 of the VCS Standard, the criteria for verification was the VCS Version 3, including the following documents:

- AFOLU requirements: VCS Version 3.4;
- AFOLU Non-Permanence Risk tool: VCS Version 3.2; and
- The CDM methodology CDM AR-AM0014 Version 3.0, which is approved for use under the VCS Program.

Unless otherwise indicated, the assessment was performed against the most recent version of the relevant VCS guidance document.

In addition, the assessment was performed against the requirements of the validated project description.

1.3 Level of Assurance

The verification report expresses a conclusion with a reasonable level of assurance about whether the reported net anthropogenic GHG removals data is free from material misstatement. SCS applied a materiality threshold of 5% with respect to omission or misstatements concerning reported quantities as per VCS Standard Section 5.3.1 4).

1.4 Summary Description of the Project

Project Proponents (Parties):	- Livelihoods Fund

Title of project activity:	India Sundarbans Mangrove Restoration
Baseline and monitoring methodology	CDM AR-AM0014 Version 3.0
Location of the project activity	The proposed grouped project is located in coastal wetlands of India and aims to carry-out the restoration of more than 4,004 ha.
Project's crediting period:	28 September 2010 to 27 September 2030
Period verified in this verification:	28 September 2010 to 28 February 2015

2 VERIFICATION PROCESS

2.1 Method and Criteria

The verification was performed through a combination of document review, interviews with relevant personnel and on-site inspections, as discussed in Sections 2.2 through 2.4 of this report. At all times, the project was assessed for conformance to the criteria described in Section 1.2 of this report. As discussed in Section 2.5, findings were issued to ensure that the project was in full conformance to all requirements.

Prior to conducting the site visit activities, the audit team created a sampling plan to determine the areas with the greatest risk of material error. The audit team created a sampling plan following a proprietary sampling plan workbook developed by SCS. Per Section 4.4.3 of ISO 14064-3:2006, the audit team identified possible risks of errors, omissions and misrepresentations with respect to the verification criteria. For each identified risk, the audit team assessed the likelihood of the material discrepancy occurring, the likelihood of the material discrepancy not being prevented or detected by the controls of the project the material discrepancy and the likelihood of the material discrepancy not being detected by the audit team. Sampling and data testing activities were planned to address any risk where the likelihood of a material discrepancy not being detected by the audit team was judged to be unacceptably high. The audit team then created a validation plan that took the sampling plan into account.

2.2 Document Review

The monitoring report (version 03 dated 3 June 2015) was carefully reviewed for conformance to the verification criteria.

The following documents provided by the project proponents have been used as direct sources of evidence for the verification conclusions:

Document name	Ref.
NEWS & UNIQUE forestry and land use: *VCS Monitoring Report (MR) for project activity "India Sundarbans Mangrove* Restoration*" in India, v*ersion 01 dated 28 February 2015 reviewed during the desk review and *v*ersion 03 dated 3 June 2015	/1/
NEWS & UNIQUE forestry and land use: *Non-permanence risk report: VCS version 3*, version 3.0, 15 May 2015	/2/
NEWS & UNIQUE forestry and land use: *VCS Project Document (PD) for project activity "India Sundarbans Mangrove* Restoration*" in India, v*ersion 5.0 dated 10 June 2015	/3/
Various entities. Signed contracts and agreements: - Memorandum of Understanding between NEWS and Danone. Signed 9 June 2010 - Contract between NEWS and Danone for the establishment of a Mangrove restoration project. Signed 7 July 2010. - Purchasing agreement including the transfer of any right to the carbon credits from NEWS to Danone. Signed 29 May 2011 - Amendment to purchasing agreement between NEWS, Danone and Livelihoods indicating that all rights on the project will be transferred from Danone to Livelhoods. Signed 28 November 2011.	/4/

Document name	Ref.
- Amendment to the MoU between NEWS, Danone and Livelihoods indicating that all rights and obligations on the project will be transferred from Danone to Livelihoods. Signed 28 November 2011. - Carbone emission reduction collaboration agreement between NEWS and Livelihoods with the investment plan for implementation and operation of the project. Signed 29-1-2012. Community carbon agreements signed with the Panchayats for the following plots: 4-M22-2; M22; 4-M17-1; 5-M17-1; M17_2; 4-S7-1; S7_2; S7_3; S7_4; S8	
NEWS & UNIQUE forestry and land use. ESRI Shapefiles • Project boundary including information on planting species; Giri C, Ochieng E, Tieszen LL, Zhu Z, Singh A, Loveland T, Masek J, Duke N (2011). Status and distribution of mangrove forests of the world using earth observation satellite data. Global Ecology and Biogeography 20: 154-159 ; http://data.unep-wcmc.org/datasets/4	/5/
NEWS. Evidence of start date. Receipts of payment of plantation and seed collection. 28 September 2010.	/6/
Ministry of Environment and Forests – Government of India. Letter of Approval for the "India Sundarbans Mangrove Restoration". 22 November 2012	/7/
NEWS & UNIQUE forestry and land use. GIS data and information: - ESRI Shapefiles with limits of Grouped Project - ESRI Shapefiles with limits of project boundary and land eligibility information ESRI Shapefiles with location of Sampling Plots	/8/
NEWS & UNIQUE forestry and land use. Baseline carbon stocks spreadsheet and sampling plot data.	/9/
NEWS & UNIQUE forestry and land use. Ex-ante GHG removals calculations and ex-ante GHG calculations	/10/
Report of the Field Survey to Sunderban during 17th - 19th May, 2011 under Danone Project	/11/
Various financial information and data: - Livelihoods Fund: Minutes of the Board of Directors indicating updated business plan. 5 December 2013 - Livelihoods Fund: Minutes of the Board of Directors indicating updated business plan. 18 December 2014 - CACEIS Bank. Capital participation and current account status. 31 December 2013 - Livelihoods Fund: Cash flow spreadsheet	/12/
NEWS & UNIQUE forestry and land use. Standard Operating Procedures (SOPs): Pilot Inventory Sampling Monitoring Plan. December 2014.	/13/
Livelihoods Fund. Management and financial plan of the NEWS Project. January 2015	/14/
Letter to The Director of Sundarban Biosphere Reserve (Department of Forests) attaching the financial and management plan of the project covering 50 years. 28 March 2015	/15/
H.J. RUITENBEEK RESOURCE CONSULTING LIMITED. Due Diligence Review. India: Restore Greenbelts in the Sundarbans Danone Fund for Nature (DFN) Wet Carbon Initiative 77081–100 Final Report. 5 July 2010	/16/
UNIQUE. Report on audit conducted on the plantation areas. Year 2014 audit. 1 April 2014.	/17/

Document name	Ref.
Bahuguna, A. 2010. Restore 'green belts' in Sunderbans , thereby increasing biodiversity resources for continued sustainable existence of the community: First Observations.	/18/
Various evidences on plantation site selection and plantation monitoring: • Pest and diseases database. 2015 • Degradation risks assessment database of years 2013 and 2014 Various reports from coordinators regarding the implementation and state of plantations	/19/
NEWS & UNIQUE forestry and land use. Participatory Rural Appraisal (PRA)	/20/

The following documents served as supporting documents in order to reach a verification conclusion and they relate to background documents and applicable methodologies, tools and standards:

Name of Document	Ref
CDM Executive Board: *Methodology* CDM AR-AM0014 "Afforestation and reforestation of degraded mangrove habitats", Version 3.0	/21/
CDM Executive Board: 'Combined tool to identify the baseline scenario and demonstrate additionality in AR CDM project activities' (version 1)	/22/
CDM Executive Board: 'Estimation of non-CO_2 GHG emissions resulting from burning of biomass attributable to an A/R CDM project activity' (version 04.0.0)	/23/
CDM Executive Board: 'Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities' (version 3.0.0)	/24/
CDM Executive Board: 'Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities' (version 4.1.0)	/25/
CDM Executive Board: 'Estimation of the increase in GHG emissions attributable to displacement of pre-project agricultural activities in A/R CDM project activity' (version 2.0.0)	/26/
CDM Executive Board: 'Calculation of the number of sample plots for measurements within A/R CDM project Activities' (version 2.1), Annex 15	/27/
CDM Executive Board: 'Demonstrating appropriateness of allometric equations for estimation of aboveground tree biomass in A/R CDM project activities' (version 01.0.0), Annex 28, EB65	/28/
VCSA: VCS standards: VCS Standard Version 3.5, 25 March 2015	/29/
VCSA: AFOLU Non-Permanence Risk tool: VCS Version 3.2, 4 October 2012	/30/
VCSA: 'Program Definitions: VCS Version 3.5', 8 October 2013	/31/
VCSA: AFOLU requirements: VCS Version 3.4, 8 October 2013	/32/
ISO 14064-3:2006: Greenhouse gases — Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions, First edition, 1 March 2006	/33/
ISO 14065:2007: Greenhouse gases — Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognitions, First edition, 15 April 2007	/34/
VCSA: *Validation and Verification Manual*. Version 3.0	/35/
Applicable legislation: - The Indian Forest Act, 1927 - National Forest Policy,1988 - The West Bengal Protected Forests Rules	/36/

- The Forest (Conservation) Act, 1980 with 1988 Amendments FCA-'80 - The Biological Diversity Act,2002 (Act No. 18 of 2003) Other Acts - The Wildlife(Protection) Act 1972 and its Amendments with WL(P) Act Schedule - The West Bengal Trees (Protection and Conservation in non-forest areas) Act, 2006	
ESRI : Change matters – On-line visor showing NDVI change between 1975 and 2010, http://changematters.esri.com/compare	/37/
- IPCC, 2003: *Good Practice Guidance for Land Use, Land-Use Change and Forestry*, prepared by the National Greenhouse Gas Inventories Programme, Jim Penman, Michael Gytarsky, Taka Hiraishi, Thelma Krug, Dina Kruger, Riitta Pipatti, Leandro Buendia, Kyoko Miwa, Todd Ngara (eds). Published: IGES, Japan. URL: http://www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf.html - IPCC (2006): *2006 IPCC Guidelines for National Greenhouse Gas Inventories, Prepared by the National Greenhouse Gas Inventories Programme*. Eggleston H.S., Buendia L., Miwa K., Ngara T. and Tanabe K. (eds).Published: IGES, Japan - Including 2013 Supplement to the 2006 IPCC Guidelines for national Greenhouse Gas Inventories: Wetlands – Methodological guidance on organic and wet soils across IPCC land-use categories.	/38/
Forest Carbon Partnership Facility: http://www.forestcarbonpartnership.org/fcp/	/39/
UN-REDD programme: http://www.un-redd.org/	/40/
United Nations Framework Convention on Climate Change (UNFCCC). Clean Development Mechanism (CDM) project database. http://cdm.unfccc.int/Projects/projsearch.html http://cdm.unfccc.int/Projects/Validation/index.html	/41/
CDM – NEWS Mangrove restoration PDD: http://cdm.unfccc.int/filestorage/O/L/V/OLVBWCH39FITE4M8DNZ26QPS5YUX70/PDD.pdf?t=bGl8bm45MDZufDA_-_FSPNfjieVtMhok_z32	/42/
The Gold Standard Foundation: Gold Standard project registry http://www.goldstandard.org/about-us/project-registry	/43/
Gomes Soares. M.L. et al. 2005. Above-ground biomass of mangrove species. E.C.Shelf Science	/44/
Komiyama et al. 2008. Allometry, biomass ans productivity. Mangrove ecology. Aquatic Botany	/45/
McKee K.L. et al. 2000. Restoration of biogeochemical function in mangrove forests. Restoration Ecology	/46/
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Tamooh, F.et al. 2008. Below-ground root yield and distribution in natural . Forest Ecology	/48/
Patil V., Singh A., Naik N., Seema U. and Sawant B. 2012. CARBON SEQUESTRATION IN MANGROVES ECOSYSTEMS. Journal of Environmental Research And Development Vol. 7 No. 1A, July-September 2012	/49/
Samantha Sifleet, Linwood Pendleton, and Brian C. Murray. 2011. State of the Science on Coastal Blue Carbon: A Summary for Policy Makers. http://nicholasinstitute.duke.edu/economics/naturalresources/state-of-science-coastal-blue-carbon#.U5cP0HlZptM	/50/
GOFC-GOLD, 2012, *A sourcebook of methods and procedures for monitoring and reporting anthropogenic greenhouse gas emissions and removals caused by deforestation, gains and*	/51/

losses of carbon stocks in forests remaining forests, and forestation. GOFC-GOLD Report COP18 version 1, (GOFC-GOLD project office, Natural Resources Canada, Alberta Canada).	
Breithaupt, J.L., Smoak, J.M., Smith, T.J., Sanders, C.J. and Hoare, A. 2012. Organic carbon burial rates in mangrove sediments: Strengthening the global budget. GLOBAL BIOGEOCHEMICAL CYCLES, VOL. 26, GB3011, doi:10.1029/2012GB004375	/52/
Chmura, G.L., Anisfeld, S. C., Cahoon, D.R, and Lynch, J.C.2003. Global carbon sequestration in tidal, saline wetland soils. Global Biogeochemical Cycles	/53/
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Bouillon, S., et al. (2008), Mangrove production and carbon sinks: A revision of global budget estimates, Global Biogeochem. Cycles, 22, GB2013, doi:10.1029/2007GB003052.	/56/
Murray, B.C., L. Pendleton, et al. 2011. Green payments for blue carbon: Economic incentives for protecting threatened coastal habitats. Durham, NC: Nicholas Institute for Environmental Policy Solutions, Duke University.	/57/
Danda, Anamitra Anurag, Gayathri Sriskanthan, Asish Ghosh, Jayanta Bandyopadhyay and Sugata Hazra (2011). Indian Sundarbans Delta: A Vision (New Delhi, World Wide Fund for Nature-India)	/58/
Hazra S, 2010. Temporal change detection (2001-2008) of the Sundarban. Unpublished report. WWF-India, Kolkata (cited in India Sundarbans Delta: A Vision.)	/59/
The World Bank. Building Resilience for Sustainable Development of the Sundarbans through Estuary Management, Poverty Reduction, and Biodiversity Conservation: A Non-Lending Technical Assistance. Draft Final Report and Appendix N. Institutional Approaches for Addressing Priority Challenges in the Sundarbans. 2011	/60/
R. Ray, D. Ganguly, C. Chowdhury, M. Dey, S. Das, M.K. Dutta, S.K. Mandal, N. Majumder, T.K. De, S.K. Mukhopadhyay, T.K. Jana, Carbon sequestration and annual increase of carbon stock in a mangrove forest, Atmospheric Environment, Volume 45, Issue 28, September 2011, Pages 5016-5024, ISSN 1352-2310, 10.1016/j.atmosenv.2011.04.074. (http://www.sciencedirect.com/science/article/pii/S1352231011004638)	/61/
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Government of West Bengal. 2012. West Bengal State Action Plan on Climate Change	/65/
The World Bank. 2014. Building Resilience for Sustainable Development of the Sundarbans – Strategy Report.	/66/
The World Bank. Integrated Coastal Zone Management (ICZM). http://www.iczmpwb.org/main/pdf/physical_progress/status%20report%20forest.pdf	/67/

Pradeep Vyas, K. Sengupta. Mangrove conservation and restoration in the Indian Sundarbans	/68/

2.3 Interviews

Interviews constituted an important component of the audit process. Interviews were conducted in two phases: an opening and scoping meeting held in Paris in 12 February 2015; and a set of interviews conducted during the site visit from 9 March 2015 to 13 March 2015. The audit team conducted various interviews with the project proponent's staff, staff of other project entities involved in the project, and other stakeholders such as the Director of Sunderbands Biosphere Reserve (Department of Forests), three presidents of Panchayats and three different communities. The list of interviewed persons is detailed as follows:

Name and Role	Affiliation	Date interviewed
Three Pradhans or presidents of Panchayats (local government)	Panchayats	6 June 2014
Mr Arabinda Manna (President)	Land & Forest Protection Committee , Basanti block	6 June 2014
Dr Pradeep Vyas (Director, Sundarban Biosphere Reserve)	Department of Forests	13 March 2015
Dibyajyoti Chatterjee (project Coordinator)	NEWS	9 March 2015 to 13 March 2015
Ajanta Jay (Joint Secretary and Project Director)	NEWS	12 February 2015; 9 March 2015 to 13 March 2015
Jean-Pierre Renaud (General Delegate, Livelihoods Venture)	Livelihoods Fund	12 February 2015
Stéphane Perrier (Project Manager, Livelihoods Venture)	Livelihoods Fund	12 February 2015
Matthias Seebauer (Consultant)	UNIQUE Forest and Land Use	12 February 2015; 9 March 2015 to 13 March 2015
> 40 members of local communities participating in the project	-	9 March 2015 to 13 March 2015

2.4 Site Inspections

The objectives of the on-site inspections performed were to:

- Select samples of data from on-the-ground measurements for verification in order to meet a reasonable level of assurance and to meet the materiality requirements of the project, as required by Section 5.1.3 of the VCS Standard;

- Perform a risk-based review of the project area and project activities to ensure that the project conformed to the requirements of the VCS rules and the methodology throughout the monitoring period; and
- Ensure that monitoring was conducted in accordance with the requirements of the validated monitoring plan, the methodology employed and the VCS rules.

In fulfilment of the above objectives, the audit team performed an on-site inspection of the project area on the dates 9 March 2015 to 13 March 2015. The main activities undertaken by the audit team were as follows:

- An assessment of the implementation and operation of the project activity through visual inspection and through interviews with the project proponent's staff. Project boundaries and the stand information were assessed using a Pocket PC with the geographic information uploaded and connected to a GPS receiver;
- Revisiting of eight randomly selected inventory sampling plots which were re-measured by the project proponent's staff under observation of the audit team. While the project proponent was carrying out the re-measurement, the audit team verified that the operational and data collection procedures were implemented in accordance with the monitoring plan of the PD and verified the information flows for generating, aggregating and reporting the monitoring parameters. Furthermore, the monitoring equipment was checked in order to confirm that the monitoring practices followed the requirements of the PD and the applicable methodology. Furthermore, the audit team performed a consistency check in order to verify the consistency of the previous measurement and the re-measurement, and to verify the correctness of the reported stand growth. Moreover, the eight field cards were compared with the data base in order to assess whether transfer check errors were material;
- Confirmation that the quality control and quality assurance procedures were in place; and
- Interviewed project personnel to confirm the appropriateness of the non-permanence risk score claimed for the project.

2.5 Resolution of Findings

Any potential or actual material discrepancies identified during the assessment process were resolved through the issuance of findings. The types of findings issued by SCS were characterized as follows:

Non-Conformity Report (NCR): An NCR signified a material discrepancy with respect to a specific requirement. This type of finding could only be closed upon receipt by SCS of evidence indicating that the identified discrepancy had been corrected. Resolution of all open NCRs was a prerequisite for issuance of a verification statement.

New Information Request (NIR): An NIR signified a need for supplementary information in order to determine whether a material discrepancy existed with respect to a specific requirement. Receipt of an NIR did not necessarily indicate that the project was not in compliance with a specific requirement. However, resolution of all open NIRs was a prerequisite for issuance of a verification statement.

Opportunity for Improvement (OFI): Receiving an OFI indicates an area that should be monitored or ideally, improved upon. OFI's are often an indication of something that may become a non-conformity if not given proper attention. A root cause analysis and corrective action plan are not required, but highly

recommended. OFI's are considered by the audit team to be closed upon issuance, and a response to this type of finding is not necessary.

As part of the verification 16 NCRs and seven NIRs were issued. All findings issued by the audit team during the verification process have been closed. In accordance with Section 5.3.6 of the VCS Standard, all findings issued during the verification process, and the inputs for their closure, are described in Appendix A of this report.

Forward Action Requests

A forward action request (FAR) is issued for actions if the monitoring and reporting require attention and/or adjustment for the next monitoring period. No Forward Action Requests were issued by SCS, only one Opportunity for Improvement (OFI) which is an area of improvement which does not require any action from the project proponent.

2.5.1

2.6 Eligibility for Validation Activities

SCS is accredited for conducting validation of AFOLU projects, so this section is not applicable.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

This is not applicable.

3.2 Methodology Deviations

No methodology deviations have been identified.

3.3 Project Description Deviations

No project description deviations were identified.

3.4 Grouped Project

No additional instances were included as part of validation.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

Implementation status of the project activity(s)

In order to verify the implementation status and the project boundaries reported in the MR, the audit team conducted an on-site inspection and multiple interviews as described in Sections 2.3 and 2.4 of this verification report. The audit team confirmed that the implementation is in accordance with that stated in the PD, and that no additional project description deviations apart from those described in Section 3.3 were present.

4.1.1

Hence, the audit team is able to confirm that the project implementation is in accordance with the project description contained in the registered PD of 10 June 2015.

Implementation status of the monitoring plan and the completeness of monitoring

The audit team checked the monitoring plan contained in the registered PD of 10 June 2015 and compared it with the MR Version 03 of 3 June 2015, to verify whether there was any difference that would cause an increase in estimates of the GHG emission reductions in the current monitoring period. The audit team confirmed that the implementation is in accordance with that stated in the monitoring plan of the PD, and that no project description deviations were present .

4.1.2

Monitoring of project implementation

The audit team confirmed that the monitoring of project implementation has been carried out in accordance with the monitoring plan contained in the registered PD. As confirmed by the audit team, forest establishment and management activities are monitored following the specific relevant Standard Operating Procedures (SOPs). These SOPs provide detailed instruction for all activities, indicating clearly how to record the activity and how to report it to the project coordinator. As shown during the site visit, the project proponent effectively monitors all forest establishment activities. Therefore, the monitoring of the forest establishment has been carried out in accordance with the MP contained in the registered PD.

Monitoring of the actual net GHG removals by sinks

The monitoring has been carried out in accordance with the revised monitoring plan and formulae contained in the registered PD of 10 June 2015.

As required by the MP of the registered PD and the applicable methodology CDM AR-AM0014 Version 3.0 the project proponent effectively monitors the required parameters to determine the project's removals by sinks and emissions by sources. The parameters reported, including source, frequency and review criteria as indicated in the monitoring plan were verified to be correct and in line with the registered MP of the PD. Necessary management system procedures including responsibility and authority of monitoring activities have been verified to be consistent with the PD. Knowledge of personnel associated with the project activity was also found to be satisfactory.

4.1.3

Inclusion under other programs and existence of other forms of environmental credit

The first instance of the grouped project was proposed as a CDM project, was submitted to the UNFCCC, but was never registered as the registration fees were never paid /41/. This project will never be registered as communicated by the project proponent; its initial intention was to conduct a gap validation in order to generate VCUs, but it realized that the CDM registration fees did not justify this option and that the grouped

project allowed for an expansion of boundaries that was not allowed under the CDM. Therefore, the project does not participate under other GHG programs.

The proposed project activity does not generate another form of environmental credit.

Previously validated methodology deviations

No methodology deviations were identified.

4.1.4 4.2 Accuracy of GHG Emission Reduction and Removal Calculations

Baseline emissions and removals

4.2.1 According to Section 3.1 of the PD, baseline net GHG removals are assumed to be zero as the existing vegetation is not removed from the site, it will not be measured as part of the monitoring and its continuous presence will be monitored too. Hence, the baseline removals **= 0 tCO_2.**

Project emissions and removals

4.2.2 The project emissions and removals or, as called in CDM methodologies, actual net GHG removals by sinks ($\Delta C_{ACTUAL,t}$) are equal to the project sum of changes in carbon stocks of the above-ground and below-ground tree biomass ($\Delta C_{P,t}$), minus the sum of the increases in GHG emissions by sources within the project boundary as a result of the implementation of the project activity ($GHG_{E,t}$):

$$\Delta C_{ACTUAL,t} = \Delta C_{P,t} - GHG_{E,t}$$

Changes in carbon stocks ($\Delta C_{P,t}$)

Following the provisions of the applicable methodology, the project sum of changes in living biomass carbon stocks (ΔC_P) would be equal to:

$$\Delta C_{P,t} = \Delta C_{TREE\_PROJ,t} + \Delta C_{SHRUB\_PROJ,t} + \Delta C_{DW\_PROJ,t} + \Delta SOC_{PROJ,t}$$

Where:

- $\Delta C_{TREE\_PROJ,t}$: Change in carbon stock in tree biomass in project in year t; t CO_2-e. This is estimated following the tool for the 'Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities' (version 4.1.0). Considering equations (12), (13), (14), (16), (12), (13), (14) and (15) of the tool, the total carbon stocks in tree biomass within the project boundary in year t (end of monitoring period), has been estimated through the following equation:

$$\Delta C_{TREE\_PROJ,t} = C_{BSL} - \frac{44}{12} \times CF_{TREE} \times A \times \sum_{i=1}^{M} w_i \times \left(\frac{\sum_l f(x_{1,l}, x_{2,l}, \ldots) \times (1 + R_j)}{A_{PLOT,i}} \right)$$

Where:

CF_{TREE}	=	Carbon fraction of tree biomass; tC t d.m.$^{-1}$. The project has applied a value of 0.47 as specified in the PD.
R_j	=	Root-shoot ratio for tree species j; dimensionless. The project has applied the equation R_j=exp[-1.085+0.9256*ln(AGB)]/AGB which is prescribed by

the tool 'Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities' (version 4.1.0).

$f(x_{1,l}, x_{2,l}, \dots)$ = Above-ground biomass of the tree returned by the allometric equation for species j relating the measurements of tree l to the above-ground biomass of the tree; t d.m. In accordance with the tool 'Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities' (version 4.1.0), for ex-post estimations the project has applied two different equations: Komiyama et al. (2005) /45/ for trees; the average of the estimate given by the allometric equations for A. Avicennia and R. Mangle sourced from Ross et al. (2001) /64/ for saplings. These equations have been validated following the procedures of the tool 'Demonstrating appropriateness of allometric equations for estimation of aboveground tree biomass in A/R CDM project activities' (version 01.0.0). According to this tool equations must have used trees growing in the same edapho-climatic conditions as the project area and the requirement is that they must be based on at least 30 trees and a coefficient of determination of 0.85. The three equations show a coefficient of determination above 0.85 and all except one used more than 30 trees. Equations have been adjusted in Mangrove ecosystems in South-East Asia and North-America that are in general similar to the project area as these are wetland soils located under tropical climates, i.e. same edapho-climatic conditions. In order to confirm if the use of these equations would cause an over-estimation of GHG removals when applied to the project area, the audit team compared the tree biomass estimates provided by these equations with the equation provided by Ray et al. (2011) which was built with more than 30 trees coming from the Sundarbans area and has a coefficient of determination higher than 0.85, i.e. in compliance with the requirements of the referred tool and with more accurate estimates that the applied equations. The result is that for all DBHs, Ray et al. (2011) provided higher estimates than the used equations, thus confirming that the estimates given by the above equations are conservative. Therefore, the audit team is able to confirm that the estimates given by the applied equations are more conservative than the estimates given by equations calibrated locally, which confirms that even if the applied allometric equations were not built with trees growing in the same edapho-climatic conditions (which is not the case), this would be in benefit of the conservativeness.
Measurement of these variables is done following specific SOPs /13/. In order to verify the data, the audit team required the project staff to re-measure eight PSPs verifying if the SOPs were correctly implemented and comparing the newly measured values with previous measurements. It was confirmed that no systematic errors were committed, therefore confirming the accuracy of the collected data. No transfer errors exist in this case since field data collectors are used and transfer is automatic so no errors could exist in the transfer.
Finally, the audit team checked the GHG benefit spreadsheet and confirmed that the monitored and verified values have been correctly applied to the allometric equations and that the biomass per ha of each PSP have been correctly propagated to all strata and then to all the area.

A = Sum of areas of the tree biomass estimation strata; ha, which is estimated through A_i. Planted areas are monitoring through specific procedures which provide instructions for the measurement of new planted areas and its verification. The audit team confirmed during the site visit that these procedures were adequately implemented and that the project staff effectively monitors the project area. Furthermore, it was confirmed that

sufficient QA/QC procedures are in place, such as internal audits or different levels of quality control (e.g., UNIQUE conducts audits on the delineation of the project area /17/). In order to verify the reported values, the audit team verified the data collected and confirmed that the verified data collected was actually used to estimate the GHG benefits, so no manual transposition errors between data sets were identified. The correctness of the collected information was checked by comparing the geographical information provided in the form of ESRI Shapefiles (SHP) through on-site verification using a GPS receiver and a mobile GIS. Moreover, Very High Resolution (VHR) imagery was used in order to confirm the accuracy in the delineation of the project area polygons and the accuracy in the strata delineation. The team confirmed that the strata delineation and project boundary delineation is accurate. Furthermore, consistency checks were conducted between stratum information of the project area SHPs and the stratum information provided by the Permanent Sampling Plots (PSP). The team identified one PSP to be located in an erroneous stratum and another PSP to be out of the project area, but their inclusion is conservative as they cause a reduction of the average estimate in carbon stocks. Moreover, the procedures for data transfer were confirmed to be sound through confirmation that data used in the calculation of GHG benefits was sourced from the verified SHP.

w_i = Ratio of the area of stratum i to the sum of areas of tree biomass estimation strata (i.e. $w_i = A_i/A$); dimensionless. This is estimated with the value above.

$A_{PLOT,i}$ = Area of sample p in stratum i, ha. The plot area used in the forest inventory ranges from a radius of 2 m to 3 m multiplied by two or three plots per sampling unit as required by the existing SOPs /13/. The audit team confirmed that SOPs were correctly implemented: PSPs are circular and a calibrated cord is used in order to determine the distance of trees to the plot center. In case of borderline trees, a measuring tape is used in order to determine exactly if the tree is in or out. In order to verify the data, the audit team required the project staff to re-measure 8 PSPs and confirmed that some trees were erroneously excluded or included, but that this error was of random nature and that it was in any case immaterial, i.e. errors compensated each other so the overall bias was negligible, and due to the tree density, the impact of a tree inclusion or exclusion was negligible. The audit team confirmed that this plot size has been used in the GHG removal calculation spreadsheet in a consistent manner.

C_{BSL} = Baseline carbon stocks, tCO_2. These were sourced from the validated in the PD and are equivalent to 29,131 tCO_2, which includes shrubs and trees.

- $\Delta C_{SHRUB\_PROJ,t}$: Change in carbon stock in baseline shrub biomass within the project boundary in year t; t CO2-e. This is estimated following the tool for the 'Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities' (version 4.1.0). This has been assumed to be zero for ex-post estimates as all biomass implemented by the project is already considered in the above component. Therefore $\Delta C_{SHRUB\_PROJ,t}$ = 0.
- $\Delta C_{DW\_PROJ,t}$: Change in carbon stock in baseline dead wood biomass within the project boundary in year t; t CO2-e. This is estimated following the tool for 'Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities' (version 3.0.0). The project proponent has selected the conservative default-factor set out in Section 6.2 of the tool, which

consists in the multiplication of the changes of carbon stocks in tree biomass by a conservative default value. Considering equations (8) and (9):

$$C_{DW\_PROJ,t} = C_{TREE\_PROJ,t} \times DF_{DW}$$

$$C_{DW\_BSL,t} = C_{TREE\_BSL} \times DF_{DW}$$

Where:

$C_{TREE\_PROJ,t}$	=	Carbon stock in trees biomass in stratum i at a point of time in year t, as calculated as explained above; t CO_2e. This has been estimated as explained above.
C_{TREE_BSL}	=	Carbon stock in trees biomass in stratum i at a point of time in year t, as calculated in the validated PD; t CO_2e. This has been estimated in the validated PD, and is equal to 427.9 tCO_2e.
DF_{DW}	=	Conservative default factor expressing carbon stock in dead wood as a percentage of carbon stock in tree biomass; per cent. For ex-post estimates, a value of 6% has been applied which is the appropriate value for tropical regions < 2000 m of elevation with a rainfall > 1600 mm yr^{-1} according to the tool for 'Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities' (version 3.0.0).

- $\Delta SOC_{PROJ,t}$: Change in carbon stock in the soil organic carbon (SOC) pool within the project boundary, in year t; t CO_2-e. This is estimated following equation (4) of the applicable methodology:

$$\Delta SOC_{PROJ,t} = \frac{44}{12} \times \sum_{t=1}^{t} A_{PLANT,t} \times dSOC_t \times 1\ year$$

Where:

$A_{PLANT,t}$	=	Area planted in year *t*; ha. Although this should be equal to the variable A as it represents the area actually planted at the beginning of the project (i.e. as required by the applicable methodology), the project has only considered the net planted area, i.e. discounting areas with a crown cover below 10%. In order to estimate the proportion of the area that is dead the project proponent has considered the results of the mortality checks /9/ and excluded a total of 1,493 ha. The audit team deems that this is a very conservative assumption as Breithaupt et al. (2012) /52/ notes that the burial rates in areas close to Mangrove forests are also high which would indicate that the organic matter is exported from the forests to nearby non-forested areas, so those discounted areas might probably sequester carbon in the SOC pool.
$dSOC_t$	=	The rate of change in SOC stocks within the project boundary, in year *t*; t C ha^{-1} $yr^{-}1$. This is 1.62 t C ha^{-1} yr^{-1} as described in the PD.

Considering the above values the change in carbon stocks or carbon removals are equal to 88,331 tCO_2e.

Project emissions ($GHG_{E,t}$).

No emissions from fires have been considered in the ex-post calculations as no burning is used to clear the land for planting and no burning has occurred in the monitoring period. This was confirmed by the audit team during the site visit no burning occurs as part of the site preparation within the project boundary and no burning occurs as part of the forest management. Therefore, **$GHG_{E,t}$=0.**

Moreover, considering the above values the project emissions and removals or actual net GHG removals by sinks (ΔC_{ACTUAL}) are equal to **88,331 tCO_2e.**

Leakage

According to the applicable methodology CDM AR-AM0014 Version 3.0 leakage emissions are assumed to occur as a result of increased emissions from displacement of agricultural activities to areas outside the project that lead to deforestation and land use change to agricultural land. The audit team confirmed that these emissions were demonstrated to be de-minimis in the registered PD and were assumed to be zero.

4.2.3 Moreover, as assessed in Appendix B of this report, market leakage is equation to zero.

Therefore, leakage emissions are equal to **0 tCO_2.**

Net anthropogenic GHG emissions

The audit team is able to confirm that:

4.2.4
- The GHG emission reductions and removals are accurate, including the spreadsheet formulae, conversions and aggregations, and the used data and parameters;
- The methods and formulae set out in the project description for calculating baseline emissions, project emissions and leakage have been followed;
- The default values used in the monitoring report are appropriate.

Hence, the audit team is able to confirm that the GHG emission reductions and removals have been quantified correctly in accordance with the project description and applied methodology and that the net anthropogenic GHG emission reductions in the monitoring period 28 September 2010 to 28 February 2015 are equal to 88,331 tCO_2e.

4.3 Quality of Evidence to Determine GHG Emission Reductions and Removals

No significant reporting risks have been identified for the data reported. All the data required for net anthropogenic GHG removals or emissions calculations are obtained following Standard Operating Procedures /13/. The procedures effectively cover: management responsibilities, data monitoring procedures, training procedures, periodic internal audits, management reviews and corrective actions in case of any deviations. As confirmed by the audit team, there are QA/QC procedures in place to check the quality of the data collected, transferred, processed and reported, and to assure that the defined standards are met at all times. Implementation of SOPs and QA/QC procedures was verified by the audit team along with the monitoring data flows from data collection to reporting. These facts provided the audit team with confidence in the high quality of the reported results. In order to reach the required reasonable level of assurance, the audit team conducted spot checks of monitored raw data and conducted general consistency checks crossing different data sources. Spot checks were conducted for every step of the information flow, from data collection up to data processing and reporting. Furthermore, the audit team performed a step by step recalculation of pertinent values. In addition, upon completion of the recalculation activities, the audit team was able to trace each value back to its origin and confirm that no transpositions or miscalculations of the data were present.

Hence, the audit team is able to confirm that sufficient and appropriate evidence is available in order to determine GHG emission reductions and removals.

Non-Permanence Risk Analysis

Following the provisions of paragraph 3.19.2 of the VCS Standard Version 3.5, a non-permanence risk report (NPRR) was prepared following the provisions of the AFOLU Non-Permanence Risk tool: VCS Version 3.2 and submitted to the audit team. The findings and conclusion regarding the non-permanence risk analysis undertaken for the project are summarized below for each risk category and factor. Unless noted otherwise, the audit team agrees with the conclusion stated in the non-permanence risk report.

4.3.1 The findings of the audit team regarding the risk scores applied for each factor are as follows.

Project Management		
Risk Factor	Verification Findings	Risk Rating
a)	80% of the employed species are *Avicennia sp*. while the remaining 20% includes: Rhizophora, Bruguiera, Ceriops, Xylocarpus, Excoecaria, Aegiceras and Aegialitis species. Seedlings are established in areas that were previously covered with mangrove species. Hence, the audit team agrees that this risk is not relevant.	0
b)	As confirmed during the site visit, there is little threat of encroachment from outside actors. The project is located in areas where the uses are compatible with the existence of mangrove forests and in fact mangrove forests enhance these uses (i.e. increase in fish habitat) and local communities are being engaged in different social programs. Hence, the audit team agrees that this risk is not relevant.	0
c)	The audit team confirmed that the project management team includes individuals with significant experience in all skills necessary to successfully undertake all project activities. This was evident during the site visit, when it was confirmed that project areas are managed by a very professional team which includes senior staff with experience in the management and implementation of the project. Moreover, Livelihoods Fund provides all the necessary technical support in order to ensure the correct management of the existing plantations. Hence, the audit team agrees that this risk is not relevant.	0
d)	As confirmed during the site visit, the project management team has a permanent presence in the project areas and NEWS has offices which are located less than few hours from the project areas. Moreover, NEWS has in each zone collaborators with whom they are constantly in communication in the case any issue occurs. Hence, the audit team agrees that this risk is not relevant.	0
e)	The current project was validated as a CDM project but was never registered. Hence, the audit team agrees that the management team includes individuals	-2

	with significant experience in AFOLU project design and implementation, carbon accounting and reporting under the VCS Program.	
f)	The NPRR discusses the existence of an adaptative management plan and evidence has been provided to support it. The audit team checked the provided Management and Financial plan /14/ and confirmed that it includes instructions to identify and assess potential risks to the project and requires the implementation of a mitigation plan. Moreover, evidence was provided that periodical PRAs were conducted /20/ which are used in order to identify any potential issue. As confirmed by the audit team and stated in such plan, the exact procedures are provided in the MoU between NEWS (implementing partner) and Livelihoods Fund (project proponent) for the monitoring and mensuration of impacts of the project /4/. This contract includes the responsibilities of each of the parties and includes specific procedures for the monitoring of the project (e.g. every three years an assessment by Livelihoods Fund will be conducted in order to confirm the status of the plantation and any mitigation action required) which includes the identification of risks and the implementation of the necessary mitigation actions. As confirmed by the audit team, any potential mitigation action is already budgeted in the contract, and as confirmed during the site visit, this adaptative management plan is implemented. Therefore, the audit team agrees that the project can claim the mitigation score of -2 due to the existence of an adaptative management plan.	-2
Total Project Management (PM) [as applicable, (a + b + c + d + e + f)] Total may be less than zero.		**-4**

Financial Viability		
Risk Factor	Verification Findings	Risk Rating
a) b) c) d)	The audit team checked the revised spreadsheet with the project financials /14/ and confirmed that all assumptions were supported by documentary evidence such as contracts, and that conservative assumptions were applied /12/. Hence, the audit team deems the provided financials to provide a conservative estimate of expected cash-flows for future years considering socio-economical local circumstances. According to the financials, the break-even point would be reached in year 2021 which is between 4 and 7 years from the current assessment. Therefore, the audit team agrees that the risk would be 1.	1
e)		0

f) g) h)	According to the financials the maximum level of investment until the project reaches break-even would be 1,259.6 kEUR. The audit team deems that the Livelihoods Fund should not have any problem in meeting this cash-out since it is participated in by large companies (e.g. La Poste, SAP AG, Danone) who have plenty of private equity for investing and are in good financing standing according to the audit team competence. The fund is participated in by large companies who decide in board meetings whether or not to invest in a project. If an investment is decided upon, each entity will commit to the expenditures for the entire duration of the project pro-rata to their participation in their fund. The final disbursement is done on an annual basis approved by the board meeting. This was confirmed by the audit team through CACEIS Bank's capital participation and current account status information /12/ which shows that the fund has committed already to 20 million EUR including the expenditures of the proposed project activity /12/, having remaining funding of 10 million EUR. The fund assumes for the financials that the carbon credits generated have a market price, but they use them for compensating for their own emissions as part of their voluntary commitments. Both the funding and the revenues may be considered secured revenue which means that the 100% of the cash-out until the project reaches break-even would be covered.	
i)	As assessed above the project proponent has enough callable financial resources of more than 50% of the total cash-out. The fund is participated by large companies who decide in meeting boards to invest or not in a project. If an investment is decided, each entity will commit to the expenditures for the entire duration of the project pro-rata to their participation in their fund. The final disbursement is done in an annual basis approved by the meeting board but the funds are already allocated to the project based on the approved investment plan. This was confirmed by the audit team through CACEIS Bank's capital participation and current account status information /12/ which shows that the fund has commited already to 20 million EUR including the expenditures of the proposed project activity /12/. This commitment can be mobilized annually, so it is a secured funding that is readily available to the project, therefore being in compliance with Section 2.2.2 (5) of the AFOLU Non-Permanence Risk Tool. Hence a mitigation factor of -2 may be claimed.	-2
Total Financial Viability (FV) [as applicable, ((a, b, c or d) + (e, f, g or h) + i)] Total may not be less than zero.		**0**

Opportunity Cost

Risk Factor	Verification Findings	Risk Rating
a) b) c) d) e) f)	As assessed in the validation report, the baseline scenario is the continuation of the land-use prior to project start, i.e. continuation of degraded mangrove with very little activity from local communities (i.e. prawn-seed collection). Although prawn-seed collection may generate a revenue so it would theoretically not be subsistence-driven, it was confirmed during the site visit that this is not a real alternative land-use scenario once the project is established, since this activity can only occur on mudflats without vegetation so once the project is established it is not physically possible to continue with these activities. The only option would be to deforest these newly established forests, which cannot occur as confirmed by the Department of Forests and local communities and government. Moreover, as indicated by The World Bank, the elimination of the prawn-seed collection will have positive impacts on the availability of resources as for every prawn seed collection a significant number of species are affected (i.e. 400 including 318 (other prawns), 8 (fish), 60 (crabs), 1 (mollusc), 13 (unidentified)) /60/. Hence, there are very few baseline activities, and where they exist, these are subsistence-driven, which indicates an opportunity risk at least of zero. The project will restore the mangrove which will increase the fish habitat and its population and will increase the prawn-seed production elsewhere. Hence, the project will generate positive community benefits. This was confirmed through interviews with stakeholders who confirmed this extent. Hence a risk of zero is appropriate.	0
g)	Project proponent is not a for-profit organization, they are carrying-out investments in order to use the carbon credits for compensating their own emissions; yet the main driver of their investments are the community benefits.	-2
h)	The project has in place signed agreements with the different Rural Communities /4/ which state clearly that they commit to conserve the carbon stocks until tree maturity and that they will respect the project activities for the whole project's length. This agreement is a legally binding commitment to continue management practices that protect the credited carbon stocks over the length of the crediting period as required by Section 2.2.3 of the AFOLU Non-Permanence Risk Tool. Moreover, as confirmed by the audit team, once the plantation reaches maturity they would be protected by the existing laws which do not allow any deforestation of Mangroves /36/. This was effectively confirmed during the interview held with the representative of the Department of Forests. In view of this, the audit team confirms that the project may claim the mitigation factor.	-2
i)	This has not been argued.	0
Total Opportunity Cost (OC) [as applicable, (a, b, c, d, e or f) + (g+h or i)]		**-4**

Total may be less than 0 as indicated by the VCSA in the "Errata and clarifications" dated 24 July 2014 (c.f. http://www.v-c-s.org/sites/v-c-s.org/files/Errata%20and%20Clarifications%2C%20AFOLU%20Non-Permanence%20Risk%20Tool%2C%20v3.2_0.pdf)	

Project Longevity		
Risk Factor	Verification Findings	Risk Rating
a) b)	The project has in place signed agreements with the different Rural Communities /4/ which state clearly that they commit to conserve the carbon stocks until tree maturity and that they will respect the project activities for the whole project's length. This agreement is a legally binding commitment to continue management practices that protect the credited carbon stocks over the length of the project longevity period as required by Section 2.2.3 of the AFOLU Non-Permanence Risk Tool. Moreover, as confirmed by the audit team, once the plantation reach the maturity they would be protected by the existing laws which does not allow any new conversion of existing Mangroves /36/. The project proponent has argued a project longevity period of 50 years, which is consistent with the management and financial plan which includes procedures and an overall budget for the 50 years has been provided by the project proponent /14/. According to the same, the first 30 years will be articulated through the contract between the project proponent and the implementing partner, which includes a detailed financial commitment for 10 years which will be updated at least twice. According to the management plan, after the first 30 years the communities will be in charge of the operation of the project. Moreover, a Letter to The Director of Sundarban Biosphere Reserve (Department of Forests) attaching the financial and management plan of the project covering 50 years was provided /15/. Moreover, it was confirmed during the interviews held with the Pradhans of the Panchayats (local government) that the agreements signed with them may be renewed as many times as desired. Although the agreements cover a 20 year period, the project proponent is renewing the agreements after each local election in order to ensure that the new local government representatives are endorsing the project. Therefore, the right of use may be maintained for the entire project longevity as required by Section 2.2.4 (2) of the AFOLU Non-Permanence Risk Tool. Therefore, in accordance to the AFOLU Non-Permanence Risk Tool, Section 2.2.4 it may be confirmed that the project longevity is 50 and that the resulting risk is 5 as there is a legal agreement to continue the management practices.	5
Total Project Longevity (PL)		**5**

May not be less than zero	

Land Tenure and Resource Access/Impacts		
Risk Factor	Verification Findings	Risk Rating
a) b)	As assessed in the validation report, the land is public land while the right of use is vested in the project proponent. Hence, a risk of 2 is applicable.	2
c)	There are no disputes as the ownership is of the state and the management is competence of the local Panchayats. During the interview held with the three Pradhans (presidents) of the local Panchayats it was confirmed that the land is public land and that the land use is under jurisdiction of the local government. Moreover, the selection of the planting areas has been done in consultation with local communities with support by the implementing partner as confirmed during the site visit and through other evidence /18/.	0
d)	As assessed above, there are no disputes over access/use rights in the project area. Hence, the audit team agrees that this risk is not relevant.	0
e)	The audit team agrees that the potential upstream and sea impacts that could undermine issued credits in the next 10 years are irrelevant or expected to be insignificant was demonstrated through the following: a) The project is a tidal wetland restoration or coastal wetland so the only potential impact could be linked to the reduction in flow in the Metla and Ganges rivers. These rivers have a very high flow and it is not expected that their flows will be significantly affected unless a large derivation or dam is implemented upwaters. However, this is not expected to occur as confirmed by the staff of the the forest department, who confirmed that new laws have been established in order to ensure that coastal wetlands are protected and this includes protection agains large projects b) The project has in place as part of its management plan, monitoring instructions to ensure that the project areas are monitored and in the case of any issues that could cause mortality on the plantations, the project would implement a set of mitigation actions which are budgeted in the plan /4/. Therefore, any negative impact would be identified and addressed. c) As confirmed during the site visit through interviews and through literature review, no deforestation or degradation has been caused by these changes in water flow. Wetlands have disappeared due to erosion but this is not related to the impact referred to in the requirement. d) Moreover, as confirmed by the audit team, the project area is divided in more than 464 polygons that are dispersed in different areas that belong to different	0

	hydrological systems. This would mean that carbon stocks are not concentrated in one unique system, so in the case of any change in the upstream and sea impacts it would be highly unlikely that these affects the whole project area or a significant part of the area. In view of this, the audit team agrees that this risk is irrelevant in the case of the project activity and agrees to set this risk to zero. Since the NPRR has been updated with this discussion, this finding has been resolved.	
f)	As explained in the project longevity risk this mitigation factor may be claimed by the project as the project area is protected by legally binding commitment to continue management practices that protect carbon stocks over the length of the project crediting period	-2
g)	Mitigation not argued by the project proponent.	0
Total Land Tenure (LT) [as applicable, ((a or b) + c + d + e+ f+g)] Total may not be less than zero.		**0**

Community Engagement		
Risk Factor	Verification Findings	Risk Rating
a)	The audit team confirmed during the site visit that no households live within the project area. Hence, the audit team agrees that this risk is not relevant.	0
b)	The audit team confirmed during the site visit that the main activities developed close to the project areas is firewood collection and prawn-seed collection As confirmed during the site visit these activities are concentrated in areas of mangrove as the degraded areas are poor in fish and oysters. During the site visit the audit team confirmed the process followed by the implementing partner to establish the plantations: the first step was to arrive to a village and organize a meeting explaining the negative impacts of the mangrove degradation and explaining how it can be restored. After that, a discussion would be held in order to understand the comments from communities, their consent for the activities and the areas that could have potential to be reforested. The audit team confirmed during the site visit that these consultation were organized in all villages that participate in the project; meeting minutes were provided demonstrating these actions /20//18//19//11/. Hence, it can be confirmed that more than 20% of the communities living out of the project area and who rely on the project area have been consulted.	0
c)	The audit team confirmed that the project is delivering of net positive impacts on the social and economic well-being of the local communities who derive	-5

	livelihoods from the project area. This was confirmed through different interviews with stakeholders who confirmed that the project will defend them from the effect of cyclones and that it will increase in fish and prawn availability. The project has not caused any harm in any livelihoods as confirmed by the same stakeholders. In view of this, the audit team is able to confirm that the positive community benefits are obvious and that the project may claim a mitigation factor of -5.	
Total Community Engagement (CE) [where applicable, (a+b+c)] Total may be less than zero.		**-5**

Political Risk		
Risk Factor	Verification Findings	Risk Rating
a) b) c) d) e)	The audit team confirmed that the mean governance score for India for the period 2009 - 2013 across the six governance indicators of World Bank Institute's Worldwide Governance Indicators (WGI, 2014 update) is -0.19. Therefore, the audit team agrees that the political risk is 2.	2
f)	The audit team checked the websites of the Forest Carbon Partnership Facility /39/ and UN-REDD /40/ and confirmed that India has not prepared any Readiness preparation proposal to be approved by the World Bank and UN. However, a CDM AR project has been registered in the country as confirmed through the UNFCCC database /41/. Therefore, the mitigation score of -2 can be confirmed.	-2
Total Political (PC) [as applicable ((a, b, c, d or e) + f)] Total may not be less than zero.		**0**

Natural Risk		
Risk Factor	Verification Findings	Risk Rating

F	As confirmed during the site visit this risk is not relevant in mangrove ecosystems due to the presence of water. This was confirmed by the representative of the Department of Forests during the interview held.	0
PD	The project proponent has selected a significance of Minor (5% to less than 25% loss of carbon stock) and a likelihood of "Less than every 10 years". The audit team checked various parcels during the site visit and confirmed that young plants are affected by some insects, yet this effect is minor and but frequent. This is confirmed by the plantation monitoring reports for 2014 and 2015 that indicate that 93% of plants are not affected by any pest /11//19/, but they do not cause a mortality to affected trees. The reduced frequency in insect attack was confirmed by the representative of the Department of Forests, who indicated than only young trees are affected by pests. Therefore, a frequency of less than 10 years and a significance of “No Loss” or “Insignificant” would be reasonable. Since there is less than 10 years in available data, the project proponent has assumed a conservative significance of “Minor”, meaning a risk of 5. As confirmed during the site visit, these insects only affect certain species so the use of a mix of species in the plantations seems to be a good strategy in order to mitigate this risk; hence a mitigation factor of 0.5 may be argued.	2.5
W	The project proponent has selected a significance of Minor (5% to less than 25% loss of carbon stock) and a likelihood of "Less than every 10 years". As indicated by The World Bank’s report “Building Resilience for Sustainable Development of the Sundarbans” /66/, cyclones is the most important natural hazard which occurs once every 10 years. Although this is one of the most important natural risks to human life and livelihoods, it is not a natural risk that affects carbon stocks in mangrove forests /65/. According to Vyas and Sengupta (2013) /68/ mangrove forests do mitigate the impacts of cyclones and are not affected by these. Moreover, during the interview held with the representative of the Department of Forests, it was indicated that mangrove forests are not negatively affected by cyclones but are positively affected as bring more nutrients and water to forests inland. This means that a frequency of “Less than every 10 years” is reasonable, while a significance of “No Loss” would also be reasonable. However, the project proponent has conservatively assumed a significance of “Insignificant”, meaning a risk of 2, which is correct as there is not a long historical series of data available. Hence, a risk of 2 would be conservative.	2
G	Two possible geological risks are earthquakes and river erosion. The former is not relevant as confirmed through interviews with different stakeholders, who indicated that earthquakes never happened in those areas. The latter is the most relevant in this case. The project proponent has selected a significance of Major (25% to less than 50% loss of carbon stock) and a likelihood of "Less than every 10 years". Since erosion is a continuous effect the selected likelihood is accurate. Regarding the significance, the audit team deems that it is conservative as the project area is scattered in a large area and it would be unlikely to have more than 25% of the project area affected in less than 10 years. This was effectively	10

	confirmed by the representative of the Department of Forests, who indicated that this risk is relevant but that this is more relevant in the areas that are exposed to the sea, and not much in the river areas. This is confirmed by Hazra (2010), who showed that accretion tends to occur in the river areas and erosion occurs in the exposed coastal areas /59/. In view of this, it may be confirmed that a significance of "Major" would be conservative, and a risk of 20 would be acceptable. As confirmed during the site visit, in order to mitigate this risk the project proponent has established a site selection procedure /18/ in order to establish plantations only on stable areas that are unlikely to be affected by erosion. In view of this, a mitigation factor of 0.5 may be claimed as mitigation measures have been put in place. Therefore, a risk of 10 can be claimed.	
ON	Not relevant as confirmed by the audit team during the site visit.	0
Total Natural Risk (as applicable, F + PD + W + G + ON)		**14.5**

In summary, the overall risk rating that was determined for the project, in accordance with the VCS Non-Permanence Risk Tool, is 15%. The audit team has concluded that the above risk rating is in conformance with the VCS rules.

Risk Category	Rating
a) Internal Risk	0
b) External Risk	0
c) Natural Risk	14.5
Overall Risk Rating (a + b + c)	**15%**

The audit team confirmed that the non-permanence assessment has been carried out adequately and applying conservative assumptions where needed.

Therefore, the total number of buffer credits are: Buffer credits = 15%*****88,331 = 13,250 tCO_2e in the monitoring period.

5 VERIFICATION CONCLUSION

The project "India Sundarbans Mangrove Restoration" conforms to the verification criteria for projects and their GHG emission reductions or removals set out in the VCS rules. The audit team asserts no qualifications or limitations with respect to the statement above.

The project "India Sundarbans Mangrove Restoration" conforms to the validation criteria for projects set out in the VCS rules, with respect to the methodology and project description deviations described in Section 3 of this verification report. The audit team asserts no qualifications or limitations with respect to the statement above.

The audit team has been able to confirm that the project and the project monitoring system have been implemented as described in the registered PD and subsequently validated project description deviations.

The audit team has been able to confirm, with a reasonable level of assurance, that the quantity of GHG emission reductions and removals set out below has been quantified in accordance with the VCS rules. As documented in Appendix B, the audit team can also confirm that the non-permanence risk score of 15% has been quantified in accordance with the VCS rules.

Reporting period: From 28 September 2010 to 28 February 2015.

Verified GHG emission reductions or removals in the above reporting period:

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
28 September 2010 to 28 February 2015	0	88,331	0	88,331
Total	0	88,331	0	88,331

The audit team verified that the non-permanence risk rating of the proposed project activity for this verification is **15%** which is to be applied to the change in carbon stocks at this verification 88,331 tCO_2, giving a total buffer equal to 13,250 tCO_2. The amount of VCUs to be issued would be **75,081 tCO_2e.**

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APPENDIX A: VERIFICATION FINDINGS

The following tables include all findings issued during the verification audit. It should be noted that all language under "Client Response" is a verbatim transcription of responses provided by project personnel.

NCR 28-08-2010 to 28-02-2015.1 dated 02/20/2015

Standard Reference: VCS Standard, Version 3.4, Section 3.18.1; VCS Monitoring Report Template, Version 3.3, Initial instructions.

Document Reference: 2015-02-18 NEWS Monitoring Report

Finding: The VCS Standard, Section 3.18.1 requires project proponents to use the VCS Monitoring Report Template and to adhere to all instructional text within the template. The audit team identified the following issues:

a) According to the initial instructions of this template, where a section is not applicable, same must be stated under the section. However, the MR provides some sections with no information and it states "Pending".

b) According to the initial instructions, all sections must be completed using Arial 10pt, black, regular (non-italic) font. However, the MR includes some text in a different font or highlighted.

c) One table of Section 3.1 is not in accordance to the template.

Client Response: Regarding the present finding, the following corrections have been performed:

a) All pending issues have been completed

b) Format of the text is now in accordance with the template

c) Tables of section 3.1 have been revised in accordance to the template "

Auditor Response: The audit team checked the revised MR and confirmed that it has been updated and that all identified issues were corrected. The MR is now in compliance with the MR template and this finding may be closed.

Closing Remarks: The Client's response adequately addresses the finding.

NIR 28-08-2010 to 28-02-2015.2 dated 02/20/2015

Standard Reference: VCS Standard, Version 3.4, Section 3.1.1 and 2.4.1; AR-AM00014, Version 3.0.0, Section 17.

Document Reference: 2015-02-18 NEWS Monitoring Report

Finding: The VCS Standard, Section 3.1.1 requires projects to be guided by the principles set in Section 2.4.1 which includes the principles of accuracy and conservativeness. According to the applied methodology AR-AM00014, Section 17, a default value of 0.5 t ha-1 yr-1 for the rate of change in SOC stocks within the project boundary may be adopted unless transparent and verifiable information can be provided to justify a different value. The project proponent has applied a default value of 1.62 t C ha-1 yr-1 sourced from Table 4.12 of the IPCC "2013 supplement to the 2006 IPCC guidelines for national greenhouse gas inventories: wetlands". The audit team checked the mentioned document, and it states that where the activity results in patchy or patches of biomass, EFRE >0 should only be applied when the mangrove covers at least 10% of the overall area. The audit team checked the carbon inventory data that is in preparation and found that some plots have negligible biomass. However, it is not clarified in the PD how this value would be applied to areas that do not reach the required canopy cover in order to ensure that accurate and conservative estimates are obtained as required by the VCS Standard.

Client Response: An explanation about the exclusion of areas with less than 10% of crown cover is now present in the PD and the MR in section 4.2 (SOC calculations)

Auditor Response: The audit team checked the revised MR (Version 2.0) and found that it now includes an explanation on how those areas that do not reach the minimum canopy cover of 10% would be excluded in the accounting of the GHG removals from the SOC pool. Therefore, the team concluded that the issue has been resolved and that the finding may be closed.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 28-08-2010 to 28-02-2015.3 dated 02/20/2015

Standard Reference: VCS Monitoring Report Template, Version 3.3, Section 4.2; CDM Tool "Demonstrating appropriateness of allometric equations for estimation of aboveground tree biomass in AR CDM project activities", Version 1.0.

Document Reference: 2015-02-18 NEWS Monitoring Report

Finding: According to the VCS Monitoring Report Template, Section 3.1, the referred section has to be completed with a quantification of project emissions and/or removals providing sufficient information to allow the reader to reproduce the calculation. The audit team checked the MR and compared them with the provided GHG accounting spreadsheet and identified the following issues:

a) Section 3.1 and Section 4.2 lists two allometric equations for ex-post estimates. One of them is sourced from Ross et al. (2001) and is applied to saplings. However, the provided equation is applicable for Avicennia germinans while the GHG accounting spreadsheet has used as estimate the average of the equation for A. germinans and Rhizophora mangle. Therefore the MR does not provide a complete information.

Client Response: The corrected explanation of how the equation Ross et al (2001) was used is now present in the MR in section 4.2

Auditor Response: The audit team checked the revised MR (version 2.0) and confirmed that it has been updated. It now includes all relevant information regarding the used allometric equations: Komiyama et al. (2005) for trees; the average of the estimate given by the allometric equations for A. Avicennia and R. Mangle sourced from Ross et al. (2001). According to the applicable methodology, these equations must be validated following the requirements provided in the tool "Demonstrating appropriateness of allometric equations for estimation of aboveground tree biomass in AR CDM project activities" (Version 1.0). According to this tool equations must have used trees growing in the same edapho-climatic conditions as the project area and the requirement is that they must be based on at least 30 trees and a coefficient of determination of 0.85. The three equations show a coefficient of determination above 0.85 and all except one used more than 30 trees, however, they have been adjusted in Mangrove ecosystems in South-East Asia and North-America which could put in doubt whether they were built with trees growing in the same edapho-climatic conditions as the project area. In order to confirm if the use of these equations would cause an over-estimation of GHG removals, the audit team compared the tree biomass estimates provided by these equations with the equation provided by Ray et al. (2011) which was built with more than 30 trees coming from the Sunderbans area and has a coefficient of determination higher than 0.85. The result is that for all DBH Ray et al. (2011) provided higher estimates than the used equations, thus confirming that the estimates given by the above equations are conservative. Therefore, the audit team is able to confirm that the issue has been resolved and may be closed.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 28-08-2010 to 28-02-2015.4 dated 02/20/2015

Standard Reference: VCS Standard Version 3.4, Section 3.1.1 and Section 2.4.1

Document Reference: 2015-02-18 NEWS Monitoring Report

Finding: The VCS Standard, Section 3.1.1, requires that projects shall be guided by the principles set out in Section 2.4.1 which include the principle of "Accuracy", i.e. "Reduce bias and uncertainties as far as is practical". The audit team checked the GHG accounting spreadsheet, and in particular the application of the equations from Ross et al. (2001). According to this source (Appendix 1) the independent variable's unit is mm. However, the equation has been applied to values in cm not mm. In view of this, it may be confirmed that the principle of accuracy has not been complied followed. Please apply the allometric equation in line with the source.

Client Response: The excel issue was corrected and now the calculations with the equations are applied with the values in mm. See updated Excel 2015-04-15 NEWS_ex-post carbon calculations

Auditor Response: The audit team checked the revised spreadsheet and confirmed that it has been corrected. The independent variable of the equations sourced from Ross et al. (2001) has been set to mm which is consistent with the publication. Therefore, this finding has been resolved and may be closed.

Closing Remarks: The Client's response adequately addresses the finding.

NIR 28-08-2010 to 28-02-2015.5 dated 02/20/2015

Standard Reference: VCS Standard Version 3.4, Section 3.1.1 and Section 2.4.1

Document Reference: 2015-02-18 NEWS Monitoring Report

Finding: The VCS Standard, Section 3.1.1, requires that projects shall be guided by the principles set out in Section 2.4.1 which include the principle of "Accuracy", i.e. "Reduce bias and uncertainties as far as is practical". The audit team checked the GHG accounting spreadsheet and the different assumptions made. The audit team checked the basic densities employed for different species and compared them with values provided by global databases (Zanne et al., 2011 and Chave et al., 2009) for the same species in India and South-East Asia. The resulting basic densities differed significantly from the applied ones, being in some cases more conservative and in others more accurate (actual value is available in the literature). Please clarify whether the basic densities sourced from CIFOR (2013) are accurate for the project circumstances.

Client Response: The updated ex-post calculations now included the wood density values from Zanne et al. 2011 (section 4.2 shows the new density-list)

Auditor Response: The audit team checked the revised spreadsheet and confirmed that it has been corrected. It now sourced all values from Zanne et al. (2011) considering values per species or Genus for India and Sout-East Asia. These values are lower than the values sourced from CIFOR (2013) so are at least more conservative, if not more accurate. Therefore, this finding has been resolved and may be closed as the project is now aligned to the principle of Accuracy.

Closing Remarks: The Client's response adequately addresses the finding.

NIR 28-08-2010 to 28-02-2015.6 dated 02/20/2015

Standard Reference: VCS Standard Version 3.4, Section 3.1.1 and Section 2.4.1

Document Reference: 2015-02-18 NEWS Monitoring Report

Finding: The VCS Standard, Section 3.1.1, requires that projects shall be guided by the principles set out in Section 2.4.1 which include the principle of "Accuracy", i.e. "Reduce bias and uncertainties as far as is practical". According to the GHG accounting spreadsheet the total project area is 4,550 ha. In order to check the accuracy of this value the audit team checked the ESRI Shapefile provided with the geographical area of the project and found the following: a) The area of strata 1-4 (c.f. 30-01-2015 NEWS All strata plot boundaries) is well above 4,550 ha; b) The audit team conducted a topology check of the ESRI Shapefile (c.f. 30-01-2015 NEWS All strata plot boundaries) and identified that some polygons overlap (e.g. ID 291 with 245; 48, 49 with 456; 23 with 407, 307 with 233, 94 with 321; 182 with 323, etc). Therefore, the total project area provided in the PD is not in compliance with the referred criteria.

Client Response: Revised and updated shape file in the drop box

Auditor Response: The audit team checked the revised Shapefile and confirmed that all identified issues were corrected: a) The area is consistent with the MR; b) The topology is correct. Hence, the project area is now in accordance with the principle of accuracy. Therefore, this finding has been resolved and may be closed.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 28-08-2010 to 28-02-2015.7 dated 02/20/2015

Standard Reference: VCS Standard Version 3.4, Section 3.1.1 and Section 2.4.1

Document Reference: GHG accounting spreadsheet

Finding: According to Section 3.1.1 of the VCS Standard projects shall be guided by the principles set out in Section 2.4.1 which include the principle of "Accuracy" and "Completeness". The audit team checked the calculation spreadsheet in order to confirm whether the calculations were complete and accurate and found that it only includes data for 2 strata while there are 4 in total. Therefore, the provided calculations do not give accurate and complete estimations of the project GHG removals.

Client Response: Information about the the third and fourth stratumis now provided. See updated Excel 2015-04-15 NEWS_ex-post carbon calculations. In addition the stratification is explained in more detail now in the monitoring report, section 1.1 and 3.3

Auditor Response: The audit team checked the revised spreadsheet and confirmed that it now includes all the missing plots from stratum 2. All selected plots from Stratum 4 were not measured, but the project proponent conducted the measurement of 30 sampling units randomly selected out from the 160 sampling units, so there is no bias linked to a potential subjective selection of plots in Stratum 4. In view of this, the audit team confirms that the project is aligned with the principles of accuracy and completeness. In view of this it can be confirmed that the finding has been resolved and it may be closed.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 28-08-2010 to 28-02-2015.8 dated 02/20/2015

Standard Reference: VCS Non-Permanence Risks Report Template, Version 3.1;

Document Reference: 2014-02-10 VCS Non-Permanence Risk Report_NEWS

Finding: a) According to the cover of the VCS Non-Permanence Risk Report Template, the project proponent must provide the monitoring period. However, the monitoring period of the NPRR is not consistent with that provided in the MR;

b) According to VCS Non-Permanence Risk Report Template, Section 1, the NPRR shall document and substantiate the risk and/or mitigation for each risk factor applicable to the project, including any documentary evidence. However, no documentation on the mitigation factor of the PM consisting on the existence of an adaptive management plan has been provided in the NPRR;

c) According to the VCS Non-Permanence Risk Report Template, Section 1, the NPRR shall document and substantiate the risk and/or mitigation for each risk factor applicable to the project, including any documentary evidence. However, no documentation has been provided to support the FV risk and the mitigation factors;

d) According to the VCS Non-Permanence Risk Report Template, Section 4.1, the referred section shall include any deductions for the AFOLU pooled buffer account, if applicable, to determine the number of GHG credits eligible to be issued as VCUs. However, the provided NPRR does not include the number of GHG credits eligible to be issued as VCUs.

Therefore, the NPRR is not in compliance with the VCS Non-Permanence Risk Report Template.

Client Response: a) Monitoring period is updated

b) Adaptive mgmt. Section has been updated and supporting documentation is available in the drop box

c) FV section have been updated and supporting documentation is available in the drop box

d) The NPRR now includes the number of GHG credits eligible

Auditor Response: The audit team checked the revised NPRR and confirmed that all issues were resolved. The NPRR is now in compliance with the VCS Non-Permanence Risk Report Template and in compliance with the VCS rules. Therefore, this finding may be closed.

Closing Remarks: The Client's response adequately addresses the finding.

NIR 28-08-2010 to 28-02-2015.9 dated 02/20/2015

Standard Reference: AFOLU Non-Permanence Risk Tool, Version 3.2, Section 2.2.4.

Document Reference: 2014-02-10 VCS Non-Permanence Risk Report_NEWS

Finding: According to the AFOLU Non-Permanence Risk Tool, Section 2.2.3, the project can benefit of the mitigation factor for the opportunity cost risk if it is demonstrated that the project proponent is a non-profit organization. According to the NPRR, since NEWS is a non-profit organization, the project can benefit of this mitigation factor; however, according to the PD the only project proponent is Livelihoods so the NPRR would not be correct. Please justify that the project proponent is a non-profit organization.

Client Response: A confirmation letter that Livelihoods is a non-profit organization is provided in the drop box

Auditor Response: The audit team checked the revised NPRR and confirmed that it has been updated. It now discusses the status of the project proponent not the implementing partner. The project proponent is Livelihoods Venture which is a carbon fund that does not sell carbon credits but redistribute them on the investors. This was actually confirmed through the contracts signed with NEWS (implementing partner) where it is clearly indicated that Livelihoods Venture is not a for profit company. In view of this, the audit team is able to confirm that the project proponent may claim the mitigation factor for the Opportunity Cost. Therefore, this finding has been resolved and may be closed.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 28-08-2010 to 28-02-2015.10 dated 02/20/2015

Standard Reference: AFOLU Non-Permanence Risk Tool, Version 3.2, Section 2.2.4.

Document Reference: 2014-02-10 VCS Non-Permanence Risk Report_NEWS

Finding: According to the AFOLU Non-Permanence Risk Tool, Section 2.2.4, Project longevity is the number of years beginning from the project start date that project activities will be maintained, which may be longer than the project crediting period where projects can demonstrate that activities that maintain carbon stocks on which GHG credits have previously been issued will continue beyond the project crediting period. The project proponent has not specified the project longevity in the NPRR and has defined a risk of zero. Please explain clearly in the NPRR what is the project longevity and why it has been defined a risk of zero. Moreover, please provide any evidence to justify this project longevity as required by Section 2.2.4 of the tool.

Client Response: Management and Financial Plan of the Indian Sunderbans Mangrove Restoration Project, where the project life is specified, is provided. The plan has been made available to the Forest Department, see letter in the drop box. The project longevity has been updated in the NPRR.

Auditor Response: The audit team checked the revised NPRR and confirmed that the discussion on the project longevity has been updated. The project proponent claims a 50 year project longevity which is consistent with the management and financial plan of the project. This plan covers 30 years under the framework of the contract signed between Livelihoods and NEWS, and 20 years of self-sustained project once all activities have been implemented. The audit team confirmed that the plan was submitted to The Director of the Sundarban Biosphere Reserve (Forestry Department), as confirmed during the site visit through interview. In viewof this, a 50 year project longevity may be argued and a risk of 5 years would be justified. Therefore, this finding has been resolved and may be closed.

Closing Remarks: The Client's response adequately addresses the finding.

NIR 28-08-2010 to 28-02-2015.11 dated 02/20/2015

Standard Reference: VCS AFOLU Requirements, Version 3.4, Section 3.1.11; AFOLU Non-Permanence Risk Tool, Version 3.2, Section 2.3.1.

Document Reference: 2014-02-10 VCS Non-Permanence Risk Report_NEWS

Finding: According to the AFOLU Requirements, Section 3.11.1, where ARR project activities occur on wetlands and the expected change in the soil organic carbon pool in the project scenario is not de-minimis, the project shall adhere to both the respective project category requirements and the WRC requirements. Moreover, according to the AFOLU Non-Permanence Risk Tool, Section 2.3.1, WRC projects are subject to upstream and sea impacts (eg, changes in water and sediment flows, tidal processes or sea level rise), whether driven by natural processes or resulting from policy decisions that may undermine credits that have been issued. WRC projects unable to demonstrate that potential upstream and sea impacts that could undermine issued credits in the next 10 years are irrelevant or expected to be insignificant, or that there is a plan in place for effectively mitigating such impacts, have to consider a risk of 5.

According to the ex-ante calculations provided in the VCS PD, the removals of the SOC pool would represent more than 5% of the net GHG removals by sinks, meaning that this carbon pool is significant and that the WRC requirements are applicable to the project. However, the NPRR states that this risk is not applicable to the project without providing any further justification. Please provide a discussion on this risk and provide the necessary evidence that the risk is nil for this project.

Client Response: A discussion has been provided in the relevant section. Further the risk of erosion has been considered now under geological risks.

Auditor Response: The audit team confirmed that the NPRR has been revised and that now it includes a discussion on the WRC risk. According to the discussion, this risk is highly unlikely due to the characteristics of the project. The audit team agrees that the potential upstream and sea impacts that could undermine issued credits in the next 10 years are irrelevant or expected to be insignificant was demonstrated through the following:

a) The project has in place as part of its management plan, monitoring instructions to ensure that the project areas are monitored and in the case of any issues that could cause mortality on the plantations, the project would implement a set of mitigation actions which are budgeted in the plan. Moreover, as confirmed by the audit team during the interview held with staff of the forest department, new laws have been established in order to ensure that coastal wetlands are protected.

b) As confirmed during the site visit through interviews and through literature review, no deforestation or degradation has been caused by drainage or impact in the tidal hydrology caused by infrastructure.

Moreover, as confirmed by the audit team, the project area is divided in more than 464 polygons that are dispersed in different areas that belong to different hydrological systems. This would mean that carbon stocks are not concentrated in one unique system, so in the case of any change in the upstream and sea impacts it would be highly unlikely that these affects the whole project area or a significant part of the area.

In view of this, the audit team agrees that this risk is irrelevant in the case of the project activity and agrees to set this risk to zero. Since the NPRR has been updated with this discussion, this finding has been resolved.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 28-08-2010 to 28-02-2015.12 dated 02/20/2015

Standard Reference: AFOLU Non-Permanence Risk Tool, Version 3.2, Section 2.4.1.

Document Reference: 2014-02-10 VCS Non-Permanence Risk Report_NEWS

Finding: According to VCS Non-Permanence Risk Report Template, Section 3, the NPRR shall explain the significance and likelihood of the natural risk and any mitigation activities implemented, however, the provided NPRR does not provide any explanation on the significance and likelihood of any of the natural risks.

Client Response: The section on natural risks has been revised and supporting documentation is provided under natural risks is the drop box

Auditor Response: The audit team checked the revised NPRR and confirmed that it now provides a clear demonstration of the significance and likelihood of the natural risks along with their mitigation factors. No additional issues from the issues already open as findings were identified. Therefore, the finding has been resolved and may be closed.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 28-08-2010 to 28-02-2015.13 dated 03/14/2015

Standard Reference: VCS Standard Version 3.4, Section 3.1.1 and Section 2.4.1

Document Reference: GHG accounting spreadsheet

Finding: According to Section 3.1.1 of the VCS Standard projects shall be guided by the principles set out in Section 2.4.1 which include the principle of "Accuracy" and "Completeness". The audit team checked the calculation spreadsheet in order to confirm whether the calculations were complete and accurate and found that there are some plots marked as non-response. According to the applicable SOPs, non-response plots are those which cannot be accessed so they cannot be measured. During the on-site assessment the audit team interviewed the members of the inventory teams regarding the classification of plots as non-response; the team confirmed that plots classified as non-response were those falling on the water (i.e. creeks), so the actual centre of the plot could not be accessed physically but it could be assessed visually as not having biomass. The audit team checked whether these non-response sampling units were included in the calculations as sampling units with carbon zero and confirmed that they were not included. Hence, calculations are not accurate and potentially biased.

Client Response: After re-checking all plots tagged non-response, the M&E officer Dibyajyoti Chatterjee confirmed that all of these plots are not zero carbon plots since they fall outside of the project boundary. Please refer to the updated shape file of PSP plots

Auditor Response: The audit team checked the non-response plots and confirmed that they are actually out of the project boundary. Therefore, this finding is not applicable and may be closed.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 28-08-2010 to 28-02-2015.14 dated 03/14/2015

Standard Reference: VCS Standard Version 3.4, Section 3.1.1 and Section 2.4.1

Document Reference: GHG accounting spreadsheet

Finding: According to Section 3.1.1 of the VCS Standard projects shall be guided by the principles set out in Section 2.4.1 which include the principle of "Accuracy" and "Completeness". The audit team checked the calculation spreadsheet and found that the dead wood has been calculated using the default factor defined in the validated PD. However, the dead wood has been calculated out (c.f. Column E, tab "Total_Carbon") from the average estimates of tree carbon stocks not from the value corrected for uncertainty.

Client Response: See updated Excel 2015-04-15 NEWS_ex-post carbon calculations

Auditor Response: The audit team checked the revised calculation spreadsheet and confirmed that it is now correct. The dead wood is calculated out from the corrected value for uncertainty. Therefore, the calculation spreadsheet is now aligned to the principle of accuracy. The finding has been resolved and may be closed.

Closing Remarks: The Client's response adequately addresses the finding.

NIR 28-08-2010 to 28-02-2015.15 dated 03/14/2015

Standard Reference: AFOLU Non-Permanence Risk Tool, Version 3.2, Section 2.2.2.

Document Reference: 2014-02-10 VCS Non-Permanence Risk Report_NEWS

Finding: The AFOLU Non-Permanence Risk Tool, Section 2.2.2, requires to calculate the cash flow breakeven considering all the potential revenues and costs linked to the project activity. Moreover, if a mitigation factor is claimed, it requires to demonstrate that the project proponent has enough callable financial resources to cover at least 50% of the cash-out until the break-even point. The audit team received a cash-flow calculation for a period of 20 years and different supporting evidence. Although the team was able to confirm the accuracy of the assumed costs against the different contracts signed between Livelihoods (or DANONE) and NEWS, the team did not find the supporting evidence for the assumed credit price and evidence to confirm that enough callable resources are available. Please provide these evidences as required by the VCS rules.

Client Response: Justification of cash flow investment cost and total investments are provided as supporting information

Auditor Response: a) No evidence has been provided. Therefore this issue remains open.

b) The audit team checked the revised NPRR and found that it has indicated a risk of 2 as the break-even point is between 7 and up to less than 10 years of the current risk assessment. However, the audit team checked the cash-flow provided in pdf, and according to this evidence the break-even point is reached in 2021 which is between 4 and 7 years from the current assessment. Please clarify if the argued risk is correct.

(Please refer to the email sent to Matthias Seebauer Tue 17/03/2015 where the evidence required is clarified)

Client Response 2: a) Updated documents on cash flow investment cost and total investments are provided as supporting information.

B) The break even is between 4 and 7 years from the current assessment. This values are changed in the RA calculations and the RA report

Auditor Response 2: a) The project proponent provided meeting minutes and a current account status extract indicating clearly that 20 million EUR have been commited so far, including the expenditures of the proposed project activity, having remaining funding of 10 million EUR. The fund assumes for the financials that the carbon credits generated have a market price, but they use them for compensating their own emissions as part of their voluntary commitments. Both the funding and the revenues may be considered secured revenue which means that the 100% of the cash-out until the project reaches break-even would be covered. Therefore, a mitigation factor for the financial risk can be claimed and this finding may be closed.

b) The audit team confirmed that the NPRR was revised and that now it was indicated that the break-even point is between 4 and 7 years from the current assessment, which is correct. Therefore, the finding has been resolved and may be closed.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 28-08-2010 to 28-02-2015.16 dated 03/14/2015

Standard Reference: AFOLU Non-Permanence Risk Tool, Version 3.2, Section 2.2.3.

Document Reference: 2014-02-10 VCS Non-Permanence Risk Report_NEWS

Finding: The AFOLU Non-Permanence Risk Tool, Section 2.2.3, requires to define the risk due to the opportunity cost based on the alternative land uses defined in the additionality assessment. Where the baseline land use are subsistence driven, the project proponent has to demonstrate that the project delivers net community benefits. The audit team checked the NPRR and confirmed that the project proponent has argued that the alternative land uses are subsistence driven. However, during the on-site assessment the audit team conducted interviews with local communities and confirmed that one of the pre-project alternative activities was the prawn-seed collection which is an income generation activity, i.e. not subsistence driven. In order to confirm that this pre-project alternative land use is plausible, the audit team conducted an interview with a member of the forestry department, who confirmed that these activities are present and that their presence depends on the dynamics of the international demand. He indicated that these activities only occur in areas of mud-flats that have no vegetation; once the forest is established it is unlikely that these activities could be resumed at a large scale level. In view of this, the audit team understands that prawn-seed collection might be an alternative land use, but it only occurs in those areas of the project area where forest has not yet been established. Hence, the NPRR does not provide an accurate information regarding the risk of these areas.

Client Response: The section on opportunity cost has been revised and updated.

Auditor Response: The audit team confirmed that the prawn-seed collection has been argued as part of the opportunity cost in the revised NPRR. The project proponent argues that this is not an actual alternative that affects carbon stocks, which is confirmed by the audit team. During the site visit the audit team conducted interviews with a member of the forest department and confirmed that prawn-seed collection only occurs on mud-flats and in degraded areas, but that it will not be possible to conduct this activity once the forest is established as: a) once a forest is established this is automatically protected; b) prawn-seed could occur in the forest at a small scale and remain undetected, but this would cause a significant effect on carbon stocks; c) Physically is not possible to apply the prawn-seed collection technique in existing forests. Therefore, once a forest is established, this alternative no longer represents a plausible alternative land-use, and it cannot be considered in the analysis of opportunity cost. In view of this, the audit team confirmed that the finding is resolved and may be closed.

Closing Remarks: The Client's response adequately addresses the finding.

NIR 28-08-2010 to 28-02-2015.17 dated 03/14/2015

Standard Reference: AFOLU Non-Permanence Risk Tool, Version 3.2, Section 2.2.4.

Document Reference: 2014-02-10 VCS Non-Permanence Risk Report_NEWS

Finding: The AFOLU Non-Permanence Risk Tool, Section 2.2.3, requires that projects must have financial and management plans covering the whole project longevity and that these are made public or submitted to the local government. During the site visit the audit team received a financial and management plan and confirmed that it covered a project longevity of 50 years. However, no evidence has been provided that this has been made public or has been submitted to local government.

Client Response: Project longevity is already guaranteed in the Management and Financial Plan and it was made available to the Forest Department, see signed letter in the drop box under project longevity

Auditor Response: The audit team received a letter whereby NEWS submits the management and financial plan to the Forest Department. During the site visit the audit team conducted an interview with stafff of the Forest Department and they confirmed that they were expecting it. Therefore, the audit team does not have any doubt that this letter was not sent to the forest department. Hence, the audit team confirms that the management and financial plan has been submitted to public authorities and confirms that the project is in compliance with the VCS rules. Thus, this finding has been resolved and may be closed.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 28-08-2010 to 28-02-2015.18 dated 03/14/2015

Standard Reference: AFOLU Non-Permanence Risk Tool, Version 3.2, Section 2.4.1.

Document Reference: 2014-02-10 VCS Non-Permanence Risk Report_NEWS

Finding: The AFOLU Non-Permanence Risk Tool, Section 2.4.1, requires to discuss amongst others, the risk due to extreme weather events. The project proponent has argued in the NPRR that the storm risk is relevant as this is an area prone of cyclones. In fact in 2009, the cyclone Aila caused catastrophic damages in the Sundarbans. Since the frequency of catastrophic cyclones is once every 10 years, it has been selected a LS of 30. The project proponent has argued a mitigation factor due to the project itself, as mangrove forests protect coastal areas from the effects of these storms. During the site visit the audit team interviewed a member of the forest department who confirmed that mangroves are not negatively affected by these cyclones and that in fact they benefit as the salty water enters more into the mangroves and there is nutrient deposition. Moreover, during the site visit different stakeholders indicated that the only coastal areas not affected by the cyclone Aila were those areas with Mangrove, reason why all communities participating in the project are interested in the project activity. In view of this, it may be confirmed that assuming that cyclones cause catastrophic damages in mangroves is not accurate, and assuming a mitigation factor due to the project itself is also not accurate, as the risk has to be analysed in the project scenario. Please ensure that the assessment for the weather risk is accurate.

Client Response: The whole section on natural risks has been updated and supporting information is provided in the drop box under natural risks

Auditor Response: The audit team confirmed that the NPRR has been revised. Now the project proponent argues a Minor significance with a frequency of less than 10 years. This is accurate as confirmed by the fact that cyclones occur once every 10 years but that they cause very few damages. This extent was confirmed by a member of the forest department who confirmed that mangroves are not negatively affected by these cyclones and that in fact they benefit as the salty water enters more into the mangroves and there is nutrient deposition. Moreover, during the site visit different stakeholders indicated that the only coastal areas not affected by the cyclone Aila were those areas with Mangrove, reason why all communities participating in the project are interested in the project activity. This means that the risk of 5 is accurate as confirmed through the above evidences. However, the project proponent has argued a mitigation factor of 0.5 based on the fact that Mangrove is not affected by these cyclones which is not correct as this effect is already factored in the significance value that is applicable to Mangrove forests (i.e. significance is already Minor because Mangrove is not affected by the Cyclones), so the argued mitigation is already existing. In view of this, the audit team cannot confirm the accuracy of the argued factor.

Client Response 2: New infromation on insignificant damage of mamngroves is provided to justify that natural risks can be account as insignificant, and the mitigation factor has been deleted.

Auditor Response 2: The audit team checked the revised NPRR and confirmed that the mitigation risk has been increased to 1 which is reasonable. Moreover, a significance of "Insignificant" has been set which is still conservative as according to the department of forests, the cyclones cause a positive impact in the growth and regeneration of mangroves. In view of this, the finding has been resolved and may be closed.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 28-08-2010 to 28-02-2015.19 dated 03/14/2015

Standard Reference: AFOLU Non-Permanence Risk Tool, Version 3.2, Section 2.4.1.

Document Reference: 2014-02-10 VCS Non-Permanence Risk Report_NEWS

Finding: The AFOLU Non-Permanence Risk Tool, Section 2.4.1, requires to discuss amongst others, the risk due to geological events. The project proponent has argued in the NPRR that the geological risk is not relevant as the area is not affected by earthquakes. During the site visit the audit team interviewed a member of the forest department who confirmed that the risk of erosion caused by the tidal movements is relevant in mangroves in the sundarbans (e.g. in 2014 it affected up to 200 ha across the Sundarbans national forests). He confirmed that mangroves are destroyed due to erosion, but only in those areas that are exposted to the tides. Considering that most of the project areas are in the mud-flats that are more exposed than interior mangroves, this risk would be relevant for the project area. In view of this, it may be confirmed that assuming that the geological risk is not relevant is not accurate. Please ensure that the assessment for the geological risk is accurate.

Client Response: Erosion has been included as a relevant factor in the geological risks.

Auditor Response: The audit team confirmed that the NPRR has been revised and that it now includes a discussion of the geological risk linked to the erosion of the coast. The project proponent has argued that the significance is major and that the likelihood is of more frequent than 10 years. During the site visit the audit team interviewed a member of the forest department who confirmed that the risk of erosion caused by the tidal movements is relevant in mangroves in the sundarbans (e.g. in 2014 it affected up to 200 ha across the Sundarbans national forests). He confirmed that mangroves are destroyed due to erosion, but only in those areas that are exposted to the tides. Considering that most of the project areas are in the mud-flats that are more exposed than interior mangroves, this risk would be relevant for the project area. The assumption that this risk occurs more frequent than every 10 years and that the significance is major is deemed conservative, as the erosion process is a slow process and it is not likely that it will affect more than 25% of the carbon stocks every 10 years since the project area is so fragmented and scattered across the landscape. In view of this, the audit team agrees that a risk of 20 is reasonable. Moreover, the project proponent argues a mitigation factor of 0.25 as demonstrated by the fact that very detailed studies for selecting sites not prone for erosion were conducted prior to planting. This is a clear evidence that prevention measures applicable to the risk factor are implemented. The project proponent additionally argues that there is a proven history of effectively containing the risk. However, considering that the project is almost 5 years old the audit team deems that this is not sufficient track in order to demonstrate that there is a proven history of effectively containing the risk.

Client Response 2: Erosion as a geological risk was re-evaluated and the mitigation factor was reduced to 0.5

Auditor Response 2: The audit team checked the revised NPRR and confirmed that the mitigation risk has been increased from 0.25 to 0.5 which is acceptable as the planting sites have been selected in order to ensure that the erosion risk is reduced to the minimum. Therefore, the issue has been resolved and the finding may be closed.

Closing Remarks: The Client's response adequately addresses the finding.

OFI 28-08-2010 to 28-02-2015.20 dated 03/14/2015

Standard Reference: VCS Standard Version 3.4, Section 3.1.1 and Section 2.4.1

Document Reference: 2015-02-18 NEWS Monitoring Report

Finding: The VCS Standard, Section 3.1.1, requires that projects shall be guided by the principles set out in Section 2.4.1 which include the principle of "Accuracy", i.e. "Reduce bias and uncertainties as far as is practical". The PD provides in Section 4.3 procedures to verify field data collection including the re-measurement of 10-20% of the plots at the end of the field work in order to confirm that the SOPs have been correctly implemented and that the data has the required quality. During the site visit it was confirmed that this procedure has not been implemented. Although it is not implemented, the audit team has been able to confirm that there is no systematic error in the data collected that would be over the materiality threshold, and confirms that the implementation of this procedure will not be a barrier for reaching a conclusion with a reasonable level of assurance in this monitoring period. However, the project proponent has to be aware that it is important to implement this procedures, and that even though at the time of verification no systematic error was identified, the implementation of this procedures would ensure that the data collected reaches the expected standards at the time of verification. Therefore, the audit team's recommendation is to implement this in the coming monitoring periods.

Client Response: . [A response to this finding was not provided. Responses to Opportunities to Improvement are not required for issuance of a validation statement.]

Auditor Response: Responses to Opportunities to Improvement are not required for issuance of a validation statement.

Closing Remarks: Responses to Opportunities to Improvement are not required for issuance of a validation statement.

NCR 28-08-2010 to 28-02-2015.21 dated 04/28/2015

Standard Reference: VCS Non-Permanence Risk Report Template, v3.1

Document Reference: 2014-04-18 VCS Non-Permanence Risk Report_NEWS

Finding: The instructional text of the VCS Non-Permanence Risk Report Template requires project proponents to "Document and substantiate the risk and/or mitigation for each risk factor applicable to the project". The audit team checked the NPRR and found that it has been argued a project longevity of 50 years. Considering this project longevity and the fact that there is in place a legal agreement or requirement to continue the management practice, the resulting risk would be 5. However, in the table it is written a risk of zero which is not in compliance with the referred requirement.

Client Response: The project longevity risk is changed to 5.

Auditor Response: The audit team checked the revised NPRR and confirmed that it has been updated. It now includes a project longevity risk of 5, in line with the discussion provided. Therefore, the issue has been resolved and the finding may be closed.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 28-08-2010 to 28-02-2015.22 dated 06/02/2015

Standard Reference: VCS Standard, Version 3.4, Section 3.18.1; VCS Monitoring Report Template, Version 3.3, Initial instructions.

Document Reference: 2015-05-15 NEWS Monitoring Report

Finding: The VCS Standard, Section 3.18.1 requires project proponents to use the VCS Monitoring Report Template and to adhere to all instructional text within the template. The audit team identified the following issues:

a) The VCS Monitoring Report Template requires that Sec. 1.1 of the MR contain the "total GHG emission reductions or removals generated in this monitoring period". It looks like the MR contains the number of VCUs to be issued (less contribution to the buffer pool), as opposed to the GHG emission reductions or removals generated.

b) The VCS Monitoring Report Template requires that Sec. 4.4 "include quantification of the net change in carbon stocks". This is included in Sec. 4.4 of the MR, but is not specifically labeled as such.

Client Response: a) The last sentence of section 1.1 in the MR has been changed to: The total GHG emission reductions or removals generated in this monitoring period 28-09-2010 to 28-02-2015 is XX t CO2-e.

b) This section 4.4 has been revised and now inlcuded the labled net change in carbon stocks

Auditor Response: The audit team checked the revised PD and assessed if the findings were addressed:

a) The total GHG emission reductions or removals generated in the monitoring period have been reported in Section 1.1 as required by the VCS Monitoring Report Template. Therefore, this finding has been resolved and may be closed.

b) The changes in carbon stocks have been explicitly labeled in Section 4.5 as required by the VCS Monitoring Report Template. Therefore, this finding has been resolved and may be closed.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 28-08-2010 to 28-02-2015.23 dated 06/02/2015

Standard Reference: AFOLU Non-Permanence Risk Tool, Version 3.2, Section 2.2.4.

Document Reference: 2015-05-15 VCS Non-Permanence Risk Report_NEWS

Finding: Sections 1 and 2 of the VCS Non-Permanence Risk Report Template requires the following for the internal and external risk categories, respectively: "Where a risk or mitigation is not relevant to the project, please write “Not applicable”." In reviewing Sections 1 and 2 of the non-permanence risk report, numerous examples of risks that are not applicable to the project have been observed. However, the non-permanence risk report does not clearly state that such risks are “Not applicable” in the manner required by the VCS Non-Permanence Risk Report Template. Risk factors (a), (b), (c) and (d) from the "project management" sub-category are examples of such risks.

Client Response: No action has been taken fater consultation with the VVB

Auditor Response: The audit team would like to note that a zero may be used where the AFOLU Non-Permanence risk tool states that the risk factor may be zero (i.e. opportunity risk). However, where the tool provides a different value and this is not applicable, following the NPRR template, a "Not applicable" must be used in these cases. Please provide a revised NPRR in compliance with the VCS rules.

Client Response: The NPRR has been revised accordingly, see latest version of the NPRR

Auditor Response: The audit team checked the revised NPRR and confirmed that "Not applicable" has been written where applicable. Therefore, the NPRR is now in accordance with the VCS rules and this finding may be closed.

Closing Remarks: The Client’s response adequately addresses the finding.

NCR 28-08-2010 to 28-02-2015.24 dated 06/02/2015

Standard Reference: AFOLU Non-Permanence Risk Tool, Version 3.2, Section 2.2.3; VCS “Errata and clarifications” dated 24 July 2014

Document Reference: 2014-02-10 VCS Non-Permanence Risk Report_NEWS

Finding: According to the “Errata and clarifications” dated 24 July 2014 (c.f. http://www.v-c-s.org/sites/v-c-s.org/files/Errata%20and%20Clarifications%2C%20AFOLU%20Non-Permanence%20Risk%20Tool%2C%20v3.2_0.pdf), the total of the opportunity risk "may be less than 0". The audit team checked the NPRR in order to confirm whether the "Errata and clarifications" were considered and found that the risk has been set to zero, while the total is equal to -4. This means that the overall total for Internal Risk is equal to zero, not one as defined in the NPRR. Please make the NPRR in accordance with the VCS rules, including the "Errata and clarifications" dated 2 July 2014.

Client Response: The related documents and sections have been revised.

Auditor Response: The audit team checked the revised NPRR and confirmed that it has been revised. Now the Opportunity Risk has been set to -4 in accordance with the "Errata and clarifications" dated 24 July 2014. Therefore, this finding has been resolved and may be closed.

Closing Remarks: The Client’s response adequately addresses the finding.

APPENDIX B: MARKET LEAKAGE ASSESSMENT

In accordance with Section 3.6.4 of the AFOLU Requirements, the quantity of market leakage caused by the project was assessed at verification. The information upon which the market leakage assessment was based is contained within the monitoring report. The market leakage assessment findings and conclusion are as follows.

The methodology CDM AR-AM0014 Version 3.0, which is the methodology used for quantification of GHG emission removals (as stated in the monitoring report) does not identify market leakage as a potential source of leakage.

In summary, the total quantity of market leakage emissions is estimated to be 0 tCO_2e over the monitoring period. The audit team has concluded that the reporting of market leakage emissions is in conformance with the VCS rules and the methodology.