

KUAMUT RAINFOREST CONSERVATION PROJECT



Document Prepared by Earthood Services Pvt. Ltd.

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Summary:

- **A brief description of the validation and the project**

Earthood Services Pvt. Ltd. (ESPL) has carried out the validation assessment of the project activity "Kuamut Rainforest Conservation (KRC) Project" in Sabah, Malaysia (VCS Project ID: 2609). The project activity falls under sectoral scope 14, Agriculture Forestry and Other Land Use (AFOLU) type and category Improved Forest Management (IFM) as per the VCS Standard, v4.3. This is a large-scale project which involves implementation of improved forest land use management activities that will lead to conservation of 83,381 ha of forest area of Sabah. The project is being implemented by Permian Malaysia Sdn. Bhd. The latest version of approved VCS methodology VM0010, v1.3 has been applied to quantify the amount of greenhouse gas reductions achieved through this project. The calculation of project emissions reductions has been carried out in a transparent and conservative manner and were made available in emission reductions calculations spreadsheets and R files for the validation assessment. The project is being developed and validated with the Climate, Community and Biodiversity Standards (CCBS) as well. The project also applies for Gold Level criteria for climate, community and biodiversity.

- **The purpose and scope of validation**

This assignment is an independent assessment by a Third Party (ESPL) of the proposed KRC Project against all defined criteria set for the registration under the VCS Standard, version 4.3 and CCB Standard, version 3.2. Validation is conducted using ESPL procedures which are developed in line with the requirements specified in the VCS Validation and Verification Manual v3.2. The purpose of the Validation is to confirm that KRC Project and all related project documentation are in accordance with all rules and requirements of the VCS Standard v4.3, CCB Standard, version 3.2, applied methodology (VM0010, v1.3) and its associated tools.

The Project will avoid 83,381 ha of forest clearing and conversion to an industrial forestry plantation of previously logged forest area of Sabah, Malaysia while at the same time delivering community and biodiversity objectives of improved local livelihoods and elimination of drivers of deforestation and forest degradation and ecosystem restoration, respectively. The proposed project activities include biodiversity and carbon monitoring to provide protection to forests, regeneration of natural forests in previously logged forest area, and planning for long-term benefits and monitoring for local communities residing near project area.

- **The method and criteria used for validation.**

The validation team has reviewed the project activity in accordance with the rules and requirements specified in the latest versions of VCS and CCB standards and checked the applicability of the project against the applied methodology and tools which includes the following:

VCS Standard, version 4.3

VCS Program Guide, version 4.2

VCS Program Definitions, version 4.2

VCS Validation and Verification Manual, version 3.2

AFOLU Non-Permanence Risk Tool, version 4.0

CCB Standard, version 3.1

CCB Program rules, version 3.1

VCS methodology: VM0010 Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, version 1.3

VT0001 Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities, version 4.0

The project activity is found to be appropriately eligible under Project Scope 14 "Agriculture, Forestry, and Other Land Use (AFOLU) and category Improved Forest Management (IFM).

- **The number of findings raised during validation**

During the validation process 6 clarifications, 43 corrective actions were raised and successfully resolved. 3 FARs have been raised and these are related to confirmation of undertaking selected and approved community customary rights by the communities in the project area and implementation of community development activities (listed in the PD). PP has shared sufficient and valid supporting documents required to complete the validation process. All the findings raised along with validation team's response has been included in the report in appendix IV.

- **Any uncertainties associated with the validation.**

There were no uncertainties associated with the validation process.

- **Summary of the validation conclusion**

In conclusion, it is ESPL's opinion that the project activity "KRC Project" in Malaysia, meets all relevant requirements for VCS and CCB standards and guidelines, and correctly applies the methodology VCS VM0010, version 1.3 for the calculation of baseline, for determining additionality and to monitor emission reductions. The estimated GHG emission reductions or removal of 16,291,489 tCO₂e through its entire crediting period which starts from 11/12/2015 to 01/12/2045. PP has clearly documented the activities planned and the expected results that enabled them to qualify for the Gold Level criteria for climate, community and biodiversity. The total Project Verified Carbon Units calculated is 14,662,342 tCO₂e and average Project Verified Carbon Units calculated is 488,745 tCO₂e till the project lifetime.

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1 INTRODUCTION

1.1 Objective

ESPL was contracted by Permian Malaysia Sdn. Bhd to undertake the validation of the project activity “KRC Project” in Sabah, Malaysia (which is under the VCS pipeline with ID 2609) /88/.

The objective of the validation is to undertake an independent third-party assessment and to approve that ‘KRC Project’ and all the related project documentation & supporting documents are in accordance with the rules and requirements of the VCS Standard v4.3 /4/ and CCB Standard v3.1/11/.

Especially the project's baseline, monitoring plan, and the quantification of emission reduction & removal and non-permanence risk analysis is in line with relevant VCS requirements and host Country criteria are validated to confirm that the project design, as documented, is comprehensive and practical and meets the identified criteria. Independent third-party validation is a requirement for all VCS projects and is mandatory to provide assurance to the Verra and other stakeholders of the quality of the project and its projected Verified Carbon Units (VCUs) generation.

1.2 Scope and Criteria

The scope of the services provided by the ESPL for the project is to perform joint VCS and CCB validation of the project “KRC Project”. The scope of validation is to assess the claims and assumptions made in the project description (PD) against the VCS Standard version 4.3 and CCB standard version 3.2, applied methodology and other relevant rules and requirements established for VCS and CCB project activities.

Validation Process and Methodology

The validation process is undertaken by a competent validation team and involves the following:

- the desk review of documents and evidence submitted by the project participant in context of the reference VCS and CCB rules and guidelines issued by Verra,
- validate whether the project activity meets the requirements of VCS Standard v4.3, VCS program guide v4.2 & VCS program definition v4.2
- evaluate whether the baseline and monitoring plan are in conformance with the applied VCS methodology VM0010, v1.3
- undertaking/conducting site visit, interview, or interactions with the representative of the project participant,
- reporting audit findings with respect to clarifications and non-conformities and the closure of the findings, as appropriate and
- preparing a draft validation opinion based on the auditing findings and conclusions
- technical review of the draft validation opinion along with other documents as appropriate by an independent competent technical review team
- finalization of the validation opinion (this report)

- an independent technical review team reviews the validation report made by the validation team. After the final report is accepted by the technical reviewer it is then approved by ESPL which is processed further according to the VCS procedures.

ESPL has performed validation based on a risk-based approach focusing mainly on the significant risks to meet the qualification criteria and the ability to generate VCUs. The validation is not meant to provide any consulting towards the client. However, stated request for clarifications and/or corrective actions may provide input for improvement of the project design.

1.3 Summary Description of the Project

The Kuamut Rainforest Conservation Project ('KRC Project') aims to protect and restore 83,381 ha of tropical forest in Sabah, Malaysia. The project is in the Tongod and Kinabatangan Districts of Sabah, Malaysia. The project area is part of a long-term approximately 1-million-hectare concession granted to Yayasan Sabah on a 99-year lease arrangement with the Sabah Forestry Department (acting on behalf of the State Government of Sabah) /18/. Yayasan Sabah is a State-owned para-governmental charitable foundation that was formed in 1966 with the aim of 'improving the lives of Malaysians living in Sabah'.

Under the baseline scenario, the project area was designated as production forest (Class II). The area had been repeatedly logged in the past and was designated for further commercial exploitation. Project additionality is explicitly demonstrated by preventing continued commercial logging and instead manage the area for protection. Had the project not intervened, the resulting carbon emissions over this period would have contributed 16,291,489 tCO₂e to the atmosphere in the period 2016 – 2045.

In addition to its contribution to preventing the release of greenhouse gas (GHG) emissions, the project is protecting an important biodiverse habitat. Despite its ex-logged state, the area is known to support very high populations of elephants, banteng and orangutan, and endangered bird species including Helmeted Hornbill, Bornean Peacock Pheasant, and Storms Stork. The project has a long-term benefit for local communities residing near project area and aims to develop livelihood options and improve socio-economic conditions of the local communities residing adjacent to the project area.

The validation team confirms by assessing emission reduction calculation sheet /12//13/ that the implementation of the project would reduce the GHG emissions by 16,291,489 tCO₂e in 30 years of crediting period, with an average annual GHG emission reduction of 543,049 tCO₂e.

2 VALIDATION PROCESS

2.1 Audit Team Composition

Validation team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Validation findings

1.	Team Leader	IR	Garg	Shreya	ESPL	Y	N	N	Y
2.	TA Expert (TA14.1)	EI	O'Brien	Michael	ESPL	Y	Y	Y	Y
3.	Methodological Expert (VM0010)	EI	O'Brien	Michael	ESPL	Y	Y	Y	Y
4.	Trainee (Validator)	IR	Sharma	Riya	ESPL	Y	N	N	Y
5.	Trainee (Validator)	IR	Panicker	Vishnu	ESPL	Y	N	N	Y

Technical reviewer and approver of the validation report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)
1.	Technical Reviewer	IR	Singh	Kaviraj	Central Office
2.	TA Expert (14.1) to TR	EI	Hassan	Zainab	Central Office
3.	Approver	IR	Singh	Kaviraj	Central Office

The Team Leader, Shreya Garg is qualified by ESPL in Validation and Verification of Clean Development Mechanism Requirements (CDM projects) and other voluntary schemes as VCS, CCB and GS. She has experience of working in carbon projects, including but not limited to CDM, VCS, GS and GCC projects of more than 10 years for various sectors and methodologies. She attained her master's degree in Climate Science & Policy. She has been qualified as per the evaluation process of ESPL for competency for CDM/VCS/GS. Thus, she has the relevant competence and work experience.

Michael O'Brien is a Technical Area (14.1) Expert and Methodological Expert (VM0010) in this project. He has conducted the physical site visit. He has attained his PhD in Ecology from University of Zurich and did his masters in Ecology. He has experience of more than 10 years in the forestry field. He has been qualified as per the evaluation process of ESPL for competency for CDM and VCS. Thus, he has the social and technical expertise in this region and have relevant ecological and biodiversity experience due to the education background.

Riya Sharma is a Trainee (Validator) in this project. She has been doing carbon projects under CDM/VCS/GS/GCC programs in ESPL. She attained her masters in Biodiversity and Conservation and did specialisation in forest carbon stock assessment. She worked for forest restoration project and has proven knowledge of R software basic level. She has a relevant competence and work experience and has been qualified as per the evaluation process of ESPL for competency for programs CDM/VCS/GS/GCC.

Vishnu Panicker is a Trainee (Validator) in this project and has been doing CDM/VCS/GS/GCC project in ESPL. He did his masters in Sustainable Development and Environment Management and bachelor's in Forestry. He has a relevant competence and background and has been qualified as per the evaluation process of ESPL for competency for programs CDM/VCS/GS/GCC.

Technical Review of the project is done by Kaviraj Singh. He is the Founder and Managing Director of the Earthood Services Private Limited. He has done his PhD in Environmental Engineering from IIT, Delhi. He has an experience of more than 16 years working in the field of Climate Change and carbon market. He has been qualified as per the evaluation process of ESPL for competency for CDM/VCS/GS/GCC. Thus, he has the relevant competence and work experience.

Technical Area (14.1) Expert to Technical Reviewer for the project is Zainab Hassan. She completed her masters in Environment Management and has work experience of more than 11 years. She predominantly worked on Forestry project under CDM and VCS standards and is an expert in technical area 14.1. She has been qualified as per the evaluation process of ESPL for competency for CDM and VCS. She is skilled in developing REDD+ strategies and projects. Thus, she has the ecological and technical expertise in this region and have relevant ecological and biodiversity experience due to the education background

2.2 Method and Criteria

The validation process involves the following.

- A review of the data and information presented submitted by the project proponent in context of the reference VCS rules and guidelines to verify their completeness.
- Undertaking site visit, interview, or interactions with the representative of the project proponent, project employees and local stakeholders,
- A review of the monitoring plan, the monitoring methodology including applicable tool(s) and, where applicable, the applied standardized baseline, and the quality assurance and quality control procedures.
- A review of calculations and assumptions made in determining the GHG data and emission reductions.
- An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

Site inspections were carried out including interviews with representatives of PP and community stakeholders, and re-measurement of tree allometry of sampled plots. Site inspections were carried out including the re-measurement of some sub-set of the permanent sample plots (PSPs) assessed as part of the PP's monitoring procedures. The samples were also verified through remote sensing analysis of the PSPs. To have a reasonable level of assurance 15% of PSPs i.e., 7 out of 46 PSPs were validated. The ground and spatial analysis confirms all the samples selected for validation are accurate for AGB. Also, to establish a reasonable level of assurance and verify the validated data for historical land use analysis and ERs, extensive review of all remote sensing (RS) data was undertaken. VVB team used acceptance sampling approach to verify the parameters.

To ensure the risk of auditing error is minimized to a reasonable level and ensure effectiveness & efficiency, a project specific validation and sampling plan was developed to guide the validation process. Field sampling and techniques were based on the best professional judgment of the VVB to meet a reasonable level of assurance. The VVB ensured that the data samples must be representative of the whole project area. The methodology of the validation and sampling plan is based on the VCS guidance documents and ISO 14064-3:2006. Any modifications applied to the plan were made based upon the conditions observed for monitoring to detect the processes with highest risk of material discrepancy. VVB along with onsite observation, objective evidence collections, data generation and recording analysis also considered the views obtained in these interviews while arriving at validation opinion.

2.3 Document Review

The joint VCS and CCB validation of the project was performed by ESPL through the document review and on-site visit completed inline with the requirements specified in the VCS and CCB standard documents. Additionally, cross checks were performed for information provided in the project description (PD) using other independent source of information.

The list of documents reviewed during the validation process is provided under appendix I of this validation report.

2.4 Interviews

The interview with the representatives of project proponent, representatives of local communities and other local stakeholders were conducted by the technical expert as a part of on-site visit. The Following is the list of people interviewed.

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Li	Esther	Project Partner of Rakyat Berjaya (RBJ)	11/02/2022	Project design and implementation, documentation and management, CCB objectives, project additionality	Michael O'Brien
2.	Udarbe	Trevor	Project Partner of Rakyat Berjaya	11/02/2022	Project design and implementation, documentation and management, CCB objectives, project additionality	Michael O'Brien
3.	Gidiman	Jikos	Project Partner of Rakyat Berjaya	11/02/2022	Project design and implementation, management, CCB objectives, project additionality	Michael O'Brien
4.	Reynolds	Glen	Project Partner of South East Asia Rainforest Research Partnership (SEARRP)	11/02/2022	Project design and implementation, documentation and land records, CCB objectives, risk identification and mitigation, financial mechanism	Michael O'Brien
5.	Yee	Hii Siew	Data Manager of SEARRP	11/02/2022	Data monitoring and management	Michael O'Brien
6.	Philipson	Christopher	Project Proponent of Permian Global	12/02/2022	Description of the project activity, technical details and project design and implementation, project additionality	Michael O'Brien
7.	Baukom	Jacob	Community Leader of 4 communities of Kuamut Cluster from Tangkuyan	13/02/2022	Stakeholder interview to know the project background, level of their involvement and related issues, risks and benefits	Michael O'Brien
8.	Murphy	Adam	Community Engagement Consultant of SEARRP	14/02/2022	Assessment related to FPIC, stakeholder engagement and community consultation	Michael O'Brien

9.	Sunjoto	Indra	Project Partner of Sabah Forestry Department (SFD) on behalf of Chief Forest Conservator	14/02/2022	Project design and implementation, documentation and land records, CCB objectives, project additionality	Michael O'Brien
10.	Ulok	Philip	Onsite Monitoring Manager of SEARRP	20/02/2022	Project boundary assessment and management of the project area according to monitoring plan, project additionality	Michael O'Brien

2.5 Site Inspections

Site inspection was conducted by ESPL Technical Expert (TA 14.1) and Meth Expert Michael O'Brien from 10/02/2022 to 20/02/2022. He was accompanied by PP during site visit. The site visit has been planned and executed in accordance with the VCS Validation and Verification manual v3.2, VCS Standard V4.3, Section 4, CCB Program Rules, v3.1 Section 4.3.1 and 4.3.2.

The onsite visit was performed in order:

- To understand and evaluate the project area/boundary, project additionality and expected outcomes
- Interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the Monitoring Plan
- To validate the measurement of carbon pools to calculate carbon stock in the chosen sample
- To interact with the communities directly and indirectly dependent/impacting/impacted by the project and understand the socioeconomic dimension of the project
- To understand the climate, community, and biodiversity dimensions of the project
- To check the project management, meet the management team, check the monitoring plan and its on ground implementation practices
- To check the High Conservation Values (HCV) areas defined and mentioned in the PD
- Review the financials audits and fund flow

During the on-site visit, interviews with representatives of project proponents and other entities involves in the project, local communities and other relevant stakeholders were conducted. The list of people interviewed are provided in section 2.4 of the validation report. The interactions include assessment of project development and design, implementation, and operation as per the PD /1/. Evidence of project legal documentation, management system, local stakeholder consultation records, and monitoring system were

reviewed. The reviewed evidence along with other supporting documents were also provided to the validation team for assessment by the PP as listed in appendix I. The records of interview conducted has been maintained in the form of audio recordings of interviews, photographs taken at project site and audit report /14//15//16/. Meeting with the local stakeholders were also scheduled during the on-site visit, however, due to increasing cases of local communities getting COVID-19 positive the interview with representative of community was taken over phone call. Head of the Kuamut cluster was interviewed by the Mr. Michael and Mr. Jacob Baukom over phone call at the time of site visit.

The re-measurement of sampled plots was also carried during site visit. Out of total 46 sample plots, 7 plots (plot 3, 6, 7, 8, 9, 39, 40) were selected for re-measurement. The measurements validated the accuracy of DBH measurements carried out by the field team (<1% error with $\pm 95\%$ accuracy). Field tree height measurements were compared to height measurements estimated from diameter as defined in the PD, which showed that the model overestimates small tree heights but underestimates large tree height. This bias leads to a conservative estimate in general as large tree heights will be smaller than expected. TCH estimated from the lidar shows a statistically similar value as a TCH estimated from individual tree heights measured on the ground.

The validation team has reviewed the shared evidence and considered all the responses of the interviewees complied during site visit. The site visit completed for the project complied of the VCS VVB Manual, v3.2 /5/ and CCB program rules, v3.1 /3/.

2.6 Public Comments

In accordance with the requirement in para 3.17.6 of the VCS standard v4.3 “All projects are subject to a 30-day public comment period. The date on which the project is listed on the project pipeline marks the beginning of the project’s 30-day public comment period”.

Also, the public comment period was inline with the CCB program rules, version 3.1 para 4.6.3 “The public comment period shall last a minimum of 30 days, but the validation/verification body or project proponent, at their discretion and on agreement of both parties, can request a longer period of the VCS”. The CCB program rules document para 4.6.4 states that the public comment period should be completed before the start of the site visit for the project. The validation team conducted site visit starting from 11/02/2022 which is inline with the CCB requirements.

This project was open for public comment for 30 days from 23/12/2021 to 22/01/2022 /88/ for public comments. No comments were received during the commenting period, as evident from the VCS pipeline in the web interface.

2.7 Resolution of Findings

The process for the resolution of findings (corrective actions, non-conformities, or other findings) raised by the validation team is carried out after reviewing supporting documents shared by project proponent and site visit observations. As an outcome of the validation process, the audit team can raise different types of findings:

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

Where a non-conformance arises the team leader shall raise a Corrective Action Request (CAR). A CAR is issued, where:

- The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions.
- The VCS standard, methodology and modules requirements have not been met; - there is a risk that emission reductions cannot be monitored or calculated.
- The validation process may be halted until this information has been made available to the team leader's satisfaction. Information or clarifications provided as a result of a CL may also lead to a CAR.

A Clarification Request (CL) will be issued where information is insufficient, unclear or not transparent enough to establish whether a requirement is met.

A Forward Action Request (FAR) will be issued when certain issues related to project implementation should be reviewed during the first verification.

During the validation process, total 43 CARs and 6 CLs were raised and resolved satisfactorily. The list of CARs/CLs raised during the validation process and its responses are provided in Appendix IV of this validation report.

2.7.1 Forward Action Requests

A Forward Action Request (FAR) is raised during validation to highlight issues related to project implementation that require review during the first verification of the project activity. FARs shall not relate to the VCS requirements for registration.

For KRC Project, 03 FARs has been raised and these are related to confirmation of undertaking selected and approved community customary rights by the communities in the project area and implementation of community development activities (listed in the PD). These FARs has been raised since full and effective community engagement started after the start date of the project and community development activities has not been implemented yet. These FARs are not related to the VCS requirements for registration.

In view of the requirement of section G5 of the CCB standard v3.1, VVB comprehends that if the nearby communities (even if residing outside the project boundary and has no legal rights on the project area) are affected in terms of resource extraction (customary rights) then it is the responsibility of the PP to obtain free, prior, and informed consent (FPIC) from the communities before implementing the project. Though the PP was in constant touch with the local communities before the start of the project, however, the full and affective consultations with the communities regarding the proposed carbon project began after the start of the project.

However, in line with the footnote 45 of the CCB Standards v3.1,¹ interviews with the stakeholders, on site overview and clarifications & documentation provided by the PP it is concluded that the Project adheres to the CCB standard requirements. The supporting evidence and site visit observation shows that PP has undertaken appropriate consultations during the project design phase and the recent consultations have been effective in evaluating community benefits, risks and adapting project design and implementation to optimize community and other stakeholder benefits and respect local customs. The PP is in constant touch with the communities and several consultations has been undertaken since 2016 and their inputs have been recorded carefully till date. Although the community development activities have not yet started due to the limitations related to COVID mobilization restrictions in Malaysia and a period of elections of new local representatives in the communities located in the project zone. Given such circumstances, PP will have to conduct further consultations and implement community development activities (listed in PD) prior first verification and re-assess the community benefits and adapt the community development interventions accordingly.

FARs 1, 2 and 3 were raised as given in Appendix IV

3 VALIDATION FINDINGS

3.1 Summary of Project Benefits

The KRC Project is being implemented in the Tongod and Kinabatangan Districts of Sabah, Malaysia. The project involves protection and restoration of 83,381 ha of forest area. The implementation of the project would remove the GHG emissions by 16,291,489 tCO₂e for the period of 2016-2045 as confirmed from reviewing GHG removal calculation sheet /12//13/.

The project is being developed and will be registered under the VCS and the CCBS. The benefits arising from the implementation of project activity has been listed in section 1.2 “standardized benefit metrics” of PD which are as follows:

Net estimated emission reductions in the project area during the project crediting period is 16,291,489 tCO₂e with annual average emissions reductions and removals of 543,049 tCO₂e. 83,381 hectares of existing production forest land will be protected, along with biodiversity conservation because of project activities.

The project will help in sustainable job opportunities for local community groups. Total 500 (out of which 300 are female) of community members are expected to have improved skills and/or knowledge resulting from training provided as part of project activities over an estimated period of 5 years of the project implementation. Around 914 (out of which 457 are women) people are expected to experience increased water quality and/or improved access to drinking water because of project activities. 1500 community

¹ Footnote 45 states “In cases where it is unclear whether a project will be implemented or not, it is acceptable to start with preliminary consultations, provided there are plans for appropriate full consultations before the start of the project. Where conformance with the CCB Standards is being applied to a project already under implementation, project proponents must either provide documentation of appropriate consultations during the project design phase or demonstrate how more recent consultations have been effective in evaluating community benefits and adapting project design and implementation to optimize community and other stakeholder benefits and respect local customs”

members (out of which 800 are women) are expected to receive improved well-being because of project activities, who will be benefitted positively in terms of health benefits.

The assessment of the estimated benefits arising from the implementation of project activities were carried out and validation opinion is provided in relevant section of the validation report. It was found that all the supporting documents required to verify the expected benefits were provided by the PP and the project will likely to achieve its expected targets if implemented in line with the planned strategies. The benefits were also confirmed with the local communities during the site visit and was found to be accurate.

CL 01 was raised and successfully closed. Please refer Appendix IV.

3.2 General

3.2.1 Summary Description of the Project

The KRC Project involves conservation and protection of 83,831 hectares of forest by preventing avoid both the continued logging and the mosaic planting and in its place managing, protecting & promoting natural regeneration the area for carbon emission reductions, biodiversity conservation & monitoring and community livelihood improvement. The project is in the Tongod and Kinabatangan Districts of Sabah, Malaysia. The project area is part of a long-term approximately 1-million-hectare concession granted to Yayasan Sabah on a 99-year lease arrangement with the Sabah Forestry Department (acting on behalf of the State Government of Sabah) /18/. Yayasan Sabah is a State-owned para-governmental charitable foundation that was formed in 1966 with the aim of 'improving the lives of Malaysians living in Sabah'. Prior to the start of the project, the project area was designated as production forest (Class II) /19/. The project area was logged regularly since the early 1990's as described in interviews with SEARRP, RBJ and SFD with the last harvesting occurring prior to reclassification. Evidence of historical extraction data were submitted by PP /69/.

In 2015, 69,450 ha were converted, and in 2016, 13,927 ha were converted for a total of 83,381 ha of Class I forest of the project area. Class I forest provides full forest protection, and no logging is being carried out in the project area. Under forest enactment of 1968, Class I is under full protection with no commercial harvesting activities. The project will avoid both the continued logging and the Mosaic Planting and instead manage the area for protection and carbon emission reductions.

Project proponent and other entities involved in the project.

Permian Malaysia Sdn. Bhd. is the project proponent who is responsible for implementation, monitoring and coordinating project and has legal rights of use of the entire project area. The management agreement and letter of engagement dated 06/08/2021 /17//22/ were reviewed and it was confirmed that the PP has right to generate and sell carbon credits produced because of successful implementation of project activity. The agreement /17/ is valid and confirms the eligibility of in accordance with VCS Standard /4.3/. Other entities involved in this project are Permian Global, Yayasan Sabah and Rakyat Berjaya Sdn. Bhd., and Sabah Forestry Department. The contact information of all the entities involved in the project are provided in section 2.1.3 and 2.1.4 of the PD /1/ and confirmed by the PP during the on-site visit /14//15//16/.

RBJ and SFD work closely together and Permian deals directly with both. RBJ and Permian are largely responsible for implementation, design and management while SFD is focused on government regulation

RBJ has history with timber concessions and has experience in timber measurements and timber contracts. Permian has the capacity to implement remote sensing, carbon measurements and projections. SFD has the technical capacity to ensure adherence to government regulation. All partners have experience with land management of forests.

Project start date

The start date of the project is 11/12/2015 which is the date of the legal conversion of forest land status from Class II to Class I Forest Reserve category. The first step taken towards GHG emission reduction in the project is the conversion of legal status of forest land. The conversion of land status has been done in two steps, the 69,454 ha of forest area has been legally converted to Class I category on 11/12/2015 and additional 13,927 ha of forest area, out of total 83,381 ha of project area got legal protection under Class I category on 08/12/2016. This has been verified by reviewing legal documents shared by PP /20//21/. Hence, the validation team can confirm that the start date of the project is accurately identified by PP in accordance with the VCS program definition of start date /6/. The conversion of project area from Class II to Class I Forest Reserve category has also been confirmed by project proponent, RBJ, SEARRP, and representative of State Forest Department during on-site interviews with ESPL technical expert /15//16/.

Project scale and estimated GHG emission reductions or removals.

The project activity falls under large project category as the estimated emission reductions are 543,049 tCO₂e/year which is more than 300,000 tCO₂e/year.

Project location.

Project area includes the Tongod and Kinabatangan districts of Sabah, Malaysia. Project boundary and coordinates are clearly defined in the Kuamut boundary shapefiles shared for the assessment.

The scenario existing prior to the implementation of the project.

Under the baseline scenario, the project area would remain under Class II category of production forest. The most likely identified baseline scenario is a combination of selective logging (Natural Forest Management) and the Mosaic Planting Approach.

Climate benefits: Emissions reductions and removals of 16,291,489 tCO₂e from 2016 – 2045 and 543,049 tCO₂e annually.

Community benefits: The project will contribute in the well-being of the local communities by improving water quality through the restoration of riparian reserves, generation of direct employment in project activities, improve health services, provide training to community members to improve their skills in tourism, handicraft elaboration and improved agricultural practices as well as facilitate access to markets as well as formal and informal education packages, including for children and reduce conflicts with outsiders working in logging concessions who would have arrived in the absence of the project.

Biodiversity benefits: The project is protecting an important biodiverse habitat. The project will contribute to the protection of 29 mammal and 12 bird species in the project areas that are considered as Rare, Threatened or Endangered [RTE] species.

Hence, information provided in the sections 2.1 of the PD /1/ are in line with observation made during desk review of the supporting documents, observation of audit team and outcome of the interviews with local communities and Project Proponent (PP), and provides an understanding of the nature of the project and its interventions.

CAR 01 was raised and resolved successfully as given in Appendix IV.

3.2.2 Physical Parameters (G1.3)

The project area includes 83.381 ha of forest land in the Tongod and Kinabatangan districts of Sabah, Malaysia. The physical parameters are explained in the PD/1/ and are assessed as follows:

Topography: The assessment of the topographic details of the project zone given in the PD and maps has been done. The terrain of the project zone is lowest in the northeast region of the project area of 16m above sea level point. The highest point is about 1,172 m above sea level. The area is undulated with slopes ranged below 15 degree to more than 25 degree. The topographic characteristics of the project zone was observed during on-site visit /14/, and it was found that details of the topography mentioned in the PD is appropriate.

Soil and geology: the soil composition of the project zone is not much explored however through independent literature review it was found that the project zone has heterogenous soil type of Ultisols soil classification group with predominantly mentapok soil and Bang soils in the region. The area is rich in dense vegetation and experience higher rate of soil formation. The main geological formations found within this area are Kuamut, Crystalline Basement and Chert-Spillite. The characteristic is confirmed through on-site observation.

Climate: the project zone is in the tropical monsoon humid climate zone with mean daily minimum temperature is about 23°C and the mean daily maximum 28°C. Mean annual rainfall for the period 2004-2017 recorded at the nearest weather station located at the Malua Field Station is 3,401 mm. Although all months' average >200 mm of rainfall, March to July is relatively dry (average 235 mm/month), while November to February are the wettest months (average 326 mm/month).

Hydrology: the project zone has abundant streams, and all converged to get drained into Kuamut river. The streams are mostly unnamed, however contributes largely in maintaining ecosystem functioning the region. These features were also verified during on-site visit.

The validation team confirmed that the PD sufficiently describes the physical parameters of the project area and zone. Climate data from Malua Field Station and topography and hydrography shapefiles were reviewed. The site visit and the supporting documents observations are in line with the information provided in the section.

CAR 02 was raised and successfully closed, Refer to Appendix IV for details.

3.2.3 Social Parameters (G1.3)

The project area has no permanent human settlements. The region surrounding with a sparse population of local communities. PP has undertaken an initial survey at the outset of the project a radius of 20km and found only eight principal communities distributed along the banks of the Kinabatangan River, to the north

of the Project Area. The social parameters of the project area are described in detail in section 2.1.6 and Section 4 of the PD.

The validation team crosschecked the references such as KML files /25/, KRC Project Social Baseline Assessment 2017-2019 – Process Report /33/, Survey data /26/ Department of Statistics Malaysia Official Portal /50/. Validation team finds the information in the PD /1/ is consistent with the observation of audit team and outcome of the interviews with local communities during the on-site visit

CAR 03 was raised and successfully closed, Refer to Appendix IV for details.

3.2.4 Project Zone Map (G1.4-7, G1.13, CM1.2, B1.2)

The boundaries of the Project Area and the Project Zone have been correctly indicated in the PD. The accuracy of the project zone map was validated from the shapefiles submitted by the PP. The coordinates where has also been verified during site visit by taking reference markers.

The boundaries of the project activity are validated in section 3.3.3 of this report. Positioning of communities and HCVs was checked by visiting a sample of these during site visit. Hence, validation team concludes that this indicator has been correctly addressed in the PD /1/.

CAR 04 was raised and successfully closed, Refer to Appendix IV for details.

3.2.5 Stakeholder Identification (G1.5)

The PD provides an explanation of the process of stakeholder identification and analysis used to identify communities, community groups and other stakeholders. Eight principal communities distributed along the banks of the Kinabatangan River, to the north of the Project Area were identified and listed in section 2.1.9 of the PD /1/. These communities form two principal groupings: four communities to the north-west of the project area and a further four to the north-east. The two groups formed are referred as “Karamuak cluster” and “Kuamut cluster”, respectively in the PD.

Local community stakeholders were identified through two main approaches: 1) through consultation with the institutional stakeholders to get information on communities with close linkages to the project area, and 2) by a spatial identification of all communities within an initial search radius of 20km from the project area boundary. In 2016, there was an initiation to identify the communities near the project area by SEARRP community consultant in collaboration with RBJ. A scope meeting assessment was in place by 2016 that identified relevant groups. Meetings with community leaders began in 2017 which provided an overview of carbon trading markets, project risks while also asking for consent on their involvement in project planning moving forward. Several workshops occurred throughout 2017 and 2018. As the communities do not reside in the project boundary, they have not been directly involved in the project planning.

Based on supporting documents submitted by client /33//34//26//25/ and /27/PP and audit site visit the relevant stakeholders mentioned in the PD/1/ were validated. The interviews conducted during on-site visit provided the clear approach of stakeholder identification by the PP and it also confirms that the stakeholders are aware and are satisfied with the KRC Project development.

3.2.6 Stakeholder Descriptions (G1.6, G1.13)

The stakeholders identified are mentioned in section 2.1.9 of the PD and also briefly explained above in section 3.2.5 of this report. The 2 local communities are at the vicinity of the project zone and are selected for the development activities. PP also identified other stakeholders such as direct stakeholders, institutional stakeholders, and commercial stakeholders. The list of relevant stakeholders is listed in Table 2 of Section 2.1.9.

Based on supporting documents submitted by client /33//34//26//25/ and /27/PP and audit site visit interpretations and interviews the relevant stakeholders mentioned in the PD/1/ were validated and are in line with the audit observation.

CAR 05 was raised and successfully closed, Refer to Appendix IV for details.

3.2.7 Sectoral Scope and Project Type

The proposed project falls into VCS Sectoral Scope 14: Agriculture Forestry and Other Land Use (AFOLU), and an IFM category Project that aims increase carbon sequestration and/or reduce GHG emissions on forest lands managed for timber harvesting. The project is not located within a jurisdiction covered by a jurisdictional REDD+ program. /87/

Based on the land use assessment and technologies employed by the project (as described in section 3.2.1 of this report) the sectoral scope and project category applied is correct and in line with the AFOLU Requirements v3.6 and VCS Standard v4.3.

3.2.8 Project Activities and Theory of Change (G1.8)

The climate benefits have a causal relationship with the conservation 83,381 ha of previously logged forest which would have been subject to further timber harvesting in the absence of the project. The actions described in section 2.1.11 of the PD, which will be implemented to achieve the project objectives are as following:

Forest Protection: to protect illegal logging and other possible illegal activities, the project will include Guard posts. The project is expected to establish at least 5 posts in the first years which will require 10 to 20 full time staff. In addition to these guard posts, project offices will be opened in each of the two main village groups (Kuamut and Karamuak) to facilitate the community development program (see below) and to encourage community participation, collaboration and employment in the site protection work and patrolling. In addition to this the project will undertake routine monitoring along major road and river access routes by car/motorbike and boat as required. The project will make extensive use of remote surveillance technology to enhance protection measures. The project will also utilise remote camera trap technology to monitor access points, both overtly and covertly.

Natural Forest Regeneration: By protecting degraded forests, the project will support natural regeneration within the project area. The project will also monitor natural regeneration using a combination of forest plots (within which we will assess a range of parameters including forest structure and the natural recruitment of tree seedlings) and high-resolution remotely sensed data.

Biodiversity conservation & monitoring: the project area has significant amount of RET species (listed in section 5.1.1). the project plans for continuous monitoring, conducted by the project staff in coordination with SEARRP, or on a periodic basis making use of temporary staff and local community members as required. In addition, the project will seek collaboration with other interested parties, including local academic institutions and research centres for monitoring and managing the project area biodiversity.

Community livelihood improvement: The project will contribute in the well-being of the local communities by improving water quality through the restoration of riparian reserves, generation of direct employment in project activities, improve health services, provide training to community members to improve their skills in tourism, handicraft elaboration and improved agricultural practices as well as facilitate access to markets as well as formal and informal education packages, including for children and reduce conflicts with outsiders working in logging concessions who would have arrived in the absence of the project. The project is expected to directly employ 20 to 30 staff for patrolling activities and 10-20 full time staffs for guard posts activities. Permanent teams will also be supplemented by temporary additional staff as required. As the project is in remote location, hence the recruitment will be mostly from the nearby local areas.

All the activities mentioned above were cross checked through supporting documents, during the on-site observation and interviews with the PP and local communities. The validation team concludes that the theory of change provided in the PD /1/ is accurate, complete, and provides an understanding of the nature of the project and how it will achieve its climate, community, and biodiversity objectives.

CAR 06 was raised and successfully closed, Refer to Appendix IV for details.

3.2.9 Sustainable Development

In section 2.1.12 of the VCS PD, the PP has provided the sustainable development contributions of the project. PP claims the following sustainable development contributions that project aims to achieve and contribute:

- SDG 1, No poverty
- SDG 8, Decent work and economic growth
- SDG 12, Responsible consumption and production
- SDG 13, Climate action
- SDG 15, Life on land

Thus, the validation team confirmed that the project has identified and addressed relevant SDGs targets and the project's sustainable development contributions is positive and can be achieved via project's interventions implementation.

CAR 07 was raised and successfully closed, Refer to Appendix IV for details.

3.2.10 Implementation Schedule (G1.9)

The information of implementation schedule of the project has been given in section 2.1.13 of the PD /1/. All the information provided in the PD were confirmed at the time of interviews conducted on site visit and supporting documents submitted by the PP. Initial planning and discussions around the project began in 2012 as identified and confirmed by representatives of interviews of PP and involved entities SEARRP, RBJ, and SFD. Evidence of initial plan for conversion of project forest area was an agreement called the Kuamut Partnership between the Rainforest Trust, Permian and SEARRP intending to convert Kuamut forest to Class I Forest, which was signed in 2014. Project area was converted from Class II to Class I in 2015 (Gazette No. 7) and 2016 (Gazette No.13) The PD/1/ states, and confirmed by the PP during the interview, that the project start date is 01/09/2016 based on the date when conversion of first forest land into Class I Protected Forest category took place. All the evidence of the major milestone achieved in the project development and implementation were reviewed, as given below:

Date	Milestone(s) in the project's development and implementation	Validation team assessment.
20/03/2012	Permian first meeting with Sabah Forestry Department to discuss carbon project development in Sabah	The document submitted by PP /84/ was checked and found to be appropriate
22/07/2013	Initial presentation to Sabah Forestry Department concerning Kuamut	This /85/ was checked and confirmed during the site visit.
11/11/2013	MoU between Permian and Sabah Forestry signed and announced (including Kuamut)	The document submitted by PP /17/ was checked and found to be appropriate
Feb-2014	First field work	This was checked and confirmed during the site visit.
08/08/2014	Formal proposal for Kuamut Project sent to Sabah Forestry Department and Yayasan Sabah	The document submitted by PP /19/ was checked and found to be appropriate
16/03/2015	Project area options maps produced by RBJ and submitted to Sabah Forestry Department	The supporting evidence submitted by the PP including the letter sent by PP RBJ /53/ for data sharing were checked and found to be okay.
27/03/2015	Final project area clarified by Sabah Forestry Department to RBJ and Permian	The supporting evidence were checked like meeting records, emails, maps were validate and found to be okay
11/12/2015	Sabah Forestry Department converted the first 69,454 ha into a Class 1 Forest Reserve	The legal land conversion to protected forest area 69,454 ha approval document /20/ was checked and the same was also confirmed during site visit and found to be okay.

8/12/2016	Sabah Forestry Department added an additional 13,927 ha to the Class 1 Forest Reserve	The additional legal land conversion to protected forest area 13,927 ha approval document /21/ was and the same was also confirmed during site visit and found to be okay.
2016-2017	Community survey and baseline	The supporting evidence submitted /26//27//31//32//33/ and /34/ by PP and found to be okay.
2022	Project validation	Based on validation contract the schedule found to be okay
2022	Community re-engagement (assuming that COVID restrictions and safety measures are in place)	Based on monitoring and protection Annual Plan of the KRC project /54/. Also, the plans during the project lifetime were discussed with the Project Management Team are in accordance with the IFM practices.
2022-onwards	Implementation of Community livelihoods improvement activities	
2022-2023	Establishment of guard posts, recruitment and training of rangers	
2022-2023	VCS/CCB monitoring events and reports generated	
2023	Project VCS/CCB Verification	
2023	Project Verification Report dissemination	
2023	Nursery establishment	
2028	Project VCS/CCB Verification	
2028	Project Verification Report dissemination	
2029	Baseline renewal	
2030	Project VCS/CCB Verification	
2030	Project Verification Report dissemination	
2035	Project VCS/CCB Verification	
2035	Project Verification Report dissemination	
2040	Project VCS/CCB Verification	
2040	Project Verification Report dissemination	
2045	Project VCS/CCB Verification	

2045	Project Verification Report dissemination	
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CAR 08 was raised and successfully closed. FAR 01 was raised and the PP has provided a satisfactory proposed action. Refer to Appendix IV for details.

3.2.11 Benefits Assessment and Crediting Period (G1.9)

The start date of the project crediting period is same as the start date of the project activity, i.e., 11/12/2015. The total crediting period is fixed, which is of 30 years for both VCS and CCB spanning from 11/12/2015 to 01/12/2045.

3.2.12 Risks to the Project (G1.10)

A comprehensive risk assessment to the climate aspect of the Project is validated in section 3.3.10 of this report.

Table 7 of the PD lists 8 main risks and what will be done to mitigate it which are assessed as below:

	Risk	Assessment of Measure
Natural Risks	Natural risks to the climate, community and biodiversity considered to be low both in short-terms and long terms.	Risks like natural fires, pests & disease, extreme weather, geological events, and other natural risks are considered in detail in the non-permanence risk assessment. The same has been assessed by the VVB. Also, VVB has assessed the Climate Risk Country Profile: Malaysia (2021) /55/ and found the project areas not on a list of high climate risk. The Sabah state is high on risk of drought. However, the management plan of PP is sufficient to overcome such issues. PP proposes reduces carbon emissions and creates a better local ecosystem though conserving forest cover. Also, PP proposes diversification of livelihood sources to reduce reliability on only nature-based livelihood like agriculture, etc., which will reduce the impact of climate change/draught over communities. Hence the Validation team finds that the mitigation measures provided by PP are adequate for the risk.
Human-induced risks	Climate – Potential risks include anthropogenic fire, encroachment, and illegal logging (loss of above ground biomass). Community: In particular, there is a risk that and initial willingness to accept and participate with the project may change if the project fails to	To mitigate the risk a wide range of measures are undertaken to, including a diverse range of project activities designed to protect and the restore the forest and to ensure the long-term support for the project from local communities like patrolling, increasing awareness among communities about conservation, and the management plan of the project, etc. Based on VVB's site visit /16/ interviews with the PP and the local communities, and through reviewing the supporting documents /17//18//20//21//22/ and /23/ submitted by the PP.

	deliver tangible benefits over the long-term to communities. Biodiversity: Potential risks include anthropogenic fire, encroachment, and illegal logging (loss of above ground biomass). In addition, there are further human-induced risks related to hunting pressure, typically focused on a narrow range of species.	Validation team finds that the measures provided by PP are adequate to mitigate/reduce the risk.
Political Risk	Policy changes by local governments	PP has provided a detailed justification on why the political risk is almost negligible to the project. The validation team assessed the referred document /56/ which present inclination of Government of Sabah towards protection of Biodiversity. Also, to mitigate any possible risk, a management agreement was signed between The State Government of Sabah, Permian Malaysia SDN. BHD and Rakya F Berjaya SDN BHD on 06/08/2021 /23/ which stipulates the conditions to grant the rights to Permian Malaysia to implement a forest carbon project in the project area. Hence, it was concluded that the policy change by local government against the project activity is unlikely.
Financial Risk	Lack of financial resources to continues the project	PP provided a detailed mitigation strategies for this risk. The start of project activities and monitoring will be undertaken with the financial contribution from Permian Global Research which will later be covered entirely by the revenues generated by the project through Permian Malaysia Sdn. At the time of the validation, the PP has secured commitments for forward purchases of carbon offsets from the Kuamut project which secures the budget availability for the implementation and monitoring of the project. This was validated by assessing the financial projection of the project /30/ audit report /37/ of the PP and by interviewing the management team during the site visit.

PP has identified all relevant risks of the projects and the mitigation measures provided for each risk is adequate to minimize/mitigate the relevant risks.

CAR 09 was raised and successfully closed, Refer to Appendix IV for details.

3.2.13 Benefit Permanence (G1.11)

To maintain and improve the benefits for the climate, community, and biodiversity for the duration of the Project and beyond the lifetime, the PP is taking the following measures:

- The effective protection status of the forest is anticipated to be maintained and extended, either through further licenses or enhanced legal protection from the state as the global importance of the stored carbon stocks and biodiversity are fully recognised because of the project.
- project to restore degraded areas will result in the project area being more resilient to the threat of fire.
- Conduct capacity building and training within the communities and landowners
- sustainable land use management in the region, leading to wider adoption of the practices it is pioneering
- Providing job opportunities for the locals in and around the project activity

VVB through validation of the above measures and through interview with PP & stakeholders, confirms that the measures included in the PD /1/ to maintain and enhance the climate, community, and biodiversity benefits beyond the project lifetime is adequate

3.2.14 Financial Sustainability (G1.12)

Permian global has funded the development of the project and until carbon credits are sold it is self funded project. The financial statement of the PP's company /37/ was reviewed to confirm the financial sustainability of the project. It will allow the activities to be developed by the land owners and the project's climate, community and biodiversity benefits can be achieved, without depending on additional funds that might be obtained in the future.

Furthermore, the Project has projected revenues from GHG emissions reductions. This has been validated in detail in section 3.3.5 of this report.

CAR 10 was raised and successfully closed, Refer to Appendix IV for details.

3.2.15 Grouped Projects

This is not a grouped project.

3.2.16 Land-Use Scenarios without the Project (G2.1)

This has been validated in depth in section 3.3.4 of this project.

3.2.17 Most-Likely Scenario Justification (G2.1)

This has been validated in depth in sections 3.3.4, 3.3.5, 3.4.4 and 3.5.3 of this report.

The most likely identified baseline scenario is a combination of selective logging (Natural Forest Management) and the Mosaic Planting Approach leading to loss of forest and biodiversity.

3.2.18 Community and Biodiversity Additionality (G2.2)

This has been validated and detailed justification is given in section 3.3.5 of this report. The section justifies that without the support of carbon benefits the project is not viable and the business as usual (BAU) scenario will continue.

CAR 11 was raised and successfully closed, Refer to Appendix IV for details.

3.2.19 Stakeholder Access to Project Documents (G3.1)

The KRC project has held a series of community engagements during which the project objectives and structure were explained and discussed. A series of brochures have been produced in the Malay language, which offer written summaries of the project objectives and implementing bodies. The brochure also describes some of the underlying principles governing the project such as biodiversity, carbon sequestration, global warming, and the principles of FPIC. These brochures have been given to community leaders were then asked to disseminate them amongst the wider community. The project will also provide access to documentation via the project website, and other means such as community notice boards as appropriate.

This was validated during the site visit and documents proof submitted by the PP. Validation team finds that the measures provided by PP are adequate to provide the information to the stakeholders and ensure their full participation in the project development and implementation process.

CAR 12 was raised and successfully closed, Refer to Appendix IV for details.

3.2.20 Community Costs, Risks and Benefits (G3.2)

Community costs, risks and benefits are described in section 2.3.4 of the validated PD /1/. This information was passed more communities in the stakeholder meetings carried out in 2016 and 2017. These discussions were also part of the participatory mapping /26/ community workshops /31/ and socioeconomic surveys /33/ conducted with the stakeholders. During the site visit interviews with the local communities, it was assessed that the ability of the community to understand the information related to the project idea and cost, risks and benefits associated with the project was very clear.

Validation team finds that the measures provided by PP are adequate to provide the information about community costs, risks and benefits to the stakeholders and ensure their full participation in the project development and implementation process.

CAR 13 and 14 were raised and successfully closed, Refer to Appendix IV for details.

3.2.21 Information to Stakeholders on Validation and Verification Process (G3.3)

The step has been clearly explained in section 2.3.5 of the validated PD. The stakeholders were informed about the third part validation and verification process on several occasions of community workshops /31/

and through brochure /32/. The local language Malay used in the brochure for better understanding of the project.

Validation team finds that the measures provided by PP are adequate to provide the information to Stakeholders on Validation and Verification Process.

3.2.22 Site Visit Information and Opportunities to Communicate with Auditor (G3.3)

In future PP in section 2.3.5 and 2.3.6 states that communities will be informed of the timing of external audit visits well in advance and provided copies of the relevant documents (including translations in Malay). Future visits to communities by external validation and verification auditors will be organised jointly with community representatives, who will assist with coordinating travel logistics, meeting venues, and informing the wider community about the visits. They will be encouraged to speak directly to the auditors, and to freely voice any opinions they hold regarding the project. They will also be informed as to how they can provide written comments via the grievance process or via the CCB website and public comment period. During the field visit, project staff will work with the communities and auditors to schedule time for the two to interact without project staff present.

Validation team finds that the plan provided by PP are adequate to provide the information to Stakeholders on site visit information and opportunities to communicate with auditor.

3.2.23 Stakeholder Consultations (G3.4)

As mentioned in Section 2.3.3, the project has conducted 11 separate workshops and other meetings with village community stakeholders, reaching over 488 participants. A full list of such meetings is provided in in Section 2.3.3 of the validated PD/1/. The PP carried out the consultations with the stakeholders in 2016 and 2017. The minutes of meetings, attendance sheets and photographs of the consultations with the comments from stakeholders were provided to the Validation team. The comments raised during the consultations were addressed by the PP. Also, all the reports of PRA's conducted so far were assessed. All the stakeholders interviewed during the site visit gave positive response about the project. While checking all the reports, minutes of meetings, questionnaire responses during site visit, it is confirmed that all the stakeholders agreed to the project plan.

Though none of the communities resides inside the project boundary and has no legal rights in the project area. However, the communities were extracting resources from the project area since long back and has customary rights. Considering the requirement of section G3.4 of CCB Standard v3.1, that how communities including all the community groups and other stakeholders have influenced project design and implementation through effective consultation, particularly with a view to optimizing community and other stakeholder benefits, respecting local customs, values and institutions, and maintaining high conservation values. Project proponents must document consultations and indicate if and how the project design and implementation has been revised based on such input. It was noted by the Validation team that the project start date is in June 2015, however the first stakeholder consultation was carried out in 2016. Regarding the issue CARs 02, 08, 12, 13, 15, and 19 were raised.

However, Validation body finds that the recent consultations and socioeconomic engagement exercises carried out by PP is in line with footnote 45 of CCB standard v3.1 which says "Where conformance with the Climate, Community & Biodiversity Standards is being applied to a project already under implementation, project proponents must either provide documentation of appropriate consultations during the project

design phase or demonstrate how more recent consultations have been effective in evaluating community benefits and adapting project design and implementation to optimize community and other stakeholder benefits and respect local customs". It was assessed that the PP has tried to engage and communicate to the stakeholders as much as possible and stakeholder access to the project information related costs, benefits, risks, and third-party requirements were clearly communicated as discussed from sections 3.2.18 – 3.2.22 of this report. It was also assessed that from 2019 – 2020 there was travel restrictions related to COVID-19, and most communities have isolated themselves and disallowed entry to non-community members and hence PP has limited access to the communities. Due to the fact again the community engagement process was disturbed. However, as discussed with the local stakeholders and interviews with PP, the project aims and re-establish the engagement with the communities once the pandemic restrictions were lifted and the safety conditions for the team and the communities are improved. The annual plan /54/ submitted by PP has detailed out the stakeholder engagement process.

Hence, based on the above assessment CARs 02, 08, 12, 13, 15, 19 were closed. But FAR 01 was raised and PP has been asked to provide proof that the local stakeholders will continue the customary rights in the project area and has taken their free and informed consent for the project before the first verification.

3.2.24 Stakeholder Consultation Channels (G3.5)

All consultations and participatory processes have been undertaken directly with communities and other stakeholders. The rightful representatives of all the local communities were also consulted and were briefed about the project and its process. The PP has ensured that adequate levels of information sharing with the local communities. The details have been mentioned in section 2.3.7 of the validated PD/1/.

This was validated during the site visit and from the meetings reports and participatory activities engagement proofs /33//31/ and /68/ and other details submitted by the PP to the VVB. Hence, as per the VVB these steps deemed as the most direct approach for the consultation and sharing information with the local stakeholders.

3.2.25 Stakeholder Participation in Decision-Making and Implementation (G3.6)

This is discussed in section 2.3.10 of the validated PD /1/. The PP have gone to considerable lengths to consult with local stakeholders and engage them in the project during the implementation process. The PP has conducted socioeconomic baseline surveys, consultations, and participatory activities /26//27//33//31// and /34/ as well which ensures effective participation of the stakeholders in implementation of the project.

CAR 15 was raised and successfully closed, Refer to Appendix IV for details. However, as discussed in Section 3.2.23 in this report a FAR 01 has been raised.

3.2.26 Anti-Discrimination Assurance (G3.7)

PP company's Code of Conduct /60/, Procurement Policy /57/ and Staff Reimbursement Policy /59/ were assessed and validated and it was found that that no type of discrimination is tolerated at any point of the project development. The step has been described in section 2.3.11 of the validated PD /1/.

3.2.27 Feedback and Grievance Redress Procedure (G3.8)

The PP company grievance policy /58/ has outlined clear grievance redress mechanism. The step has been discussed in section 2.3.12 of the validated PD /1/. The policy is under discussions with the communities and once the procedure has been fully negotiated with communities and formally adopted, it will be provided in print form in the Malay language to community leaders for dissemination. The Policy has been assessed by the VVB and found to be appropriate in addressing any grievance in the future of the project. As of now no grievance was reported till date for the project.

3.2.28 Worker Training (G3.9)

The annual work plan for protection and monitoring was assessed and it was found that Project is committed to investment in training and capacity building, and this commitment extends from project staff to project-zone communities, to local collaborators (both NGO and government). Such training can take many forms, from work shadowing, internships, ad hoc training, to formal classroom style teaching. The various types of training proposed by the project is listed in Table 5 of Section 2.3.14 of the PD.

It was found by the validation team that appropriate plans are designed to provide orientation and training for the project's workers and relevant stakeholders from the communities with an objective of capacity building of locally useful skills and knowledge to increase local participation in project implementation. Special attention to women and vulnerable and/or marginalized people has also been considered. The PP has provided sufficient steps to ensure that in case of new workers when there is staff turnover, there will be sufficient information so that local capacity will not be lost.

CAR 34 was raised and successfully closed, Refer to Appendix IV for details.

3.2.29 Community Employment Opportunities (G3.10)

Based on assessment made through the site visit interviews with the client & local stakeholders and PP company's Procurement Policy /57/ & Staff Reimbursement Policy /59/ conclude that project provides equal employment to people from the community and describe the steps taken to validate the project's practices.

CAR 16 was raised and successfully closed, Refer to Appendix IV for details.

3.2.30 Relevant Laws and Regulations Related to Worker's Rights (G3.11)

The details are provided in section 2.3.16 of the validated PD and it states that the project meets all the applicable laws and regulations related to worker's rights. To confirm the same, supporting documents were validated /57//58//59//60//61//63/ and /64/. Hence, it has been concluded that the project is implemented and adhere to the respective laws and regulations of the project area.

3.2.31 Occupational Safety Assessment (G3.12)

SEARRP has guidelines for worker assessments, safety and salary raises. PP works directly with field teams and maintains open communication with staff on safety, salary and workload. The monitoring team has first aid kits and has evacuation procedures. Helicopters are used for field monitoring and medivac options are on standby when teams are in the field. Training for safety in the field was carried out by a third party. SFD has an OSH officer at every district office, and there is a policy of reporting accidents and an

annual district planning for OSH activities, including for contractors. RBJ works directly with OSH to maintain staff safety and provided their safety procedures. Laws of Malaysia, Act 4 Employees' Social Security Act 1969 /64/ was also checked and found that the PP adhere to the laws and regulations related to occupational safety of the employees. This was also confirmed during the observations of site visit.

3.2.32 Project Governance Structures (G4.1)

The details are mentioned with a management structure in section 2.4.1 of the PD /1/. The management team were interviewed during the site visit. Hence, the Project Governance Structure based on assessment during the site visit and documents assessed is in line with the information provided 2.4.1 of the PD /1/.

3.2.33 Required Technical Skills (G4.2)

This has been explained in section 2.4.2 of the validated PD /1/. The same has been checked and validated during the site visit. Short profiles of technical team /65/ were also assessed and validated during the site visit meetings. In the opinion of VVB, the PP and its team has robust technical skills to ensure successful implementation and sustainability of the project.

3.2.34 Management Team Experience (G4.2)

RBJ has history with timber concessions and has experience in timber measurements and timber contracts. Permian has the capacity to implement remote sensing, carbon measurements and projections. SFD has the technical capacity to ensure adherence to government regulation. All partners have experience with land management of forests. Curriculum vitae of the managing team /86/ were shared with the validation team which confirmed the proven experience of management team. In the opinion of VVB, the PP and its team has robust management team experience to ensure successful implementation and sustainability of the project.

3.2.35 Project Management Partnerships/Team Development (G4.2)

This is defined in section 2.4.4 of the validated PD /1/. Permian Malaysia Sdn. Bhd. Partners with Permian Global, Yayasan Sabah and Rakyat Berjaya Sdn. Bhd, and Sabah Forestry Department for designing, developing, and implementing the project /23/. The information mentioned in section 2.4.1 of the PD was confirmed by assessing the supporting documents /23/ and conducting interviews during the site visit.

Also, Section 2.4.3 of the PD has presented the management team's expertise and prior experience implementing land management and carbon projects at the scale of this project. PP has also documented key technical skills required to implement the project successfully, including community engagement, biodiversity assessment and carbon measurement and monitoring skills. PP has partnered with other expert organizations like SEARRP and PACOS Trust to ensure effective and efficient implementation and functioning of the project.

Therefore, based on the on-site assessment, interview with the management & technical teams, assessing the CVs of technical staff submitted by the PP and reviewing the website of the PP and other partner organization ensures that the project has adequate human resources for its effective implementation.

CARs 17 and 35 were raised and successfully closed, Refer to Appendix IV for details.

3.2.36 Financial Health of Implementing Organization(s) (G4.3)

The VVB has checked and assessed the financial audits /30/ and /37/ of the company since the project has started and confirms financial health of the PP. Permian global has funded the development of the project and until carbon credits are sold it is self funded project (interview PP). It is concluded by the VVB that the PP financial strategies are sound enough to develop and sustain the project.

3.2.37 Avoidance of Corruption and Other Unethical Behavior (G4.3)

Based on site visit interviews and assessment of supporting documents /57//60//62/ and /63/ it is concluded that the project proponent involved in project design and implementation are not involved in or are not complicit in any form of corruption such as bribery, embezzlement, fraud, favoritism, cronyism, nepotism, extortion, and collusion.

3.2.38 Commercially Sensitive Information (Rules 3.5.13 – 3.5.14)

The following information is commercially sensitive and is not publicly available:

- Financial projections – Detailed 30-year financial projections for the project which include all project-related costs and ex-ante carbon estimates.
- Agreements between implementing, technical partners, communities and government – All agreements between project proponents and other implementing partners governing the implementation of project activities.
- Project workplans and budgets – Detailed implementation workplans.

However, the same was assessed by the validation team during the validation process. The information which has been considered as commercially sensitive are not related to information in the project description related to the determination of the baseline scenario, demonstration of additionality, and estimation and monitoring of GHG emission reductions and removals. Hence, the VVB concludes that the exclusion of the above-mentioned documents is okay, and it meets the requirements of VCS Standard V4.3.

3.2.39 Statutory and Customary Property Rights (G5.1)

This is explained in section 2.5.1 of the validated PD. The project area does not belong to any indigenous communities. Yayasan Sabah on a 99-year lease arrangement with the Sabah Forestry Department (acting on behalf of the State Government of Sabah). The Sabah Forestry Department is the legal land rights-holder of project area. PP has the full authority /18/ and /19/ of designing, developing, and implementing the proposed project in the Project area. The VVB has checked and assessed the land use agreement and on-site observations and interview with local stakeholders residing in the project areas. The project proponents have proven ownership to the land on which the project is designed and implemented.

CARs 18 and 36 were raised and successfully closed, Refer to Appendix IV for details. Since the local communities have customary rights and for the same FAR 01 has been raised.

3.2.40 Recognition of Property Rights (G5.1)

This is explained in section 2.5.2 of the validated PD. The VVB has checked and assessed land and partnership records /18//19/ and /17/. It is concluded that all property rights and recognized, respected and supported. All properties involved in the project either have property titles or equivalent documents to certify and assure rights over the land. Within the project area, there are no local communities or indigenous heritage with collective property titles. However, the local communities have customary rights and for the same FAR 01 has been raised.

CAR 37 was raised and successfully closed, Refer to Appendix IV for details.

3.2.41 Free, Prior and Informed Consent (G5.2)

This has been clearly explained in section 2.3.23 of this report.

CAR 19 was raised and successfully closed, Refer to Appendix IV for details. Since the local communities have customary rights and for the same FAR 01 has been raised.

3.2.42 Property Rights Protection (G5.3)

This is explained in section 2.5.4 of the validated PD. As discussed above the project activities do not lead to involuntary removal or relocation of property rights holders from their lands or territories, and do not force rights holders to relocate activities important to their culture or livelihood. However, the same has not been documented. To ensure the same FAR 01 has been raised.

CAR 38 was raised and successfully closed, Refer to Appendix IV for details

3.2.43 Illegal Activity Identification (G5.4)

The KRC Project aims to reduce and put an end to all the illegal activities identified in the project area by a combination of protection and enforcement, education, and incentive, including strengthening tenure rights and providing sustainable livelihood options and employment opportunities. RBJ and SFD are the government agencies responsible for preventing illegal activities. SFD has predetermined process and laws for prosecuting illegal activities.

Through this mechanism the project will be generating positive leakage. During the site visit interview with the project management team and local communities it has been assessed that the project management team has a robust strategy to identify such illegal activities and stop such actions on immediate effect. Hence, it is concluded that the project's climate, community, and biodiversity impacts will not be affected by any illegal activities.

3.2.44 Ongoing Disputes (G5.5)

Ongoing disputes are not applicable for this project as no communities have been displaced due to this project and land rights are owned exclusively by SFD and the YS concession. During the site visit it was found that there are no conflicts between PP, other parties and the local communities regarding land purchase Property rights and its protection. However, there could be potential future disputes over access to fishing due to the increased regulation as a Class I forest. It was found that some of the communities

were just concerned about their customary rights in the Project area. To resolve the same PP and associated project parties are in continuous consultation with the communities and the later has assured the communities that “any customary rights of the local communities will be respected through the project implementation which can be confirmed at each verification period”.

During the site visit the local communities showed an excitement over the project.

CAR 20 was raised and successfully closed, Refer to Appendix IV for details.

3.2.45 National and Local Laws (G5.6)

The project activities follow all the laws and regulations listed in section 2.5.7 of the validated PD, the laws and regulations are confirmed through checking the public websites /66/ which has been compared with the actual situation of the project by on-site observation. Also, the Management Agreement /17/ between Permian Malaysia, the State Government of Sabah and RBJ submitted by the PP states the compliance with all the laws and regulations for the implementation of the project.

3.2.46 Approvals (G5.7)

This is explained in section 2.5.8 of the validated PD /1/. The Project is developed on a government land taken on lease for 99 years by the PP. The agreements were assessed /17//18/ and /19/and found to be appropriate. Hence, it was concluded that the PP has taken all the required approvals for the project implementation.

3.2.47 Project Ownership (G5.8)

This is explained in section 2.5.1 of the validated PD. Yayasan Sabah on a 99-year lease arrangement with the Sabah Forestry Department (acting on behalf of the State Government of Sabah) has taken the land for project development and implementation. The Sabah Forestry Department is the legal land rights-holder of project area. PP has the full authority /18/ and /19/ of designing, developing, and implementing the proposed project in the Project area.

Permian Global does not and will not own the land, but they have agreements with RBJ and SFD for monitoring and economic distributions.

Hence, based on documents review and site visit the project ownership belongs to the PP.

3.2.48 Management of Double Counting Risk (G5.9)

This is explained in section 2.5.10 of the validated PD. The project has not, nor does it intend to create non-participate in any other GHG emission trading program and the ERR generated will not be used in other national or sub-national target. Declaration letter /67/ for the same has been submitted by the PP to the VVB.

3.2.49 Emissions Trading Programs and Other Binding Limits

PP has mentioned in section 2.5.11 of the validated PD that the project is not part of any emissions trading programs and is not subject to other binding limits. Undertaking /67/ for the same has been provided.

3.2.50 Other Forms of Environmental Credit

In section 2.5.12, PP has mentioned that the project does not intend to generate any other form of environmental credits related to the reductions and removals of GHG emissions claimed under the VCS program. Undertaking /67/ for the same has been provided.

3.2.51 Participation under Other GHG Programs

The project did not receive or sought to be registered in any other GHG program, in addition to submitting it to validation and verification in the VCS and CCBS. The same is mentioned in section 2.5.13 of the validated PD. Not applicable. Undertaking /67/ for the same has been provided.

3.2.52 Projects Rejected by Other GHG Programs

The Project has not undergone validation/verification of any other GHG program and is therefore not rejected by any other GHG program. The same is mentioned in section 2.5.14 of the validated PD. Not applicable. Undertaking /67/ for the same has been provided.

3.2.53 Double Counting (G5.9)

This is explained in section 2.5.15 of the validated PD. The project has not, nor does it intend to create non-participate in any other GHG emission trading program and the ERR generated will not be used in other national or sub-national target. Declaration letter /67/ for the same has been submitted by the PP to the VVB.

3.3 Climate

3.3.1 Title and Reference

Following are the details of applied methodology and tools in the project

- VM0010 Methodology for Improved Forest Management: Conversion from Logged to Protected Forest Version 1.3 /7/
- VT0001 Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities, v3.0 /8/
- VCS AFOLU Non-Permanence Risk Tool /9/

CAR 21 was raised and successfully closed, Refer to Appendix IV for details

3.3.2 Applicability

The project has applied VCS methodology VM0010, Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, version 1.3 /7/. The applicability conditions of the applied methodology have been assessed as below.

Applicability conditions	Demonstration and justification provided in the PD	VVB assessment
Methodology VM0010 for Improved Forest Management: Conversion from Logged to Protected Forest Version 1.3		
Forest management in the baseline scenario must be planned timber harvest	Under the baseline scenario, the project area would have been managed as a production forest (Class II). Parts of the area would have been subjected to continued selective logging. The rest of the area would have been managed using a practice that is known locally as the Mosaic Planting Approach. The concept of Mosaic Planting Approach involves timber harvesting (while retaining small patches of natural forest areas containing young commercial tree species) and planting of fast-growing species in the more open areas. The small patches of natural forests left standing, usually on steeper slopes comprise commercially forest species with a diameter below the prescribed cutting limit. The more open and flatter areas left are harvested, cleaned and planted with selected fast-growing species.	The baseline activity is planned timber harvest confirmed during the site visits and documents /20/ and /21/ and satellite images /69/ provided by the PP.
Under the project scenario, forest use is limited to activities that do not result in commercial timber harvest or forest degradation	Under the project scenario, the area is fully protected and no longer subject to commercial timber harvest.	The conversion of project area from Class II to Class I category of Protected Forest /20/ and /21/ has been confirmed. Hence, the project meets the applicability criteria.
Planned timber harvest must be estimated using forest inventory methods that determine allowable offtake as volume of timber (m ³ ha ⁻¹)	The merchantable volume of timber per unit area that is potentially available for harvest has been estimated using field plot data, and a published high-resolution Top of Canopy Height (TCH) Map obtained using LiDAR. These data were combined to produce a high-resolution merchantable timber volume map for the project area.	TCH map /47/ and LiDAR data /46/ submitted by PP have been reviewed and the validation team found that calculation of TCH is appropriately done. Hence, the project meets the applicability criteria.
The boundaries of the forest land must be clearly defined and documented	The project boundaries are clearly defined and documented when the area was designated as a protected forest	The project boundaries have been clearly defined in the PD /1/ and substantiated

		with KML files /25/ of project zones and geodetic coordinates. Hence, the project meets the applicability criteria.
The baseline condition cannot include conversion to managed plantations	Under the baseline scenario, the project area would have been managed as a production forest (Class II). Parts of the area would have been subjected to continued selective logging. The rest of the area would have been managed using a practice that is known locally as the Mosaic Planting Approach. The concept of Mosaic Planting Approach involves timber harvesting (while retaining small patches of natural forest areas containing young commercial tree species) and planting of fast-growing species in the more open areas. The small patches of natural forests left standing, usually on steeper slopes comprise commercially forest species with a diameter below the prescribed cutting limit. The more open and flatter areas left are harvested, cleaned and planted with selected fast-growing species.	The baseline scenario has been validated and it was found that the under the existing scenario before the implementation of the project, the area would have been subjected to continuous logging and mosaic planting. This was confirmed by PP through supporting documents assessment /20/ and /21/ during on site observations & interviews /14/15/. Hence, the project meets the applicability criteria.
Baseline scenario, project scenario and project case cannot include wetland or peatland	Condition met. There are no peatlands or wetlands in the project area	The project area includes forested land only and does not include wetland or peatland. This was confirmed through checking satellite images from open sources /51/ and /73/ and is also validated during on-site inspection. Hence, the project meets the applicability criteria.
VT0001 Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities, v3.0		
AFOLU activities the same or similar to the proposed project activity on the land within the proposed project boundary performed with or without being registered as the VCS AFOLU project shall	Condition met. The AFOLU activities that took place before the project start and the planned project activities (see 1.11) do not lead to violation of any applicable law in Malaysia (see section 2.5.7)	From the site visit assessment and the documents and reference provided it has been concluded that the project is implemented and adhere to

not lead to violation of any applicable law even if the law is not enforced		the respective laws and regulations of the project area /66/. Hence, it was concluded that the project is in line with the applied tool.
The use of this tool to determine additionality requires the baseline methodology to provide for a stepwise approach justifying the determination of the most plausible baseline scenario.	Condition met. VM0010 refers to this tool to determine the most plausible baseline scenario	Step 6.1 of the applied methodology recommend the use the most recent version of the VCS tool, VT0001 Tool for the Demonstration and Assessment of Additionality in AFOLU Project Activities to assess which of the baseline alternatives must be excluded from further consideration. PP has used the most recent version of the VCS document AFOLU Requirements, v3 and has applied the step wise approach mentioned in the tool to assess the project baseline and additionality of the project.

The validation team assessed that the project's developed is relevant as per the applied baseline and monitoring methodology VM0010, version 1.3 and tools /7/ and /8/. PP has detailed all the applicability conditions of the applied methodology and tool in section 3.1.2 of the PD and has elaborated on how the project meets all applicability conditions. VVBs has also assessed the project against each of these applicability conditions and found that the project conform with the applicability conditions of the applied methodology and the tool (as assessed in the table above).

3.3.3 Project Boundary

The project boundary encompasses 83,381 ha of forest area located in the Tongod and Kinabatangan districts of Sabah, Malaysia. The geodetic coordinated provided in the PD/1/ has been checked and it found fine.

The area and location have been confirmed via checking the project design and shape files of project boundaries /69/ submitted by the PP. The project area is under State Forest Department and the Yayasan Sabah is the license holder of the land that has been granted permission for conversion of forest area from Class II to Class I /20/ and /21/.

For the Mosaic Planting Approach, the reference area consists of 3 areas within the greater Yayasan Sabah Forest Management Area which each have their own management plan:

- An area of 20,000 ha within the SG Pinangah Forest Reserve
- An additional area of 5,000 ha within the SG Pinangah Forest Reserve (with a separate management plan)
- An area of 28,000 ha in the Gunung Rara forest reserve.

For the Natural Forest Management, the reference area consists of the Ulu Segama Forest Reserve. This area encompasses approximately 1272 km² within the Yayasan Sabah Forest Management Area.

The same has been identified during the site visit as well as checking the boundaries shapefiles of reference areas /25/.

The geographical boundaries for leakage the coordinates where checked and same has also been assessed during site visit and found to be accurate.

The carbon pools considered for the calculation of emission reductions are Aboveground biomass – trees and Harvested wood products. Deadwood – logging slash is included only in baseline calculations. The following table present the carbon pool considered within the project boundary along with the justification which has been accepted by the validation team.

Carbon pool		Included?	Justification/ Explanation
Above ground biomass	Trees	Included	Mandatory and significant pool
	Non-tree	Excluded	Exclusion is always conservative when forests remains as forest since the stocks of non-tree aboveground biomass are expected to be greater in the project scenario (protected natural forest) than in the baseline scenario
Below ground biomass		Excluded	Excluded in the methodology since this is unlikely to change significantly in forests remaining as forests and is difficult to measure-omission is conservative
Deadwood	Logging slash	Included in the baseline	The dead wood (logging slash) carbon pool is expected to be larger in the baseline than in the project scenario, and therefore this pool must be included
	Naturally accumulated	Excluded	Conservatively omitted since this pool is expected to be larger in the project scenario than the baseline scenario
Litter		Excluded	Conservatively omitted since this pool is expected to be larger in the project scenario than the baseline scenario

Soil organic carbon	Excluded	Conservatively omitted since this pool is pool is unlikely to change significantly in forests remaining as forests
Harvested wood products	Included	Will be greater in baseline than project scenario since the baseline includes timber harvesting for commercial markets

Source		Gas	Included?	Justification/Explanation
Baseline	Biomass burning	CH4	Included	Included as required by the methodology
		N2O	Excluded	Potential emissions are negligible
	Fossil fuel combustion	CO2	Excluded	This is deemed conservative, as emissions will be greater in the baseline scenario than in the project scenario
		CH4	Excluded	This is deemed conservative, as emissions will be greater in the baseline scenario than in the project scenario
		N2O	Excluded	This is deemed conservative, as emissions will be greater in the baseline scenario than in the project scenario
	Removal of herbaceous vegetation	CO2	Excluded	Excluded by the methodology
Project	Biomass burning	CH4	Included	Included as required by the methodology
		N2O	Excluded	Potential emissions are negligible
	Fossil fuel combustion	CO2	Excluded	This is deemed conservative, as emissions will be greater in the baseline scenario than in the project scenario
		CH4	Excluded	This is deemed conservative, as emissions will be greater in the baseline scenario than in the project scenario
		N2O	Excluded	This is deemed conservative, as emissions will be greater in the baseline scenario than in the project scenario

By checking the information and evidence available /7//1/ and /12/ and interviews during site visit and on-site observation made, the VVB team concluded that the appropriate carbon pools have been considered and the description in the PD is accurate and complete, and also the selected carbon pools and GHG emissions sources are justified for the proposed project activity.

CARs 22 and 23 were raised and successfully closed, Refer to Appendix IV for details.

3.3.4 Baseline Scenario

Step 6.1 – Selection of baseline: PP has demonstrated the baseline scenario in line with the guidelines mentioned in the applied methodology /7/ and referred VT0001 Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities, v3.0 /8/ for the baseline assessment.

Apart from other stepwise approach, to determine the most likely baseline scenario a “barrier analysis (step 3 in VT0001)” was applied to determine which of the scenarios from step 1 is the most likely baseline scenario.

Step 3 of VT0001. Barrier analysis

Sub-step 3a. Identification of barriers

Scenario i	barriers exist consisting of barriers related to local ecological conditions and technological barriers.
Scenario ii	The main barriers for this scenario to apply to the whole project area are technological and local ecological conditions. More specifically, due to the history of repeated logging, the area is now a complex mosaic of forest in conditions ranging from intact to highly degraded. The area would not produce an economic harvest without some form of silvicultural intervention. This was assessed and confirmed during site visit interviews
Scenario iii	The mosaic planting approach is mostly applied in areas with slopes < 20 degrees. The topography of the project area is such that the mosaic planting approach cannot be applied in the whole project area, therefore preventing the implementation of scenario iii. This has been assessed and confirmed during the site visit and were cross check with the slope raster data of 100 m submitted /74/.
Scenario v	This scenario faces financial barriers. Yayasan Sabah’s objective is to promote economic opportunities for the people of Sabah and converting the area to a protected forest would generate no income, therefore making it economically and financially less attractive than the other land use scenarios without the revenue from the sale of GHG credits.

Sub-step 3b. Show that the identified barriers would not prevent the implementation of at least one of the alternative land use scenarios

Scenario iv	It would allow to overcome the barriers associated with scenarios ii. And iii. In this scenario, Natural Forest Management and the Mosaic Planting Approach would be combined to allow for optimal commercial use of the forest in the project area. There are no barriers preventing this scenario from occurring and therefore scenario iv. (Combination of Natural Forest Management and the Mosaic Planting Approach) is considered as the most likely baseline scenario for this project
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From overall analysis by applying the said tool and as detailed in section 3.3.5 below, scenario iv i.e., Combination of Natural Forest Management (NFM) and the Mosaic Planting Approach is the most likely baseline scenario for this project.

Step 6.2 – Modeling the baseline scenario: PP has selected the common practice baseline scenario model for demonstration of baseline scenario of the project which is a “Combination of Natural Forest Management (NFM) and the Mosaic Planting Approach”.

Common practice is defined as timber harvest under the legal requirements for forest management and will be determined from a timber harvest plan. To develop the timber harvest, plan the following steps were followed:

- Identification of the reference areas
- Initial stratification of the project area
- Forest inventory to determine the biomass per hectare potentially available for harvest:
- Division of the harvestable forest into annual operating areas in the different strata based on common practice
- Design of the forestry infrastructure needed to harvest, skid/haul, store and move harvested timber products from the land parcels to downstream processing or market entry points.

Identification of the reference areas: To ensure that the reference area includes the combination of the different forest management practices in the baseline scenario, the reference area of local common practice for timber harvest was split to represent both the management practices.

- For the mosaic planting approach, the reference area consists of 3 areas within the greater YSFMA which each have their own management plan (as mentioned above in section 3.3.3 of the report)
- For the common practice in NFM, the reference area consists of the Ulu Segama Forest Reserve. This area encompasses approximately 1272 km² within the YSFMA (as mentioned above in section 3.3.3 of the report)

The slope, elevation, vegetation classes and boundaries same has been identified during the site visit as well as checking the boundaries shapefiles of reference areas and raster data /25/. It was concluded that the aspects and information mentioned in the PD/1/ regarding the reference areas are fine.

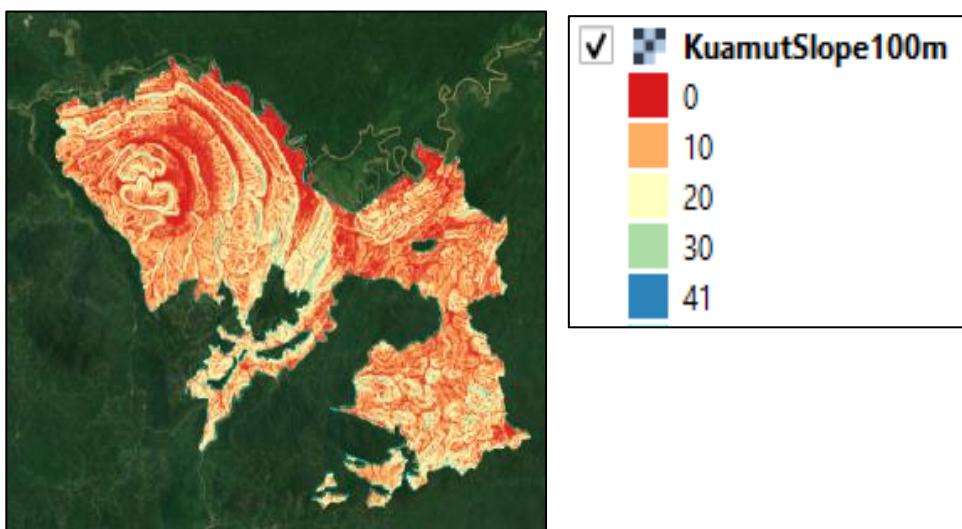


Figure 1: Slope map Kumaut Project area

Initial stratification: As mentioned in this section and the additionality section that the baseline scenario is a combination of NFM and mosaic planting approach. Some of the areas are inoperable

The project area has therefore been divided in different baseline strata to reflect the different management practices under the baseline and the differences in existing vegetation. The following strata have been defined:

Stratum 1 – Inoperable: this stratum includes the area that would not have been subjected to any type of harvesting including Riverine Buffers, Protected Area Buffers, and steep slopes. Stratum 1 (figure 22 in the PD /1/) has been verified with the spatial dataset road, river and location of protected area refer figure below. The protected area database from IUCN /94/ is reference to identify the protected area boundaries

Stratum 2 – Natural Forest Management concessions: this stratum includes the areas that would have been subjected to continued selective logging (Natural Forest Management)

Stratum 3: Natural Forest Management within the Mosaic Planting areas: this includes the areas within the Mosaic Planting areas where patches of natural forest are left that are then subject to selective logging. These patches are usually located on steeper slopes. This stratum is different from stratum 2 because the cutting limit differs between the Natural Forest management and Mosaic Planting practices.

Stratum 4: Area within the Mosaic Planting areas subject to timber harvesting and planting: this stratum includes the parts of the Mosaic Planting areas that would have been subject to timber harvesting and clearing, followed by planting of fast-growing species.

It is to be noted that the calculation of GHG emission reductions and removals were carried out in R software. PP has submitted all the R files for the assessment. VVB carried out the assessment of R files through following steps:

- All the R files were run to check the coding.
- Errors in the R files, wherever identified, were communicated to PP for clarifications.
- Equations applied in the R coding were checked in line to the methodology and tool
- All the generated maps were checked by GIS expert and all the calculation was checked by the validation team

Forest inventory to determine the biomass per hectare potentially available for harvest: The timber harvest plans for both the Mosaic Planting and NFM areas are based on 1) a detailed forest inventory using field plots and 2) airborne LiDAR data. The steps are clearly defined in section 3.1.4 of the methodology. VVB checked the TCH maps, and it was found that each field plot was geolocated in the TCH maps. The tree canopy height data has been presented in figure 27 of the PD/1/ has been verified with the High-resolution Tree Canopy height data submitted by the PP /47/, the tree canopy ranges lie from 0 to 50m. This tree canopy height data has been further varied with the GEDI /52/ data

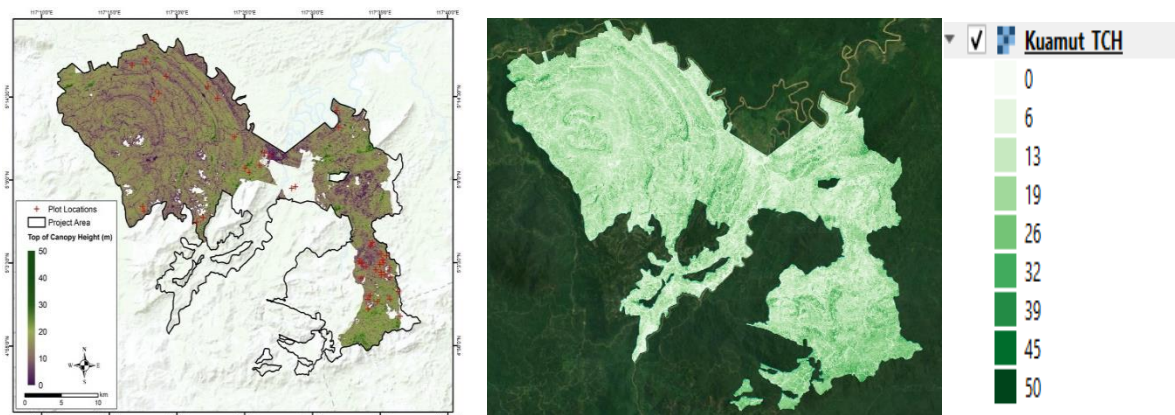


Figure 2: TCH validation

To verify the relation between the merchantable volume derived from the inventory plot and Tree Canopy height under NFM and Mosaic Planting approach the inventory plot is overlaid with the TCH map to extract the tree canopy height values with along with calculated volume, this helps in verifying the relation presented in the figure 29 and 30 of PDD.

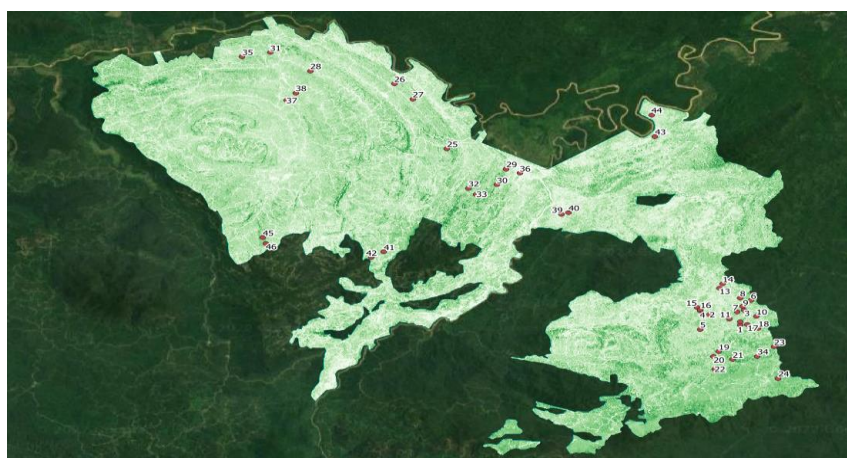


Figure 3: Combining plot data and airborne LiDAR

Division of the harvestable forest into annual operating areas in the different strata based on common practice: To divide the harvestable forest into annual operating areas, it is common practice in Sabah that new permits are based on the logging coupes of previous logging operations. Therefore, the scenario modelling started by collating historical data including the geographic boundaries of the historic logging coupes, and the last year that each logging coupe was logged. Each logging coupe was further subdivided into 31 hectare 'set-ups'. In Sabah setups are small units traditionally harvested by an individual logging team.

For the NFM areas, the timber harvesting plan foresees that NFM areas would experience re-entry logging 10 years after the last logging within the Kuamut reserve which took place in 2014. The analysis of the common practice from the Ulu Segama reference area shows that re-entry usually takes place once there

is sufficient timber volume for an economic cut. For the Mosaic areas, based on the reference areas, the timber harvesting plan assumes that the logging in the areas that will be replanted (often referred to as 'salvage logging') would take 6 years. This is based on the average rate of salvage logging in the management plans of the three reference mosaic areas.

These points were validated during the site visit and reviewing the supporting documents submitted by the PP /77//78/.

Design of the forestry infrastructure needed to harvest, skid/haul, store and move harvested timber products from the land parcels to downstream processing or market entry points: The project will not account for the forestry infrastructure.

Step – 6.3 Stratification: It was checked and confirmed that the modelling of the baseline and the development of the timber harvest plan, PP has used a wall-to-wall high resolution Merchantable Timber Volume map was developed by combining field data and LiDAR Top of Canopy Height data. The availability of wall-to-wall data excludes the need for further stratification beyond the initial strata defined during the modelling of the baseline scenario. The TCH has been presented in figure 27 of the PDD has been verified with the High-resolution Tree Canopy height data submitted by the PP /47/ and the tree canopy ranges lie from 0 to 50m. This tree canopy height data has been further varied with the GEDI data /52/.

CAR 25 was raised and successfully closed, Refer to Appendix IV for details.

3.3.5 Additionality

The project has applied VT0001 Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities, v3.0 /8/ to demonstrate the additionality of the project. The validation assessment against the applicability conditions of the VT0001 /8/ is done as follows:

Step 1. Identification of the alternative scenarios of land use to the proposed VCS AFOLU project activity

Sub-step 1a. Identify credible alternative land use scenarios to the AFOLU project activity

This step includes identifying the credible land-use scenarios for the Project Area and assessing the consistency of each scenario based on local regulations. Five scenarios were analysed which included

- conversion to palm oil plantation,
- continued periodic commercial logging,
- mosaic planting approach,
- combination of commercial logging and mosaic planting approach, and
- protected forest without being registered as the VCS AFOLU project.

Outcome: Based on the analysis, all the identified land use scenarios above are credible. Therefore, all the above listed activities are credible land use scenario and can be implemented.

Sub-step 1b. Consistency of credible land use scenarios with enforced mandatory applicable laws and regulations

Outcome: The consistency analysis done by the PP shows that all the scenarios identified in sub-step 1a. follow mandatory legislation and regulations considering their enforcement in the region or country and EB decisions on national and/or sectoral policies and regulations. VVB has checked all the applicable laws and regulations and found that since the project area was a production forest (Class II) before the start of the project /18/, following scenarios identified in sub-step 1a are legally permissible under the current laws and regulations governing forest areas:

continued periodic commercial logging

mosaic planting approach,

combination of commercial logging and mosaic planting approach

Scenario - **conversion to palm oil** required land use change approval. Yayasan Sabah as the licence holder of the land has been granted permission before to convert forest land into oil palm /19/ and /20/. This conversion is justified by Yayasan Sabah's status as a state sanctioned organisation that was developed to promote economic opportunities for the people of Sabah.

The last scenario - **protected forest** - requires changing the status of the area to legal protected (Class I Protection Forest) and requires a change in the law and cabinet approval.

Therefore, based on the above assessment, checking the supporting documents /15//16//18//19//20//21/69//81/ and /77/, the outcome of sub-step 1.b includes all the scenarios identified in the outcome of sub-step 1a as plausible alternative land use scenarios to the VCS AFOLU project activity follow mandatory legislation and regulations taking into account their enforcement in the region or country and EB decisions on national and/or sectoral policies and regulations.

Sub-step 1c. Selection of the baseline scenario

Explained in section 3.3.4 above.

From overall analysis by applying the said tool and as detailed in section 3.3.5 below, scenario iv i.e., Combination of Natural Forest Management (NFM) and the Mosaic Planting Approach is the most likely baseline scenario for this project. Section 3.3.4 of this report and section 3.1.4 of the validated PD detailed out the approach take to identify the most plausible baseline scenario. And from the assessment it is confirmed that the most plausible baseline scenario has been assessed by a stepwise approach following the applied additionality tool VT0001 V03. And Step 2 is proceeded.

Step 2. Investment analysis

The purpose of this step is to determine whether the proposed project activity (scenario v.), without the revenue from the sale of GHG credits is economically or financially less attractive than at least one of the other land use scenarios.

In accordance with the tool, if the VCS AFOLU project generates no financial or economic benefits other than VCS related income, then the simple cost analysis (Option I) should be applied. The project activities as described in section 2.1.11 do not generate financial or economic benefits for the project proponents, other than VCS related income. Therefore, the simple cost analysis (Option I) was applied.

Sub-step 2b. – Option I. Apply simple cost analysis

The costs associated with the VCS AFOLU project are documented were submitted /75/. Based on assessment, it was concluded that the project activities produce no financial benefits for the project proponents other than VCS CCB related income.

Step 4. Common practice analysis

As per the “the applied tool of additionality, similar activities are defined as that which are of similar scale, take place in a comparable environment, inter alia, with respect to the regulatory framework and are undertaken in the relevant geographical area, subject to further guidance by the underlying methodology”. Malaysia is a big country, and so far, none of the project has been registered under CDM or VCS under the project category of Improved Forest Management (IFM) with activity type Logged to Protected Forest (LtPF). /95/

The proposed project is not a common practice in the project area. PP has provided detailed projection of the common practice within the YSFMA shows that, in the absence of external financial incentives, only pristine forests were re-gazetted from Class II (Production) to Class I (Protection) Forest Reserves. Further, and without financial incentives, the protection of these forests (i.e. Danum and Maliau) took place almost 20 years before the start of the Project. Other formerly Class II Forest Reserves (e.g. Ulu Segama and Malua) have primarily been protected because of external financial incentives; The project activity, without the prospect of the sale of GHG credits, is therefore not common practice

All the steps are explained in detail in section 3.1.5 of the validated PD.

From the above analysis it is concluded that the project is not viable in BAU scenario, and additional financial support is required to develop, implement, and sustain the project. Hence, the project is additional.

- BAU Scenario – Combination of Natural Forest Management and the Mosaic Planting Approach) is considered as the most likely baseline scenario for this project
- Project scenario – Improved Forest Management (IFM) with activity type Logged to Protected Forest (LtPF) and avoiding loss of forest which could have happened in the BAU scenario.

CAR 24 and 25 were raised and successfully closed, Refer to Appendix IV for details

3.3.6 Methodology Deviations

Not applicable.

3.3.7 Quantification of GHG Emission Reductions and Removals

The assessment of the quantification methods for GHG emission reductions and removals applied in the project has been done in line with the applied methodology VM0010, version 1.3 /7/. The calculation of baseline emission has been carried by PP by using equations given under section 8.1.1 of the methodology /7/. Modelling of the baseline scenario has been done by applying common practice analysis as described in section 3.1.4 of the PD /1/. This has been validated under section 3.3.4 of the validation report.

BASELINE EMISSIONS: GHG Emission Reduction/Removal calculations, including calculation of baseline scenario were carried out in R software and all the R files were submitted by PP for the validation. VVB ran the R files in the Rstudio software to check the calculation and it was found that the R files submitted has carefully documented every step of the analysis, and every segment has detailed description describing the formula used and the corresponding pages in the methodology /7/.

Merchantable volume: The merchantable volumes was estimated through an approach where a detailed forest inventory using field plots was combined with airborne LiDAR data. Aa total of 46 circular 30-meter radius (each 0.28 ha) permanent sample plots (PSPs) plots were set up within the Kuamut area. The taxonomic information was recorded. Biomass was calculated according to equation 4 from Chave et al. (2014). The PP measured diameter and heights, and the estimated wood density. Global Wood Density Database (Chave et al. 2009) was used for the wood density. 1.89 was taken as the BCEF (default values) from 2006 IPCC Guidelines for National Greenhouse Gas Inventories Chapter 4 – Forest Land, Table 4.5 /90/ and 0.47 for CF. The plot level timber volume was derived by summing the timber volume of all trees above the defined cutting limit (40 cm DBH for the NFM areas, and 31 cm DBH for the Mosaic Planting Approach areas).

The field plot data were combined with the high-resolution Top- Of-Canopy height (TCH) map derived from LiDAR. The relationship between the merchantable volume from field plots and the TCH was modelled using a non-linear model. From this high resolution map, the mean volume of extracted merchantable timber per hectare ($V_{Ex,j,i|BSL}$) was estimated.

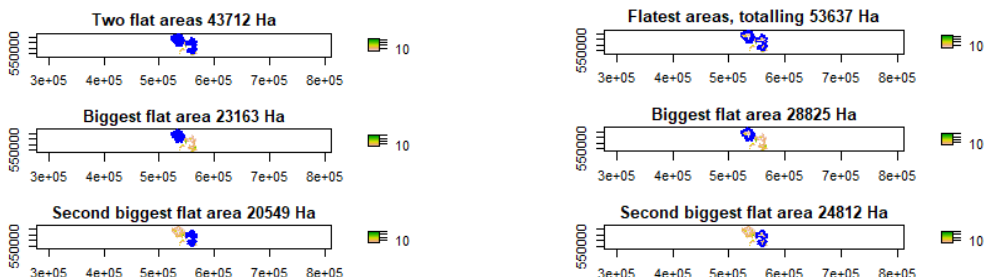
TCH and field data are used to calculate merchantable timber which is then used to calculate carbon stocks as per methodology in PD. The TCH is calculated as the difference from the digital surface model and digital elevation model, as is the standard method with lidar data. The TCH maps were checked. The relationship between the merchantable volume from field plots and the TCH was modelled using a non-linear model and high-resolution merchantable timber volume map was produced.

The R files Kuamut Tree Allometrics and Kuamut tree2plots were reviewed. BCEF and CF taken for calculation are 1.89 and 0.47, respectively. For the calculation, tree level dataset with above ground biomass, above ground carbon and volume estimated for each tree were uploaded in the R file. The code ran returned with output file of plot species list. Individual tree measurement file was then run in the Rstudio which gave the tree level above ground biomass, carbon, and volume. The TCH data has been verified with the High-resolution Tree Canopy height data submitted /47/. This tree canopy height data has been further validated with the GEDI /52/ data and found to be in line with the description and values mentioned in the PD.

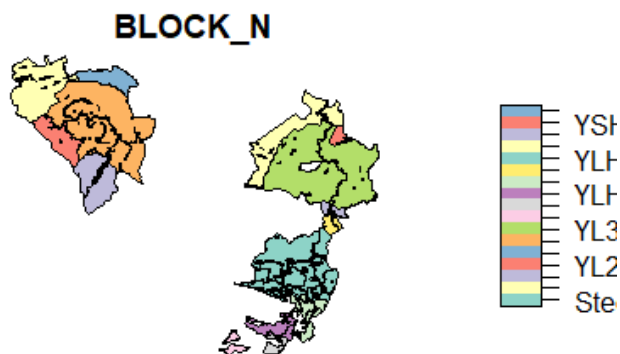
For the calculation of baseline scenario and stratification of the project area, PP has conducted cluster analysis on the slope raster to distinguish between selective logging (Natural Forest Management) and the Mosaic Planting Approach areas. It is to be noted that all the assessment were performed in R software

including emission reduction calculations. The analysis led to generation of shapefiles of two largest contiguous flat areas. The shapefile was produced through R coding in which image of slopes were inserted and read by R. The shapefiles shared for the assessment were checked and found to be fine /25/. The corresponding R code file was also shared and checked by VVB. The outcome of the R files i.e., shapefiles were found accurate and exactly similar as shared by PP. Areas (in ha) were correctly identified and reported in PDD.

The slope analysis file read the project boundaries shapefiles to carry out cluster analysis to contiguous 'flat areas' and 'steep areas'



The analysis showed that flat contiguous areas identified suitable for mosaic. Cluster flat area came out 53,637 ha and mosaic coupes area came out as 46664.18 ha. The R calculation file returned the shapefiles of IFM coupes, Mosaic coupes, Mosaic plant, Mosaic unplanted and No-Go areas.



The R file Annualised calculations_VM0010 v1.3 provided the calculation of baseline scenario greenhouse gas emissions from change in carbon stocks.

Carbon stock of timber harvested per unit area: The carbon stock of timber harvested per hectare was calculated as per the equation 3 of the methodology. In this the mean volume of extracted timber for forestry infrastructure ($V_{EX,INF,j,i|BSL}$) was considered 0 in the calculations. This is a conservative approach taken by the PP as it underestimates the timber extracted, and therefore the carbon removed, in the baseline. As mentioned above .89 was taken as the BCEF (default values) from 2006 IPCC Guidelines for National Greenhouse Gas Inventories Chapter 4 – Forest Land, Table 4.5 /90/ and 0.47 for CF.

The mean carbon stock of the wood removed to markets: The mean carbon stock of the wood removed to markets (extracted timber), is calculated as per equation 4 of the applied methodology. For D_j the value of 0.51 was used which is the average value of the species found in the field plots.

Calculation of dead wood (logging slash) generated in the process of timber harvest: Dead wood (logging slash) generated in the process of timber harvest has been estimated using equation 5 of the applied methodology.

The mean carbon stock in timber from residual stand damage has been estimated using equation 6 of the applied methodology. For FRSD|BSL the value of 1.8 was used. This was calculated based on Pinard and Putz (1996). The project applied this 41% to the extraction rate in the NFM areas. On average this gave a FRSD of 1.8. The same FRSD has been used for stratum 3.

The change in carbon stock in dead wood (ie, logging slash) left on the forest floor: This is calculated using equation 6 of the applied methodology. The establishment of forestry infrastructure has been considered as 0. The total change in carbon stock of dead wood remaining in the forest as a result of harvest under the baseline is estimated in Table 20 of the PD

Calculation of baseline carbon sequestered in wood products: As per the applied methodology the wood products extracted were categorized as following:

- (i) wood products that would decay within 3 years after harvest (ie, the Wood Waste (WW) and the Short-Lived Fraction (SLF)),
- (ii) wood products that are retired between 3 and 100 years after harvest and
- (iii) other wood products that are considered to permanently store carbon.

The Sabah Forestry Department provided on the production of major wood products in Sabah for the period 2015-2020. Based on these data the shares of likely wood products to be produced from the harvested wood have been determined in Table 21 of the PD /1/.

The carbon stock of extracted timber that is immediately emitted to the atmosphere at the time of harvest has been calculated as per equation 9 of the applied methodology. For WW and SLF, the default values given in the methodology were used. For WW, a value of 24% (suitable for developing countries) was used for all types of wood products. For SLF the following values were used.

The amount of extracted carbon stock that is assumed to enter the wood products pool that is not immediately emitted at harvest has been calculated as per equation 10 of the applied methodology.

The carbon stock of wood products assumed to be retired between 3-100 years has been calculated as per equation 11 of the applied methodology /7/. The default value of OF has been taken from the applied methodology.

Change in carbon stocks due to forest regrowth after harvest: The carbon sequestration in the baseline scenario resulting from forest regrowth after timber harvest up to year t is considered equal to the forest regrowth rate of each stratum by the project as directed in the methodology.

The sequestration from regrowth is calculated as per equation 12 of the applied methodology. For stratum 2 and 3, RGRi is assumed to be 1.6 t C ha⁻¹yr⁻¹. For stratum 4, RGRi is estimated as 3.0 t C ha⁻¹yr⁻¹. For this estimation, data from Yahya and Ikau (2015) on DBH, height, age, and planting density were used. In addition, the project has used 0.2955 Mg M³ as the mean wood density for *Paraserianthes* from the global wood density database (Chave 2009, Zanne 2009). For *Neolamarckia* a value of 0.362 from Mahmud et al. (2017). Using these values, Tree-level Above-Ground Biomass (in Mg) was calculated using Eq. 4 in Chave et al. (2014), and assuming an average age of planted individuals of 6.25 years.

The average regrowth rate was estimated from the tree-level AGB based on a feasible planting rate and harvesting 15 years after planting. For the planting rate it was assumed that the entire area would take 30 years to plant, or 1261 hectares per year. Based on the planting density in Yahya and Ikau (2015), this planting rate would require nursery facilities for almost a million seedlings per year. According to the PP this is an ambitious planting rate and results in a conservative overall RGR for the planted areas which was found to be appropriate by the audit team as well.

In estimating the forest regrowth in stratum 4, it was further assumed that there would be no growth between the salvage logging and the planting within the mosaic areas due to the damaging nature of salvage logging. If there was any regrowth during this interlude, not only would it be negligible, but there would also be additional site preparation clearing immediately before planting which was found to be appropriate by the audit team as well.

The overall average growth rate for the area was estimated to be 3.0 t C ha⁻¹yr⁻¹.

Calculation of baseline emissions from the combustion of fossil fuels in forestry and wood processing machinery: The emission has been excluded as a conservative approach and is also in accordance with the applied methodology.

Calculation of baseline scenario greenhouse gas emissions from change in carbon stocks: The net change in carbon stock from wood products and logging slash across all parcels within the 1, 2-10, and 10-20 year of harvest in the baseline is calculated as per equations 23, 24 and 25 respectively of the applied methodology.

The net change (sequestration) in carbon stock due to forest regrowth across all parcels in all years since harvest in the baseline scenario are calculated using equation 26 of the applied methodology.

The net change in carbon stock across all parcels harvested over each year of the project crediting period in the baseline scenario since the start of the project activity is calculated as per equations 27 and 28 of the applied methodology.

The baseline emission calculated is 3,424,835 tCO₂e over the project lifetime.

PROJECT EMISSIONS: GHG Emission Reduction/Removal calculations, including calculation of project scenario were carried out in R software and all the R files were submitted by PP for the validation. VVB ran the R files in the Rstudio software to check the calculation and it was found that the R files submitted has carefully documented every step of the analysis, and every segment has detailed description describing the formula used and the corresponding pages in the methodology /7/.

Ongoing forest growth in the project scenario: The annual AGB in the project scenario has been estimated with the similar method explained above in the baseline emissions quantification. For the ex-ante estimations of the project emissions, the IPCC default value of 1.6 Mg ha⁻¹ yr⁻¹ was used to estimate the ongoing forest growth in the project scenario. However, for ex-post annual carbon stock growth will be estimated using equation 32 of the applied methodology /7/. The same method of validation was used by the VVB to assess the carbon stock measurement reported in the PD as done for the baseline emissions.

Forest disturbance in the project scenario: PP has estimated all fire to non-fire disturbance which can happen in the project area.

Natural disturbance – Fire: Natural disturbance from fire has been estimated using equation 33 of the applied methodology. If any area is subject to a fire disturbance, the aboveground biomass stock present in the project scenario but absent in the baseline scenario before burning will be derived from the high-resolution map and the Aboveground Carbon Density model by applying equation 34.

For the ex-ante estimation, it is assumed by the PP that the area burned is zero as a consequence of the project but this will be monitored during project implementation. NASA FIRMS alerts will be used to monitor any possible fires. Any hotspot inside or surrounding the project area will be checked. The emails alerts from NASA will be converted into text messages with the coordinates of the hotspots that determined field team members will receive on their phones. Remote sensing imagery as close to the fire event as possible will be used to map the burn scars.

Natural Disturbance – Non-Fire: for non-fire natural disturbance, it is assumed that a disturbance event in the project scenario would also have occurred in the baseline scenario. Project emissions are therefore equal to the non-fire natural disturbance to biomass absent in the baseline scenario (harvested and removed) but present in the project scenario. This will be calculated using equation 35 of the applied methodology.

Similar to disturbances by fire, if any area is removed, we will use the carbon value for that specific area based on the high resolution map. The area does not have a history of major disturbance events in the area, therefore for the ex-ante estimation it is assumed that the area disturbed is zero.

Illegal Logging: PP has selected option B sampling for assessment of illegal logging in the project area. Data on the occurrence of disturbances and illegal logging will be derived from the field plots and remote sensing analysis that are part of the monitoring of ongoing forest growth in the project scenario. To ensure sufficient coverage, the project will also use the Global Forest Watch GLAD deforestation alerts. These alerts will be used as a guide for the field team to check specific locations where illegal logging may be happening. They will also be used as a guide to monitor the areas using remote sensing. This will be complemented with an analysis of optical data products (Landsat & Sentinel-2) and Synthetic Aperture Radar (SAR) data that have a proven capability for deforestation detection and some capacity for degradation detection

The proposed project activities are expected to completely prevent illegal logging and therefore for the ex-ante estimation, the area potentially impacted by illegal logging is assumed to be zero.

Net greenhouse gas emissions in the project scenario: The net GHGs is estimated using equations 38 and 39 of the applied methodology.

The project emission calculated is -13,853,006 tCO₂e over the project lifetime.

LEAKAGE EMISSIONS: GHG Emission Reduction/Removal calculations, including calculation of leakage emissions were carried out in R software and all the R files were submitted by PP for the validation. VVB ran the R files in the Rstudio software to check the calculation and it was found that the R files submitted has carefully documented every step of the analysis, and every segment has detailed description describing the formula used and the corresponding pages in the methodology /7/.

PP has considered both activity and market leakage due to the project activities which is in line with the applied methodology.

Activity shifting leakage: For activity leakage, as described earlier the project area is owned by Yayasan Sabah and under the baseline scenario would have been managed by its subsidiary, Rakyat Berjaya Sdn. Bhd. Licences to harvest, through annual coupe permits would have been issued by the Sabah Forestry Department and granted to Rakyat Berjaya Sdn Bhd. The management plans for Yayasan Sabah and Rakyat Berjaya Sdn. Bhd. have not materially changed because of the planned project and neither have the permits issued by the Sabah Forestry Department materially changed.

The audit team has checked the Sabha Timber Production records /81/. The data provided include data on the volume extracted, the area that was harvested, and the logging type (NFM or Salvage logging). Multiple records for each forest reserve were taken. The data analysis shows that there is no material difference between the Timber Volume extracted from the other forest reserves before and after the start of the project activity, therefore there is no evidence of any activity shifting leakage.

Market leakage: This is calculated by applying equation 40 of the methodology. The leakage factor was determined by considering where logging will be increased because of the decreased supply of the timber caused by the project. To estimate the leakage factor, the ratio of merchantable biomass to total biomass was estimated for the NFM stratum (stratum 2) and the combined Mosaic strata (stratum 3 and 4) in the project area (PMPi). PML is calculated individually for each Forest Reserve Logging Type combination. The weighted leakage for the entire project estimated is 0.288.

The leakage emission calculated is 986,352 tCO₂e over the project lifetime.

NET GHG EMISSION REDUCTIONS AND REMOVALS

The net GHG emission reductions and removals has been estimated using equation 41 of the applied methodology. PP has considered the second concession area (approved in 2016) for ERR calculation from 2020 onwards.²

The net emission reductions and removals calculated is 16,291,489 tCO₂e and the average annual net emission reduction estimated is 543,049 tCO₂e over the project lifetime.

² Sabah Forestry Department added an additional 13,927 ha to the Class 1 Forest Reserve

CreditYear	GHG_NET_PRJ	dC_NET_BSL_t	GHG_NET_BSL_yearly	GHG_NET_BSL	GHG_LK	GHG_CREDITS_LtPF
2016	-461766.9	42196.95	154722.15	154722.1	44559.98	571929.1
2017	-923533.8	59443.14	217958.17	372680.3	107331.93	1188882.1
2018	-1385300.6	61344.61	224930.24	597610.6	172111.84	1810799.4
2019	-1847067.5	99516.62	364894.26	962504.8	277201.39	2532371.0
2020	-2308834.4	111666.03	409442.12	1371946.9	395120.72	3285660.6
2021	-2770601.3	119430.42	437911.54	1809858.5	521239.24	4059220.5
2022	-3232368.2	100851.97	369790.54	2179649.0	627738.92	4784278.3
2023	-3694135.0	100851.97	369790.54	2549439.6	734238.59	5509336.0
2024	-4155901.9	120359.43	441317.90	2990757.5	861338.15	6285321.2
2025	-4617668.8	158172.91	579967.32	3570724.8	1028368.74	7160024.9
2026	-5079435.7	129092.71	473339.93	4044064.7	1164690.64	7958809.8
2027	-5541202.6	107444.38	393962.73	4438027.5	1278151.91	8701078.1
2028	-6002969.5	120487.05	441785.86	4879813.3	1405386.23	9477396.5
2029	-6464736.3	43488.96	159459.53	5039272.8	1451310.58	10052698.6
2030	-6926503.2	5372.84	19700.41	5058973.2	1456984.30	10528492.2
2031	-7388270.1	-19147.47	-70207.39	4988765.9	1436764.57	10940271.4
2032	-7850037.0	-4263.61	-15633.23	4973132.6	1432262.20	11390907.4
2033	-8311803.8	2908.52	10664.58	4983797.2	1435333.60	11860267.5
2034	-8773570.7	-4875.04	-17875.14	4965922.1	1430185.55	12309307.2
2035	-9235337.6	-33137.56	-121504.39	4844417.7	1395192.29	12684563.0
2036	-9697104.5	-51017.45	-187063.99	4657353.7	1341317.86	13013140.3
2037	-10158871.4	-70644.10	-259028.38	4398325.3	1266717.69	13290479.0
2038	-10620638.3	-102834.16	-377058.60	4021266.7	1158124.81	13483780.2
2039	-11082405.1	-79561.17	-291724.27	3729542.4	1074108.22	13737839.3
2040	-11544172.0	-37248.91	-136579.34	3592963.1	1034773.37	14102361.7
2041	-12005938.9	-27343.31	-100258.81	3492704.3	1005898.83	14492744.3
2042	-12467705.8	-14246.66	-52237.75	3440466.5	990854.36	14917317.9
2043	-12929472.7	22064.34	80902.57	3521369.1	1014154.30	15436687.5
2044	-13391239.5	-10418.17	-38199.95	3483169.1	1003152.72	15871256.0
2045	-13853006.4	-15909.46	-58334.67	3424834.5	986352.33	16291488.6

Project Verified Carbon Units

Uncertainty: In accordance with the requirements of the methodology, the uncertainties associated with parameters and coefficients have been estimated to determine if an adjustment for uncertainty is required.

All the activity data come from the modeled harvesting plan and the uncertainty associated with those parameters is considered zero since they are not based on measured data. In term of emission factors, the following categories of errors have been identified in relation to the LiDAR-assisted mapping of aboveground carbon: 1) measurements of trees, 2) allometric models 3) LiDAR measurements, 4) errors in predictions outside of field plots to LiDAR-scale and 5) prediction errors outside of LiDAR data and the data used for these outside LiDAR predictions.

Project has considered negligible error due to field measurement of biomass in line with Asner et al (2013). Also, the field measured the first few plots more than once, until measurement errors were negligible. For the allometric models, the field plot data included height measurements of every single tree above 10cm DBH which, in combination with detailed taxonomic information, greatly reduces the error associated with allometric models. In view of the secondary published literature and accuracy in undertaking ground inventory the error of the allometric model was therefore not considered further.

The VCS tool for measuring aboveground live forest biomass using remote sensing (VT0005 version 1.0) notes that 'The use RS (LiDAR, RADAR, hyperspectral/hyperspatial imagery) in combination with a relatively small number field plots and can be used to achieve a statistically valid sample applying this tool. VT0005 highlights that 'statistically, reduced uncertainty is achieved with greater sampling intensity' and for the Kuamut Project area PP have near wall-to-wall mapping with high resolution remote sensing data.

The error from the non-linear models was required to be reproduced to the entire carbon stock (for the project scenario) and for the entire merchantable volume (for the baseline scenario). The project therefore performed a Monte Carlo simulation where we resampled the non-linear model using a non-parametric bootstrap (each for ACD, 31cm Merchantable volume, and 40cm Merchantable volume). The model was developed with 95% confidence intervals. Using the 95% confidence intervals the project calculated the uncertainty for each of the stock maps (ACD for the project scenario, and both merchantable volume stock maps (31cm and 40 cm DBH Merchantable Volume).

The project has propagated the errors using the IPCC simple equation for error propagation /90/ and then the total uncertainty is calculated using the equation 42 of the applied methodology /7/.

The total uncertainty calculated is 0.262% which is smaller than the 15% threshold indicated in the methodology, therefore no deduction for uncertainty is required.

Calculation of verified carbon units: this is calculated using the equation 44 of the applied methodology. An ex-ante estimation of the risks has been performed using the VCS AFOLU Non-Permanence Risk Tool /9/. The assessment shows the risk rating as 10 which is the minimum risks rating to be applied according to the tool. The buffer value calculated over the project lifetime is 1,629,149 tCO₂e.

The total Project Verified Carbon Units calculated is 14,662,342 tCO₂e and average Project Verified Carbon Units calculated is 488,745 tCO₂e till the project lifetime.

The R files submitted carefully documents every step of the analysis, and every segment has detailed description describing the formula used and the corresponding pages in the methodology. VVB confirms that all the estimates of the baseline emissions can be replicated using the data and parameter values provided in the project description. VVB also conclude all relevant assumptions and data are listed in the PD, including their references and sources and all data and parameter values used in the PD are considered reasonable in the project context.

CARs 26, 27, 28, 29 and 30 were raised and successfully closed, Refer to Appendix IV for details.

3.3.8 Monitoring Plan

The monitoring plan in section 3.3.3 of the validate PD is confirmed as designed according to the methodology and VCS CCB template. The project will be managed by Permian Malaysia Sdn. Bhd. And Permian Global will provide technical support in areas such as monitoring, field assessment and other technical aspects related to the carbon accounting, biodiversity surveys and community engagement.

PP in section 3.3.3 of the PD has described the process and schedule for obtaining, recording, compiling and analyzing the monitored data and parameters set out in Section 3.3.2 of the PD /1/. Following details have been included in the PD:

- The methods for measuring, recording, storing, aggregating, collating, and reporting data and parameters.
- The organizational structure, responsibilities and competencies of the personnel that will be carrying out monitoring activities.
- The policies for oversight and accountability of monitoring activities.
- The procedures for internal auditing and QA/QC.
- The procedures for handling non-conformances with the validated monitoring plan.
- Any sampling approaches used, including target precision levels, sample sizes, sample site locations, stratification, and frequency of measurement.

The quality assurance and quality control (QA/QC) systems already in place and was checked by the audit team. The monitoring responsibilities and competencies of each technical staff is mentioned in section 3.3.3 of the PD /1/ and the same was confirmed during the audit site visit. To increase the effectiveness and efficiency of the monitoring practices the monitoring plan incorporates the latest scientific findings and new technologies as they become available.

The Project therefore aims to achieve a target precision level for its monitoring at a 95% confidence interval, +/- 10%. In the case where monitoring does not achieve the target precision requirements, then PP will conduct additional monitoring until the targets are met. As noted in the VCS tool for measuring aboveground live forest biomass using remote sensing (VT0005): 'The use RS (LiDAR, RADAR, hyperspectral/hyperspatial imagery) in combination with a relatively small number field plots and can be used to achieve a statistically valid sample applying this tool. VT0005 highlights that 'statistically, reduced uncertainty is achieved with greater sampling intensity' and for the project area PP will have near wall-to-wall mapping with high resolution remote sensing data. Therefore, no separate target precision level has been set for the sampling approach.

An identification of the parameters to be monitored, and a description of the steps taken to validate the suitability and eligibility of monitoring equipment and procedures, is provided below.

Climate parameters to be monitored

Sl. No.	Data/Parameter	Unit	Description	Determination method
1	$A_{burn,i,t}$	Hectare (ha)	Area burnt in stratum i at time t	LiDAR, Landsat & Sentinel-2 remote sensing data, NASA FIRMS alerts
2	$A_{dist,i,t}$	ha	Area disturbed in stratum i at time t	LiDAR, Landsat & Sentinel-2 remote sensing data in combination with ground truthing
3	$A_{DIST_IL,i}$		Area impacted by illegal logging in stratum i	LiDAR, Landsat & Sentinel-2 remote sensing data in combination with ground truthing
4	$\Delta C_{AB,t PRJ}$	tCO ₂ e	Annual carbon stock change in aboveground biomass of trees in the project scenario	Remeasuring of field plots in combination with remote sensing (LiDAR (airborne and/or satellite), supported with optical and RADAR remote sensing data).
5	$B_{i,t PRJ}$	t d.m.ha ¹	Aboveground biomass stock present in the project scenario but absent in the baseline scenario before burning	Determined using the high-resolution maps and the model that determines the relation between the Aboveground Carbon Density and the TCH
6	$C_{AB,i BSL}$	tC·ha ¹	Carbon stock in aboveground biomass in areas disturbed	Determined using the high-resolution maps and the model that determines the relation between the Aboveground Carbon Density and the TCH
7	$C_{DIST_IL,i,t PRJ}$	tCO ₂ e	Biomass carbon of trees cut and removed through illegal logging	High resolution TCH map in combination with model that determines the relation between the Aboveground Carbon Density and the TCH
8	PMP_i	%	Leakage Factor, merchantable biomass as a proportion of total aboveground tree biomass for stratum i within the project boundaries	Merchantable biomass and aboveground tree biomass are estimated from the forest biomass maps

Based on the assessment done from the monitoring plan mentioned in the PD, the supporting evidence submitted and on-site observations, the audit team confirmed that the monitoring parameters have been included in conformance with the applicable methodology and that the monitoring methods and SOPs are designed using best practices as required by the methodology. The audit team understands that monitoring procedures are described with an appropriate degree of certainty, but with some leeway to allow for decisions to be made according to circumstances that may arise in the future. The audit team confirmed through review of independent sources and interviews with the project team that the remote sensing technology that the project will use for monitoring of carbon stock differences is currently available and are among the best practices to be followed. All monitoring procedures are appropriate to the stated task.

CAR 31 was raised and successfully closed, Refer to Appendix IV for details

3.3.9 Dissemination of Monitoring Plan and Results (CL4.2)

The details are provided in section 3.3.4 of the PD /1/. The complete PD and the verified Monitoring Reports will be disseminated and made publicly available on the internet and this will be communicated to the communities and other stakeholders through other means such as community notice boards as appropriate /76/ in both official and local languages. This has been validated during the site visit and personal interview with the management team of the project.

CAR 32 was raised and successfully closed, Refer to Appendix IV for details

3.3.10 Non-Permanence Risk Analysis

The non-permanence risk report /28/ has been provided by PP, the risk assessment was conducted according to the VCS “AFOLU Non-Permanence Risk Tool”, version 4.0 /9/.

Each risk category was calculated based on the VCS guidance. The information was validated and cross-checked through document review, onsite visits of the project area and interviews conducted.

“The table below describes the assessment of the documentation and data provided for confirming the risk score in each factor (see Appendix I for the list of documents referred)”

Risks	Assessment of the risk factor justification	Risk rating
Internal risks		
Project management (PM)	There will be limited plantation activities in the project area with native species only. The implementation of the project activity prevents encroachment activity. /56//83/ SFD and RBJ manages the project area which includes patrolling, monitoring through satellite imagery of the project area. Project management is done by competent personnel of SFD, RBJ, SEARRP team along with PP. /18/ The monitoring plan was also discussed during site and the roles of each of the entities involved were understood. /15//16/ Furthermore, the project team	Risk rating: -2

	of Permian Malaysia is based in Malaysia with support from Permian Global in the UK. Management team includes individuals with significant experience in AFOLU project design and implementation, carbon accounting and reporting under the VCS Program or other approved GHG programs.	
Financial viability (FV)	The project cash flow breakeven point is greater than 4 and up to 7 years from the current risk assessment, therefore there is no risk involved. VVB has checked the financial analysis records and evidence provided for validation assessment. /30//37/ Funding secured by project is 80% needed to cover the total cash out. Project has available as callable financial resources at least 50% of total cash out before project reaches breakeven	Overall risk rating: -1
Opportunity costs (OC)	The assessment of the financial sheets of the project confirmed that NPV from the most profitable alternative land use activity is expected to be at least 100% more than that associated with project activities. /30//75/ The legal status of the project area is protected area and legal agreement signed by PP for management practices is of 30 years. This was confirmed by reviewing evidence and site visit inspection. Project is protected by legally binding commitment /22//23/ to continue management practices that protect the credited carbon stocks over at least 100 years. /18/	8 is given for the risk factor NPV. For the mitigation measure, Mitigation: Project is protected by legally binding commitment /22//23/ to continue management practices that protect the credited carbon stocks over at least 100 years, -8 is rated. /18/ Overall risk rating: 0
Project longevity (PL)	The project area got legal protection from harvesting activities and falls under Class I forest protected area category which provides full forest protection, and no logging is being carried out in the project area. /20//21//19/	Yayasan Sabah on a 99-year lease agreement with the Sabah Forestry Department (acting on behalf of the State Government of Sabah) has taken the land for project development and implementation. /18/.

		Logging is not permissible in the 99 years of lease agreement. Considering the above Risk rating: 0
Internal risk rating	PM + FV + OC + PL	score is $-2 + -1 + 0 + 0 = -3$ but in accordance with the Tool, total may not be less than zero Internal risk score = 0
External risks		
Land Tenure and Resource Access/ Impacts (LT)	The project area is categorised as Class I forest which is a protected forest type, and this legal status is permanent, the legal agreement of the implementation of management practices in the project area is with PP for at least 30 years. Yayasan Sabah on a 99-year lease arrangement with the Sabah Forestry Department (acting on behalf of the State Government of Sabah) has taken the land for project development and implementation. /18/ The Sabah Forestry Department is the legal land rights-holder of project area. /22//23/ PP has the full authority of designing, developing, and implementing the proposed project in the Project area.	For the risk factor Ownership and resource access/use rights are held by different entity(s) (e.g., land is government owned, and the project proponent holds a lease or concession), risk is rated as 2. However, the mitigation measure in this risk category is that continuation of the implementation of project activity through legally binding commitment, therefore this has been rated -2. Total risk rating: 0
Community engagement (CE)	It was confirmed from the site inspection that no community, community groups or indigenous groups prior to the Project or after the project resides inside the project area. Communities identified were divided into two clusters "Kuamut and Keramuak clusters" which dwells in the vicinity of the project area.	The project includes livelihood activities to improve the well being of the communities /82/, and therefore risk mitigation factor has been scored in the project. Risk rating: -5

Political risk (PC)	PP has calculated governance score from the mean of Governance Scores across the six indicators of the World Bank Institute's Worldwide Governance Indicators	The governance score falls between 0.19 and 0.82, therefore PP has rated this risk as 1. Further, mitigation measures and the inclination of Government of Sabah towards protection of Biodiversity /56/ gives risk mitigation rating -2. Total risk rating: 0 (as the total may be less than zero)
External risk	LT + CE + PC	score is $-0 + -5 + 0 = -5$ but in accordance with the Tool, total may not be less than zero. External score = 0
Natural risks		
Fire (F); Pest and Disease outbreaks (PD)	There is no evidence of fires, pest and disease outbreaks ever occurring in Kuamut. This was confirmed through site inspection and interviews with stakeholders. /14//15//16/	Risk rating: 0
Extreme Weather (W)	Chances of occurrence of extreme weather in Sabah including project location is every 10 to less than 25 years. /55/	Risk rating: 1
Geological risk (G)	Chances of occurrence of small geological events like landslides, earthquakes or volcanoes in Sabah including project location is every 50 to less than 100 years. /55/	Risk rating: 0
Other natural risk (ON)	Through site visit inspection and interview /15//16/ with PP it was confirmed that chances of occurrence of other risks associated with estuarine wetlands is negligible.	Risk rating: 0

Natural risks	F + PD + W + G + ON	Score is 0 + 0 + 1 + 0 + 0 = 1 but in accordance with the Tool
Overall risk rating	Internal risk + external risk + natural risk	0 + 0 + 1 = 1

The calculation has been validated as per the VCS tool applied for the non-permanence risk calculation and it concluded to be appropriate. Overall rating calculated was 1%, however risk value considered is 10%. Since the AFOLU Non-Permanence Risk Tool /7/ requires a minimum risk rating of 10%. Hence, the value considered is as per the applicable tool and a conservative value has been considered for the project. The calculation of total tradable VCUs is done by multiplying the risk factor with the calculated net emission reductions as per the excel calculation sheets. The risk rating should not be used for any other purpose than reserving buffer credits and calculation of VCUs according to the VCS permanence rules. The risk will be reassessed at time of the next verification (section 3.2.13 of VCS Standard v4.3 /2/) as the risk rating may change.

CAR 33 was raised and successfully closed, Refer to Appendix IV for details

3.3.11 Optional Gold Level: Regional Climate Change Scenarios

The description mentioned in section 3.4.1 of the PD/1/ has been checked with the online information available on the government website and published reports of UNFCCC, World Bank and ADB. To assess the impact of climate change in the project area PP has used spatial eco-hydrological model Co\$ting Nature. /100/ The model results were assessed by the VVB and were also cross checked with published data and found that the regional climate change scenario presented by the PP is fine and in line with the published information.

The published report supports the claim of PP that the region faces intensifying temperature, increased rainfall and extreme weather conditions. Overall, the country has experienced increased minimum, mean and maximum air temperatures. The rainfall intensity has also increased. While Malaysia can experience drought, landslides, earthquakes, and storm surges, most of its losses are attributable to flooding. Malaysia's climate also makes the country particularly vulnerable to vector-borne diseases. Malaysia regularly experiences high maximum temperatures, on average experiencing an annual maximum of daily maximums of around 33°C /55/. The project through its increased vegetation cover and helping the biodiversity and community well-being will certainly help in local climate change adaptation and mitigation.

Hence, the project qualifies for the Exceptional Community Benefits Gold Level.

3.3.12 Optional Gold Level: Climate Change Impacts

As explained in section 3.4.2 of the PD /1/, the most pressing issue in the project area is water scarcity, water quality and soil erosion which is exacerbated by climate change impact in the area. The water scarcity is and will directly impact the local people and biodiversity. It is reported that due to climate change Malaysia can experience drought, landslides, earthquakes, and storm surges, most of its losses are attributable to flooding. Forests can play role excess rainwater retention, prevent extreme run-offs and reduce the

damage from flooding. The project area forests are likely to play a climate adaptation role regulating water supplies. If the forest in Kuamut was not protected, droughts downstream the Kinabatangan river could likely be more pronounced and flooding events even larger due to the loss of flow regulation provided by the forest. Therefore, the Kuamut project can help buffer against the likely impact of climate change in terms of water flow, regulation and water stress mitigation. Also, forest areas of Kuamut will help in reducing soil erosion, which means that the water quality flowing downstream from Kuamut would be cleaner compared to water flowing from other areas, therefore resulting in better water quality downstream for water consumption.

VVB validated the PP's claim during the site visit interviews with the PP and local communities and checking the independent published reports /55/.

3.3.13 Optional Gold Level: Measures Needed and Designed for Adaptation

As explained in section 3.3.11 of this report and section 3.4.1 of the PD /1/, the project area is highly vulnerable to climate change and already facing its wrath. The project through its different interventions has planned for climate change mitigation and adaptation. Adaptation will be achieved through strengthening community and biodiversity resilience. PP will be implementing following activities to achieve the adaptation goal:

Forest ecosystem protection and regeneration	The conserved and healthy forest will contribute to a better biodiversity and will act as a buffer against natural hazards. It will also help in regulating water cycle and water retention capacity of the area.
Participatory planning with local communities	The project will integrate community level planning which will be integrated in climate change prediction into a long-term planning process. This will help in identifying risk and vulnerability from the grassroot level and help in designing a better community centric adaptation plan.
Community based business development and microfinance model	The project aims to develop diversifies livelihood for the local people which will help them in better adaptation to climate change vulnerability. This will increase resilience and the availability of the alternative livelihood in case of affected industries.
Improved public health and sanitation work	As mentioned, section 4.2.3 of the PD /1/, the project will improve the access to health care of local communities. This will help in increased community resilience to climate change impacts such as changing or increased pattern of diseases. The project will contribute in improving 62cess and

	quality of water which will directly affect the well-being of local communities
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The measured needed and designed to assist communities and biodiversity to adapt to the probable impacts of climate change are satisfactory. PP has described each project activity and the expected outputs and impacts of the activities identifying the causal relationships that explain how the activities will achieve the project's predicted climate, community, and biodiversity benefits. Hence, the section is in line with requirements of G1.8 of the CCB standard v3.1.

3.4 Community

3.4.1 Descriptions of Communities at Project Start (CM1.1)

Communities' descriptions have been provided by the PP in section 4.1.1 of the validated PD. Based on onsite observation it was concluded that no community, community groups or indigenous groups prior to the Project or after the project resides inside the project area. Communities identified were divided into two clusters "Kuamut and Keramuak clusters" which dwells in the vicinity of the project area (mentioned in section 2.1.6 of the PD). The surveys conducted in the project area and in the nearby areas to assess the socio-economic condition i.e., family income, livelihood, health, education, resources extraction from the project area analyse the impact they have, and they could have on the project area's forests.

The major issues identified are:

- No or very less Accessibility in terms of roads to travel from one to another place
- Lack of access to clean water
- Human-wildlife conflicts
- Progressive decline in productivity and profitability of traditional agriculture and livestock.
- Lack of access to electricity, healthcare, and employment opportunities
- Disagreements over statutory and customary rights like hunting and resource gathering (However, considering the legal ownership documents /18//19//20//21//22/ and /23/of the project area, the project ownership and statutory rights lies with the PP. Also, customary rights to local communities would still be allowed but require permission from SFD (interview SFD). FAR 01 has been raised for the same.

The project aims to have long and short-term impacts on the communities include maintaining road infrastructure for improved accessibility, improved livelihood, health, agricultural practices, clean water, increasing their incomes and promote improvements in professional career.

The information provided in section 4.1.1. are in line with the reference documents like minutes of meetings of the consultations /33//34//26//25/ and /27/, and participatory activities mapping /68/ and site visit interviews with the local communities' representatives, local employees, and PP and Project partners.

3.4.2 Interactions between Communities and Community Groups (CM1.1)

The communities are in regular interaction among each other. Even having different religious beliefs, communities retain a shared history and broader cultural institutions, and there does not appear to be any indication of division or conflict between communities.

From the PP's end there were regular interactions between the communities and the community engagement manager between 2016 and 2019. The gap in community consultation for 2 years has been explained in section 3.2.23 and 3.4.4 of this report. The step has been clearly explained in section 4.1.2 of the PD /1/. Also, there is an intention and ongoing efforts are in place for regular engagement on the side of the PP. hence, the information provided in section 4.1.2 of the PD /1/ is in line with the information provided in reference documents like minutes of meetings of the consultations /33//34//26//25//27/68/ and /68/ and site visit interviews with the local communities' representatives, local employees, PP, and Project partners.

3.4.3 High Conservation Values (CM1.2)

Community well-being high conservation value areas identified in section 4.1.3 of the PD /11/. The same has been discussed and confirmed with the local communities and stakeholders.

CL 04 has been raised and resolved successfully. Refer Appendix IV for the same.

3.4.4 Without-Project Scenario: Community (CM1.3)

This has been described in section 4.1.4 of the PD /1/ and the same was confirmed during the site visit and documentations review. The PP claim is valid that the BAU scenario would involve a continuation of current conditions in the Project Zone, including those which constitute significant challenges for communities and community groups: such as limited access to clean water, no or poor road access, limited access to markets for agricultural and other produce, and limited options for employment and career development amongst youths. Also, in the Project area BAU scenario involves the continuation of commercial logging operations, with significant land clearance for mosaic planting. This would have negatively impacted the communities especially on water quality and impacted the fish stock. There would have been no scope of road infrastructure improvement and livelihood diversification. The human-wildlife conflict would have been further worsened, as wildlife is increasingly displaced by mosaic clearance.

CL 05 has been raised and resolved successfully. Refer Appendix IV for the same.

3.4.5 Expected Community Impacts (CM2.1)

The audit team took the following steps to verify the reported impacts of project activities on identified community group.

- The VVB reviewed Section 4.2.1 of the PD and confirmed it includes a detailed assessment of expected community impacts on the well-being of communities, including all constituent socio-economic or cultural groups under the with and without project scenario.
- The indicators, impacts and change in well-being is clearly described in the PD, which allow easy assessment of project's community risks and benefits for the auditor and public.

- Based on on-site assessment, the audit team interviewed local community members who confirmed that the assumptions in the model with regard to community impacts, were discussed and explained to them and are a result of the continuous consultations process from 2016 – 2019. The PD includes a detailed breakdown of anticipated impacts including costs, risks and benefits by communities and shows the result to be net positive for all, therefore meeting the requirements of the CCB and VCS requirements.

However, the audit team found that the project has not been developed in line with CCB G5 requirements, since the socioeconomic assessment and communities' engagement started after the project start date. However, Validation body finds that the recent consultations and socioeconomic engagement exercises carried out by PP is in line with footnote 45 of CCB standard v3.1 which says "Where conformance with the Climate, Community & Biodiversity Standards is being applied to a project already under implementation, project proponents must either provide documentation of appropriate consultations during the project design phase or demonstrate how more recent consultations have been effective in evaluating community benefits and adapting project design and implementation to optimize community and other stakeholder benefits and respect local customs". It was assessed that the PP has tried to engage and communicate to the stakeholders as much as possible and stakeholder access to the project information, costs, benefits, risks, and third-party requirements were clearly communicated as discussed from sections 3.2.18 – 3.2.22 of this report. It was also assessed that from 2019 – 2020 there was travel restrictions related to COVID-19, and most communities have isolated themselves and disallowed entry to non-community members and hence PP has limited access to the communities. Due to the fact again the community engagement process was disturbed. However, as discussed with the local stakeholders and interviews with PP, the project aims to re-establish the engagement with the communities once the pandemic restrictions were lifted and the safety conditions for the team and the communities are improved. The annual plan /54/ submitted by PP has detailed out the stakeholder engagement process. FAR 01 has been raised for the same.

The assessment made by the supporting documents /33//34//26//25/ and /27/, PRAs report /68/ and site visit interviews confirms the above. The project will have positive impacts on the communities if implemented in line with the communicated intentions and strategies.

3.4.6 Negative Community Impact Mitigation (CM2.2)

The negative impact of the project on the local communities are the stopping of customary rights like resource extraction, fisheries, and hunting. Based on interviews with the PPs and local communities' representative, the legal customary rights like extraction of wild plants and fisheries from the project area will be allowed and the discussions regarding the same are ongoing. However, the only issue is with hunting, which is an illegal activity as well (as per the Malaysian regulations and law). Stopping hunting is a complex issue and one which PP is undertaking especial tact and care when discussing hunting with communities during ongoing dialogues. Also, PP is seeking to provide education in both biodiversity conservation and the relevant state legislation.

This was discussed during the site visit, and it was found that the dialogue to resolve the above issues are ongoing and will be addressed where both the parties come to an agreement. In section 2.3.8 and section 2.5.1 of the PD /1/, PP has clearly stated that "any customary rights of the local communities will be respected through the project implementation which can be confirmed at each verification period". FAR 01 has been raised for the same.

3.4.7 Net Positive Community Well-Being (CM2.3, GL1.4)

The step is explained in section 4.2.3 of the PD. The PD states that the project will generate positive community impacts through improving and introducing the following:

- Tourism
- Agricultural practices
- Handicrafts

Based on the above activities prioritized and selected by the communities, PP has planned future activities largely along the lines of these thematic groupings, or their subsets.

Descriptions in PD has been checked, it is verified that the information on the community groups in baseline scenario is fine through checking the socioeconomic survey report /33/, Participatory mapping /68/ and onsite observations and discussions with the local stakeholders of the project.

3.4.8 High Conservation Values Protected (CM2.4)

Project Area has been designated as a Class I Forest Reserve /20/ and /21/ under the 1968 Forest Enactment it now has the status of a Protected Area under state law. The HCVs related to community well-being will not be negatively affected by the project; on the contrary, only positive impacts are expected. The project is designed to protect and conserve these areas from misuse, enhance community understanding of their value and to improve overall community well-being.

3.4.9 Impacts on Other Stakeholders (CM3.1)

This is explained in detail in section 4.3.1 of the validated PD. The project is designed to generate only positive impacts to the stakeholders living in the LMA and other near-by communities. The negative plausible impacts and mitigation on local communities has been discussed in sections 3.4.6 and 3.4.10 of this report. Apart from local communities, the primary non-community stakeholders are the Sabah Forestry Department and Yayasan Sabah (via its subsidiary body Rakyat Berjaya). By reclassifying the Kuamut forest reserve as a Class I Protection Forest, both entities are foregoing potential future revenues from continued logging operations and mosaic planting. They thus bear some opportunity costs by engaging with the project and may stand to lose a portion of their incomes if the project is unsuccessful.

Conversely, with a successful project both the Sabah Forestry Department and Yayasan Sabah may make good financial returns and will have the reputational benefits of contributing to the conservation of the state's biodiversity and participating in a pioneering model of conservation management through the enhancement of ecosystem services whilst enhancing the livelihoods of indigenous communities.

This was cross checked and confirmed during the site visit observations and interviews.

3.4.10 Mitigation of Negative Impacts on Other Stakeholders (CM3.2)

As discussed in section 3.4.6 above, PP is undertaking special tact and care when discussing the plausible negative community impacts during ongoing dialogues. Also, PP is seeking to provide education in both

biodiversity conservation and the relevant state legislation. The grievance handling mechanism to resolve any issues and concerns is well established by the PP and communities are aware of it.

3.4.11 Net Impacts on Other Stakeholders (CM3.3)

As discussed above, in the project scenario local as well as other stakeholders will have positive economic, social as well as environmental impacts. Mitigation strategies and resolutions are already under discussions for the expected negative impact discussed in section 3.4.7 of this report and 4.2.2 of the PD /1/. Descriptions in PD has been checked, it is validated that the information on the community groups in baseline scenario is satisfactory based on supporting documents and site visit observations.

3.4.12 Community Monitoring Plan (CM4.1, CM4.2, GL1.4, GL2.2, GL2.3, GL2.5)

The PP mentioned a detailed community monitoring plan in section 4.4.1 of the validated PD.

The VVB has assessed the monitoring plan /82/ and found that monitoring indicators are confirmed as consistent with the net positive change which created by the project. The plan mentioned in the PD is satisfactory to track the social and economic changes and impacts on the communities.

PP has identified the community variables to be monitored, community groups and other stakeholders to be monitored, the types and methods of measurements, and the frequency of monitoring and reporting. As discussed during interviews with the PP, the HCVs identified in section 4.1.3 of the PD will also be monitored and tracked regularly.

Community parameters to be monitored

Sl. No.	Data/Parameter	Unit	Description	Determination method
1	Training	Number (n)	Implementation of Work plan Training at least 500 people; 300 women, in 5-years	The PP will use the following method to evaluate the outcome: • Evident base, success story • Activities report and feedback • Database of participants who active and no-active in implementing their new practices. • Monitoring and evaluation report

2	Sustainable livelihood	Number (n)	Implementation of Work plan Livelihood improvement the project area. Involving 1,000 people (50% women)	The PP will use the following method to evaluate the outcome: - Evident base, success story Activities report and feedback - Monitoring and evaluation report
3	Health improvement	Number (n)	Implementation of Work plan Procedure for education support. Involving 1000 people (50% women).	The PP will use the following method to evaluate the outcome: - Evident base, success story - Activities report and feedback, consist of participant list based on sex and ages. - Monitoring and evaluation report
4	Quality of education	Number (n)	Implementation of Work plan Procedure for education support. Involving 100 people (50% women and girls).	The PP will use the following method to evaluate the outcome: - Evident base, success story - Activities report and feedback, consist of participant list based on sex and ages. - Monitoring and evaluation report
5	Water quality		Implementation of Work plan Procedure for education support. Involving 1000 people (50% women).	The PP will use the following method to evaluate the outcome: Evident base, success story

				- Activities report and feedback - Monitoring and evaluation report
6	Well-Being	Number (n)	Implementation of Work plan Procedure for education support. Involving 1500 people (50% women).	The PP will use the following method to evaluate the outcome: - Evident base, success story - Activities report and feedback - Monitoring and evaluation report
7	Tourism		Implementation of Work plan River-based tourism focuses on sites of biocultural significance, especially in Kuamut	The PP will use the following method to evaluate the outcome: - Evident base, success story - Activities report and feedback, consist of participant list based on sex and ages. - Monitoring and evaluation report
8	Handicraft	Number (n)	Implementation of Work plan Training and capacity building value-added, access to markets and marketing of their products.	The PP will use the following method to evaluate the outcome: - Evident base, success story - Activities report and feedback, consist of participant list based on sex and ages.

				Monitoring and evaluation report
9	Agriculture	Number (n)	Implementation of Work plan Technical and infrastructural assistance with developing various forms of sustainable subsistence and commercial agriculture, especially in Keramuak	The PP will use the following method to evaluate the outcome: - Evident base, success story - Activities report and feedback, consist of participant list based on sex and ages. - Monitoring and evaluation report
10	Employment	Number (n)	Implementation of Work plan Direct employment for at least 50 people (50% women), and ages.	The PP will use the following method to evaluate the outcome: - Evident base, success story - Activities report and feedback, consist of participant list based on sex and ages. - Monitoring and evaluation report

As per the community monitoring plan developed by the PP and measures planned to monitor and evaluate are satisfactory and are sufficient to report the outcome of the activities. Also, the monitoring plan aims at creating an association and mutual responsibility sense between the project and local communities in the management of social environmental impacts, as well as improving the perception of the social responsibility adopted by the project. The monitoring survey will be conducted as per the monitoring plan. This was confirmed during the on-site visit and the interview with the management team.

CAR 43 was raised and resolved successfully. Refer Appendix IV for the same.

3.4.13 Monitoring Plan Dissemination (CM4.3)

The structure of community monitoring has been explained in section 4.4.1 of the PD /1/. The discussions regarding the monitoring plan and dissemination process with the communities will be held and once it is confirmed by both the parties, the dissemination plan will be reported.

CAR 43 was raised and resolved successfully. Refer Appendix IV for the same

3.4.14 Optional Gold Level: Exceptional Community Criteria

The description mentioned in section 4.5.1 of the PD/1/ has been checked with the online information available on the government website and published reports of world bank and ADB. And it was found that the project area is in a low human development area of Malaysia. Sabah the State of Malaysia in which the project area falls has the highest poverty rate 25.3%. /96//97/ The State also has the highest unemployment rate. /99/ From the survey reports /27/ and on-site interviews of local people it was assessed that more than 50% of households are below the national poverty line (of approximately US\$ 4.00 (2011 PPP) per person per day, and has not increased in real terms since 1977) /98/ – a situation that has exacerbated by the pandemic.

Hence, the project qualifies for the Exceptional Community Benefits Gold Level.

CAR 42 was raised and resolved successfully. Refer Appendix IV for the same.

3.4.15 Optional Gold Level: Short-term and Long-term Community Benefits

For the category PP claims the following:

- Provision of piped, clean water: the PP has claimed that within 18 months of becoming operational, the project will install either a gravity fed or pumped water system.
- Agricultural advice & support: the project will be providing knowledge and awareness regarding diversification of agricultural activities. PP claims that Project support could include purchase of high-quality crop seeds and planting material, establishing processing facilities and support with marketing and distribution – particularly of processed products.
- Direct community engagement on the project: plantation activities like production of seedlings and tourism will support in livelihood generation.
- Healthcare training & support (including emergency first aid): The project intends to support a healthcare-focussed education programme – with a particular emphasis on emergency first aid
- Installation of solar power systems: Through the first five years of the project, the project to phase-out diesel power generation and to replace this with solar power – leaving diesel generators for back-up and emergency use only. The project will also explore the potential to supplement solar power with other low-carbon power generation methods, including micro-hydro systems and solid-waste gasifiers.

During the audit it was found that though the activities mentioned above were discussed with the communities. However, none of the of the activities have been implemented on ground due to issues discussed sections 3.4.5 and 3.2.23 of this report. FAR 02 has been raised for the same.

CL 06 has been raised and resolved successfully. Refer Appendix IV for the same.

3.4.16 Optional Gold Level: Community Participation Risks

So far, the project through a participatory process has identified risks for the community members to participate in the project. In section. In section 4.5.3 PP has listed the participation risks and has also describes trade-offs and the measures taken to manage the identified risks. Reference documents like minutes of meetings of the consultations /33//34//26//25//68/ and /27/ and site visit interviews with the local communities' representatives, local employees, and PPs verified the same.

3.4.17 Optional Gold Level: Marginalized and/or Vulnerable Community Groups

PP has identified women of both the communities' clusters as marginalized community groups that the project is engaging with. The project is expected to positively impact 500 women. Barriers for assessing the benefits and expected benefits has been clearly mentioned in section 4.5.4 of the PD /1/. No negative impact is expected. Reference documents like minutes of meetings of the consultations /33//34//26//25//68/ and /27/ and site visit interviews with the local communities' representatives, local employees, and PPs verified the same.

3.4.18 Optional Gold Level: Net Impacts on Women

The net impact on women who are also identified as the marginalized community group are expected to have net positive impacts. The same has been clearly defined in sections 4.5.4 and 4.5.5 of the PD /1/. Reference documents like minutes of meetings of the consultations /33//34//26//25/ and /27/, PRAs report /68/ and site visit interviews with the local communities' representatives, local employees, and PPs confirmed the same.

3.4.19 Optional Gold Level: Benefit Sharing Mechanisms

Though there are several consultations conducted in the project area. Risks, costs, and benefits of the project has also been discussed with the communities. However, due to the constraints mentioned in section 2.3.3 of the PD section 3.2.23 and 3.4.5 of this report, benefit sharing mechanism development and finalization is still under process and will be completed soon. FAR 03 has been raised for the same.

3.4.20 Optional Gold Level: Benefits, Costs, and Risks Communication

Community costs, risks and benefits are described in sections 2.3.4 and 4.5.7 of the validated PD /1/. This information was passed more communities in the stakeholder meetings carried out in 2016 and 2017. These discussions were also part of the participatory mapping /68/ community workshops /31/ and socioeconomic surveys /33/ conducted with the stakeholders. During the site visit interviews with the local communities, it was assessed that the ability of the community to understand the information related to the project idea and cost, risks and benefits associated with the project was very clear.

Validation team finds that the PP has taken satisfactory measures to provide the information about community costs, risks and benefits to the stakeholders and ensure their full participation in the project development and implementation process.

3.4.21 Optional Gold Level: Governance and Implementation Structures

The project governance structure implied for the project implementation will also be used for community activities governance and implementation. The PP has also planned the involvement of the communities in the project activities implemented in the project zone which will be based on an inclusive approach to ensure effective participation of all community members. The community involvement is still under discussion and will be implemented soon. This was confirmed during the site visit interviews conducted by the audit team.

3.4.22 Optional Gold Level: Smallholders/Community Members Capacity Development

The capacity development plan has already been designed /54/. However, there has been no capacity development activities conducted so far due to the constraints mentioned in section 2.3.3 of the PD section 3.2.23 and 3.4.5 of this report.

3.5 Biodiversity

3.5.1 Existing Conditions (B1.1)

The Project has a primary focus of preserving forest which was designated as Class II area (most of the project area, which is verified by cross checking survey /40//58//70/ and /49/ and ecological report /38/, on-site observation and interview with local officers and residents) in the project area that is a critical region within the global terrestrial ecoregion “Borneo lowland rain forests”. The project area is in the State of Sabah and the biodiversity of Sabah is exceptionally high, helping to earn Malaysia its status as one of 17 mega-diversity countries. /91/ The project area is home to many endemic, vulnerable and endangered populations of flora and fauna. The natural forests of central-eastern Sabah are dominated by dipterocarps, particularly *Parashorea malaanonan* and *P. tomentella* together with *Shorea johorensis* and other *Shorea* species of the *Rubroshorea* group. Between 80 and 90% of large canopy trees belong to the *Depterocarpaceae* with the balance being accounted for mainly by *Koompassia*, *Diospyros* and *Durio* species. In terms of floral diversity, the Sabah Forestry Department’s herbarium records for Kalabakan (a forest reserve to the south of the Project Area) list a total of 892 plant species, of which 44 are classified as Critically Endangered, Endangered or Vulnerable in the IUCN Red List (species listed under these three designations will be considered here Rare, Threatened or Endangered [RTE] species, whose presence in an area invokes HCV 1 status), and 18 are endemic to Borneo.

In the Project area BAU scenario involves the continuation of commercial logging operations, with significant land clearance for mosaic planting. This would have negatively impacted the biodiversity. The logging activities would have resulted into deforestation of forest, forest fragmentation and reduction of ecological habitat. Due to these activities the area will lose many RTE and endemic species of flora and fauna which will cause ecological imbalance. The Project enhance and protects the forestland for the benefit of local communities and forest habitat. Project has created undisturbed forests areas by protection and conservation.

Existing conditions of biodiversity identified in section 5.1.1 of the validated PD /1/. The section provides a complete description with the relevant species of flora and fauna. The Malaysia government, IUCN sources and other scientific research papers referred were crosschecked and assessed by the VVB to confirm the description provided in the PD /1/.

3.5.2 High Conservation Values (B1.2)

The HCVs identified were under two principal components: 1) HCV 1 – Species diversity of RTE floral and faunal species dependent on mature undisturbed forest habitats and HCV 1 – Species diversity of RTE species more tolerant of forest disturbance, and 2) HCV 2 – Landscape level ecosystems Mature and undisturbed mixed dipterocarp forests. These HCVs will be protected by the implementation of project activities. The Malaysia government sources, IUCN sources and other scientific research papers referred were crosschecked and assessed by the VVB to confirm the description provided in the PD /1/.

3.5.3 Without-project Scenario: Biodiversity (B1.3)

This has been clearly described in section 4.1.4 of the PD /1/ and the same was confirmed during the site visit observations & interviews and documentations review /38//40//58//70/ and /49/. The PP claim is reasonable that the BAU scenario would involve a continuation of current conditions in the Project Zone, including those which constitute significant challenges for biodiversity including habitat destruction, increased animal-human conflict and ultimately loss of RTE and endemic species of the project area. Also, in the Project area BAU scenario involves the continuation of commercial logging operations, with significant land clearance for mosaic planting. This would have negatively impacted the biodiversity.

3.5.4 Expected Biodiversity Changes (B2.1)

The expected biodiversity impact of the project is positive and will help the protection and enhancement of biodiversity. The impacts are listed in detail in section 5.2.1 of the validated PD.

This was confirmed by checking and assessing the climate and biodiversity baseline data /41//39//40//70/ and /71/ and interview with local experts and communities.

3.5.5 Mitigation Measures (B2.3)

Mitigation measures as discussed across the PD to conserve and enhance the forests and biodiversity of the project area are consistent with the standard practices and sufficient to achieve the project aim.

This was confirmed by checking and assessing the climate and biodiversity baseline data /41//39//40//70/ and /71/ and interview with local experts and communities.

3.5.6 Net Positive Biodiversity Impacts (B2.2, GL1.4)

The expected biodiversity impact of the project is positive and will help the protection and enhancement of biodiversity. The impacts are listed in detail in sections 5.2.1 and 5.2.3 of the validated PD.

This was confirmed by checking and assessing the climate and biodiversity baseline data /41//39//40//70/ and /71/ and interview with local experts and communities.

3.5.7 High Conservation Values Protected (B2.4)

Checking and assessing the climate and biodiversity baseline data /41//39//40//70/ and /71/ and interview with local experts and communities the VVB concluded that the project will not negatively affect any

biodiversity-related HCVs. The project is committed to the protection of all HCV values present in the Project Area and Project Zone.

3.5.8 Species Used (B2.5)

The degraded parts of the Project Area have the capacity to regenerate naturally under the condition of full protection, and no planting activities are currently envisioned. As of now no new species will introduced. This was confirmed during the site visit interviews and observations.

3.5.9 Impacts of Non-native Species (B2.6)

The project involves improved forest management activities to restore the project area and none of the planned interventions under this project will introduce invasive species or genetically modified organisms. The project will allow natural regeneration and no new species will be planted. This was confirmed during the site visit observations and interviews with the PP, management team and local people.

3.5.10 GMO Exclusion (B2.7)

The project involves improved forest management activities to restore the project area and none of the planned interventions under this project will introduce invasive species or genetically modified organisms. The project will allow natural regeneration and no new species will be planted. This was confirmed during the site visit observations and interviews with the PP, management team and local people.

3.5.11 Inputs Justification (B2.8)

Not applicable.

3.5.12 Waste Products (B2.9)

Not applicable.

3.5.13 Negative Offsite Biodiversity Impacts (B3.1) and Mitigation Measures (B3.2)

The only negative offsite impact identified is hunting activities refocused in other forest reserves outside of Project Zone. PP has provided possible areas /72/ where hunting might shift due to the project activity. However, PP is taking proper mitigation measures to avoid any such negative impact through reduction in overall hunting pressure through livelihood enhancement and education & awareness generation activities. Also, PP is seeking to provide education in both biodiversity conservation and the relevant state legislation.

This was discussed during the site visit, and it was found that the dialogue to resolve the above issues are ongoing and will be addressed where both the parties come to an agreement. FAR 01 has been raised for the same.

3.5.14 Net Offsite Biodiversity Benefits (B3.3)

There is a possibility that hunting activities will be refocused in other forest reserves outside of the Project Zone; e.g., the Deramakot Forest Reserve to the north of the Kuamut village cluster. However, as discussed in section 3.5.13 above PP is taking proper mitigation measures to avoid any such negative impact through reduction in overall hunting pressure through livelihood enhancement and education & awareness

generation activities. Also, PP is seeking to provide education in both biodiversity conservation and the relevant state legislation. Also, for any issues related to ongoing activities, the grievance handling mechanism for community concerns and resolving any issues and concerns is well established by the PP and communities are aware of it.

This was discussed during the site visit, and it was found that the dialogue to resolve the above issues are ongoing and will be addressed where both the parties come to an agreement. FAR 01 has been raised for the same.

3.5.15 Biodiversity Monitoring Plan (B4.1, B4.2, GL1.4, GL3.4)

Biodiversity monitoring plan will be undertaken along with the climate monitoring plan. Apart from forest health monitoring, signs of RTE species (direct sightings, tracks and/or scats) will be documented opportunistically by the field team during monthly surveillance and monitoring activities (see section 3.3.3 of PD /1/), and recorded via data sheets, photographs, and GPS waypoints. The project biodiversity monitoring plan /83/ has been provided for validation. The VVB has assessed the monitoring plan /83/ and found that monitoring indicators are confirmed as consistent with the net positive change which created by the project. The plan mentioned in section 5.4.1 the PD /1/ and in the biodiversity monitoring plan /83/ is satisfactory to track the biodiversity changes and impacts.

Biodiversity parameters to be monitored

Sl. No.	Data/Parameter	Unit	Description	Determination method
1	Number of Orangutan in the project area	Number/year	Number of the critically endangered species through the SOPs developed for field work for protecting the species	The monitoring SOPs procedure will be applied to for Orangutan survey. Field training and capacity building work to carry out the task will be employed by the PP.
2	Fill knowledge gap on use of project area by RTE/HCV species	dimensionless	Increasing awareness and understanding of biodiversity conservation in the project area – with a focus on endangered, critically endangered, endemic and HCV species	Activity implemented to monitor the parameter is Camera trapping, soundscape bioacoustics and Dung beetle-based wildlife monitoring. To use the equipment project will procure required equipment, form and train team, deploy & check camera traps and then manage and analyze data.

3	Secure wide-ranging species and protect the wildlife habitat	ha	Maintain and improve forest extent, quality and integrity to make it suitable for and/or presence of wide-ranging species.	Ground based monitoring through forest inventory combined with remote sensing analysis will be used.
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CAR 43 was raised and resolved successfully. Refer Appendix IV for the same

3.5.16 Biodiversity Monitoring Plan Dissemination (B4.3)

The structure of biodiversity monitoring has been explained in section 5.4.2 of the PD /1/. The biodiversity monitoring plan and monitoring results will be communicated with Project Zone communities concomitantly with discussions on monitoring results.

CAR 43 was raised and resolved successfully. Refer Appendix IV for the same

3.5.17 Optional Gold Level: High Biodiversity Conservation Priority Status

PP has demonstrated the presence of Bornean orangutan (*Pongo pygmeus morio*) species on the IUCN Red List that is critically endangered/92/. It was assessed through secondary literature review and on site observations that the project area is a crucial habitat for Bornean orangutan (*Pongo pygmeus morio*) species. /93/ Hence, it is concluded that the project qualifies for the Exceptional Biodiversity Benefits Gold Level

CAR 40 was raised and successfully closed, Refer to Appendix IV for details

3.5.18 Optional Gold Level: Trigger Species Population Trends

Trigger species are by which an area qualifies as Key Biodiversity Area (KBA). The presence of Bornean orangutan (*Pongo pygmeus morio*) and other RTE species (identified in section 5.5.1 of the validate PD /1/) makes the project area a KBA. The project area is in a critical region within the global terrestrial ecoregion "Borneo lowland rain forests". The project area is in the State of Sabah and the biodiversity of Sabah is exceptionally high, helping to earn Malaysia its status as one of 17 mega-diversity countries. /91/ In section 5.5.2 of the PD, given details of population of Bornean orangutan in the project area at the start of the project and has also described the most likely changes under the without-project land use scenario. PP has also given details measures needed and taken to maintain or enhance the population status of each trigger species in the project zone and to reduce the threats. The details were cross checked and confirmed through secondary literature and on-site records.

4 VALIDATION CONCLUSION

ESPL was contracted by Permian Malaysia Sdn. Bhd. For the project activity “Kuamut Rainforest Conservation Project” in Sabah, Malaysia (VCS project ID: 2609) with regards to the VCS Standard v4.3 and CCB Standard v3.1 requirements and the information provided by the project proponent related to the project design and emission reduction calculation spreadsheets.

A risk-based approach has been followed to perform this validation. During the validation 46 Corrective Action Requests (CARs), and 06 Clarification requests (CLs) were raised and successfully closed. The review of the revised PD versions, the supporting documents and subsequent follow-up discussions provided adequate evidence to conclude the closure of specified CARs and CLs. 03 Forward Action Requests (FARs) were also raised which are required to be addressed before first verification of the project.

No limitations or doubts were identified related to the validation of the project. The conservative approach and methodological choices used in the project design make it very likely that the KRC project will meet the projected emissions reduction & removals, community and biodiversity target. Also, PP has clearly documented the activities planned and the expected results that enabled them to qualify for the Gold Level criteria for climate, community and biodiversity.

ESPL has reviewed the project description documents and emission reductions and removals calculation R files and subsequently carried out site visit interviews to confirm the fulfilment of stated criteria.

The project activity has correctly applied the baseline and monitoring methodology “VM0010 Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, v1.3” which is an approved methodology under the VCS programme and is acceptable under VCS Standard Version 4.3. The baseline has been determined in accordance with the stated approved baseline methodology.

As summary the validation team able to conclude that:

- The project is in line with all relevant host country criteria (Malaysia) and is applied in accordance with the guidelines and requirements of VCS and CCB Standards.
- The project additionality is sufficiently justified in the PD.
- The monitoring plans (climate, community and biodiversity) are transparent and satisfactory and in line with applied baseline and monitoring methodology of VM0010, version 1.3 and all the related tools.
- The calculation formulae and use of parameter for the project emission reductions estimation are transparent and in line with the requirement of the applied methodology. The ex-ante projection of emission reductions given is found to be appropriate, conservative and in line with the requirement. The estimated Emission Reductions during the crediting period by the Project is expected to be 16,291,489 tCO₂e to the atmosphere in the period 30 years of project life.
- The conclusions of this report show that the project, as it was described in the project documentation, is in line with all criteria applicable for the validation as outlined under VCS Standard v4.3 and CCB Standard v1.3

The Project activity is found to be eligible under Sectoral Scope 14. Therefore, ESPL is able to certify that the project meets all relevant requirements of the above-defined criteria and recommend registration of the project activity.

Approved by



Dr. Kaviraj Singh

Date: 11/03/2023

Managing Director

Place: Gurugram, Haryana

Earthood Services Private Limited

APPENDIX I: LIST OF DOCUMENTS REFERRED

Ref no.	Author	Title	Reference to the document	Provider
1.	PP	CCB & VCS Project Description (PD)	Version 3.3 dated 07/03/2023	PP
2	VCS	CCB VCS Project Description template	Version 3.0	Others
3	VCS	VCS Program Guide	Version 4.2	Others
4	VCS	VCS Standard	Version 4.3	Others
5	VCS	VCS Validation and Verification Manual	Version 3.2	Others
6	VCS	VCS Program Definitions	Version 4.2	Others
7	VCS	VM0010 Methodology for Improved Forest Management: Conversion from Logged to Protected Forest	Version 1.3	Others
8	VCS	VT0001 Tool for demonstration and assessment of additionality in VCS AFOLU Project Activities	Version 3.0	Others
9	VCS	AFOLU Non-Permanence Risk Tool	Version 4.0	Others
10	CCB	CCB Program Rules	Version 3.1	Others
11	CCB	CCB Standard	Version 3.1	Others
12	PP	GHG Emission Reduction calculation files		PP
13	PP	GHG Emission Reduction HTML files a) Kuamut Annualised Calculations b) Kuamut Parcel Calculations	-	PP
14	ESPL	On-site photographs taken by the validation team	-	Others
15	ESPL	Audio recordings of interview conducted during on-site visit	-	Others
16	ESPL	On-site audit report	-	Others
17	PP	Management agreement signed between a) Permian Malaysia Sdn. Bhd. b) The State Government of Sabah c) Rakyat Berjaya Sdn. Bhd.	06/08/2021	PP
18	The Government of The State of Sabah	Sustainable Forest Management Licence Agreement (1-million-hectare concession granted to Yayasan Sabah on a 99-year lease arrangement with the Sabah Forestry Department)	10/09/1997	PP
19	Rainforest Trust	Grant agreement 2014-15 to reclassify the 282,000 acre Class 2 Production Forest of Kuamat into a Class I Forest Reserve	31/07/2014	PP
20	The State of Sabah	No. 7 of 2015 (Legal land conversion to protected forest area 69,454 ha)	11/12/2015	PP
21	The State of Sabah	No. 13 of 2016 (Additional legal land conversion to protected forest area 13,927 ha)	08/12/2016	PP

22	Rakyat Berjaya Sdn. Bhd.	Letter of Engagement on Monitoring and Protection signed between Permian Malaysia Sdn. Bhd and Rakyat Berjaya Sdn. Bhd.	06/08/2021	PP
23	PP	Service Agreement signed between a) Permian Malaysia Sdn. Bhd. b) The State Government of Sabah c) Rakyat Berjaya Sdn. Bhd.	06/08/2021	PP
24	PP	Geodetic coordinates of project boundaries	-	PP
25	PP	KML files and project zone maps	-	PP
26	PP	Photographic evidence of participatory mapping carried out by PP	-	PP
27	PP	KRRP household survey datasheet	-	PP
28	PP	Kuamut AFOLU Non-permanence risk assessment report	-	PP
29	VCS	VCS AFOLU Non-Permanence risk report template	-	Others
30	PP	Sabah Kuamut Financial Projections 2022-2041	-	PP
31	PP	Photographic evidence of community workshops and attendance sheets	13/10/2017	PP
32	PP	Copy of brochures distributed in Malay language	-	PP
33	PP	KRC Project Social Baseline Assessment 2017-2019 – Process Report	-	PP
34	PP	Kuamut household survey database	-	PP
35	PP	Staff handbook folder	-	PP
36	PP	Resume of involved project personnel	-	PP
37	PP	Permian Malaysia Sdn. Bhd. Financial Statement and reports 2018, 2019 and 2020	-	PP
38	PP	Training records	-	PP
39	PP	Kuamut carbon field inventory SOP	-	PP
40	PP	Field plot database for biomass calculation	-	PP
41	PP	R files for the calculation of baseline scenario	-	PP
42	PP	R files for the calculated carbon stocks in commercial timber volumes	-	PP
43	PP	R files for the calculation of project scenario	-	PP
44	PP	R files for the calculation of leakage analysis	-	PP
45	PP	R files for calculation of uncertainty analysis	-	PP
46	PP	LiDAR data	-	PP
47	PP	High resolution Top to Canopy Height (TCH) maps	-	PP
48	PP	High Conservation Values (HCV) area maps	-	PP
49	PP	Map of state-wide vegetation classification	-	PP
50	Department of Statistics, Malaysia	Department of Statistics, Malaysia https://www.dosm.gov.my/v1/index.php?r=column3/accordion&menu_id=amZNeW9vTXRydTFwTXAxSmdDL1J4dz09	Last accessed on 20/07/2022	Others
51	Google earth	https://www.google.com/earth	Last accessed on 20/07/2022	Others
52	GEDI Data	https://glad.umd.edu/dataset/gedi	Last accessed on 20/07/2022	Others

53	PP	Request for data from PP to RBJ	1 st September 2015	PP
54	PP	KRC Project Monitoring and Protection Annual Plan 2022	-	PP
55	Different Organizations	Climate Risk Country Profile: Malaysia (2021): The World Bank Group and the Asian Development Bank https://reliefweb.int/attachments/49ce1b95-d60c-3a4d-a518-03c8c0e837ff/climate-risk-country-profile-malaysia.pdf Malaysia National communication 2 UNFCCC https://unfccc.int/sites/default/files/resource/Malaysia%20NC3%20BUR2_final%20high%20res.pdf Climate change Knowledge Portal World Bank https://climateknowledgeportal.worldbank.org/country/malaysia/vulnerability#:~:text=While%20Malaysia%20can%20experience%20drought,vulnerable%20to%20vector%20Dborne%20diseases. Impact of Extreme Drought Climate on Water Security in North Borneo: Case Study of Sabah https://mdpi-res.com/d_attachment/water/water-12-01135/article_deploy/water-12-01135-v2.pdf?version=1587873353 Impacts of and adaptation to climate change on the oil palm in Malaysia: a systematic review https://sci-hub.se/10.1007/s11356-021-15890-3 3 Surprising Ways Water Depends on Healthy Forests https://www.wri.org/insights/3-surprising-ways-water-depends-healthy-forests Trees, forests and water: Cool insights for a hot world https://www.sciencedirect.com/science/article/pii/S0959378017300134	Last accessed on 22/07/2022	Others

56	Sabah Biodiversity Strategy 2012-2022	Sabah Biodiversity strategy 2012-2022 https://sabc.sabah.gov.my/sites/default/files/uploads/attachments/2020-05/Sabah-Biodiversity-Conservation-Strategy.pdf	Last accessed on 20/07/2022	Others
57	PP	SEARRP Procurement Policy	-	PP
58	PP	SEARAPP Grievances Redressal Procedure	-	PP
59	PP	SEARAPP Staff Reimbursement Policy	-	PP
60	PP	SEARAPP Code of Conduct	-	PP
61	PP	SEARAPP Sexual Harassment Policy	-	PP
62	PP	SEARAPP Whistleblowing Policy & Procedure	-	PP
63	PP	SERRAP Guidelines for Employee Conduct	-	PP
64	Law of Malaysia	Laws of Malaysia, Act 4 Employees' Social Security Act 1969 https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/43901/99443/F970138794/MYS43901%202013.pdf	Last accessed on 20/07/2022	Others
65	PP	RBJ Management Description	-	PP
66	Malaysian Law and regulations	Native Customary law 1995 https://sagc.sabah.gov.my/?q=ms/content/native-courts-native-customary-laws-rules-1995 Environment Quality Act, 1974 https://www.env.go.jp/en/recycle/asian_net/Country_Information/Law_Regulation/Malaysia/Malaysia_mal13278.pdf Occupational safety and health act, 1994, Malaysia https://www.ilo.org/dyn/natlex/docs/WBTEXT/47664/65082/E94MYS01.htm#:~:text=An%20Act%20to%20make%20further,and%20for%20matters%20connected%20therewith	Last accessed on 20/07/2022	Others
67	Yayasan Sabah Group	Undertaking of project not under any emission trading scheme	28/03/2022	PP
68	PP	Participatory mapping	-	PP
69	PP	Historical Extraction data and shapefiles	-	PP
70	PP	Flora and Fauna list – survey report KRC project area	-	PP
71	Biodiversity assessment secondary literature	Biodiversity assessment secondary literature: 1. Developing Ecosystem Maps Using Eco-Geological Information for the Sustainable Management of Natural Resources https://www.scirp.org/%28S%28vtj3fa45qm1ean45vvfcz55%29%29/reference/referencespapers.aspx?referenceid=1758663 2. Runoff and Soil Erosion in Selectively-logged Over Forest, Danum Valley Sabah, Malaysia http://tost.unise.org/pdfs/vol4/no4/4x4x449x459.html 3. Biodiversity conservation in multiple-use forest landscapes in Sabah, Malaysia	Last accessed on 20/07/2022	Others

		https://www.my.undp.org/content/malaysia/en/home/operations/projects/environment_and_energy/80468_forestlandscapes.html 4. Aerial Surveys Give New Estimates for Orangutans in Sabah, Malaysia (citation – Acrenaz. Et. Al. PloS Biology, January 2005, Vol. 3, issue 1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC534813/ 5. Changes in Sabah Orungutan population in recent times 2002 – 2017 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6636716/#:~:text=A%20total%20of%2096%2C580%20nests,interval%3A%206%2C815%20to%2015%2C129		
72	PP	Plausible offsite hunting sites shapefiles	-	PP
73	Global Forest Watch Land Use data	https://data.globalforestwatch.org/search?groupIds=f66f01cc104e4fd5adf1f8790a472e85	Last accessed on 20/07/2022	Others
74	PP	Project area Slope raster data	-	PP
75	PP	Simple cost analysis calculation	-	PP
76	Permian Malaysia Sdn. Bhd. Website	https://permianglobal.com/	Last accessed on 20/07/2022	Others
77	Reference area management plan and research paper	1. 10 years forest development Plan 2012-2022 for NFM and mosaic planting approach in an area of 15,000 ha within FMU 16, SG Pinangah Forest Reserve submitted by RBJ 2. 10 years forest development Plan 2003-2023 for NFM and mosaic planting approach in an area of 20,000 ha within FMU 16, SG Pinangah Forest Reserve submitted by RBJ 3. 10 years forest development Plan 2001-2021 for NFM and mosaic planting approach in an area of 5,000 ha within FMU 16, SG Pinangah Forest Reserve submitted by RBJ 4. 10 years forest development Plan 2015-2024 for 14,158 ha within FMU 24, Gunung Rara Forest Reserve submitted by RBJ	-	Others
78	Yahya & AG, 2016	Yahya, A. Z., & AG, A. I. Reforestation with naturally regenerated trees and selected forest plantation species based on mosaic planting approach https://www.researchgate.net/profile/Ahmad-Yahya-3/publication/341313623_REFORESTATION	Last accessed on 20/07/2022	Others

		WITH NATURALLY REGENERATED TREE S AND SELECTED FOREST PLANTATION SPECIES BASED ON MOSAIC PLANTING APPROACH/links/5eba6dcc92851cd50dab6851/REFORESTATION-WITH-NATURALLY-REGENERATED-TREES-AND-SELECTED-FOREST-PLANTATION-SPECIES-BASED-ON-MOSAIC-PLANTING-APPROACH.pdf?origin=publication_detail		
79	Global wood density data	Biomass calculation references https://www.researchgate.net/profile/Javier-Gamarra/publication/277716151_GlobAllomeTree%27s_wood_density_database/links/5c0a87e692851c39ebda296b/GlobAllomeTrees-wood-density-database.pdf?origin=publication_detail	Last accessed on 20/07/2022	Others
80	Chave et al., 2014	Chave, J., Réjou-Méchain, M., Búrquez, A., Chidumayo, E., Colgan, M. S., Delitti, W. B., ... & Vieilledent, G. (2014). Improved allometric models to estimate the aboveground biomass of tropical trees. <i>Global change biology</i> , 20(10), 3177-3190 https://www.researchgate.net/profile/Raphael-Pelissier/publication/262197290_Improved_allometric_models_to_estimate_the_aboveground_biomass_of_tropical_trees/links/59dc84a5a6fdcc1ec8a6fad2/Improved-allometric-models-to-estimate-the-aboveground-biomass-of-tropical-trees.pdf?origin=publication_detail	Last accessed on 20/07/2022	Others
81	PP	Sabah Timber Production 2010 – 2019	-	PP
82	PP	KRC – Community Development Plan	-	PP
83	PP	KRC – Biodiversity Development Plan	-	PP
84	PP	Permian first meeting with Sabah Forestry Department to discuss carbon project development in Sabah	-	PP
85	PP	Initial presentation to Sabah Forestry Department concerning Kuamut	-	PP
86	PP	CV of the managing team members	-	PP
87	Sabah Forestry Department	Undertaking that the project is not under jurisdictional REDD+ programme	30/03/2022	PP
88	VERRA	Kumauat Rainforest Conservation Project https://registry.terra.org/app/projectDetail/VCS/2609	-	Others
89	VERRA	VT0005 Tool for measuring aboveground live forest biomass using remote sensing	Version 1.0	Others

90	IPCC	Chapter 3, 2006 IPCC Guidelines for National Greenhouse Gas Inventories Equation 3.1 https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/1_Volume1/V1_3_Ch3_Uncertainties.pdf	Last accessed on 20/07/2022	Others
91	UNDP	https://www.my.undp.org/content/malaysia/en/home/operations/projects/environment_and_energy/80468_forestlandscapes.html	Last accessed on 20/07/2022	Others
92	IUCN	https://www.iucnredlist.org/species/pdf/7640635/attachment	Last accessed on 20/07/2022	Others
93	Oram et al., 2022	Oram, F., Kapar, M. D., Saharon, A. R., Elahan, H., Segaran, P., Poloi, S., ... & Ancrenaz, M. (2022). "Engaging the Enemy": Orangutan (<i>Pongo pygmaeus morio</i>) Conservation in Human Modified Environments in the Kinabatangan floodplain of Sabah, Malaysian Borneo. International Journal of Primatology, 1-28. https://link.springer.com/article/10.1007/s10764-022-00288-w	Last accessed on 20/07/2022	Others
94	Protected planet	Malaysia https://www.protectedplanet.net/country/MYS	Last accessed on 20/07/2022	Others
95	VERRA	https://registry.verra.org/app/search/VCS/Registered	Last accessed on 20/07/2022	Others
96	Department of Statistics Malaysia Official Portal	https://www.dosm.gov.my/v1/index.php?r=column/cthemByCat&cat=493&bul_id=VTNHRkdiZkFzenBNd1Y1dmg2UUlrZz09&menu_id=amVoWU54UTI0a21NWmdhMjFMMWcyZz09	Last accessed on 20/07/2022	Others
97	Statista	https://www.statista.com/statistics/1196343/poverty-rate-by-state-malaysia/#:~:text=In%202020%2C%20the%20East%20Malaysian,ringgit%20to%202%2C208%20Malaysian%20ringgit.	Last accessed on 20/07/2022	Others
98	World Bank 2020	Malaysia Poverty and Equity Brief – East Asia and Pacific. Available in https://databank.worldbank.org/data/download/poverty/33EF03BB-9722-4AE2-ABC7-AA2972D68AFE/Global_POVEQ_MYS.pdf	Last accessed on 20/07/2022	Others
99	RSIS Working paper	Sabah's unrelenting exclusionary and inclusionary politics Vilashini Somiah & Jose Ricardo Sto. Domingo s. Rajaratnam School of International Studies Singapore 5 May 2021.	Last accessed on 20/07/2022	Others

		https://www.rsis.edu.sg/wp-content/uploads/2021/05/WP334.pdf		
100	Co\$ting Nature	Conservation prioritization and Ecosystem Services mapping with co\$ting nature http://www.policysupport.org/costingnature	Last accessed on 22/07/2022	Others

APPENDIX II: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWERS

Competence Statement			
Name	Shreya Garg		
Country	India		
Education	M.Sc. (Climate Science & Policy), TERI University		
Experience	6 Years +		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS.I.A., AMS.I.C., AMS.I.D., AMS.I.F., AMS.II.D., AMS.II.G., AMS.II.J., AMS.III.AV., AMS.III.BL, ACM0002, ACM0012		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.2, TA 3.1)		
Reviewed by	Shifali Guleria	Date	26/04/2022
Approved by	Deepika Mahala	Date	26/04/2022

Competence Statement	
Name	Michael O'Brien
Education	PhD. (University of Zurich)
Experience	10+ years
Field	Forestry
Approved Roles	
Team Leader	No
Validator	No
Verifier	No
Methodology Expert	YES (VM0007, VM0010, VM0035)
Local expert	No
Financial Expert	No

Technical Reviewer	No		
TA Expert (X.X)	YES (TA 14.1)		
Reviewed by	Shifali Guleria (Quality Manager)	Date	19/07/2022
Approved by	Deepika Mahala (Technical Manager)	Date	19/07/2022

Competence Statement			
Name	Riya Sharma		
Education	M.Sc. Biodiversity & Conservation		
Experience			
Field	Climate Change & Environment		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	NO		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	NO		
Trainee	YES		
Reviewed by	Deepika Mahala (Quality Manager)	Date	19/08/2021
Approved by	Ashok Gautam (Technical Manager)	Date	25/08/2021

Competence Statement	
Name	Vishnu S Panicker
Education	M.Sc (Sustainable Development and Environment Management) B.Sc (Forestry)
Experience	-
Field	Forestry and environment
Approved Roles	
Team Leader	NO
Validator	NO
Verifier	NO
Methodology Expert	NO
Local expert	NO
Financial Expert	NO
Technical Reviewer	NO
TA Expert (X.X)	NO

Trainee	YES		
Reviewed by	Deepika Mahala (Quality Manager)	Date	08/09/2021
Approved by	Ashok Kumar Gautam (Technical Manager)	Date	17/09/2021

Competence Statement			
Name	Kaviraj Singh		
Country	India		
Education	Ph.D. (Environmental Engineering), IIT Delhi Masters (Energy & Environmental), DAVV Indore		
Experience	15 Years +		
Field	Climate Change & Environment		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS-I.D., AMS-II.D., ACM0006, AMS-I.A., AMS-I.C., AMS-II.B., AMS-III.H, ACM0002, ACM0001, AM0080, ACM0018, AM0056		
Local expert	YES (India)		
Financial Expert	YES		
Technical Reviewer	YES		
TA Expert	YES (TA 1.1, TA 1.2, TA 3.1, TA 13.1, TA 13.2)		
Reviewed by	Shreya Garg	Date	12/02/2020
Approved by	Anshika Gupta	Date	12/02/2020

Competence Statement	
Name	Zainab Hassan
Education	M.Sc. Environment Management B.Sc. Zoology (Hons)
Experience	10+ years
Field	Forestry
Approved Roles	
Team Leader	NO
Validator	NO
Verifier	NO
Methodology Expert	NO
Local expert	NO
Financial Expert	NO
Technical Reviewer	NO
TA Expert (X.X)	YES (TA 14.1)

add rows, if necessary			
Reviewed by	Shreya Garg (Quality Manager)	Date	15/12/2020
Approved by	Anshika Gupta (Technical Manager)	Date	15/12/2020

APPENDIX III: ABBREVIATIONS

Abbreviations	Full texts
AFOLU	Agriculture, Forestry and Other Land Use
BE	Baseline Emission
CAR	Corrective Action Request
CCB	Climate Community & Biodiversity
CDM	Clean Development Mechanism
CL	Clarification Request
CO2	Carbon di oxide
CP	Crediting Period
DBH	Diameter at Breast Height
DR	Desk Review
EI	External Individual
ER	Emission Reductions
ESPL	Earthood Services Private Limited
FAR	Forward Action Request
GEDI	Global Ecosystem Dynamics Investigation
GHG	Green House Gas
GPS	Global Positioning System
Ha	Hectares
HCV	High Conservation Value
IFM	Improved Forest Management
ISO	International Organization for Standardization
IR	Internal Resource
KRC	Kuamut Rainforest Conservation
LiDAR	Light Detection and Ranging
MP	Monitoring Period
NGO	Non-Governmental Organization
PD	Project Description
PP	Project Proponent
PSP	Permanent Sample Plots
RADAR	Radio Detection And Ranging
REDD+	Reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks
RS	Remote Sensing
RTE	Rare, Threatened and Endangered
SAR	Synthetic Aperture Radar
SDG	Sustainable Development Goals
SEARRP	South East Asia Rainforest Research Partnership
SOP	Standard Operating Protocol
TCH	Top to Canopy Height
tCO ₂ e	tonnes (t) of carbon dioxide (CO ₂) equivalent (e)

UNFCCC	United Nations Framework Convention on Climate Change
V	Version
VCS	Verified Carbon Standard
VCUs	Verified Carbon Units
VER	Verified Emission Reduction
VVB	Validation and Verification Body
VVS	Validation and Verification Standard

APPENDIX IV: CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS AND FORWARD ACTION REQUESTS

CAR: Corrective Action Request

CL: Clarification Request

FAR: Forward Action Request

Table 1. CL from this verification

CL ID	01	Section no.	3.1	Date : 03/03/2022
Description of CL				
In section 1 "Summary of Project benefit", PP is requested to clarify why protection and conservation of 83,381 ha of forest area has not been considered as a unique benefit of the project which would otherwise have been deforested in the absence of the project activity.				
Project participant response				Date : 22/03/2022
The PD was updated and includes protection and conservation of 83,381 ha of forest area as unique benefit.				
Documentation provided by project participant				
Please see section 1 of the updated PD				
VVB assessment				Date: 04/04/2022
"Outcome or Impact Estimated by the End of Project Lifetime" table under the sub section 1.1 has been revised in the PD version 2.0. The main objective of the project is protection and restoration of 83,381 ha of tropical forest in Sabah, Malaysia, which has been added under section 1.1 unique Project benefits. The section 1.1 of the PD includes project benefits in line with the PD template instructions and therefore CL#01 stands closed.				
CL ID	02	Section no.	3.1	Date : 03/03/2022
Description of CL				

In the section 1.2 “Standardized Benefit Metrics”,

- For category “GHG emission reduction or removal”, the Net estimated emission reduction in the project area measured against the without project scenario is taken for the period 2016-2028 but the project activity is having the period till 2045. PP is requested to clarify why the estimated emission reduction is not done for the whole span of the project activity and this has been found at multiple areas throughout the PDD.
- For category “Health”, PP has mentioned health benefit for the local communities due to implementation of the project activity in section 4 of the PDD while in the table it has been mentioned not applicable. PP is requested to clarify why community benefits has not been listed in spite of providing benefits as per CCB standard in Section 4 of the PDD?
- For category “Education”, PP has mentioned education benefit for the local communities due to implementation of the project activity in section 4 of the PDD while in the table it has been mentioned not applicable. PP is requested to clarify why community benefits has not been listed in spite of providing benefits as per CCB standard in Section 4 of the PDD?
- For category “Biodiversity conservation”, PP is requested to check the number of critically endangered and endangered species listed in accordance with the section 5 of the PDD.

Project participant response

Date : 22/03/2022

- Our analysis of reference areas and common practice gave clear predictions of the expected re-entry logging practices and mosaic planting concession practices over the next 13 years. We understand that under the VCS requirements the baseline will have to be reassessed and renewed after 10 years. We included the full 13 years rather than then 10 until the baseline renewal as this analysis is based on the substantial amount of data (all provided) and is therefore particularly robust. However, we take your point that rougher estimations until 2045 may still be useful as additional reassurance that the project is fully intended to be a long-term project and offer permanent forest protection. We have therefor completed estimations and predictions for GHG accounting until 2045. However, as the VCS rule is to renew the baseline in 10 years, and we will have more up to date data at that time, we believe including this will cause unnecessary confusion to the reader, and we therefor suggest not to include this in the document. If the auditors prefer, we are happy to include the estimations until 2045 if this clarification is insufficient.
- Health indicator now included and made consistent with section 4
- Education indicator now included and made consistent with section 4
- Indicator on ‘Expected number of globally Critically Endangered or Endangered species benefiting from reduced threats’ is changed and made consistent with section 5.1.1

Documentation provided by project participant

- Version 2 of the PD

VVB assessment

Date: 04/04/2022

PP’s response to above raised clarifications were assessed as follows:

- PP must show the ERR estimated till 2045 and hence is requested to include the ERR estimation till the end of the project life. This can be updated during the baseline reassessment. Comment stands open.
- VVB cannot trace the beneficiaries’ number in the referred section or in any other sections of the PD. PP is requested to check and mention the number of beneficiaries in the PD to make it traceable. Comment stands open.
- VVB cannot trace the total number in the referred section or in any other sections of the PD. PP is requested to check and mention the number of women beneficiaries in the PD to make it traceable. Similar other comments are made in the table, please check and make the required corrections. Comment stands open.
- The changes made in the section 5 under category “Biodiversity conservation” were checked and found consistent, therefore this comment is closed.

Since comments a, b, and c are open, CL#02 stands open.

Project participant response

Date : 16/05/2022

a. The PD was updated and now includes estimations until 2045 that we expect will need updated during the baseline renewal b. The following sentence was added in section 4.2.3 in relation to the beneficiaries referred in the health category: "Through project implementation, community members will be allowed to access to the health services established for the project team onsite, initially offered to the communities to the Kuamut river, involving 914 people from which at least 50% are women." c. The following sentence was added in section 4.2.3 in relation to the beneficiaries referred in Education category: "...the Kuamut Project aims to support the local government's efforts to improve the quality of basic education and the number of enrolment and encourage the youth to pursue higher education to at least 100 students from which 50% should be women."	
Documentation provided by project participant	
PD version 3	
VVB assessment	Date: 06/06/2022
All the findings have been addressed by PP and therefore CL#02 stands closed.	

CL ID	03	Section no.	3.1	Date : 03/03/2022
Description of CL				
As per the information given in the page no. 2 of the PDD, the project lifetime is 11/12/2015 to 01/12/2045 and the GHG Accounting period is 11/12/2015 to 01/12/2045. In section 2.1.17 "Estimated GHG Emission Reductions or Removals", a. PP is requested to clarify why only 13 years of estimation has been mentioned when the project activity is total of 30 years. b. PP is requested to submit a final ER sheet to check the ER calculation as commented in section 3.2.4 of the PD				
Project participant response				Date : 22/03/2022
a. Our analysis of reference areas and common practice gave clear predictions of the expected re-entry logging practices and mosaic planting concession practices over the next 13 years. We understand that under the VCS requirements the baseline will have to be reassessed and renewed after 10 years. We included the full 13 years rather than then 10 until the baseline renewal as this analysis is based on the substantial amount of data (all provided) and is therefore particularly robust. However we take your point that rougher estimations until 2045 may still be useful as additional reassurance that the project in fully intended to be a long term project and offer permanent forest protection. We have therefor completed estimations and predictions for GHG accounting until 2045. However, as the VCS rule is to renew the baseline in 10 years, and we will have more up to date data at that time, we believe including this will cause unnecessary confusion to the reader, and we therefor suggest not to include this in the document. If the auditors prefer, we are happy to include the estimations until 2045 if this clarification is insufficient. b. R files were submitted instead of Excel that contain all the calculations				
Documentation provided by project participant				
R files were provided				
VVB assessment				Date: 04/04/2022
a. PP must show the ERR estimated till 2045 and hence is requested to include the ERR estimation till the end of the project life. This can be updated during the baseline reassessment. Comment stands open. b. VVB need to validate all the calculation and make the assessment based on the excel sheet. Please note that VERRA will also ask for the excel sheet for the ERR calculations. However, R files will also be validated. CL#03 stands open.				
Project participant response				Date : 16/05/2022

a. The calculations have been updated and now includes estimations until 2045 that we expect will need updated during the baseline renewal b. We are grateful that you are willing to validate the R files – which we strongly believe are more transparent and robust for the analysis in the PD. We have therefor made considerable effort to update our workflow to make it clearer to someone not experienced with R. We look forward to showing you the updates over a conference call to minimize further confusion.	
Documentation provided by project participant	
• PD version 3 • See folder 49 for the list of files used for R calculations	
VVB assessment	Date: 06/06/2022
All the findings have been addressed by the PP and therefore CL#03 stands closed.	

CL ID	04	Section no.	3.4.3	Date : 03/03/2022
Description of CL				
In section 4.1.3 High Conservation Values for HCV 5 Community needs, PP shall clarify whether the HCV 5 is a part of project area or not. Also, confirm and provide sufficient information whether gathering of plant and animal resources for community subsistence, and fishing grounds as a qualifying attribute has been allowed for the communities.				
Project participant response				Date : 22/03/2022
As discussed in section 4.1.3, HCV 5 does include some of the northern parts of the project area. The project is not restricting the pre-project use of these areas by the communities.				
Documentation provided by project participant				
Consultations with the communities during the onsite confirmed the support of the communities to the project.				
VVB assessment				Date: 04/04/2022
The justification provided by the PP is accepted and therefore CL#04 stands closed.				

CL ID	05	Section no.	3.4.4	Date : 03/03/2022
Description of CL				
In section 4.1.4 Without-Project Scenario: Community, PP shall clarify why it has mentioned that some significant impacts which the project will have on the communities residing near the project area. However, the same has not been mentioned in section 1 and 2.1.1				
Project participant response				Date : 22/03/2022
The project will improve the conditions for communities by preventing the baseline activities that would negatively impacted them. Information on this is added in section 1 and 2.1.1 of version 2 of the PD				
Documentation provided by project participant				
• Version 2 of the PD				
VVB assessment				Date: 04/04/2022
Section 4.1.4 of the PD has been revised with relevant information and therefore CL#05 stands closed.				

CL ID	06	Section no.	3.4.15	Date : 23/05/2022
Description of CL				
In section 4.5.2 of the PD, PP says that within 18 months of becoming operational, the project will install either a gravity fed or pumped water system. Piped water in the 'Karamuak Cluster' will be checked for quality and reliability and any improvements or repairs deemed necessary will be carried-out within the same time. What does the PP mean by "becoming operational"? What is the date of operationalization of the project here? Please clarify.				
Project participant response				Date : 06/06/2022

The term “becoming operational” in this context refers to the start of the implementation of the community activities on the ground. For sake of clarity, the term was deleted and now reads as follows:

“..within 18 months of starting the community development activities...”

The community development activities are now included in the community work, monitoring and evaluation plan, including a calendar of activities.

Documentation provided by project participant

- Version 3.2 of the PD
- See folder 39 for the community work, monitoring and evaluation plan

VVB assessment

Date: 15/07/2022

On the basis of review of community monitoring plan and the changes made in the PD the CL 06 is now closed.

Table 1. CAR from this verification

CAR ID	01	Section no.	3.2.1	Date : 03/03/2022
Description of CAR				
In accordance with section 2.1.1 “summary description of the project” of the VCS CCB project description template, PP shall provide a summary description of the project’s climate, community and biodiversity objectives. However, information related to the community objective is missing from the section 2.1.1 in the PDD. PP shall consider revising the section and provide the required information in line with the VCS CCB PD template guidelines.				
Project participant response				Date : 22/03/2022
The project will improve the conditions for communities by preventing the baseline activities that would negatively impacted them. Information on this is added in section 1 and 2.1.1 of version 2 of the PD				
Documentation provided by project participant				
• Version 2 of the PD				
VVB assessment				Date: 04/04/2022
Information related to the community objectives have been added in the section 2.1.1 of the revised PD, version 2.0. The project will also provide community benefits by improving access to water quality of the area, employment opportunities to local communities, and trainings for skill improvement. The climate objectives of the project were also discussed and confirmed at the time of site visit. However, PD shall also mention total ERRs estimated for the project lifetime in the section 2.1.1. Therefore, CAR#01 stands open.				
Project participant response				Date : 16/05/2022
The PD was updated, the estimations are now done to 2045				
Documentation provided by project participant				
• PD version 3				
VVB assessment				Date: 06/06/2022
PP has addressed the findings and therefore CAR#01 stands closed.				

CAR ID	02	Section no.	3.2.2, 3.2.23	Date : 03/03/2022
Description of CAR				
In accordance with section 2.1.5 Physical parameters” of the VCS CCB project description template, PP shall provide information related the geodetic coordinates which is missing in the section 2.1.5 from the PDD. PP shall consider revising the section and provide the required information in line with the VCS CCB PD template guidelines.				
Project participant response				Date : 22/03/2022

Geodesic coordinates of the project area were provided in shapefiles and KLM files (shapefile for the project area is in folder 4, while the kml is in folder 5)	
Documentation provided by project participant	
shapefile for the project area is in folder 4, while the kml is in folder 5 of the sharepoint	
VVB assessment	Date: 04/04/2022
The geodetic coordinates are still missing from the section 2.1.5 of the PD. The instructions given in section 2.1.5 "Physical Parameters" of the CCB VCS PD template states to indicate the project location and geographic boundaries (if applicable) including a set of geodetic coordinates. Coordinates must also be submitted separately as a KML file. The validation team confirms that the PP has shared the shapefiles for the assessment however, PP is requested to refer PD template guidelines and provide geodetic coordinates in the PD also. Since section 2.1.5 of the PD is not revised in line with the CCB VCS template guidelines. As per CCB VCS PD template section 2.1.5, PP must indicate the project location and geographic boundaries including a set of geodetic coordinates. Hence, PP is requested to mention the geographical coordinates in the PD as well. CAR#02 stands open.	
Project participant response	Date : 16/05/2022
The project area is located within these coordinates: 5° 18' 40.2"N 117° 11' 8.69"E 5° 18' 40.2"N 117° 37' 58.51"E 4° 55' 55.68"N 117° 37' 58.51"E 4° 55' 55.68"N 117° 11' 8.69"E Section 2.1.5 includes geographical coordinates where the project is located.	
Documentation provided by project participant	
PD Version 3	
VVB assessment	Date: 06/06/2022
The updated PD is fine. CAR 02 is now closed.	

CAR ID	03	Section no.	3.3.3	Date : 03/03/2022
Description of CAR				
In accordance with section 2.1.6 of the VCS CCB PD template, PP shall provide information related to socio-cultural information (ethnicity, gender, age, household income, land ownership, education, health statistics, migration patterns, etc.), which is missing in the section 2.1.6 "Social Parameter" of the PDD. PP is requested to check the template and add the required information.				
Project participant response				Date : 22/03/2022
The PD was amended and includes information related to socio-cultural characteristics of the surrounding communities to the project area.				
Documentation provided by project participant				
Version 2 of the PD				
VVB assessment				Date: 04/04/2022
Section 2.1.6 "Social Parameters" of the PD has been updated with the sufficient information in accordance with the CCB VCS template guidelines. CAR#03 stands closed.				

CAR ID	04	Section no.	3.2.4	Date : 03/03/2022
Description of CAR				
In accordance with Section 2.1.7 of the VCS CCB PD template, PP has to provide the following information: - Geodetic coordinates must be provided to allow an unambiguous identification of boundaries of the project area(s), which may be submitted separately as a KML file - Areas where offsite climate impacts are predicted. - Areas where other stakeholders will be impacted (for Section 4.3 "Other Stakeholder Impacts"). - Areas where offsite biodiversity impacts are predicted (for Section 5.3 "Offsite Biodiversity Impact"). PP is requested to check the requirement of section 2.1.7 of the VCS CCB PD template and update the section accordingly.				

Project participant response	Date : 22/03/2022
a. Geodesic coordinates of the project area were provided in shapefiles and KLM files (shapefile for the project area is in folder 4, while the kml is in folder 5) b. The only offsite climate impacts could occur in the areas considered in the leakage analysis. For this, shapefile with the active concessions in the state of Sabah is provided and a figure is added to section 2.1.7 c. As discussed in section 4.3, no other stakeholders are impacted d. As indicated in section 5.3 of the PD, there is a possibility that hunting activities will be refocused in other forest reserves outside of the Project Zone. A shapefile has been prepared that contains the forest reserves within a 30 km radius from the project zone villages. 30 km is considered as the maximum range that the villagers would travel for hunting	
Documentation provided by project participant	
• shapefile for the project area is in folder 4, while the KML is in folder 5 • shapefile that contains the active forest concessions (folder 45) • shapefile that contains the forest reserves within a 30 km radius from the project zone villages (folder 45)	
VVB assessment	Date: 04/04/2022
The data submitted was checked and found correct. CAR#04 stands closed.	

CAR ID	05	Section no.	3.2.6	Date : 03/03/2022
Description of CAR				
1. As per the VCS CCB PD template guidelines under section 2.1.9, PP shall list all communities, community groups, and other stakeholders, including a description of how each stakeholder was identified and their relevance to project activities. • The expected impacts on communities identified have not been properly described in section 2.1.9 of the project description. Further, it VVBs not identify the groups that will be monitored throughout the lifetime of the project. PP is requested to update Section 2.1.9 of the PD to clearly describe a. Which communities have been selected? b. What impact the project will have on them? c. Why they have been selected? Further, PP is also requested to update Section 4.2.1 to include the community groups identified in Section 2.1.9, or the groups that are to be impacted and monitored. 2. In the section 2.1.8 "Stakeholder Identification" of PD, PP has mentioned that no communities are found inside the project boundary. However, the information given in the Table 1: "Key project stakeholders and the rights, interest and relevance to the project" is contradictory to the information of section 2.1.8. PP is requested to check and rephrase the information.				
Project participant response				Date : 22/03/2022
1. Section 2.1.9 was updated including a description on how stakeholders were identified and reference to section 4 where the description of the impacts to communities is provided. Please note that the requirement as per CCB_VCS template V.3 is to "List all communities, community groups, and other stakeholders, including a description of how each stakeholder was identified and their relevance to project activities". There isn't a requirement to describe the impacts on communities which is provided in Section 4. Section 4.2.1 was updated to include community groups identified in section 2.1.9. 2. The eight communities identified in table 1 are located outside the project boundary but within the project zone area as requested by the CCB_VCS template V.3. Consistency check was made between the information in table 1 and section 2.1.8.				
Documentation provided by project participant				
Version 2 of the PD				
VVB assessment				Date: 04/04/2022

PP has made required changes in sections 2.1.9 and 4.2.1 of the revised PD and was found correct. Hence, CAR#05 stands closed.

CAR ID	06	Section no.	3.2.8	Date	03/03/2022
Description of CAR					
In section 2.1.11 "Project Activities and Theory of Change", under the agriculture section of the paragraph 'Community livelihood improvement', the information mentioned is incomplete regarding the activities proposed by the communities. PP has to conclude whether any of the options proposed are selected under the project activity or not.					
Project participant response					Date
Section 2.2.11 was updated providing more detailed information on the 'Community livelihood improvement' which includes description of the support to be provided to communities by the project					30/03/2020
Documentation provided by project participant					
Version 2 of the PD					
VVB assessment					Date:
PP has made required changes in sections 2.1.11 of the revised PD and was found appropriate. Hence, CAR#06 stands closed.					04/04/2022

CAR ID	07	Section no.	3.2.9	Date	03/03/2022
Description of CAR					
In section 2.1.12 "Sustainable Development" of the PD, a. In Table 2: "Kuamut project support of UN SDGs", PP is requested to add the SDG number for all the SDGs. b. In Table 2: "Kuamut project support of UN SDGs", PP has mentioned 'direct employment of local people and support for local enterprises'. Whereas in the table 1.2 "Standardized Benefits Metrics" and in section 4 of the PD, PP has not mentioned any direct employment generation for the local people. PP is requested to clarify and make required corrections in either of the section. c. In Table 2: "Kuamut project support of UN SDGs", PP has mentioned 'Commitment and extensive activities to promote sustainable agriculture, aquaculture and agroforestry in villages in the project area'. Whereas in section 4 of the PD, PP has not mentioned any such activities benefiting the local people. PP is requested to clarify and make required corrections in either of the section.					
Project participant response					Date
a. SDG numbers have been added in the revised version of the PD b. Direct employment in project activities (such as patrolling, nurseries, restoration) has been included and metrics updated c. Section 4 was updated providing more information on the activities related to support smart agricultural activities in communities.					30/03/2020
Documentation provided by project participant					
• Version 2 of the PD					
VVB assessment					Date:
a. SDG numbers added in the revised PD has been checked and found appropriate and in line with UNSDGs, comment is closed. b. In the response, please mention the section in which the metrics has been updated. c. In the updated section 4 there is no description related to promotion of improved aquaculture techniques. Also, PP has just mentioned a point that it will support improved agricultural practices. However, no further information has been provided that how it will support improved agricultural practices and what are the planned interventions to achieve that. Hence, PP is requested to further elaborate that how it will achieve SDG 12 in section 4 of the PD. Since all the comments are not closed, therefore CAR#07 stands open.					04/04/2022
Project participant response					Date
b. Section 1.2 indicates at least 40 people employed full time in project activities from which at least 20 will be women. Similarly, section 2.1.11 indicates the following: "The Kuamut project will also employ at					16/05/2022

least 40 people from the communities nearby, particularly from the Kuamut cluster aiming to include at least 50% women. The project activities that would require local hire include the restoration of riparian reserves to improve water quality, patrolling activities and nursery maintenance and management.”

c. Reference to aquaculture was deleted from the PD due to the limited information collected during the social survey. Nonetheless, the project will assist communities in developing aquaculture practices if requested by them. In relation to agricultural practices, the following was included in the PD section 2.1.11 and 4.2.3 for consistency: “More specifically, for supporting agricultural activities, the project will promote sustainable practices within farmers dedicated to the production of palm oil, mostly in the Keramuak villages, while improvement of agricultural practices through smart agriculture techniques (e.g. shade cocoa, tillage, organic fertilizers, etc) will be promoted with the villages dedicated to rubber, cocoa and subsistence agriculture. Acknowledging the importance of road infrastructure to improve the accessibility to markets for the Kuamut villages, the project will coordinate closely with the local and regional authorities to identify the possibilities to improve the access to these villages and connect them to markets, in addition to the microfinance program described above and provision of small processing plants to add value to their products.”

Documentation provided by project participant

- PD version 3

VVB assessment

Date: 06/06/2022

b. the changes made in the updated PD is fine.

c. PP is requested to submit any document proof where the same has been discussed or agreed the activities mentioned in point c. In case the document has already been shared, kindly let us know the folder no. and the document name.

CAR#07 stands open.

Project participant response

Date : 11/07/2022

The proposed activities described in point c above, are proposed as response to the social survey conducted in 2017 which collected the views and needs of local communities. The following sentence is included in the PD “Potential community activities have been identified in a participatory manner, by eliciting feedback from the communities themselves”.

Please note that the project is committing to conduct further consultations to update the social survey and collect the views from the communities for the implementation of community development activities. Evidence of the updated consultations will be provided at time of first verification.

The following paragraph was included in the PD “It is important to highlight that further consultations will be conducted to update community needs and benefits through participatory and iterative process prior to the implementation of any community development activities in the project zone.”

Furthermore, reference to RSPO was replaced to “promote sustainable palm oil cultivation” in order to refine the activities based on the new consultations to be conducted prior to first verification

Documentation provided by project participant

- PD version 3

VVB assessment

Date: 15/07/2022

The updated PD is now fine and CAR 07 is now closed.

CAR ID	08	Section no.	3.2.10, 3.2.23	Date :	03/03/2022
Description of CAR					
In section 2.1.13 ‘Implementation Schedule’, - PD has not provided sufficient information on the implementation schedule, specifically details of the project activities throughout the lifetime of the project. PP is requested to update Section 2.1.13 of the project description to include further information on the project activities throughout the lifetime of the project a brief description or table of the frequency of the activities - PP is requested to clarify why PP has not listed stakeholder consultations and biodiversity assessments carried out and will be carried out as important milestones for the project, considering that it is also a CCB project.					
Project participant response					Date : 30/03/2020

Section 2.1.13 was updated with more information on the consultations and biodiversity monitoring through the project implementation	
Documentation provided by project participant	
PD version 2	
VVB assessment	Date: 04/04/2022
- Project activities throughout the lifetime of the project has been updated in the section 2.1.13 of the PD, however, please justify why project validation has not been included as an important milestone. - The start date of the project is 11th December 2015. While in the same section PP has mentioned community survey and baseline was conducted in 2016-2017 which is after the project start date. PP is required to justify how it adheres to section G3 and G5.2 of the CCB standard. The document submitted in folder 40 does not support the justification. Kindly provide justification and share the relevant supporting document. CAR#08 stands open.	
Project participant response	Date : 16/05/2022
- Project validation added to the table in section 2.1.13 - Following clarifications from the VVB and in accordance to footnote 45 of the CCB Standards that states "In cases where it is unclear whether a project will be implemented or not, it is acceptable to start with preliminary consultations, provided there are plans for appropriate full consultations before the start of the project. Where conformance with the Climate, Community & Biodiversity Standards is being applied to a project already under implementation, project proponents must either provide documentation of appropriate consultations during the project design phase or demonstrate how more recent consultations have been effective in evaluating community benefits and adapting project design and implementation to optimize community and other stakeholder benefits and respect local customs", the engagement with the community began after the start date of the project, although the community development activities have not yet started due to the limitations related to mobilization restrictions in Malaysia and also a period of elections of new local representatives in the communities located in the project zone. Given such circumstances, the project team will conduct further consultations prior first verification and re-assess the community benefits and adapt the community development interventions accordingly. - Please refer to documentation provided in folders 06, 07, 14, 15 and 16 for evidence of engagement with the communities, noticing that these occurred after the project start date as pointed out in the audit findings.	
Documentation provided by project participant	
Folders 06, 07, 14, 15 and 16	
VVB assessment	Date: 06/06/2022
- The milestone mentioned for 11th Dec 2015 as Sabah Forestry Department converted the first 69,454 ha into a Class 1 Forest Reserve only. However, the same is the project start date as well. PP is requested to add Project start date in the milestone column as well. - Folders 6, 7, 14, 15 and 16 were checked. Data in folders 6, 7 and 14 mainly contain photographs. Folder 14 PP has provided attendance sheet, but there is no signature of the participants and hence the document cannot be considered as a genuine document. Please submit attendance sheets with the signature of the participants (if available). If not, then please explain why taking signature of the participants were not deemed necessary by the PP. Folder 15 contains Brochure in Malaya. In folder 16 there is Socioeconomic assessment report which has described the method followed for community engagement and way forward. In the "Kuamut Social Baseline Assessment Report", PP has mentioned that it has followed the FPIC guideline for stakeholder engagement. How PP will justify that FPIC guidelines and principles has been considered for stakeholder engagements when in the Project the community engagement happened after the start date of the project. Even the best-practices documents which PP has referred for FPIC has not been followed for the same. Hence, it is requested to please check the "Kuamut Social Baseline Assessment Report". Please and provide proper	

justification on why PP thinks that it has followed the FPIC guidelines for stakeholder engagement.

The CARs regarding the project start date and the community engagement date have been closed considering footnote 45 of the CCB Standard V3.1. However, as per section G5 of CCB Standard V3.1, PP is still required to provide clarification regarding FPIC. To resolve the same issue FAR 01 has been raised.

CAR ID	09	Section no.	3.2.12	Date	03/03/2022
Description of CAR					
In the section 2.1.18 'Risk of the project' table, - Under the 'mitigation' column of Sub section 'Community', PP is requested to mention how PP is planning to share the benefits with the community. It is required to either mention the information in the aforesaid section or else have to refer to the section number where the same has been described. - Under the 'mitigation' column of Sub section 'Biodiversity', PP has not identified any political risk or financial risk in the project area? - PP is requested to list the impact on the project activity in case there is any policy change by the local or national government - In case there is lack of budget for project monitoring, PP is requested to include and elaborate how the project will cope when there is a lack of budget for project monitoring.					
Project participant response					Date : 30/03/2020
- Section 2.1.18, 'mitigation' column of Sub section 'Community' now includes reference to benefits to the communities - Section 2.1.18, 'mitigation' column of Sub section 'Biodiversity' now updated and reference to the Sabah Biodiversity Strategy 2012-2022 is provided. - a paragraph was added describing how to cope with the lack of budget for project monitoring. The PP will initially be funded by Permian Global and then entirely by Permian Malaysia which secured forward purchases for the carbon credits generated by the project.					
Documentation provided by project participant					
- PD version 2 - Sabah Biodiversity Strategy 2012-2022 https://sabc.sabah.gov.my/sites/default/files/uploads/attachments/2020-05/Sabah-Biodiversity-Conservation-Strategy.pdf					
VVB assessment					Date: 04/04/2022
- PP has now mentioned the BSM and was found okay, comment is closed. - PP has mentioned that there is little risk that the concession is reverted due to changes in policy as the proposed project contributes to the continuation of the implementation of the Sabah Biodiversity Strategy 2012-2022. Hence, PP is requested to provide a mitigation strategy/plan to prevent this small risk as well. Comment is open. - PP has now provided an acceptable justification to cope when there is lack of budget for the project monitoring. Comment is closed. Since, one comment is still open, CAR#09 stands open.					
Project participant response					Date : 16/05/2022
To mitigate any possible political risk, the following sentence was added: "To mitigate any possible risk, a management agreement was signed between The State Government of Sabah, Permian Malaysia SDN. BHD and Rakya F Berjaya SDN BHD on August 6th 2021 which stipulates the conditions to grant the rights to Permian Malaysia to implement a forest carbon project in the project area"					
Documentation provided by project participant					
PD version 3					

VVB assessment	Date: 06/06/2022
PP has categorized the Political risk under biodiversity category. However, this is a common issue directly to the project and will impact all its component. PP is requested to make a separate section for the political risk and its mitigation measures.	
Project participant response	Date : 08/07/2022
The entire table was reorganized, and the political risk placed as a separate risk. Also, the financial risk was included in the table.	
Documentation provided by project participant	
PD version 3.2	
VVB assessment	Date: 15/07/2022
The corrections has now been made in the PD and the CAR is now closed.	

CAR ID	10	Section no.	3.2.14	Date : 03/03/2022
Description of CAR				
In the section 2.1.20 'Financial Sustainability', PP has mentioned 'The project's objectives include the implementation of different activities in community development and ecosystem restoration. The initiative intends to focus on community education to enable communities to understand the benefits of protecting their environment.' PP is requested to justify the relevance of the statement in the section.				
Project participant response				Date : 30/03/2020
The section has been edited in version 2 of the PD and this statement has been removed since it was considered unnecessary for this section.				
Documentation provided by project participant				
PD version 2				
VVB assessment				Date: 04/04/2022
The updated section 2.1.20 of the PD was reviewed and found appropriate. CAR#10 stands closed.				

CAR ID	11	Section no.	3.2.18	Date : 03/03/2022
Description of CAR				
VCS CCB PD template guidelines of section 2.2.3 'Community and Biodiversity Additionality' says "Document that community, and biodiversity project benefits would not occur in the absence of the project. Explain how existing laws, regulations, and governance arrangements, or lack of laws and arrangements, would likely affect land use in the absence of the project. Demonstrate that project activities would not have been implemented under the without-project scenario due to significant financial, technological, institutional or capacity barriers. If project activities are required by law, demonstrate that pertinent laws are not being enforced". PP is requested to check and make required correction as the description of community activities described in section 2.1.11 is incomplete. Also, activities mentioned in section 2.1.11 differs from activities mentioned in section 4 of the PD. PP is requested to check and make the statements and activities consistent across the PD.				
Project participant response				Date : 30/03/2020
Section 2.2.3 updated providing further information on how existing and historical governance and legislation affects the development for communities in Sabah in the absence of the project. Section 2.1.11 has been updated as well with further information on community livelihood improvement by the project as well as ensured consistency with section 4.				
Documentation provided by project participant				
PD version 2				
VVB assessment				Date: 04/04/2022
The updated section 2.2.3 of the PD was reviewed and found appropriate. CAR#11 stands closed.				

CAR ID	12	Section no.	3.2.19, 3.2.23	Date : 03/03/2022
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Description of CAR	
In the section 2.3.1 'Stakeholder Access to Project Documents', - Community engagement records except of the one organized in 2017 could not be found in the evidence folder shared by PP. PP is requested to check and provide supporting documents of the workshop carried out from or before 2015 as part of the project activity. - No FPIC proof has been submitted by the PP. PP is requested to check G3.6 of the CCB standard for FPIC requirement and provide the required information in the PD as well as the supporting documents (MoM, Photographs and attendance sheets.)	
Project participant response	Date : 30/03/2020
- Please find evidence of community engagement records in folders 6, 7, 14, 15 and 16. The discussions with the communities began in 2016, there are no records from or before 2015. The project activities started with the negotiations to classify the project area as protected and stop logging operations. - Proof of FPIC can be found in the document Kuamut Community Baseline Survey, Assessment Process Report and Technical Report and further evidence in folders 6, 7, 14, 15 and 16	
Documentation provided by project participant	
Please see folders 6, 7, 14, 15 and 16	
VVB assessment	Date: 04/04/2022
In the response, PP has mentioned that the discussions with the communities began in 2016, there are no records from or before 2015. However, start date of the project is 11th December 2015 and community engagement starts in 2016-2017 which is after the project start date. PP is required to justify how it adheres to section G3 and G5.2 (footnotes 61, 63 and 64) of the CCB standard. CAR#12 stands open.	
Project participant response	Date : 16/05/2022
Similar to CAR#8, further clarification is requested from the VVB to respond to this CAR. The following footnotes referred in the CAR are taken from the CCB Standard which do not make reference to the start date of the project: • Footnote 61 'Customary rights' to lands, territories and resources refer to patterns of long-standing community lands, territories and resource usage in accordance with Indigenous Peoples' and local communities' customary laws, values, customs and traditions, including seasonal or cyclical use, rather than formal legal title to lands, territories and resources issued by the State. (See: World Bank Operational Manual, OP 4.10 – Indigenous Peoples, 200, available at: https://policies.worldbank.org/sites/ppf3/PPFDocuments/090224b0822f89d5.pdf) Footnote 63 In conformance with the United Nations Declaration on the Rights of Indigenous Peoples and International Labour Organization (ILO) Convention 169. The following manual can be used for guidance on Free, Prior and Informed Consent: Anderson, 2011, Free, Prior and Informed Consent in REDD+: Principles and Approaches for Policy and Project Development (available at http://www.recoftc.org). If non-contacted peoples are located or believed to be located in the project area, their right to remain in isolation should be respected in accordance with local, national and international laws and recommendations. Unless invited to make contact, implementing entities should not engage in any activities that may impact these populations, including project activities. There should be a buffer zone between the project area and the area in which indigenous populations living in voluntary isolation reside, or are believed to reside. Guidelines for the Protection of Indigenous Peoples in Voluntary Isolation and Initial Contact in the Amazon Region, the Gran Chaco and the Eastern Region of Paraguay, Office of the United Nations High Commissioner (OHCHR) and the Spanish Agency for International Cooperation and Development, May 2012. Footnote 64 Definition of free prior and informed consent from United Nations Department of Economic and Social Affairs, 2005, International Workshop on Free, Prior and Informed Consent and Indigenous Peoples, UN Document PFII/2005/WS.2/4 (available at: http://www.un.org/esa/socdev/unpfii/documents/workshop_FPIC_tamang.doc). It is important to note that consultation is not the same as consent. Free, prior and informed consent is the decision made by a community following a consultation. A project team must receive affirmative consent from relevant property rights holders prior to commencing with project activities. UN General Assembly, 2007, UN	

Declaration on the Rights of Indigenous Peoples, Resolution adopted by the General Assembly, A/RES/61/295, Articles 32 (2), (available at: www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf).

- Having received further clarification from the audit team, it was clarified that the project start date was prior to the engagement with communities. In accordance to footnote 45 of the CCB Standards v.3.1, the project carried out community surveys and engagement following FPIC principles following CCB requirements after the project start date. Similar to the response in CAR 8, the Kuamut project team will conduct additional community engagements prior first verification provided that all mobilization restrictions are lifted and safety conditions for the team and the community members are in place.

Documentation provided by project participant

PD Version 3

VVB assessment

Date: 06/06/2022

The concern regarding the project start date and the community engagement date has been resolved considering footnote 45 of the CCB Standard V3.1. Hence this CAR is now closed. However, PP has not provided any documents to prove and justify considering community engagement after the project start date. Hence, FAR 01 has been raised.

CAR ID	13	Section no.	3.2.20, 3.2.23	Date : 03/03/2022
Description of CAR				
It is informed in the section 2.3.4 'Community Costs, Risks, and Benefits' of the PD that the community engagement started in 2017, however the project start date is 2015. Has there been no complaints/grievance or issues in resource extraction from the project area by communities due to the project activity? How will PP justify that it has considered Section G.3 of CCB standard v.1 for the design and development of the project activity?				
Project participant response				Date : 30/03/2020
Please note that the project initial activities were to reach to an agreement with Sabah Forestry for the conversion of the project area to Class 1 Forest Reserve from a logging concession. There were no other activities developed with the communities neither restrictions to the continuation of their livelihoods because of the project. Section G.3 of CCB provides information of the interactions with the communities from the time of the initial survey conducted in 2017 onwards.				
Documentation provided by project participant				
• PD version 2				
VVB assessment				Date: 04/04/2022
As per Section G5 of the CCB Standard, the project should recognize respects and supports rights to lands, territories, and resources, including the statutory and customary rights of Indigenous Peoples and others within communities and other stakeholders. The free, prior and informed consent (as described in G5.2) has been obtained at every stage of the project. Project activities do not lead to involuntary removal or relocation of property rights holders from their lands or territories and do not force them to relocate activities important to their culture or livelihood. Any proposed removal or relocation occurs only after obtaining free, prior and informed consent from the relevant property rights holders.				
Hence, PP is required to justify how it adheres to section G3 and G5.2 of the CCB standard. Please check G5.2 point 2 and footnotes 61, 63 and 64 says for more clarity. This CAR#13 stands open.				
Project participant response				Date : 16/05/2022

- Further clarification is requested from the VVB to respond to this open CAR (similar to CAR8 and CAR 12) - Following the guidance provided by the VVB team, it was clarified that the project follows the guidance provided in footnote 45 of the CCB Standards v3.1 which acknowledges circumstances of applying CCBS to projects already under implementation. As indicated previously, the project will re-engage with the communities prior first verification to update the community benefits and the community development activities following additional consultations with the communities involved.
Documentation provided by project participant
PD Version 3
VVB assessment
Date: 06/06/2022
The concern regarding the project start date and the community engagement date has been resolved considering footnote 45 of the CCB Standard V3.1. Hence this CAR is now closed. However, PP has not provided any documents to prove and justify considering community engagement after the project start date. Hence, FAR 01 has been raised provide proof that PP has allowed the local stakeholders to continue the customary rights in the project area and has taken their consent for the project before the first verification.

CAR ID	14	Section no.	3.2.20	Date : 03/03/2022
Description of CAR				
In the section 2.3.8 'Continued Consultation and Adaptive Management', PP is requested to justify why after 2017, no meetings/consultations organized by PP with the communities? Also, section G3.4 of CCB standard v.1 says that "A plan must be developed and implemented to continue communication and consultation between the project proponents and communities, including all the community groups, and other stakeholders about the project and its impacts to facilitate adaptive management throughout the life of the project." Has there been any such plans or method of communication developed by the PP? PP is requested to elaborate the same in the section and provide supporting documents if any.				
Project participant response				Date : 30/03/2020
Section 2.3.3 of the PD provides the following explanation why after 2017 no meetings/consultations organized by PP with the communities: "...This occurred initially due to federal and state elections held in 2018, which led to a widespread political upheaval across Malaysia as government ministries were dissolved and reformed, departmental policies altered or replaced, and leadership positions reassigned across all levels of government." ... communities themselves requested that the project refrain from further community-level engagements until this situation had been resolved." "Since early 2020, inter-district travel has been largely prohibited in Sabah owing to Covid-19 restrictions, and most communities have isolated themselves and disallowed entry to non-community members" - Please note that the project is using the combined VCS CCB template v.3.3 in which section G3.4 of CCB standard refers to Stakeholders Consultations. This section VVBs not require to provide a Plan to continue communication and consultation between the project proponents and communities, including all the community groups, and other stakeholders. Nonetheless, the PP is committed to develop such plan given the limited interaction with the communities and stakeholders caused for the reasons explained in the previous point. This plan will be presented to the auditors at the time of verification, jointly with the implementation report of such plan as described in Section 2.3.8 of the PD.				
Documentation provided by project participant				
PD Version 2				
VVB assessment				Date: 04/04/2022

The justification for not having the consultation after 2017 is fine and acceptable.

Section 2.3.8 requires the PP to describe the plan developed to continue communication and consultation between the project proponent(s) and communities and other stakeholders about the project. Explain the processes the project will use throughout the life of the project to consider this input and adapt management accordingly. This must be developed during the Project Validation process.

PP is requested to check CCB VCS PD Template requirement of section 2.3.8 which also refers to section G3.4 of the CCB Standard and make the required changes in the PD.

Therefore, CAR#14 stands open.

Project participant response	Date : 16/05/2022
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- Section 2.3.8 was significantly revised providing details on how the process will be conducted and also reference to the internal FPIC protocol of Permian Global.

Documentation provided by project participant
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- PD Version 3
- Permian Global FPIC protocol in folder 50

VVB assessment	Date: 06/06/2022
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The updated PD is fine, CAR 14 is now closed.

CAR ID	15	Section no.	3.2.23, 3.2.25	Date : 03/03/2022
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Description of CAR

In the section 2.3.10 'Stakeholder Participation in Decision-Making and Implementation', In accordance with Section G3.4 of the CCB standard v.1 says that PP has to describe how communities including all the community groups and other stakeholders have influenced project design and implementation through effective consultation, particularly with a view to optimizing community and other stakeholder benefits, respecting local customs, values and institutions and maintaining high conservation values. Project proponents must document consultations and indicate if and how the project design and implementation has been revised based on such input. However, in the section PP has mentioned that the community engagement started only in 2017. Then how PP will justify that for the project design and development it as considered section G3.4 of the CCB standard?

Project participant response	Date : 30/03/2020
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Please note that according to the combined VCS CCB template v.3.3, the section 2.3.10 of the PD refers to Section G3.6 of CCB Standard. Section G3.4 of CCB is provided in section 2.3.7 that includes a description how communities including all the community groups and other stakeholders have influenced project design and implementation. As described in section 2.1.11 the Community Livelihood Improvement activities were identified based on the consultations with the communities, while the activities prior to 2017 were related to the conversion of the project area to Class 1 Forest Reserve.

Documentation provided by project participant
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PD Version 2

VVB assessment	Date: 04/04/2022
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The justification provided by PP is not sufficient. In response of CAR#12, PP has mentioned that the discussions with the communities began in 2016, there are no records from or before 2015. However, start date of the project is 11th December 2015 and community engagement starts in 2016-2017 which is after the project start date. PP is required to justify how it adheres to section G3 and G5.2 (footnotes 61, 63 and 64) of the CCB standard.

CAR#15 stands open.

Project participant response	Date : 16/05/2022
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- Please see comments in CAR 8, 12 and 13. Further clarification is required from the VVB to respond to this CAR.
- Following the guidance provided by the VVB team, it was clarified that the project follows the guidance provided in footnote 45 of the CCB Standards v3.1 which acknowledges circumstances of applying CCBS to projects already under implementation. As indicated previously, the project will re-engage with the communities prior first verification to update the community benefits and the community development activities following additional consultations with the communities involved.

Documentation provided by project participant	
Updated PD	
VVB assessment	Date: 06/06/2022
The concern regarding the project start date and the community engagement date has been resolved considering footnote 45 of the CCB Standard V3.1. Hence this CAR is now closed. However, PP has not provided any documents to prove and justify considering community engagement after the project start date. Hence, FAR 01 has been raised provide proof that PP has allowed the local stakeholders to continue the customary rights in the project area and has taken their consent for the project before the first verification.	

CAR ID	16	Section no.	3.2.29	Date : 03/03/2022
Description of CAR				
In the section 2.3.15 Community Employment Opportunities, PP is requested to provide supporting documents that two people from local communities has been employed under the project. also, why the same has not been mentioned in the standardized benefits table 1.2? Even during the site visit the same couldn't be traced. PP is requested to check and provide required justification.				
Project participant response				Date : 30/03/2020
We provide the Malaysian 'MyKad' Identity Cards of these two employees – please keep these as confidential				
Documentation provided by project participant				
Please see folder 18				
VVB assessment				Date: 04/04/2022
The shared identity cards are not a sufficient means of verification for the community employment opportunities. PP is requested to submit any document proofs (e.g., joining letter, contract, etc.) to VVB to confirm the hiring of people under the project activity. CAR#16 stands open.				
Project participant response				Date : 16/05/2022
We have now added recent pay-slips for these two employees, to show that the staff are working and still working with the organization.				
Documentation provided by project participant				
Please see folder '18. Resumes of involved staff'				
VVB assessment				Date: 06/06/2022
The submitted proofs are fine and CAR 16 is now closed.				

CAR ID	17	Section no.	3.2.23	Date : 03/03/2022
Description of CAR				
In the section 2.4.4 Project Management Partnerships/Team Development, PP is requested to provide copy of any consultants hired for the project development and implementation.				
Project participant response				Date : 30/03/2020
CV's of consultants now added to the folder '18. Resumes of involved staff in project'				
Documentation provided by project participant				
CV's of consultants now added to the folder '18. Resumes of involved staff in project'				
VVB assessment				Date: 04/04/2022
CV's of consultant hired were checked and therefore CAR#17 stands closed.				

CAR ID	18	Section no.	3.2.39	Date : 03/03/2022
Description of CAR				

In the section 2.5.1 Statutory and Customary Property Rights, Why PP has given details regarding community land ownership and issues related with it, when there is no community land inside the project area and the ownership of the project area is of the PP? As per the section 2.5.1 requirements PP shall describe map tenure, use, access and management rights to lands, territories and resources in the project zone. PP shall revise the complete section as per the requirements of Section 2.5.1 of the VCS CCB PD template.

Project participant response

Date : 30/03/2020

Please note that the requirement of the Section 2.5.1 of the VCS CCB PD template v.3.3 refers to the **project zone**, not to the **project area**. The project zone, as per section 2.1.7 of the VCS CCB template is defined as the area encompassing the project area(s) in which project activities that directly affect land and associated resources, including activities such as those related to provision of alternate livelihoods and community development, are implemented

Documentation provided by project participant

PD Version 2

VVB assessment

Date: 04/04/2022

The justification provided by the PP was found acceptable and therefore CAR#18 stands closed.

CAR ID	19	Section no.	3.2.23	Date :	03/03/2022
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Description of CAR

In the section 2.5.3 Free, Prior and Informed Consent, PP is requested to justify conducting FPIC when the project has already been designed and implemented? Please elaborate and provide proper justification for not considering FPIC before the start of the project.

Project participant response

Date : 30/03/2020

The project start is defined as the date on which GHG reduction/removal project activities begin as per section 2.1.14 of the VCS CCB PD template v.3.3. The project start date is December 11th, 2015, which is the date the first 69,454 ha were converted into a Forest Reserve. The FPIC process was conducted prior commencing any activities with the community which are outside the project area.

Documentation provided by project participant

PD Version 2

VVB assessment

Date: 04/04/2022

The explanation provided by the PP does not justify that the project meets the FPIC requirement of CCB Standard. PP is requested to refer CAR 12 and provide response to this finding. CAR#19 stands open.

Project participant response

Date : 16/05/2022

Please see comments in CAR 8, 12, 13 and 16. Further clarification is required from the VVB to respond to this CAR.

Following the guidance provided by the VVB team, it was clarified that the project follows the guidance provided in footnote 45 of the CCB Standards v3.1 which acknowledges circumstances of applying CCBS to projects already under implementation. As indicated previously, the project will re-engage with the communities prior first verification to update the community benefits and the community development activities following additional consultations with the communities involved.

Documentation provided by project participant

Updated PD

VVB assessment

Date: 06/06/202

The concern regarding the project start date and the community engagement date has been closed considering footnote 45 of the CCB Standard V3.1. Hence this CAR is now closed.

However, PP has not provided any documents to prove and justify considering community engagement after the project start date. Hence, FAR 01 has been raised provide proof that PP has allowed the local stakeholders to continue the customary rights in the project area and has taken their consent for the project before the first verification.

CAR ID	20	Section no.	3.2.44	Date :	03/03/2022
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Description of CAR

In the section 2.5.6 Ongoing Disputes, PP has mentioned “Many community members feel that their rights to access and use natural resources have been circumscribed by the gazettement of the Kuamut forest reserve – and indeed these activities are not considered lawful under the Sabah Forestry Department’s legislation”. PP is requested to provide any copy of such agreement where this dispute has been discussed and has been resolved before undertaking the project activity.

Project participant response

Date : 30/03/2020

Please note that the paragraph VVBs not make any reference to any agreement where this dispute has been discussed and has been resolved, but rather is documenting the perception of community members which is documented in the Kuamut Community Baseline Survey. The following sentence of the same section indicates the following :”the project will endeavor to facilitate agreements between government and community stakeholders which are congruent with biodiversity conservation, climate change mitigation, community livelihoods and State law” . A sentence was added to indicate that such effort by the project was undertaken as part of the community engagement plan implementation.

Documentation provided by project participant

PD Version 2

VVB assessment

Date: 04/04/2022

Section 2.5.6 says "community access rights to traditional lands and resources remains a contentious issue (and one which will require considerable future efforts from all parties to ameliorate)". However, during the call of PP with VVB, it was conveyed that there will be no impact on the customary rights of the local communities during the project crediting period. PP is required to check FAR 01 and make the required revisions in this section of the PD and share the revised version.

Project participant response

Date : 08/07/2022

Evidence of further consultations and assurance that customary rights of the local communities will be respected through the project crediting period will be provided prior to first verification. Furthermore, the auditor confirmed during the onsite visit the positive response from communities to the project.

Documentation provided by project participant

Evidence of further consultations to be provided prior to first verification

VVB assessment

Date: 15/07/2022

PP has provided a satisfactory answer and the CAR is now closed.

CAR ID	21	Section no.	3.1.1	Date :	03/03/2022
Description of CAR					
a. In the section 3.1.1 Title and Reference of Methodology, PP shall add version number of VCS AFOLU Non-permanence risk tool. b. In Table 6: Applicability conditions from VM0010 of section 3.1.2, - For the demonstration and justification of the applicability criterion ‘under the project scenario, forest use is limited to activities that do not result in commercial timber harvest or forest degradation’, it is stated that ‘the area is fully protected and no longer subject to commercial timber harvest’. However, the validation team found no justification has been provided to support the statement. - PP shall consider revising the demonstration and justification column of table 6 in line with the requirements of section 3.1.2 of the VCS CCB PD template. PP is requested to make similar corrections across the applicability demonstration and justification column.					
Project participant response					Date :
					30/03/2020

a. Added in version 2 of the PD b. For table 6: • The area is gazetted as a Class I protection forest by the State of Sabah in the Forest Enactment no 7 of 2015 and no 13 of 2016 respectively (documents attached). As a Class I protection forest, the area is fully protected and no longer subject to commercial timber harvest. This is evidenced by the Kuamut Conservation Area Rules which lay out the management objectives. • During the onsite visit, the validation team were flown around the entire project area in a helicopter, landing in all areas requested by the onsite team. These observations will have shown that there is no evidence of recent commercial activities. • Further information has been added throughout table 6

Documentation provided by project participant	
• Version 2 of the PD • Forest Enactment no 7 of 2015 and no 13 of 2016 • Forest (Northern Kuamut Conservation Area) Rules 2016	
VVB assessment	Date: 04/04/2022
PP has made required changes in the section 3.1.1 of the PD and therefore CAR#21 stands closed.	

CAR ID	22	Section no.	3.3.3	Date : 03/03/2022
Description of CAR				
In the section 3.1.3 'Project Boundary',				
a. PP mentions "A map of the project boundary is provided above in Figure 1". The map is not visible and PP is requested to check and update. b. PP is requested to submit the modified shapefiles for the reference.				
Project participant response				Date : 30/03/2020
a. Figure 1 is visible in the PD version with comments. Version 2 of the PD is submitted with the same figure unless a different type of map is expected b. Shapefiles attached				
Documentation provided by project participant				
• Version 2 of the PD • Shapefiles of the project area				
VVB assessment				Date: 04/04/2022
PP has made required changes in the section 3.1.3 of the PD and Therefore CAR#22 stands closed.				

CAR ID	23	Section no.	3.3.3	Date : 03/03/2022
Description of CAR				
As per section 5.2 of the applied methodology, PP has also to define the temporal boundaries of the project. PP shall check the applied methodology and add the required information below the figure 11: Location reference area for Natural Forest Management.				
Project participant response				Date : 30/03/2020
Temporal boundaries added in version 2 of the PD, section 3.1.3				
Documentation provided by project participant				
• Version 2 of the PD				
VVB assessment				Date: 04/04/2022
Information related to temporal boundaries has now been added in the section of the updated PD. However, the geographical boundaries for leakage have not been mentioned in the section. Please add the same. CAR#23 stands open.				
Project participant response				Date : 16/05/2022

The geographical boundaries for leakage are all forest concession within the following coordinates:

7° 21' 35.73"N 115° 22' 28.41"E

7° 21' 35.73"N 119° 16' 9.33"E

4° 6' 54.28"N 119° 16' 9.33"E

4° 6' 54.28"N 115° 22' 28.41"E

They have been added in section 3.1.3 of the PD.

Documentation provided by project participant

- PD Version 3

VVB assessment

Date: 06/06/2022

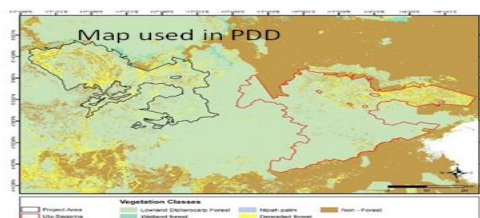
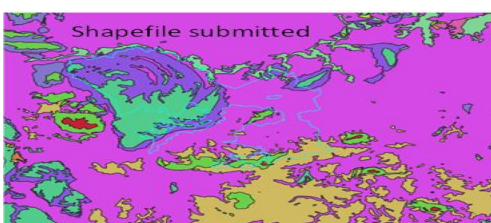
The updated PD is now fine and CAR 23 is now closed.

CAR ID	24	Section no.	3.3.4	Date :	03/03/2022
Description of CAR					
For 3.1.4 "Baseline Scenario", The applied methodology has specific steps for analysis of the baseline Scenario. Section 3.1.4 of the project description does not follow the guidance of the methodology's section 6 and follow each step to define the baseline emission. PP is requested to update Section 3.1.4 and 3.1.5 of the project description to apply the steps for defining the boundary and the LULC per the guidance in the methodology.					
Project participant response					Date : 30/03/2020
The PD has been re-organized to follow the different steps of section 6 of the methodology in section 3.1.4 of the PD					
Documentation provided by project participant					
• Version 2 of the PD					
VVB assessment					Date: 04/04/2022
The steps have now been clearly explained. However, the CAR will be closed once we validate the ERRs calculation. Though PP has clearly mentioned in the PD that "For the purpose of the calculations, the areas of the different strata have therefore been adjusted (by reducing the area of each strata by 1.67%) so the project area in the calculations matches the gazetted area" However, the data submitted are still not clear. VVB would like to see the shapefiles used for Table 14 and Table 15. If already submitted, then requesting if PP can guide which data to refer to in the database folders to look for the shapefiles of Table 14 and 15. CAR#24 stands open.					
Project participant response					Date : 09/05/2022
Shapefiles for table 14 are the project area (in folder 4) and reference area for NFM (folder 48). Shapefiles for table 15 are in folder 5.					
Documentation provided by project participant					
Shapefiles for table 14 are the project area (in folder 4) and reference area for NFM (folder 48). Shapefiles for table 15 are in folder 5.					
VVB assessment					Date: 10/05/2022
1. Based on the stratification, the project area is divided into four strata as mentioned in table 15 and shown in figure 26 in the PDD. The area in shapefiles submitted in Folder 5 is not matching the area mentioned in table 15 of the PD.					
Strata	Area (ha) as per PDD	Area (ha) as per GIS files	Difference	Proportion Of Project Area	
Stratum 1 (Inoperable)	4671	4753.2	-82.2	0.056	
Stratum 2 (Natural Forest Management)	34654	38163.9	-3509.9	0.4156	

Stratum 3 (selective logging within Mosaic Planting)	6866	6992.5	-126.5	0.0823
Stratum 4 (planting areas within Mosaic Planting)	37190	37849.2	-659.2	0.446
Total	83381	87758.9	-4377.9	

Request PP to provide shapefile based on the stratification as per report or else provide proper justification on why there is mismatch in the strata areas.

- The vegetation classification for the project area and reference area cannot be verified as the vegetation class mentioned in the PDD figure 21 at page 89 is different in comparison to vegetation classes in shapefile submitted data referred from folder 34 state-wide vegetation. Request to submit the vegetation layer same that has been used for PDD development, so that a comparative analysis can be done.



MAJOR_FORE	
1	Beach Forest
2	Lower Montane Forest
3	Lower Montane Kerangas Forest
4	Lower Montane Peat Swamp Forest
5	Lower Montane Ultramafic Forest
6	Lowland Freshwater Swamp Forest
7	Lowland Kerangas Forest
8	Lowland Mixed Dipterocarp & Kerangas Forest
9	Lowland Mixed Dipterocarp Forest
10	Lowland Mixed Dipterocarp Forest & Limestone vegetation
11	Lowland Peat Swamp Forest
12	Lowland Seasonal Freshwater Swamp Forest
13	Lowland Ultramafic Forest
14	Mangrove Forest
15	Sub Alpine Vegetation
16	Upland Freshwater Swamp Forest
17	Upland Kerangas Forest
18	Upland Mixed Dipterocarp & Kerangas Forest
19	Upland Mixed Dipterocarp Forest

- The reference area mentioned for the Natural Forest Management in the report does not match with the submitted shapefile. Based on the shapefile the area calculate is 1272.68 Km², whereas in the report it mentioned the reference area under NFM is 2040 km² approximately.
- For figure 24 and 25 PP is requested to provide the spatial datasets generated using the slope cluster analysis. And, please guide the exact folder and sub-folder for finding data for figures 33 and 34.
- PP is requested to submit the copy of Carnegie Airborne Observatory (CAO 2012) Protocol followed for field inventory to validate the SOP submitted.

Project participant response	Date : 16/05/2022
This is described on page 74 of the PD under section '3.1.3, Project Boundary' "A map of the project boundary is provided above in .figure 1 It must be noted that the size of the project area in the official shapefile is slightly larger than the area gazetted as the Class I forest reserve (shapefile area is 84,800 ha while the gazetted area is 83,381 ha). When the shapefile has been used in the calculations, the areas have been adjusted so the project area in the calculations matches the gazetted area."	

This is also described in more detail on page 95 of the PD "As noted in 3.1.3, the size of the project area in the official shapefile is slightly larger than the area gazetted as the class I forest reserve (shapefile area is 84800 ha while the gazetted area is 83381 ha). For the purpose of the calculations, the areas of the different strata have therefore been adjusted (by reducing the area of each strata by 1.67%) so the project area in the calculations matches the gazetted area. The adjusted areas of the strata are indicated in table 15 below."

We describe this in more detail in the section 'Project Area' in the 'Parcel calculations' R code, which we have now made more clear and transparent in our 'R markdown' html document.

It should be noted that the numbers you describe above for 'Stratum 2 (Natural Forest Management)' are not correct, and the numbers you describe correspond to if you have accidentally used the main NFM outline before the 'No Go' strata has been subtracted. The files you should use are the 'IFMCoupesGo' shapefiles.

For additional clarity – there is only one correct shapefile outline, and for our calculations we have conservatively reduced the area by 1.67% to ensure we do not claim any more area than in the legal gazette document.

2. The vegetation stratification has been already submitted and is in folder 34, subfolder LC2016. The other classification in folder 34 (the one in the first figure above) was only used for some of the community part of the PD.
3. This is a mistake in the PD, the correct area is indeed 1272 km². The PD has been modified with the correct number.
4. All the shapefiles are in the folder '05. KML files and project zone maps'. The output of the 'cluster analysis' are used to visually guide the coupe selection and are now provided in subfolder 'ClusterAnalysisFlatOutline' with the shapefiles named as 'TwoFlatAreas1haRes'. Figure 33 is of the NFM harvesting grid showing the years of harvest under the baseline. The spatial files are provided both as KMZ and shapefiles 'IFMCoupes_THP_Grid' in the subfolder 'IFMCoupes'. Figure 34 is likewise the grid showing the annual operating areas for Mosaic Planting Approach area, we provide them separately for each strata with the shapefiles 'MosaicPLANT_THP_Grid' for the 'planted' strata in the subfolder 'MosaicPLANT' and the unplanted strata shapefiles in the 'MosaicUNplanted' subfolder with the 'MosaicUNplanted_THP_Grid' filenames.
5. Our SOP for the field inventory is complete and the correct document to refer to. The document we referenced 'Carnegie Airborne Observatory (CAO 2012)' is now provided - file 'Carnegie BIOMASS-DIVERSITY Field Protocol (2012).doc' is now provided in both folders '21. Carbon field inventory SOP' and '36. Carbon monitoring SOP'. However, it is **very important** to note that this IS NOT our SOP and we referenced it out of respect for our academic partners. We followed OUR SOP provided, 'Philipson_Kuamut_SOP_Final_With_DataSheetsSmallerFile.pdf'

Documentation provided by project participant

PD v3.2

VVB assessment

Date: 15/07/2022

1. The clarification provided by the PP is fine
2. The raster files have been validated and vegetation cover analysis seems fine.
3. The PD has now been revised and is fine
4. The files have now been checked and are fine and in line with the description and values provided in the PD
5. The CAO 2012 and the climate monitoring SOP has now been checked. The inventory done and monitoring procedure which will be followed by the PPD is in line with the applied methodology.

CAR#24 stands closed.

CAR ID	25	Section no.	3.3.4	Date : 03/03/2022
Description of CAR				
For Section 3.1.5 "Additionality"				
a. In the table under Sub-step 1a. Identify credible alternative land use scenarios to the proposed VCS AFOLU project activity, the outcome of Step 1.a is not clear. Please check 2.1.1 C and make the required addition. b. Under Sub-step 1b. Consistency of credible land use scenarios with enforced mandatory applicable laws and regulations, PP has not submitted documents supporting that the project area has the legal rights to deforest. Folders 12 and 13 are showing empty. PP is requested to check and provide the required supporting documents. c. Under Sub-step 1b. Consistency of credible land use scenarios with enforced mandatory applicable laws and regulations, step 1.C of tool VT0001 V3 is missing. PP is requested to check and add the step. d. Under Sub-step 2a. Determine appropriate analysis method, PP has to demonstrate that all the other identified credible land use scenarios are not viable except the proposed project. PP is requested to check the analysis done thoroughly as per the applied additionality tool and make the required corrections and update the section. e. Under Sub-step 3a. Identification of barriers, As per steps 2.3 of the additionality tool VT0001 V3, PP has to demonstrate: - Barrier analysis maybe performed instead of or as an extension of investment analysis - If this step is used, determine whether the proposed project activity faces barriers that: a) Prevent the implementation of this type of proposed project activity without the revenue from the sale of GHG credits; and b) Do not prevent the implementation of at least one of the alternative land use scenarios. PP is requested to check the tool and update the complete barrier analysis. f. Under Step 4. Common practice analysis, PP is requested to check requirements of section 2.4 of the tool VT0001 V3 and rewrite the section completely. g. The conclusion made at the end of the additionality analysis is missing. PP is requested to conclude the section properly.				
Project participant response				Date : 30/03/2020
a. Further detail has been added to sub step 1a in version 2 of the PD b. The underlying 99-year licence agreement on the entire Yayasan Sabah concession between Yayasan Sabah and the State Government provides for continued harvesting through this period. This confidential document is not available in digital form. We have arranged that an auditor can view this in person. c. Sub step 1.C has been added d. Sub-step 2a of the VT0001 V3 states that the project shall determine whether to apply simple cost analysis, investment comparison analysis or benchmark analysis in sub-step 2b and that these options are mutually exclusive hence, only one of them can be applied. Since the project generates no financial or economic benefits other than VCS related income, the simple cost analysis was applied (Option I) which only requires to document the costs associated with the VCS AFOLU project and demonstrate that the activity produces no financial benefits other than VCS related income. The simple cost analysis VVBs not require further analysis of the other scenarios. e. The barrier analysis was removed from the 3.1.5 but has been applied in section 3.1.4 to assess the baseline alternatives and demonstrate a baseline scenario of planned timber harvest. f. The common practice analysis section was rewritten g. Conclusion as added				
Documentation provided by project participant				

- Version 2 of the PD 99-year licence agreement between Yayasan Sabah and the State Government (not available in digital form but can be viewed in person).	
VVB assessment	Date: 04/04/2022
The updated section 3.1.5 is in line with applied additionality Tool VT0010 V03. However, PP needs to submit the simple cost analysis done for the project which shows that the project is not viable without the carbon credits benefits. CAR#25 stands open.	
Project participant response	Date : 16/05/2022
A simple cost analysis showing negative income through the lifetime of the project is now provided. Please refer to the tab 'Simple Cost Analysis' in the excel file named 'Simple Cost Analysis'. Please keep this file confidential	
Documentation provided by project participant	
Please find Simple Cost Analysis excel file in folder 11 (confidential)	
VVB assessment	Date: 06/06/2022
- The tab 'Simple Cost Analysis' is missing in the excel. There is only one sheet "Budget sheet" in the excel. Please check and provide a revised sheet. - Please provide references in sub-step 3a for the claim which says that "For scenario i. (palm oil), barriers exist consisting of barriers related to local ecological conditions and technological barriers. The barriers related to the local ecological conditions have to do with the fact that the conditions in the project area, especially when it comes to soils and topography (slopes), are sub-optimal for establishing large scale industrial palm oil plantations". - PP is requested to provide proper citation of all scientific literature referred in Step 4 – common practice analysis	
Project participant response	Date : 11/07/2022
- In order to visualize the tab 'Simple cost analysis' the file needs to be downloaded - Please note that the barrier analysis was removed from the 3.1.5 but has been applied in section 3.1.4. References to the soils and topography are provided in the PD, figure 19 and figure 23. - A footnote is inserted with the citation of the scientific literature referred in Step 4 – common practice analysis as follows: <u>Glen Reynolds</u>, <u>Junaidi Payne</u>, <u>Waidi Sinun</u>, <u>Gregory Mosigil</u>, <u>Rory P D Walsh</u>, 2011. Changes in forest land use and management in Sabah, Malaysian Borneo, 1990-2010, with focus on the Danum Valley region. Philos Trans R Soc Lond B Biol Sci https://pubmed.ncbi.nlm.nih.gov/22006960/	
Documentation provided by project participant	
PD Version 3.2	
VVB assessment	Date: 15/07/2022
The changes made in the PD are fine and the CAR is now closed.	

CAR ID	26	Section no.	3.3.7	Date : 03/03/2022
Description of CAR				
Under the sub-section 'Stratification' of section 3.2.1 Baseline Emissions, the applied methodology has specific steps for analysis of the baseline emissions. Section 3.2.1 of the project description VVBs not follow the guidance of the methodology's section 8 and follow each step to define the baseline emission. PP is requested to update Section 3.2.1 of the project description to apply the steps for defining calculation of baseline emissions.				
Project participant response				Date : 30/03/2020
Section 3.2.1 of the project description was edited to clarify how each step for defining the calculation of the baseline emissions was applied.				
Documentation provided by project participant				
Version 2 of the PD				
VVB assessment				Date: 04/04/2022

Revised PD was checked, and information added was found in line with the methodology, CAR#26 stands closed.

CAR ID	27	Section no.	3.3.7	Date	03/03/2022
Description of CAR					
For paragraph 'Field Inventory' under section 3.2.1 Baseline Emissions, PP have mentioned total of 46 circular 30-meter radius (each 0.28 ha) plots were set up within the Kuamut area between the 9th of October 2015 and the 3rd of August 2016 according to a modified field protocol from the Carnegie Airborne Observatory (a more detailed description is available for validation in a Standard Operational Procedure). PP shall elaborate whether these 46 plots are permanent sample plots (PSPs) and shall include same clarification in the PDD section 3.2.1.					
Project participant response					Date : 30/03/2020
The plots are permanent sample plots (PSPs) and we use 2 foot of rebar driven into the ground the mark the centre of the plot. The trees are also marked with permanent metal tags which are carefully nailed into the tree. This is described in detail in the 'Carbon field inventory SOP'. When these plots are remeasured we replace any tags and nailed that are damaged or on trees that have grown substantially. We have updated the text on page 80 to make this clearer.					
Documentation provided by project participant					
file 'Philipson_Kuamut_SOP_Final_With_DataSheets.pdf' within folder 21. Carbon field inventory SOP					
VVB assessment					Date : 04/04/2022
The justification provided is accepted by VVB and the changed made in the revised PD were checked and found okay. Therefore, CAR#27 stands closed.					

CAR ID	28	Section no.	3.3.7	Date	03/03/2022
Description of CAR					
For section 3.2.2 Project Emissions, the applied methodology has specific steps for analysis of the project emissions. Section 3.2.2 of the project description VVBs not follow the guidance of the methodology's section 8.2 and each step to define the baseline emission. PP shall update Section 3.2.2 of the project description to apply the steps for calculation of the project emissions.					
Project participant response					Date : 30/03/2020
Section 3.2.2 of the project description was edited to clarify how each step for defining the calculation of the project emissions was applied.					
Documentation provided by project participant					
Version 2 of the PD					
VVB assessment					Date : 04/04/2022
ERR calculation was checked and found appropriate; CAR#28 stands closed.					

CAR ID	29	Section no.	3.3.7	Date	03/03/2022
Description of CAR					
For section 3.2.4 'Net GHG Emission Reductions and Removals',					
- The applied methodology has specific steps for analysis of the quantification of net GHG emissions and removals. Section 3.2.4 of the project description VVBs not follow the guidance of the methodology's section 8.4 and follow each step to define the net GHG emissions and removals. PP is requested to update Section 3.2.4 of the project description to apply the steps for calculation of net GHG emissions and removals per the guidance in the methodology. - Please share "final ER calculation spreadsheet" which include calculations of baseline, project, leakage and net GHG emissions. PP is requested to share this separately; it is difficult to find from the folders shared by the P.P. - Under the Paragraph 'Uncertainty', why PP has not considered buffer calculated as per the risk assessment report? PP is requested to elaborate and clarify why buffer is not considered as per the risk assessment report?					
Project participant response					Date : 30/03/2020

a. Section 3.2.4 of the project description was edited to clarify how each step was applied. b. R files were submitted instead of Excel since there is no requirement from either VCS or the methodology to use a specific software program. This was discussed at the initial audit meetings with Verifit on the onsite, and Verifit stated that there was no requirement for specific software, only that the analysis could be followed. The R files submitted carefully documents every step of the analysis, and every segment has detailed description describing the formula used and the corresponding pages in the methodology. This description can be accessed by opening the file in a text editor such as notepad and simply reading the clear steps and descriptions. Moreover during the onsite visit, the PP and the Earthhood onsite auditor looked at the R code files together and the stated that the R files where well documented and made sense. If, in addition to reading the R code files, the VVB wishes to do their own analysis in Excel – we can save any step or table of numbers as a .csv file for direct opening in Excel. Please just let us know which table(s) are useful to your own excel checks. c. The uncertainty estimated in the PD is smaller than the 15% threshold indicated in the methodology, therefore no deduction for uncertainty is required.			
Documentation provided by project participant			
- R files containing the calculations - Version 2 of the PD			
VVB assessment			Date: 04/04/2022
The CAR will be closed once we validate the ERRs calculation. The justification regarding uncertainty is accepted. Estimated ERRs has been given till 2028 only. The PP shall include the ERR estimation till the end of the project life. CAR#29 stands open.			
Project participant response			Date : 06/06/2022
ERRs are now estimated until the end of the project life			
Documentation provided by project participant			
PD Version 3			
VVB assessment			Date: 06/06/2022
Revised PD was checked and found to be okay; CAR#28 stands closed.			
CAR ID	30	Section no.	3.3.7
Description of CAR			
In the section 3.3 “Monitoring”, For the parameter CFj under section 3.3.1 Data and Parameters Available at Validation, PP is requested to provide proper reference with the weblink or mention the complete name of the report.			
Project participant response			Date : 30/03/2020
Reference has been changed to refer to the IPCC default value for tree biomass			
Documentation provided by project participant			
Version 2 of the PD			
VVB assessment			Date: 04/04/2022
ERR calculation was checked and found okay. CAR#30 stands closed.			
CAR ID	31	Section no.	3.3.8
Description of CAR			

In the section 3.3.3 "Monitoring Plan"

The VCS CCB PD template has specific requirements which are to be mentioned in the PD section 3.3.3. Section 3.2.3 of the project description VVBs not follow the guidance of the template and follow each step to define the monitoring plan.

The PP is requested to update Section 3.3.3 of the PD and make changes as per the PD template requirements.

PP is required to add following information:

The methods for measuring, recording, storing, aggregating, collating and reporting data and parameters. Where relevant, include the procedures for calibrating monitoring equipment.

The organizational structure, responsibilities and competencies of the personnel that will be carrying out monitoring activities.

The policies for oversight and accountability of monitoring activities.

The procedures for internal auditing and QA/QC.

The procedures for handling non-conformances with the validated monitoring plan.

Any sampling approaches used, including target precision levels, sample sizes, sample site locations, stratification, frequency of measurement and QA/QC procedures.

Where appropriate, include line diagrams to display the GHG data collection and management system.

Project participant response

Date : 30/03/2020

Section 3.3.3. has been edited to more clearly identify how the information provided fits with the requirements set by the PD template and where necessary, information has been added.

Documentation provided by project participant

- Version 2 of the PD

VVB assessment

Date: 04/04/2022

The revised section 3.1.3 of the PD was checked and found okay; the above queries are closed.

However, as per the VCS CCB PD template requirement, PP has not mentioned the procedures for handling non-conformances with the validated monitoring plan. Please check the template and add the required information in the PD.

CAR#31 stands open.

Project participant response

Date : 06/06/2022

Please note that the procedures for handling non-conformances with the validated monitoring plan are described jointly with the internal auditing and QA/QC.

The data management process and responsibilities for internal auditing and QA/QC, including detecting and correcting non-conformances with the validated monitoring plan, are described in figure 34 and the SOPs

Documentation provided by project participant

- PD Version 3.2

VVB assessment

Date: 15/07/2022

The updated PD is now fine. The monitoring SOP has also been checked and the justification provided by the PP is fine. The CAR 31 is now closed.

CAR ID	32	Section no.	3.3.9	Date :	03/03/2022
Description of CAR					
The section 3.3.4 Dissemination of Monitoring Plan and Results of the PD lacks sufficient information related to dissemination of project monitoring plan. PP shall clarify how the information will be communicated to the communities and describe the means by which summaries (at minimum) of the monitoring plan and results will be communicated to the communities and other stakeholders. Also, PP shall mention that the reports will be available in local language as well.					
Project participant response					Date : 30/03/2020
Information has been added in section 3.3.4					
Documentation provided by project participant					
• Version 2 of the PD					

VVB assessment	Date: 04/04/2022
The revised section 3.3.4 of the PD was checked and found appropriate; therefore CAR#32 stands closed	

CAR ID	33	Section no.	3.3.10	Date : 03/03/2022
Description of CAR				
According to VCS standard version 4.2, para 3.2.9, projects shall prepare a non-permanence risk report in accordance with the VCS Program document AFOLU Non-Permanence Risk Tool at both validation and verification. The non-permanence risk report shall be prepared using the VCS Non-Permanence Risk Report Template, which may be included as an annex to the project description or monitoring report, as applicable, or provided as a stand-alone document.				
Project participant response				Date : 30/03/2020
Information that was provided has been inserted in the template. The result is annexed to the updated PD				
Documentation provided by project participant				
VCS Non-Permanence Risk Report				
VVB assessment				Date: 04/04/2022
The revised AFOLU Non-Permanence Risk Report of the project submitted by PP has been reviewed and it was found that				
- The latest template of Non-Permanence Risk report, version 4.0 has been used to prepare Non-Permanence risk report for the project. - All the sections of the report have been filled with the required information in line with the AFOLU Non-Permanence Risk tool, version 4.0				
However, Project ID and Monitoring Period are not filled in the information table of the report. The total number of credits withheld in VCS AFOLU pooled buffer account calculated is less than 10%. However, it should be minimum of 10%. Also, this shall be reviewed once the validation of ERRs calculations are completed.				
CAR#33 stands open.				
Project participant response				Date : 06/06/2022
The buffer considers a 10% discount				
Documentation provided by project participant				
PD version 3				
VVB assessment				Date: 06/06/2022
CAR#33 stands closed as the ERR calculation checked and found appropriate.				

CAR ID	34	Section no.	3.2.28	Date : 23/05/2022
Description of CAR				
As per the requirement of CCB Standard V3.1 section G3.9, PP must identify how training is passed on to new workers when there is staff turnover, so that local capacity will not be lost. The same is missing in section 2.3.14 of the PD. PP is requested to include the same.				
Project participant response				Date : 06/06/2022
The following text was added to indicate permanent capacity to new workers where there is staff turnover "...In order to retain local capacities in cases of staff turn-over, the above training activities will be conducted with the support of local partner organizations with long term presence in the region such as SEARP and PACOS. In addition, Permian Global Research will provide continuous training support to local staff following its onboarding process for new employees and associates."				
Documentation provided by project participant				
PD version 3.2				
VVB assessment				Date: 15/07/2022
The updated PD is now fine, and CAR 34 is now closed.				

CAR ID	35	Section no.	3.2.23	Date : 23/05/2022
Description of CAR				

The KRC Project collaborates with a wide range of partners. PP is requested to list all the partners (as mentioned in section 2.1.3 and 2.1.4) in section 2.4.4 of the PD and revise the section accordingly.	
Project participant response	Date : 08/07/2020
The following was added to the PD: “.... These institutions include Yayasan Sabah and Rakyat Berjaya Sdn. Bhd, Sabah Forestry Department , and a range of other partners that assist the project on an issue-based such as SEARP (South East Asia Rainforest Research Partnership) supporting with the operations on the ground mostly on biodiversity aspects and logistics, as well as PACOS Trust, a community-based organization supporting indigenous communities in Sabah.”	
Documentation provided by project participant	
• PD version 3.2	
VVB assessment	Date: 15/07/2022
The updated PD is now fine, and CAR 35 is now closed.	

CAR ID	36	Section no.	3.2.39	Date : 23/05/2022
Description of CAR				
The justification provided is not explaining the statutory and customary property rights in the project area. In section 2.5.1 of the PD, PP is requested to follow section G5.1 of the CCB standard v3.1 and section 2.5.1 requirements of CCB VCS template and clearly mention that the project does not belong to any local communities or indigenous groups. The land tenure rights/statutory rights belong to the PP as per the agreement. Also, please mention that the customary rights of the local communities will be respected, and the project will ensure its continuity till the project crediting period.				
Project participant response				Date : 06/06/2022
The following was added to the PD: “The project area is legally owned by the Sabah State Government which excludes any territory from indigenous or local communities. The necessary rights to implement the Kuamut Conservation Project were provided to the project proponent through an agreement between Permian Malaysia, the State Government of Sabah and Rakyat Berjaya SDN, BHD. Copy of this agreement is available for the review of the auditors” Also: “Any customary rights of the local communities will be respected through the project implementation which can be confirmed at each verification period”.				
Documentation provided by project participant				
• PD Version 3.2				
VVB assessment				Date: 15/07/2022
The justification provided by the PP and the changes made in the PD are fine and CAR 36 is now closed.				

CAR ID	37	Section no.	3.2.40	Date : 23/05/2022
Description of CAR				
In section 2.5.2 PP must demonstrate that all property rights are recognized, respected, and supported. If applicable, describe measures needed, designed, and implemented by the project to help to secure statutory rights. from the write-up it is not clear whether the land use right belongs to the PP or not. Hence, PP is requested to elaborate the land use right of the PP. Then PP can further provide the details which it has already mentioned in the section				
Project participant response				Date : 08/07/2022
The following text was added: “As described in the previous section, the project is implemented respecting all property rights which were transferred to Permian Malaysia through an agreement signed with the Sabah State Government.” The following text is already in the PD: “As the project matures and grows, it will adopt formal Standard Operating Procedures governing staff conduct with respect to community engagement founded on FPIC principles. The project will also negotiate written agreements with communities which will serve as guiding documents for future project-community collaborations.”				

Documentation provided by project participant	
PD Version 3.2	
VVB assessment	Date: 15/07/2022
The justification provided by the PP and the changes made in the PD are fine and CAR 37 is now closed.	

CAR ID	38	Section no.	3.2.42	Date : 23/05/2022
Description of CAR				
From the justification provided in the PD, it is not clear that whether the customary rights of the local communities will continue or there will be any forced regulations. PP is requested to revise section 2.5.4 and provide the information related to the customary rights of the local communities will be respected.				
Project participant response				Date : 06/06/2022
Please note that section 2.5.4 refers to any involuntary removal or relocation of property rights holders. Description related to customary rights is provided in section 2.5.1 and 2.5.2.				
The project area contains no permanent human settlements.				
Documentation provided by project participant				
PD Version 3.2				
VVB assessment				Date: 15/07/2022
The justification provided by the PP and the changes made in the PD are fine and CAR 38 is now closed.				

CAR ID	39	Section no.	3.5.15	Date : 23/05/2022
Description of CAR				
- As per section 5.4.1 of the VCS CCB template, PP must present a monitoring plan that: - Identifies biodiversity variables to be monitored, which should be directly linked to the project's biodiversity objectives and to predicted outputs, outcomes and impacts identified in the project's causal model related to biodiversity. - Identifies the areas to be monitored. - Identifies the types of measurements, the sampling methods, and the frequency of monitoring and reporting to be used. - Assesses the effectiveness of measures taken to maintain or enhance all identified HCVs related to globally, regionally or nationally significant biodiversity present in the project zone. - If the project intends to meet the Gold Level for climate change adaptation benefits (GL1), the community monitoring plan must also include indicators for adaptation benefits for biodiversity. - If the project intends to meet the Gold Level for exceptional biodiversity benefits (GL3), it must also include indicators of the population trend of each trigger species and/or the threats to such species. The above points are missing from the current description mentioned in the PD. Please check the requirements and revise. - PP has mentioned that signs of RTE species (direct sightings, tracks and/or scats) will be documented opportunistically by the field team during monthly surveillance and monitoring activities, and recorded via data sheets, photographs, and GPS waypoints. Please submit some of such for validation. - In folder 37 – Biodiversity Monitoring Plan – There is no biodiversity monitoring plan document. PP is requested to upload if it has developed a monitoring plan for the biodiversity component of the project.				
Project participant response				Date : 08/07/2022
- A biodiversity monitoring plan that covers all required sections was developed (see folder 37) - Please see the community monitoring plan section related to adaptation benefits for biodiversity. - Orangutan nest survey will be conducted as a mean to monitor the Kuamut orangutan population following the methods of 2002 and 2017 surveys. - The monitoring activities are yet to be performed and will be available at time of verification (please see section 7 of the BD monitoring plan) - The biodiversity monitoring plan is now uploaded.				
Documentation provided by project participant				

• PD Version 3.2 • Biodiversity monitoring plan in folder 37	
VVB assessment	Date: 15/07/2022
The supporting document and changes made in the PD are fine and CAR 39 is now closed.	

CAR ID	40	Section no.	3.5.17	Date : 23/05/2022
Description of CAR				
As per VCS CCB PD template Section 5.5.1, PP has to demonstrate the presence of at least a single individual of a species on the IUCN Red List that is critically endangered or endangered, or the presence of at least 30 individuals or 10 pairs of a vulnerable species. PP has mentioned Bornean orangutan (<i>Pongo pygmaeus morio</i>) as a Critically Endangered which is protected by the project. However, it has not given the IUCN reference – like category, criteria, etc. PP is requested to add the same in the section.				
Project participant response				Date : 08/07/2022
Reference to the IUCN red list of endangered species is included in the footnote https://www.iucnredlist.org/species/17975/123809220				
Documentation provided by project participant				
• PD Version 3.2				
VVB assessment				Date: 15/07/2022
The changes made in the PD is fine and CAR 40 is now closed.				

CAR ID	41	Section no.	3.1	Date : 23/05/2022
Description of CAR				
- Please check the meeting date of the 1st Steering meeting report on the Northern Kuamut Project (from the 2nd page of the MoM – Folder no - 8) and make the required corrections. - Also, folder 35 of documents related to biodiversity recods is empty please check. - Please submit the PRA reports conducted so far. - when will the project draft Annual Work Plan for Protection and Monitoring will be finalized (available folder 09)? - Please submit the copy Company Manpower Reporting (UU 7/1981) regulation referred in section 2.3.16 of the PD.				
Project participant response				Date : 06/06/2022
- Correction of the date of the 1st steering committee on 21st December 2021 was made - Please ignore folder 35, the biodiversity monitoring plan is now included in folder 37 - The Annual Plan for Monitoring and Protection 2022 was completed in June 2022 (copy uploaded to the sharepoint in folder 9) - Copies of the company manpower reporting are uploaded in folder 51				
Documentation provided by project participant				
• PD Version 3.2 • Annual Plan for Monitoring and Protection 2022 (folder 9) • Company Manpower Reporting (folder 51)				
VVB assessment				Date: 15/07/2022
1. The document is now fine 2. The biodiversity monitoring plan is now accessible to VVB 3. The final plan has now been submitted and is okay. 4. The document is now accessible to VVB				
The CAR 41 is now closed.				

CL ID	42	Section no.	3.4.14	Date : 23/05/2022
Description of CAR				

In section 4.5.1 of PD PP claims that 50% of the households are below the national poverty line having income of per household per month appx. USD 510. Please provide reference for considering USD 510 for national poverty line.	
Project participant response	Date : 08/07/2022
The following was amended in the PD using a more recent source from the World Bank for poverty line of approximately US\$ 4.00 (2011 PPP) per person per day. At the time of the social survey, it was found that cash-poor, average monthly income is around MYR 350 (around one-third of Malaysian minimum wage) in the Kuamut cluster and MYR 879 per month in the Keramuak cluster.	
Documentation provided by project participant	
• PD Version 3.2 • Reference for poverty line from World Bank 2020 (folder 52)	
VVB assessment	Date: 15/07/2022
The changes made in the PD and the references provided are fine. The CAR 42 is now closed.	

CAR ID	43	Section No.	3.5.15, 3.5.16	Date : 23/05/2022
Description of FAR				
The project has not submitted the community and biodiversity monitoring plan. PP is required to provide the community and biodiversity monitoring plan for the project before the first verification.				
Project participant response				Date : 08/07/2022
Biodiversity and community monitoring plans are now provided.				
Documentation provided by project participant				
• Biodiversity Monitoring plan (folder 37) • Community monitoring plan (folder 38)				
VVB assessment				Date: 15/07/2022
The community and biodiversity monitoring plans are now accessible to the VVB. The CAR 43 is now closed.				

Table 2. FAR from this verification

FAR ID	01	Section No.	3.2.10, 3.2.23, 3.2.40, 3.2.41, 3.5.14	Date : 23/05/2022
Description of FAR				
The stakeholder engagement started after the start date of the project. Hence, as per section G5 of CCB standard v3.1, PP is required to provide proof that project activities do not lead to involuntary removal or relocation of property rights holders from their lands or territories and do not force them to relocate activities important to their culture or livelihood. PP will respect customary tenure and resources use of the communities.				
Project participant response				Date : 08/07/2020
Please note that none of the project activities lead to involuntary removal or relocation of property rights holders from their lands or territories and do not force them to relocate activities important to their culture or livelihood. Furthermore, the project area contains no permanent human settlements. Evidence of further consultations and assurance that customary rights of the local communities will be respected through the project crediting period will be provided prior to first verification.				
Documentation provided by project participant				
• PD Version 3.2				
VVB assessment				Date: 15/07/2022
The justification and assurance provided by the PP is satisfactory. The FAR to be addressed during the first verification of the report.				

FAR ID	02	Section No.	3.4.15	Date : 23/05/2022
Description of FAR				

In Section 4.5.2 of the PD, PP claims for gold level criteria for Short-term and Long-term Community Benefits and has listed number of activities. However, during the audit it was found that as of now due to different constraints no such activities could be implemented. Hence, to continue the claim PP is required to provide the evidence that all the listed activities are implemented before the first verification.	
Project participant response	Date : 06/06/2022
Evidence of the implementation of the community activities to be provided at time of verification. Please note that at time of validation the implementation of the activities described is not required.	
Documentation provided by project participant	
VVB assessment	Date: 15/07/2022
The justification and assurance provided by the PP is satisfactory. The FAR to be addressed during the first verification of the report.	

FAR ID	03	Section No.	3.4.19	Date : 23/05/2022
Description of FAR				
In Section 4.5.6 of the PD, PP claims for gold level criteria for community benefit sharing mechanism. Details have been provided in the section. However, during the audit it was found that as of now due to different constraints the BSM is still not finalized. Hence, to continue the claim PP is required to provide the evidence that the BSM has been finalized and approved by the communities before the first verification.				
Project participant response				Date : 06/06/2022
Evidence of the benefit sharing mechanism with nearby communities to the project area will be provided at time of verification				
Documentation provided by project participant				
VVB assessment				Date: 15/07/2022
The justification and assurance provided by the PP is satisfactory. The FAR to be addressed during the first verification of the report.				