



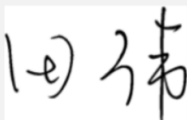
**Verified Carbon
Standard**

VCS VALIDATION REPORT FOR

NATIONAL SHALE OIL LOW-CARBON
INTELLIGENT DEMONSTRATION BASE
CARBON SINK AFFORESTATION PROJECT



Report ID	0104020323038(001)
Project title	National Shale Oil Low-Carbon Intelligent Demonstration Base Carbon Sink Afforestation Project
Project ID	4800
Crediting period	26/02/2023 to 25/02/2043
Original date of issue	25/12/2023
Most recent date of issue	15/12/2024

Version	4.0
VCS Standard Version	4.5
Client	Beijing MD Energy Technology Co., Ltd.
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Summary:

China Classification Society Certification Co. Ltd. (hereafter referred to as “CCSC”) has been commissioned by Beijing MD Energy Technology Co., Ltd. to perform the validation of the project activity “National Shale Oil Low-Carbon Intelligent Demonstration Base Carbon Sink Afforestation Project” (hereafter referred to as “the project”) on the basis of requirements of Verified Carbon Standard (VCS) Version 4.5, VCS Validation Manual, and the approved Clean Development Mechanism (CDM) methodology AR-AMS0007 version 03.1. The validation report are summarizing the findings of the validation.

The project is located in Madengbian Residential Area, Xinbao Village, Yule Town, Huachi County, Qingyang City, Gansu Province, People’s Republic of China. The project area is 33.35ha (500 mu) ha commercial forest, which is expected to generate yearly average about 497 tCO₂e in 20 years (9,933tCO₂e in total for the 20 years of crediting period, including buffer reductions 1489.950tCO₂e). In the absence of the Project, the sites of the project are all low-nutrient, low-supply land, and the terrain is steep, with few herbaceous plants growing. Without its implementation, all the sites will keep the same circumstances with no natural renewal and reforestation within the project area. Through the implementation of the project, it enhances ecosystem services through carbon storage, and soil and water conservation. It has a significant potential to mitigate the effects of climate change effects through microclimate moderation and natural resources conservation in the short run and through carbon sequestration in the long run. It also provides employment opportunities to rural population, and promotes the sustainable development of local economy and society.

The validation scope is defined as an independent and objective review of the Project Description (hereafter refer to as “PD”), the project’s baseline study and monitoring plan, the emission reduction calculation spreadsheet and other relevant documents refer to VCS and CDM requirements.

The validation is an independent 3rd party assessment of the project's baseline, estimated GHG emission reductions or net anthropogenic GHG removals, the monitoring plan and the crediting period using the applicable VCS requirements. Validation is a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of estimated Verified Carbon Units (VCUs).

The project is eligible under AFOLU project. The validation criteria followed the guidance documents provided by VCS and the selected CDM methodology and tool includes:

- VCS Standard, Version 4.5
- VCS Program Guide, Version 4.4
- Methodology AR-AMS0007 version 03.1: Afforestation and reforestation project activities implemented on lands other than wetlands and related tools
- AFOLU Non-Permanence Risk Tool, v4.2

The Validation process includes three phases:

- 1) Desk review of documents;
- 2) On-site visit and follow-up interviews;
- 3) Issuance of the final validation report.

CCSC appointed a qualified audit team in accordance with internal procedures to perform the validation. Five Corrective Action Requests (CAR) and seventeen Clarification Requests (CL) were raised in the validation process and successfully closed upon the project participant taken actions and submitted the revised PD and supporting evidence. No Forward Action Request (FAR) was raised during this validation.

In conclusion, it is CCSC's opinion that the project in the PD (version 4.0, date 05/12/2024) meets all relevant requirements for VCS activities and all relevant host Party criteria and correctly applies methodology AR-AMS0007 version 03.1: Afforestation and reforestation project activities implemented on lands other than wetlands.

CONTENTS

1	INTRODUCTION	5
1.1	Objective	5
1.2	Scope and Criteria	5
1.3	Reasonableness of Assumptions	5
1.4	Summary Description of the Project	5
2	VALIDATION PROCESS	5
2.1	Method and Criteria	6
2.2	Document Review	7
2.3	Interviews	7
2.4	Site Visits	8
2.5	Resolution of Findings	9
3	VALIDATION FINDINGS	10
3.1	Project Details	11
3.2	Safeguards and Stakeholder Engagement	16
3.3	Application of Methodology	27
3.4	Non-Permanence Risk Analysis	40
4	VALIDATION OPINION	44
4.1	Validation Summary	68
4.2	Validation Conclusion	68
	APPENDIX 1: COMMERCIAL SENSITIVE INFORMATION	73
	APPENDIX 2: ABBREVIATIONS	74
	APPENDIX 3: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWERS	76
	APPENDIX 4: DOCUMENTS REVISED OR REFERENCED	78
	APPENDIX 5: CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS AND FORWARD ACTION REQUESTS	87

1 INTRODUCTION

1.1 Objective

Beijing MD Energy Technology Co., Ltd. has commissioned China Classification Society Certification Co., Ltd. (herein after refer to as CCSC) to performed the validation of National Shale Oil Low-Carbon Intelligent Demonstration Base Carbon Sink Afforestation Project (VCS ID 4800, hereafter referred to as “the project”) on the basis of requirements of Verified Carbon Standard (VCS) version 4.5.

CCSC as the validation/verification body (VVB) of the project has been accredited as a DOE by UNFCCC and meets the competence requirements as set out in ISO 14065:2020.

The validation is an independent 3rd party assessment of the project’s baseline, estimated GHG emission reductions or net anthropogenic GHG removals, the monitoring plan and the crediting period using the applicable CDM and VCS requirements.

1.2 Scope and Criteria

The validation was performed on the basis of VCS criteria. The information in the documents is reviewed against CDM Validation and Verification Standard, VCS standard version 4.5 and associated interpretations. CCSC has based on the instructions in the VVS and employed a risk-based and stepwise approach when conducting the validation, focusing on the identification of significant risks for project implementation and the generation of VCUs. The validation is not meant to provide any consulting towards the PPs. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

1.3 Reasonableness of Assumptions

CCSC has undertaken a reasonable assurance engagement in accordance with VCS Standard (version 4.5). The validation conclusions are based on the PD and supporting evidence made available to the VVB and information collected through performing interviews and during the on-site inspection.

1.4 Summary Description of the Project

The project is located in Madengbian Residential Area, Xinbao Village, Yule Town, Huachi County, Qingyang City, Gansu Province, People’s Republic of China.

In the absence of the Project, the sites of the project are all low-nutrient, low-supply land, and the terrain is steep, with few herbaceous plants growing. Without its implementation, all the sites

will keep the same circumstances with no natural renewal and reforestation within the project area. Through the implementation of the project, it enhances ecosystem services through carbon storage, and soil and water conservation. It has a significant potential to mitigate the effects of climate change effects through microclimate moderation and natural resources conservation in the short run and through carbon sequestration in the long run. It also provides employment opportunities to rural population, and promotes the sustainable development of local economy and society.

The project applies methodology AR-AMS0007 version 03.1 Afforestation and reforestation project activities implemented on lands other than wetlands. The project is expected to generate an annual average of 497 tCO₂e emission reduction over the 20-years of crediting period.

2 VALIDATION PROCESS

2.1 Method and Criteria

The validation scope covers the relevant documents (e.g., the VCS-PD, the emission reduction calculation spreadsheet, supporting documents and information collected through performing interviews and during the on-site inspection, VERRA's requirements publicly available, relevant rules, including the host country legislation, etc.) to be independently reviewed, the project geographical locations to be visited on-site, the related project stakeholders to be interviewed with, and processes that are necessary to acquire objective evidence for the evaluation of the project compliance to the VCS requirements and associated interpretations. The validation activities are conducted according to the VERRA's requirements. In doing so, the principles of accuracy and completeness, relevance, reliability and credibility were followed. The validation is not meant to provide any consulting service towards the PPs. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project.

The validation schedule including key milestones has been included in below of this table.

Table 2.1.1 the validation schedule

Item	Date	Description of the implementation
Desk review of documents	27/11/2023 to 03/12/2023	The audit team evaluates the information provided by PPs.
Validation plan	04/12/2023	The audit team has formulated the validation plan for VCS projects and send it to PPs by email.
opening meeting	12/12/2023	All parties involved had attended the kick-off meeting.

On-site inspection	12/12/2023-13/12/2023	The audit team has interviewed with key personnel from the project owner (the project proponent), and the local stakeholders.
The resolution of outstanding issues and the issuance of the validation report and statement.	13/12/2023-25/12/2023	After the on-site inspection, The audit team issuance of the findings and subsequently the final validation report.

2.2 Document Review

A desk review of the PD and supporting documents was conducted by the audit team. The aim of the desk review of the documentation was to verify correctness, credibility, interpretation and completeness of presented data and information, and to cross check between information provided in the updated PD and information from sources other than that used, if available. Review of the appropriateness of formulae and correctness of calculations was also carried out during this stage based on the approved methodology being applied.

The audit team evaluated the information provided by PPs through document review in accordance with the requirements of CDMP0310- *CDM Audit Verification Implementation Procedure* and *CDM Project Audit Verification Standards*, both of which are the internal procedures for implementing CDM/VCS Validation in CCSC. With the document review, the audit team should acquire including:

- Identification of project types;
- Description of project activities;
- Selection of methodology and baseline;
- Application of Methodologies and Tools;
- Start date, type of credit period and length of credit period;
- Environmental impact;
- Local stakeholders communication methods;
- Evaluation comments from local stakeholders;
- The state of sustainable development;
- Project implementation;
- Monitoring plan;
- Quantification of GHG emission reductions and carbon dioxide removals.

When assessing the project baseline, the audit team consult both the provided documents by PP and relevant national law and industry regulatory texts or refer to industry experts to ascertain the afforestation requirements of local regulations. This procedure enables the team to determine the accuracy of the project baseline selection.

Appendix 4 of this report contains a complete list of all documents and proofs reviewed by the audit team.

2.3 Interviews

From 12/12/2023-13/12/2023, CCSC performed an on-site inspection at the physical site of the project.

During the on-site inspection, the audit team has interviewed with key personnel from the project owner (the project proponent), local stakeholders, local experts, and project developer.

The assessment content and topics/the persons interviewed at the on-site inspection were provided in the below table.

Date: 12/12/2023-13/12/2023	
Interview topics	Interviewed Organizations and persons
- The status of VCS project. - The project on-site inspection - The evidences of construction status and operation of key equipment, parameters monitoring and data processing activities, monitor equipment and calibration. - Monitoring data. - Quality Management; organizational structure, responsibilities and competencies; Internal QA/QC Management procedures and document control. - Compliance with National Laws and Regulations.	PetroChina Company Limited Changqing Oilfield Shale Oil Development Branch (Project Owner) Mr. Zhang Haibing Mr. Feng Daibin Mr. Ji Jinghao Mr. Shi Shuo Beijing MD Energy Technology Co., Ltd. (Project Developer) Ms. Feng Haiying
- Status of the forest of the project activity; - Status of the selected sample plot; - Operation of project activity. - The process and participation of the stakeholder consultation; - The impact of the project activity;	Local residents Ms. Huang Qiaofang Ms. Zhang Caiqin Mr. Zhang Mingyi Mr. Lu Chunen Mr. Wu Tinghu

Date: 12/12/2023-13/12/2023	
Interview topics	Interviewed Organizations and persons
- The complaint by local stakeholders - and the implementation of the mitigation measures.	Director of local village committee (Xinbao Village) Mr. Wang Yongli Local Forestry and Grassland Bureau (government) Mr. Wang Yanlin
- Applicability of selected methodology - Baseline of the project - Emission factors - Preparation of PD. - Compliance of the monitoring plan with the monitoring methodology - Compliance of monitoring with the monitoring plan - Assessment of data and calculation of GHG emission reductions	PetroChina Company Limited Changqing Oilfield Shale Oil Development Branch (Project Owner) Mr. Zhang Haibing Mr. Feng Daibin Mr. Ji Jinghao Mr. Shi Shuo Beijing MD Energy Technology Co., Ltd. (Project Developer) Ms. Feng Haiying

2.4 Site Visits

The on-site inspection involved following activities:

- An assessment of the implementation and operation of the project as per the PD;
- A review of information flows for generating, aggregating and reporting the monitoring parameters;
- Interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the approved monitoring plan.

The audit team performed the on-site validation during 12/12/2023-13/12/2023.

The interviewed personnel and objective are listed in above table.

2.5 Resolution of Findings

During the validation of a project activity, to identify issues that need to be further elaborated upon, researched, or added to in order to confirm that the project meets the VERRA's

requirements and can achieve credible emission reductions, CCSC will issue a Corrective Action Request (CAR), a Clarification Request (CL) or a Forward Action Request (FAR) depending on different situations.

The objective of this phase of is to resolve issues related to the monitoring, implementation and operations of the project activity that could impair the capacity of the project activity to achieve emission reductions or influence the monitoring and reporting of emission reductions prior to CCSC's positive conclusion on the GHG emission reduction calculation.

Findings established during the validation can either be seen as a non-fulfilment of criteria ensuring the proper implementation of a project or where a risk to deliver high quality emission reductions is identified.

A Corrective Action Request (CAR) will be raised if one of the following occurs:

- a) Non-compliance with the monitoring plan or methodology are found in monitoring and reporting and has not been sufficiently documented by the project proponents, or if the evidence provided to prove conformity is insufficient;
- b) Modifications to the implementation, operation and monitoring of the project activity has not been sufficiently documented by the project proponents;
- c) Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;
- d) Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project proponents.

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

A Forward Action Request (FAR) will be raised, for actions if the monitoring and reporting require attention and/or adjustment for the next verification period.

There are 5 CARs, 17 CLs that have been raised during the validation process, No Forwarded Action Requests (FAR) were raised.

Each finding, including the issue raised, the response(s) provided by the project proponent, and the final conclusion and any resulting changes to project documents, are listed in the appendix 5.

2.5.1 Forward Action Requests

None FAR was raised during the validation process.

3 VALIDATION FINDINGS

3.1 Project Details

The project is located in Madengbian Residential Area, Xinbao Village, Yule Town, Huachi County, Qingyang City, Gansu Province, People's Republic of China.

In the absence of the Project, the sites of the project are all low-nutrient, low-supply land, and the terrain is steep, with few herbaceous plants growing. Without its implementation, all the sites will keep the same circumstances with no natural renewal and reforestation within the project area. Through the implementation of the project, it enhances ecosystem services through carbon storage, and soil and water conservation. It has a significant potential to mitigate the effects of climate change effects through microclimate moderation and natural resources conservation in the short run and through carbon sequestration in the long run. It also provides employment opportunities to rural population, and promotes the sustainable development of local economy and society.

Within the project activity, approximately 51,800 saplings will be planted, covering an area of around 33.35ha (500 mu). A total of around three tree species are proposed for plantation activities within the project. The species selected for afforestation include Mongolian pine, Spruce, and Xinjiang poplar, due to the high survival rate, better ecological benefits, ability to withstand extreme weather disasters, strong resistance to pests and diseases, their acceptability by local people, and carbon sequestration potential. Among them, the total number of saplings are shown in the following table.

Species of tree	Total planting quantity
Mongolian pine	27750
Spruce	16650
Xinjiang poplar	7400
Total	51800

Under the project for crediting period of 20 years, harvesting is not part of the project activities which has been confirmed through relevant document reviews /16//57/ and onsite interviews against Local Forestry and Grassland Agency staff, and PP. The project applies methodology AR-AMS0007 version 03.1 Afforestation and reforestation project activities implemented on lands other than wetlands. The project is expected to generate an annual average of 497 tCO₂e emission reduction over the 20-years of crediting period.

The project description is accurate, complete, and provides with reader with an understanding of the nature of the project.

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Audit history	This is validation of the project. No previous audit.
Sectoral scope	Checking Annex A to the Kyoto Protocol: https://unfccc.int/resource/docs/convkp/kpeng.html and VERRA website: https://verra.org/programs/verified-carbon-standard/vcs-program-details/#sectoral-scopes It is confirmed that the project belongs to sectoral scope 14. Agriculture, Forestry, and other Land uses (AFOLU) as the project is related to the Afforestation, Reforestation and Revegetation (ARR).
AFOLU project category, if applicable	By document review against the VCS-PD, it is confirmed that the AFOLU project category is Afforestation, Reforestation and Revegetation (ARR).
Project activity type	Non-grouped project
General eligibility of the project to participate in the VCS Program	- The project is project generating GHG emission reductions by afforestation, which is not excluded under Table 2.1 of the VCS Standard. - The project start date is 26/02/2023, on which activities such as land preparation and planting are carried out which resulted in removal of the GHG emissions /21//24/, while the project initiated the pipeline listing process on 03/11/2023 within three years of the project start date, which complies with the VCS standard, and the project complete validation within eight years of the project start date which is required by VCS Standard. - The applied methodology AR-AMS0007 version 03.1 is eligible under the VCS Program and the methodology has scale limit below 60,000tCO₂e/y. - The project is not a fragmented part of a larger project or activity that would otherwise exceed such limits, which is confirmed by document review /17/ and onsite inspection. - No other relevant eligibility information.
AFOLU project eligibility, if applicable	AFOLU project eligibility is met:

	- The selected AFOLU project category, ARR is appropriate and all related category requirements are met, since the project increase carbon sequestration by establishing forest through the planting of woody vegetation. Under the project for crediting period of 20 years, harvesting is not part of the project activities by relevant document review /16//57/ and onsite interviews against Local Forestry and Grassland Agency staff, and PP. The project will not include timber harvesting in management plan, and the project area shall not be cleared of native ecosystems within the 10-year period prior to the project start date, which can be confirmed by reviewing the declaration by the project implementor /54/ and photos of project site prior to the project start /56/, as well as onsite inspection. - There is sufficient evidence to demonstrate that native ecosystems have not been converted, cleared, drained, or degraded to generate GHG credits in Section 3.2.4.3 below.
Transfer project eligibility, if applicable	N/A as the project is not a transfer project or CPAs seeking registration.
Project design	The project has been designed as single location which has been confirmed by review documented evidence /17//18//19//24/ and onsite inspection.
Project ownership	Registered forest land rights of the Project /15/ and the Contracts of land management between the PP and the local villagers /16/ have been checked, and the representatives of the local villagers have been interviewed during onsite visit. It was confirmed that the PP is authorized the legal rights to control, develop and manage the carbon credits generated by the proposed project during the crediting period.
Project start date	The PD indicates that the project start date is 26/02/2023 on which activities such as land preparation and planting are carried out which resulted in removal of the GHG emissions, as per the Planting records /23/. The determination of the project start date complies with the VCS standard version 4.5.
Project crediting period	The PD indicates that the project crediting period is 20 years stated from 26/02/2023, which complies with the VCS standard version 4.5, as an ARR project other than ALM project.

Project scale	It is confirmed that the PD indicates the project as a “Project” since the annual emission reductions are below 30,000tCO _{2e} .
Likelihood of achieving estimated GHG emission reduction or removals	Calculation of estimated emission reduction has been checked and confirmed appropriate and correct, as indicated in the PD. Referring to the section 3.3.6 of the report.
Technologies and measures implemented by the project activity or activities	Technologies and measures included in the section 1.12 of the PD have been checked and confirmed against the documented evidences /17//18//19//21//22//23//24/ and by onsite inspection.
Implementation schedule of the project activity or activities	Implementation schedule described in the section 1.12 of the PD has been checked and confirmed via document review /21//22//24/.
Project location	The Maps of the Project (kml file) /18/ and Topographic map /19/ have been checked and the project area including project geographical coordinates were confirmed.
Conditions prior to project initiation	Conditions existing prior to project initiation have been included in the section 1.14 of the project description, which were confirmed by reviewing documents /17//56/ and interviews during onsite inspection. The information is also included in the PD including Ecosystem type, Current and historical land-use, and present and prior environmental conditions of the project area including information on the climate, hydrology, topography, relevant historic conditions, soils, vegetation, and ecosystems of the project area.
Project compliance with applicable laws, statutes and other regulatory frameworks	The project is voluntarily implemented on non-forest land, which complies with all the with applicable laws, statutes and other regulatory frameworks. By checking laws and regulation, such as Forest Law of the People's Republic of China, Natural forest protection and restoration system plan, Regulations of Gansu Province on the protection of natural forests and Code of Forest Harvesting, it is confirmed that the project activity is in complicate with all laws and regulations in China. The project will be under regular inspection by local government during the implementation period to ensure the continuous compliance based on the local

	expertise of the VVB and confirmed by interview with local officer.
Double counting and participation under other GHG programs	The project has neither been registered nor seeking registration under any other GHG programs, and hasn't been rejected by any other GHG project, which has been confirmed via checking the website of UNFCCC, GS, VCS, GCC, and CCER. The PP also provided the Declaration on non-double counting for GHG program /52/ which was checked by the audit team.
No double claiming with emissions trading programs or binding emission limits	China has a national emissions trading scheme only cover the high-emission industries, such as power generation sector that emitted at least 26,000 tons of CO₂e/year which has been verified in the public website, the project owner and the project activity is not included in the mandatory emission control scheme and there is no emission cap enforced for the project owner by checking the enforced company list in public information. In addition, there are 7+1 Pilot ETSs in China, which include Beijing city, Shanghai city, Tianjin city, Chongqing city, Shenzhen city, Guangdong province, Hubei province and Fujian province. Hence, Gansu province is not a Pilot ETS, Hence, it is confirmed that the emission reductions will not be double counted. The declaration regarding the project is submitted by PP which is acceptable to the audit team. The audit team confirms that the Net GHG emission reductions or removals generated by the project will not be used for compliance with an emissions trading program or to meet binding limits on GHG emissions in any Emission Trading program or other binding limits. The audit team checked the relevant laws, statutes, and other regulatory. Thus, the audit team concluded that the project activity will not be involved on other Emissions trading programs and other binding limits.
No double claiming with other forms of environmental credit	The project has no intention to generate any other form of GHG-related environmental credit for GHG emission reductions or removals claimed under the VCS Program. Besides, the project does not generate electricity and therefore it cannot apply for any other forms of environmental credit including I-REC.
Supply chain (Scope 3) emissions double claiming	Supply chain (Scope 3) emissions are not applicable for the project.

Sustainable development contributions	By checking China's National Plan on Implementation of the 2030 Agenda for Sustainable Development /29/ and 17 SDGs defined by UNDP /30/, and interviewing with stakeholders during site visit, it is confirmed that the project activity would contribute sustainable development in the region in following aspects, which has been confirmed by site visit: • SDG 1: End of poverty: Through afforestation practices, the project aims to secure, diversify and increase farmers' income. • SDG 4: Quality Education: Through afforestation practices, the project employs a majority of its staff from the rural areas in which it operates and provides them with extensive vocational and technical training. • SDG 5: Gender Equality, Through afforestation practices, women will be hired to provide them with equal employment opportunities. • SDG 13: Action for the climate: The project acts for climate change mitigation through carbon storage in the trees. From 2023 to 2024, around 51,800 seedlings have been planted.
Additional information relevant to the project	• Leakage management for AFOLU projects It is confirmed that the leakage of the project activities is considered as zero as it's insignificant. • Commercially sensitive information No commercially sensitive information has been excluded from the public version of the project description. • No additional relevant information that may have a bearing on the eligibility of the project, the reductions or removals, or the quantification of the project's reductions or removals.

3.2 Safeguards and Stakeholder Engagement

3.2.1 Stakeholder Engagement and Consultation

3.2.1.1 Stakeholder Identification

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder identification	The audit team has checked the PD and confirm that the stakeholder identification has been conducted as per the VCS standard Version 4.5. Project area has been confirmed by the validation team through onsite inspection, onsite interview against the Xinbao village committee and local stakeholders, and reviewing documents including the KML file of the project area /18/, Afforestation Operation Design Report /17/, Contracts of land lease and transfer of management between the PP and the local villagers /16/, and etc. The project covers an area of 33.35ha, is located in Madengbian Residential Area, Xinbao Village, Yule Town, Huachi County, Qingyang City, Gansu Province, People's Republic of China. The project occupies only a small area of Madengbian Residential Area. Therefore, the outside the project area are area in Madengbian Residential Area other than the project area. Madengbian Residential Area is a settlement, it's an autonomous group, i.e., a community. The total area of the community is 357.27ha, with 302.67ha of non-cultivated land, and the total population of the area is 206, with 116 permanent residents. All villagers in Madengbian Residential Area are stakeholders of the project. People or groups who might be impacted by a project are identified stakeholders, including the villagers of Madengbian Residential Area,, which is a part of the Xinbao Village and where all the related villagers of the project live, are considered the stakeholders. The validation team has onsite checked the following evidence of the stakeholder identification and engagement processes: a. Stakeholder Management Program /59/ This document describes in detail the stakeholder identification and analysis process. b. Project announcement /60/, Questionnaire /28/, and Contracts of Land Lease and Transfer/16/

	The documents embody the stakeholder engagement process.
Legal or customary tenure/access rights	The audit team confirm that the land can be leased or the management right of land can be transferred according to the Forestry Law of the People's Republic of China, and the villagers strongly agreed to sublet the land to the project participant for afforestation /16/. The project also provides employment to rural population and promote the sustainable development of local economy and society. Refer to Sustainable development contributions in the section 3.1 of this report.
Stakeholder diversity and changes over time	Stakeholder diversity and changes over time described in the PD in the aspects including culture, society, economy, and etc. has been checked and confirmed by the audit team by onsite interview and with expertise of the audit team. The local people share the same faith and there is no social and no cultural difference or diversity.
Expected changes in well-being	The audit team can confirm the project enhances ecosystem services through carbon storage, and soil and water conservation. It has a significant potential to mitigate the effects of climate change effects through microclimate moderation and natural resources conservation in the short run and through carbon sequestration in the long run. It also provides employment to rural population and promote the sustainable development of local economy and society. Refer to Sustainable development contributions in the section 3.1 of this report.
Location of stakeholders	The audit team confirm that it is appropriate that stakeholders located in Madengbian Residential Area,, Xinbao Village, Yule Town, Huachi County, Qingyang City, Gansu Province, People's Republic of China.
Location of resources	It is confirmed that territories and resources occupied by the project is within Madengbian Residential Area, Xinbao Village, Yule Town, Huachi County, Qingyang City, Gansu Province, People's Republic of China.

3.2.1.2 Stakeholder Consultation and Ongoing Communication

Item	Evidence gathering activities, evidence checked, and assessment conclusion
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Stakeholder engagement process	The process and methods used to document the outcomes are provided in the PD. Communications with local stakeholders are being carried out through steps below: a) Field investigation b) Notification on Stakeholder Consultation Survey c) Questionnaire survey The above process to engage stakeholders is in a culturally appropriate manner, including dates of announcements or meetings, language and gender sensitivity.
Consultation outcome	100 questionnaires /28/ survey for the local stakeholder to collect the relevant comments and suggestions on 08/06/2022 have been checked. The 100 investigated stakeholders include all the 34 related villagers of the project and the others are local residents. It is confirmed that no negative comments received for the project.
Ongoing communication	It is appropriate that the project owner set up an on-going communication mechanism in the Stakeholders procedures /26/ to regularly holds stakeholder meetings every year to collect opinions of various stakeholders during the project operation period.
Stakeholder input	By onsite interviews and reviewing Notification on Stakeholder Consultation Survey dated 25/05/2022 /27/ and all the questionnaires /28/ conducted on 08/06/2022, it is confirmed that all stakeholders support the implementation of the project activities. Updates to the project design were not necessary.

3.2.1.3 Free, Prior, and Informed Consent

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Obtaining consent	The sections 2.1.2 and 2.1.3 of the PD have been revised to include the following steps of FPIC: The project proponent implements the following measures to ensure that the process of obtaining FPIC was accessible to all community members who wanted to participate: a. 07/04/2022 Field investigation, determining stakeholder composition;

	b. 25/05/2022 Notification on Stakeholder Consultation Survey, the village Council officers went door-to-door to ensure that every stakeholder received the message. c. 08/06/2022 Questionnaire Survey, ask for and solicit comments and suggestions from stakeholders. d. 01/08/2022 Contracts of land lease and transfer of management, the stakeholders agree to transfer the land to the project proponent and sign a land transfer contract. e. 06/2022 Afforestation Operation Design, stakeholders are involved in the selection of tree species during the design of afforestation operations. f. 26/02/2023 Afforestation Log, the starting date of the project activity The above documents and the process of obtaining FPIC have been checked, and confirmed during onsite interviews against the local stakeholders and the Xinbao Village Committee and relevant document review. By checking all the questionnaires /28/ conducted on 08/06/2022, it is confirmed that all stakeholders support the implementation of the project activities. All the related villagers signed the Contracts of land lease and transfer of management between the PP and the local villagers /16/. There are no ongoing or unresolved conflicts in this project.
Outcome of FPIC discussion	By checking the evidence /15//16//28/ and interviewing the local stakeholders, the audit team can confirm that the project has not encroached on land, relocated people without consent, and forced physical or economic displacement.

3.2.1.4 Grievance Redress Procedure

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Development process	Development process of the grievance redress procedure described in the PD has been checked and confirmed via onsite interview: Madengbian Residential Area, will receive and listen to the opinions and suggestions of stakeholders, and Xinbao Village Committee will

	coordinate with project participants and resolve the corresponding complaints.
Grievance redress procedure	According to VCS standard, the project's grievance redress procedure has been specified in detail in Stakeholder Management Program /59/ formulated by the project proponent which was added provisions for mediation and arbitration in Section 2.1.4 of the PD. Grievance redress procedure of the grievance redress procedure described in the PD has been checked and confirmed by document review /59/ and via onsite interview: a. Complaint procedures about land transfer If the stakeholders have comments or suggestions, they can report the situation to the Madengbian Residential Area, and Xinbao Village Committee will supervise and resolve the conflict. If there is any problem that cannot be solved through consultation between the stakeholders and project proponent, the Xinbao Village Committee shall mediate as a neutral third party. If the village collective cannot solve the problem, it shall hold a meeting with the project proponent to discuss and determine the solution in time until it is satisfactorily solved. If mediation is not possible, it may be submitted to Huachi County Rural Land Contract Mediation and Arbitration Commission for Dispute settlement or to Huachi County People's Court for arbitration in accordance with the provisions of Contracts of Land Lease and Transfer and the Arbitration Law of the People's Republic of China, the Mediation and Arbitration Law of the People's Republic of China on Dispute Settlement and Arbitration of Rural Land Contract and Management. b. Complaint procedures for environmental and social impacts and mitigation measures If there is any problem that cannot be solved through consultation between the stakeholders and project proponent, the Xinbao Village Committee shall mediate as a neutral third party. If mediation is not possible, it may be submitted to Huachi County Natural resources Bureau filed a complaint.

	If the dispute still cannot be settled, an administrative lawsuit may be brought in accordance with the Administrative Procedure Law of the People's Republic of China, or directly to Huachi County people's court to file a lawsuit. During the implementation of the project, the project was implemented in strict accordance with the requirements without any conflict with the stakeholders.
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3.2.1.5 Public Comments

Comments received	Actions taken by the project proponent	Evidence gathering activities, evidence checked, and assessment conclusion
No comment has been received	N/A	N/A

3.2.2 Respect for Human Rights and Equity

3.2.2.1 Labor and Work

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Discrimination and sexual harassment	It has been confirmed during onsite inspection and interviews that project proponent treated the local population with great respect and there was no discrimination or sexual harassment has occurred during the implementation of the project.
Management experience	It has been confirmed during onsite inspection and interviews that the project proponent signed Afforestation contracts /21/ with a professionally qualified construction party through open bidding.
Gender equity in labor and work	It has been confirmed during onsite inspect and interviews that project promotes equality between men and women. Besides, China promulgated the Law of the People's Republic of China on the Protection of Women's Rights and Interests to ensure that women enjoy equal rights with men in all aspects /37/. Project participant have always complied with national laws and regulations, and the equal opportunities have been provided in the context of gender equity and pay for labor and work.
Human trafficking,	It has been confirmed during onsite inspect and interviews that project proponent strictly complies with the law, i.e. Labour Law of People's

forced labor, and child labor	Republic of China /38/, and there is no human trafficking, forced labor, and child labor.
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3.2.2.2 Human Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Human rights	It has been confirmed during onsite inspect and interviews that project proponent strictly complies with the law, i.e. Labour Law of in line with People's Republic of China /38/ and the legal rights and interests of all employees are protected. No indigenous peoples or tribal peoples are treated differently from the majority of local people. During the implementation of the project, the project provides employment opportunities for local residents and increases their income, and improves the local ecological environment through afforestation activities.

3.2.2.3 Indigenous Peoples and Cultural Heritage

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Preservation and protection of cultural heritage	It has been confirmed during onsite inspect and interviews that no cultural heritage involved, which is also confirmed by the local government /55/.

3.2.2.4 Property Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Rights to territories and resources	It has been confirmed during onsite inspect and interviews that the village collective leased the land contracted by the villagers to the project proponent for afforestation project development /16/. The validation team can confirm, by reviewing the Contracts of land lease and transfer of management between the PP and the local villagers /16/ and interviewing against the representatives of the local villagers, that prior to the project implementation, the project proponent and the local villagers agreed that the local villagers transfer the land use right to the Project Proponent by signing the Contract of land lease and transfer of management and the project proponent paid the transfer fee of the right to

	land use. The financial benefits accrued from the sale of VCUs under the project will belong to the project proponent. All the related rights to territories and resources include ownership of the lands, land use ownership, ownership of the forest, right to the VCU sales revenue. All the related rights have been agreed between the project proponent and the local villagers and supervised by the Collective according to the Contract of land lease and transfer of management between the Project Proponent and local villagers.
Respect for property rights	It has been confirmed during document review /16/ and interviews that the project proponent respect property rights by signing Contracts of land lease and transfer of management between the PP and the local villagers /16/.

3.2.2.5 Benefit Sharing

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Process used to design the benefit sharing plan	It has been confirmed during document review /16/ and interviews that the project proponent design the benefit sharing plan by signing Contracts of land lease and transfer of management between the PP and the local villagers /16/. The validation team can confirm that China is a civil law country, and the rights to territories and resources are defined by the legal provisions. According to Article 10 of the Constitution of the People's Republic of China /61/ and the provisions of the Land Management Law of People's Republic of China /62/, the land is owned by the state or collectives and the ownership is non-transferable, while the land use right can be transferred according to the law. The lands in the project area are owned by the collective and managed by the local villagers /15/. All the related rights have been agreed between the project proponent and the local villagers and supervised by the Collective according to the Contract of land lease and transfer of management /16/ between the project proponent and local villagers. There are no other customary right holders except for the local villagers. The project proponent and the local villagers reached a consensus agreement and signed the Contract of land lease and transfer of management, which is in compliance with the Civil Code of the People's Republic of China /63/.

Summary of the benefit sharing plan	It has been confirmed during document review /16/ and interviews that Contracts of land lease and transfer of management between the PP and the local villagers were signed. The project proponent and the local villagers agreed that the local villagers transfer the land use right to the project proponent by signing the Contract of land lease and transfer of management /16/.
Approval and dissemination of benefit sharing plan	It has been confirmed during document review /16/ and interviews that Contracts of land lease and transfer of management between the PP and the local villagers were signed. According to the signed contracts, the benefit- sharing agreement was agreed up on by the affected stakeholder groups, and that the agreement was shared in a culturally appropriate manner.

3.2.3 Risks to Local Stakeholders and the Environment

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Risks to stakeholder participation	No risk has been identified as confirmed during onsite interviews. Pre-forestation photos and KML file show no agricultural activity in the project area, which have been confirmed through onsite inspection and interviews. In the absence of this project, the occupied land by the project is low-nutrient, low-supply land, the terrain is steep, and unsuitable for farming, with few herbaceous plants growing, and no agricultural activities and no yield. There is no agricultural activity on the project site. Therefore, there is no risks on food security, land loss, loss of yields and profits, and no negative impacts on livelihoods for local stakeholders to participate in the project. The project benefits the local sustainable development and mitigation activities are unnecessary.
Working conditions	Risks exist during forest clearing, land preparation and seedling planting on soil and water loss during afforestation. The audit team confirm the mitigation or preventative measures taken included in the PD are appropriate.
Safety of women and girls	No risk has been identified as confirmed during onsite interviews.
Safety of minority and marginalized	No risk has been identified as confirmed during onsite interviews.

groups, including children	
Pollutants (air, noise, discharges to water, generation of waste, release of hazardous materials)	There are exhaust and noise from construction vehicles. The exhaust gas and noise of construction vehicles are short-term and local impacts, which can be eliminated with the end of construction and will not cause pollution to the environment.

3.2.4 Ecosystem Health

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Impacts on biodiversity and ecosystems	The audit team confirm that the implementation of the project is conducive to increasing biodiversity and thus improving ecosystem stability. The impact of the project on biodiversity and the ecological environment is positive. No mitigation or preventative measure is necessary.
Soil degradation and soil erosion	The audit team confirm that in the early stage of afforestation, the soil will be bare and loose, resulting in a certain area of bare ground and damaging the soil stability structure. During the construction period, the publicity and education of construction personnel should be strengthened, and the work of patrol and law enforcement should be strengthened. Various construction activities should be strictly controlled in the construction area, as far as possible not to damage the original surface vegetation and soil. After preparation, the PP will cover the surface with shrubs and herbs in time to avoid exposing the topsoil. Overall, the project will play an important role in soil conservation, wind prevention and sand fixation.
Water consumption and stress	The audit team confirm that the project contributes to increased water conservation capacity. No mitigation or preventative measure is necessary.
Usage of fertilizers	The audit team confirm that the project will use a small amount of base fertilizer during the afforestation process, which will have a minimal impact on the environment. The PP will take reasonable control of fertilizer use.

3.2.4.1 Rare, Threatened, and Endangered species

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Species and habitat	No risk has been identified as confirmed during onsite interviews and document review /17//21//54//55/.

3.2.4.2 Introduction of Species

Species introduced	Evidence gathering activities, evidence checked, and assessment conclusion
N/A	No risk has been identified as confirmed during onsite interviews and document review /17//21/.

Existing invasive species	Evidence gathering activities, evidence checked, and assessment conclusion
N/A	No risk has been identified as confirmed during onsite interviews and document review /17//21/.

3.2.4.3 Ecosystem conversion

Item	Evidence gathering activities and evidence checked
Ecosystem conversion	No risk has been identified as confirmed during onsite interviews and document review /17//54//55/.

3.3 Application of Methodology

3.3.1 Title and Reference

Applied methodology: AR-AMS0007 version 03.1 Afforestation and reforestation project activities implemented on lands other than wetlands

Applied tools:

AR-AM-TOOL08 “Estimation of non-CO2 GHG emissions resulting from burning of biomass attributable to an A/R CDM project activity” (version 4.0.0, ar-am-tool-08-v4.0.0)

AR-AM-TOOL14 “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities” (version 04.2, ar-am-tool-14-v4.2)

“VCS AFOLU Non-Permanence Risk Tool (Version 4.2)

3.3.2 Applicability

Methodology ID	Applicability condition	Assessment and conclusion
AR-AMS0007 version 03.1	This methodology is applicable to small-scale afforestation and reforestation (A/R) project activities	Applicable as ER is lower than CDM small-scale threshold 60,000tCO ₂ e/y.
AR-AMS0007 version 03.1	(a) The land subject to the project activity does not fall in wetland category	Applicable as the land subject to the project activity, which is sandy, barren and degraded land, does not fall in wetland category.
AR-AMS0007 version 03.1	(b) Soil disturbance attributable to the project activity does not cover more than 10 per cent of area in each of the following types of land, when these lands are included within the project boundary: (i) Land containing organic soils; (ii) Land which, in the baseline, is subjected to land-use and management practices and receives inputs listed in appendices 2 and 3 to this methodology.	Applicable. The project area is sandy, barren and degraded land. Soil disturbance attributable to project area will always be less than 10% of the total surface.
ar-am-tool-08-v4.0.0	The tool is applicable to all occurrence of fire within the project boundary. Non-CO ₂ GHG emissions resulting from any occurrence of fire within the project boundary shall be accounted for each incidence of fire which affects an area greater than the minimum	Applicable for ARR project.

	threshold area reported by the host Party for the purpose of defining forest, provided that the accumulated area affected by such fires in a given year is $\geq 5\%$ of the project area.	
ar-am-tool-14-v4.2	The tool is applicable for: (a) Estimation of carbon stock and change in carbon stock in living biomass of trees and shrubs in baseline; (b) Ex-ante estimation (projection) of carbon stock and change in carbon stock in living biomass of trees and shrubs in project; (c) Ex-post estimation of carbon stock and change in carbon stock in trees and shrubs for monitoring of project activities. This tool has no internal applicability conditions.	Applicable for ARR project.
AFOLU-Non-Permanence-Risk-Tool-v4.2	Tool is applicable as the current project is an AFLOU project.	Applicable for AFLOU project.

3.3.3 Project Boundary

The audit team has checked the documents including Afforestation Operation Design Report /17/ and Afforestation contracts /21/, and onsite inspected the project and interviewed the PP, and confirmed that the project boundary is appropriately correctly in the PD which is in accordance with the methodology AR-AMS0007 version 03.1.

Source		Gas	Included?	Assessment and conclusion
Baseline	Above-ground biomass	CO ₂	No	Not accounted for in the baseline as prior to the project activity the land is degraded sandy land with an extremely low forest coverage.
		CH ₄	No	Excluded for simplification. This is conservative.

Source		Gas	Included?	Assessment and conclusion
		N ₂ O	No	Excluded for simplification. This is conservative.
		Other	N/A	N/A
	Below-ground biomass	CO ₂	No	As per the methodology AR-AMS0007 version 03.1 carbon stock in this pool is expected to increase due to the implementation of the project activity. It is conservative to ignore baseline emissions of Below-ground biomass.
		CH ₄	No	Excluded for simplification. This is conservative.
		N ₂ O	No	Excluded for simplification. This is conservative.
		Other	N/A	N/A
	Dead wood Litter and Soil organic carbon	CO ₂	No	As per the methodology AR-AMS0007 version 03.1 carbon stock in this pool may increase due to the implementation of the project activity. It is conservative to ignore baseline emissions of Below-ground biomass.
		CH ₄	No	GHG emissions in the baseline can be conservatively ignored
		N ₂ O	No	GHG emissions in the baseline can be conservatively ignored
		Other	N/A	N/A
Project	Above-ground biomass	CO ₂	Yes	Carbon stock in this pool is expected to increase due to the implementation of the project activity
		CH ₄	No	Excluded for simplification. This is conservative.
		N ₂ O	No	Excluded for simplification. This is conservative.
		Other	N/A	N/A
	Below-ground biomass	CO ₂	Yes	Carbon stock in this pool is expected to increase due to the implementation of the project activity.
		CH ₄	No	Excluded for simplification. This is conservative.
		N ₂ O	No	Excluded for simplification. This is conservative.
		Other	N/A	N/A
	Dead wood Litter and Soil organic carbon	CO ₂	No	Carbon stock in this pool is expected to increase due to the implementation of the project activity. It is conservative to ignore this pool.
		CH ₄	No	GHG emissions in the baseline can be conservatively ignored
		N ₂ O	No	GHG emissions in the baseline can be conservatively ignored

Source	Gas	Included?	Assessment and conclusion
	Other	N/A	N/A

Emission sources and GHGs selected for accounting:

Source	Gas	Included?	Assessment and conclusion
Burning of woody biomass	CO ₂	No	CO ₂ emissions due to burning of biomass are accounted as a change in carbon stock
	CH ₄	Yes	Burning of woody biomass for the purpose of site preparation, or as part of forest management, is allowed under the methodology.
	N ₂ O	Yes	Burning of woody biomass for the purpose of site preparation, or as part of forest management, is allowed under the methodology.

3.3.4 Baseline Scenario

It is confirmed by the audit team that the baseline is identified in the PD as per the methodology AR-AMS0007 version 03.1: the continuation of the pre-project land-use.

The continuation of the land uses about project activity area is a minimum period of 20 years and before the proposed project design, the land would be barren and. At present, the land is degraded sandy land with an extremely low forest coverage indicated in photo as following. It shows that the proposed project is located in position which was sandy, barren and degraded land before the proposed project is implemented. The documents including Contracts of land lease and transfer of management between the PP and the local villagers, Afforestation Operation Design Report, Photos of project site prior to the project start /16//17//56/ have been checked and via onsite interviews, the audit team can confirm the situations of the pre-project land-use.

3.3.5 Additionality

It is confirmed that the project is located in a Non-Annex 1 country, and the project is not mandated by any law, statute, or other regulatory framework by reviewing local laws, statutes, and other regulatory framework, and via onsite interviews.

In the PD, additionality of the project is demonstrated as per the requirement in the methodology AR-AMS0007 version 03.1:

Option (a) Using the barrier analysis outline contained in appendix 1 of this methodology.

Investment barrier

The sites of the project are all low-nutrient, low-supply land with few herbaceous plants growing, and the terrain is steep. As a result, the cost of reforesting these lands would be very high.

Through onsite inspection and interviewing the local authorities indicated above, the audit team can confirm that the project lands were left unplanted due to lack of budget, and lower motivation in undertaking similar activities and lower voluntary community participation. The local communities and villagers showed no interest in taking up these lands for afforestation activities as they did not expect any significant benefits.

Barriers due to local ecological conditions

Through onsite inspection and interview, and reviewing the documented evidence including Registered forest land rights of the Project, Contracts of land lease and transfer of management between the PP and the local villagers, Afforestation Operation Design Report /15//16//17/, the audit team confirms that the soil of the project site is poor, the vegetation coverage of forest trees is low, the soil erosion is serious. The terrain of the project site is steep, and which is on the sunny side. As a result, there are ecological conditions obstacles for afforestation.

Without the benefits flowing from the carbon credits expected under this project the above mentioned two barriers would have ensured that the afforestation work on these project lands was never taken up.

Therefore, the audit team can conclude that the additionality of the project is established.

3.3.6 Quantification of GHG Emission Reductions and Carbon Dioxide Removals

The audit team confirms that the steps taken and equations applied to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the methodology AR-AMS0007 version 03.1, which are described below.

Baseline emissions

Taking project boundaries into account, baseline scenario corresponds to the continuation of the pre-project land use. Considering the conditions of applicability of the selected methodology, changes in selected carbon pools (above ground biomass and belowground biomass) can be assumed to be negligible for the baseline emission calculations.

$$\Delta C_{BSL,t} = \Delta C_{TREE_BSL,t} + \Delta C_{SHRUB_BSL,t} + \Delta C_{DW_BSL,t} + \Delta C_{LI_BSL,t} \quad \text{Equation (1)}$$

Where:

$\Delta C_{BSL,t}$ = Baseline net GHG removals by sinks in year t ; t CO₂-e

$\Delta C_{TREE_BSL,t}$ = Change in carbon stock in baseline tree biomass within the project boundary in year t , as estimated in the tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities"; t CO₂-e

$\Delta C_{SHRUB_BSL,t}$	=	Change in carbon stock in baseline shrub biomass within the project boundary, in year t , as estimated in the tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities”; t CO ₂ -e
$\Delta C_{DW_BSL,t}$	=	Change in carbon stock in baseline dead-wood biomass within the project boundary, in year t , as estimated in the tool “Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities”; t CO ₂ -e
$\Delta C_{LI_BSL,t}$	=	Change in carbon stock in baseline litter biomass within the project boundary, in year t , as estimated in the tool “Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities”; t CO ₂ -e

The audit team confirm that it is in accordance with the methodology and the project boundary, the pools corresponding to shrub biomass, dead wood and litter will not be considered for the purposes of this project as explained above. The project area was sandy, barren and degraded land before afforestation, and there were no loose trees. Therefore, these carbon pools will be assumed as zero in the baseline, which is appropriate. The carbon stock in the baseline trees and shrubs are going to increases (sinks) due to the conditions of the land under project area. Hence, the change in the amount of carbon stock is negative. However, changes in carbon stocks in trees in the baseline is accounted as zero in accordance to Methodological tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities”, specific requirements are as follows.

- There are very few trees in the pre-project area and these trees are neither harvested, nor cleared, nor removed, throughout the crediting period of the project activity.
- The pre-project trees do not suffer mortality because of competition from trees planted in the project, or damage because of implementation of the project activity, at any time during the crediting period of the project activity.
- The pre-project trees are not inventoried along with the project trees in monitoring of carbon stocks but their continued existence, consistent with the baseline scenario, is monitored throughout the crediting period of the project activity.

Thus, the audit team confirm that changes in carbon stock in shrubs is also zero, which is conservative, i.e.,

$$\Delta C_{SHRUB_BSL,t} = 0$$

For simplicity and to be in accordance with the project boundary, Change in carbon stock in baseline tree biomass within the project boundary, Change in carbon stock in baseline dead-

wood biomass within the project boundary, and Change in carbon stock in baseline litter biomass within the project boundary are zero, which is confirmed by the audit team.

Therefore, the baseline net GHG removals is considered to be zero:

$$\Delta C_{BSL,t} = 0$$

$$\Delta C_{TREE_BSL,t} = 0$$

$$\Delta C_{SHRUB_BSL,t} = 0$$

$$\Delta C_{DW_BSL,t} = 0$$

$$\Delta C_{LI_BSL,t} = 0$$

$$\Delta C_{BSL,t} = 0.$$

Project emissions

The audit team has checked the calculation method of project emissions included in the PD, and confirm it is in accordance with the methodology AR-AMS0007 version 03.1:

The actual net GHG removals by sinks is calculated as follows:

$$\Delta C_{ACTUAL,t} = \Delta C_{P,t} - GHG_{E,t} \quad \text{Equation (2)}$$

Where:

$$\Delta C_{ACTUAL,t} = \text{Actual net GHG removals by sinks, in year } t; \text{ t CO}_2\text{-e}$$

$$\Delta C_{P,t} = \text{Change in the carbon stocks in project, occurring in the selected carbon pools, in year } t; \text{ t CO}_2\text{-e}$$

$$GHG_{E,t} = \text{Increase in non-CO}_2 \text{ GHG emissions within the project boundary as a result of the implementation of the A/R CDM project activity, in year } t, \text{ as calculated in the tool "Estimation of non-CO}_2 \text{ GHG emissions resulting from burning of biomass attributable to an A/R CDM project activity"; t CO}_2\text{-e}$$

The audit team reviewed the related documents including Afforestation Operation Design Report /17/, Afforestation contracts /21/, Planting records /24/, Declaration on non clearance of native ecosystem /54/, Declaration on the timber harvesting in management plan /53/, and interviewed the PP during onsite inspection, and confirmed that the pre and post project activities does not involve in the burning of biomass or forest fires, or usage of fire for site preparation or usage of fire to clear land of harvest residue prior to replanting of land. The area affected by fire is estimated to be 0% or extremely negligible. Hence, as per the ar-am-tool-08-v4.0.0 "Estimation of non-CO₂ GHG emissions resulting from burning of biomass attributable to an A/R CDM project

activity (Version 4.0.0)” the area affected burning of biomass is less than 5% and so the emissions resulting from the same is estimated as zero.

Therefore, $GHG_{E,t}$ is zero, $\Delta C_{ACTUAL,t} = \Delta C_{P,t}$.

It is confirmed to be in compliance with the methodology AR-AMS0007 version 03.1, change in the carbon stocks in project, occurring in the selected carbon pools, in year t is calculated as follows:

$$\Delta C_{P,t} = \Delta C_{TREE_PROJ,t} + \Delta C_{SHRUB_PROJ,t} + \Delta C_{DW_PROJ,t} + \Delta C_{LI_PROJ,t} + \Delta SOC_{AL,t} \quad \text{Equation (3)}$$

Where:

$\Delta C_{P,t}$	=	Change in the carbon stocks in project, occurring in the selected carbon pools, in year t ; t CO ₂ -e
$\Delta C_{TREE_PROJ,t}$	=	Change in carbon stock in tree biomass in project in year t , as estimated in the tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities”; t CO ₂ -e
$\Delta C_{SHRUB_PROJ,t}$	=	Change in carbon stock in shrub biomass in project in year t , as estimated in the tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities”; t CO ₂ -e
$\Delta C_{DW_PROJ,t}$	=	Change in carbon stock in dead-wood biomass in project in year t , as estimated in the tool “Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities”; t CO ₂ -e
$\Delta C_{LI_PROJ,t}$	=	Change in carbon stock in litter biomass in project in year t , as estimated in the tool “Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities”; t CO ₂ -e
$\Delta SOC_{AL,t}$	=	Change in carbon stock in SOC in project, in year t , as estimated in the tool “Tool for estimation of change in soil organic carbon stocks due to the implementation of A/R CDM project activities”; t CO ₂ -e

In the PD, Change in carbon stock in shrub biomass in project in year t , Change in carbon stock in dead-wood biomass in project in year t , Change in carbon stock in litter biomass in project in year t , and Change in carbon stock in SOC in project in year t are zero, which is confirmed in accordance with the project boundaries, since the above project emissions are excluded. Therefore,

$\Delta C_{SHRUB_PROJ,t}$	=	0
$\Delta C_{DW_PROJ,t}$	=	0
$\Delta C_{LI_PROJ,t}$	=	0
$\Delta SOC_{AL,t}$	=	0

and then

$$\Delta C_{P,t} = \Delta C_{TREE_PROJ,t} \quad \text{Equation (4)}$$

It is confirmed that according to the applied methodological tool ar-am-tool-14-v4.2 “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities”, the change in carbon stock in trees and the associated uncertainty are estimated as follows:

$$\Delta C_{TREE_PROJ,t} = C_{TREE_PROJ,t2} - C_{TREE_PROJ,t1} \quad \text{Equation (5)}$$

For the project, carbon stock in pre-project tree biomass is estimated in three type of trees, and detailed equation is following.

$$\Delta C_{P,t} = \Delta C_{TREE_PROJ,t} \quad \text{Equation (6)}$$

$$= \Delta C_{Mongolian\ pine_PROJ,t} + \Delta C_{Spruce_PROJ,t} + \Delta C_{Xinjiang\ poplar_PROJ,t}$$

Thus,

$$\begin{aligned} \Delta C_{TREE_PROJ,t} = & (C_{Mongolian\ pine_PROJ,t2} - C_{Mongolian\ pine_PROJ,t1}) \\ & + (C_{Spruce_PROJ,t2} - C_{Spruce_PROJ,t1}) \\ & + (C_{Xinjiang\ poplar_PROJ,t2} - C_{Xinjiang\ poplar_PROJ,t1}) \end{aligned} \quad \text{Equation (7)}$$

Where:

$$\Delta C_{TREE_PROJ,t} = \text{Change in carbon stock in tree biomass in the project in year } t; \text{ tCO}_2\text{-e}$$

$$C_{TREE_PROJ,t1} = \text{Carbon stock in trees as estimated at time } t_1; \text{ t CO}_2\text{e}$$

$$C_{TREE_PROJ,t2} = \text{Carbon stock in trees as estimated at time } t_2; \text{ t CO}_2\text{e}$$

The following requirements for stratification of the applied methodology AR-AMS0007 version 03.1 have been confirmed:

If biomass distribution over the project area is not homogeneous, stratification should be carried out to improve the precision of biomass estimation. Different stratifications may be appropriate for the baseline and project scenarios in order to achieve optimal precision of estimation of net GHG removals by sinks. In particular:

- (a) For baseline net GHG removals by sinks, it is usually sufficient to stratify the area according to major vegetation types and their crown cover and/or land use types;

For the project, baseline net GHG removals by sinks is zero, thus, stratification under baseline scenarios is not involved.

(b) For actual net GHG removals by sinks the stratification for ex ante estimations is based on the project planting/management plan and the stratification for ex post estimations is based on the actual implementation of the project planting/management plan. If natural or anthropogenic impacts (e.g. local fires) or other factors (e.g. soil type) significantly alter the pattern of biomass distribution in the project area, then the ex post stratification is revised accordingly.

It is confirmed that based on the actual situation that the terrain, climate, soil and other site conditions of the forested land in the project area are basically the same, and the afforestation time, initial planting density and operation and management measures are the same. Therefore, it is appropriated that in the PD the planting area is stratified to one stratum.

According to the applied methodological tool ar-am-tool-14-v4.2 “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities”, mean carbon stock in trees within the tree biomass estimation strata and the associated uncertainty are estimated as follows (all time-dependent quantities relate to the time of measurement):

$$C_{TREE_PROJ} = \frac{44}{12} \times CF_{TREE_PROJ} \times B_{TREE_PROJ} \quad \text{Equation (8)}$$

$$B_{TREE_PROJ} = A \times b_{TREE_PROJ} \quad \text{Equation (9)}$$

$$b_{TREE_PROJ} = \sum_{i=1}^M w_i \times b_{TREE_PROJ,i} \quad \text{Equation (10)}$$

$$u_c = \frac{t_{VAL} \times \sqrt{\sum_{i=1}^M w_i^2 \times \frac{s_i^2}{n_i}}}{b_{TREE}} \quad \text{Equation (11)}$$

Where:

C_{TREE_PROJ}	=	Carbon stock in tree biomass in the project; tCO ₂ -e
CF_{TREE_PROJ}	=	Carbon fraction of tree biomass; t C (t d.m.) ⁻¹
B_{TREE_PROJ}	=	Tree biomass within the biomass estimation strata; t d.m.
A	=	Sum of areas of the biomass estimation strata; ha

b_{TREE_PROJ}	=	Mean tree biomass per hectare within the biomass estimation strata; t d.m. ha ⁻¹
w_i	=	Mean tree biomass per hectare within the biomass estimation strata; t d.m. ha ⁻¹
u_c	=	Uncertainty in C_{TREE}
t_{VAL}	=	Two-sided Student's t-value for a confidence level of 90 per cent and degrees of freedom equal to $n - M$, where n is total number of sample plots within the tree biomass estimation strata and M is the total number of tree biomass estimation strata
s_i^2	=	Variance of tree biomass per hectare across all sample plots in stratum i ; (t d.m. ha ⁻¹) ²
n_i	=	Number of sample plots in stratum i .

For Mongolian pine,

Biomass of a tree in a sample plot is estimated by using one of the following equations:

$$B_{TREE_PROJ,i,j} = f_j(x_{1,l}, x_{2,l}, x_{3,l} \dots) \times (1 + R_j) \quad \text{Equation (12)}$$

Where:

$B_{TREE_PROJ,i,j}$	=	Biomass of tree l of species j in sample plot p of stratum i ; t d.m.
$f_j(x_{1,l}, x_{2,l}, x_{3,l} \dots)$	=	Above-ground biomass of the tree returned by the allometric equation for species j relating the measurements of tree l to the above-ground biomass of the tree; t d.m.
	=	The specific equation is, Aboveground biomass per plant is equal to $0.306D^{1.886}$ (" DBH " represents the diameter at breast height of the tree species j , cm), which has been confirmed by review the evidence /40/.
R_j	=	Root-shoot ratio for tree species j ; dimensionless

For Spruce,

Estimation by modelling of tree growth and stand development

$$B_{TREE_PROJ,i,j} = (0.152 \times DBH)^2 \times H^{0.768}$$

Equation (13)

Where:

DBH = Diameter at breast height of species j in sample plot p of stratum i; cm

H = Height of tree of species j in sample plot p of stratum i; m, which has been confirmed by the evidence /41/.

For Xinjiang poplar,

Estimation by modelling of tree growth and stand development

$$B_{TREE_PROJ,i,j} = (0.032927DBH)^{1.999595} \times H^{0.850952}$$

Equation (14)

Where:

DBH = Diameter at breast height of tree of species j in sample plot p of stratum i; cm

H = Height of tree of species j in sample plot p of stratum i; m, which has been confirmed by the evidence /42/.

The biomass of the individual trees is added and the sum is divided by the area of the sample plot to obtain the plot biomass value.

Leakage emissions

It has been confirmed against the Paragraph 21 of the methodology that leakage emission is calculated as follows:

$$LK_t = LK_{AGRIC,t}$$

Equation (15)

Where:

LK_t = GHG emissions due to leakage, in year t; t CO₂-e

$LK_{AGRIC,t}$ = Leakage due to the displacement of agricultural activities in year t, as calculated in the tool "Estimation of the increase in GHG emissions attributable to displacement of pre-project agricultural activities in A/R CDM project activity"; t CO₂-e

In the absence of this project, the sites of the project are all low-nutrient, low-supply land, the terrain is steep, and unsuitable for farming. So there is no agricultural activities and no yield and profit in the project area. So there is no risks on food security, land loss, loss of yields, and no negative impacts on livelihoods for local stakeholders to participate in the project. Then there is no agricultural transfers, and no pastoral transfers in the project area. The Xinbao village committee issued a certificate stating that the project boundary does not involve agricultural activities conversion, clearance, depletion and degradation. Pre-forestation photos /56/ and KML file /18/ show no agricultural activity in the project area. The validation team confirmed that there is no agricultural transfers, and no pastoral transfers in the project area by reviewing the above documents and also by onsite interviews against Local Forestry and Grassland Agency staff, and local government staff. Hence the leakage is accounted as zero as per the methodology and the CDM AR-TOOL 15, v02.0 “Leakage due to the displacement of agricultural activities”.

3.3.7 Methodology Deviations

There is not any methodology deviation.

3.3.8 Monitoring Plan

Data and parameters available at validation

The project applies the approved monitoring methodology AR-AMS0007 version 03.1 Afforestation and reforestation project activities implemented on lands other than wetlands. The chosen monitoring methodology is suitable for this project, and the monitoring plan aligns with the monitoring methodologies. The monitoring plan provides a chance for actual measurements of emission reduction achievements. It includes principles and concepts that serve as its foundation, along with operational and monitoring obligations that the project owner must fulfil. These obligations encompass resources involved in the monitoring process, training, support activities, calibration and data collection, quality assurance procedures, data management, and electronic support tools.

The data and parameters available at validation are included in the PD and are provided in compliance with the methodology:

Data / Parameter	Description	Source of data	Value applied		Unit	Justification
CF _{TREE}	Carbon fraction of tree biomass	People's Republic of China Second National Communication on Climate Change /39/	Mongolian pine	0.522	tC(t d.m.) ⁻¹	Consistent with the official data source /39/
			Spruce	0.521		
			Xinjiang poplar	0.496		

R _{TREE}	Root-shoot ratio for trees	People's Republic of China Second National Communication on Climate Change /39/	Mongolian pine	0.241	/	Consistent with the official data source /39/
			Spruce	0.224		
			Xinjiang poplar	0.227		
t _{VAL}	Two-sided Students t-value, at infinite degrees of freedom for the required confidence level	Default value from tool "Calculation of the number of sample plots for measurements within A/R CDM project activities" (Version 02.1.0)	1.645		/	Consistent with the tool "Calculation of the number of sample plots for measurements within A/R CDM project activities" (Version 02.1.0) /10/

Data and parameters monitored

The audit team confirms that the monitoring plan complies with the requirements of the applied methodology and tools. The steps taken to assess whether the monitoring arrangements described in the monitoring plan are feasible within the project design are described below.

Parameter	Description	Monitoring methods	Measuring frequency
A _{PLOT,i} A _i	Area of a sample plot; area of a stratum i	Standard operating procedures (SOPs) prescribed under national forest inventory are applied. In the absence of these, SOPs from published handbooks, or from the IPCC GPG LULUCF 2003, are applied	At every verification
n _i	Number of sample plots in stratum i	Calculated: $n = \frac{N \times t_{VAL}^2 \times (\sum_i w_i \times s_i)^2}{N \times E^2 + t_{VAL}^2 \times \sum_i w_i \times s_i^2}$	At every verification

DBH _i	Diameter at breast height of trees of species <i>i</i> in sample plot	Standard operating procedures (SOPs) prescribed under national forest inventory are applied. In the absence of these, SOPs from published handbooks, or from the IPCC GPG LULUCF 2003, are applied	At every verification
H _i	Height of trees of species <i>i</i> in sample plot	Standard operating procedures (SOPs) prescribed under national forest inventory are applied. In the absence of these, SOPs from published handbooks, or from the IPCC GPG LULUCF 2003, are applied	At every verification
N _{i,j}	Number of the tree species <i>j</i> of strata <i>i</i>	Standard operating procedures (SOPs) prescribed under national forest inventory are applied. In the absence of these, SOPs from published handbooks, or from the IPCC GPG LULUCF 2003, are applied	At every verification
A _{SPF,t}	Area of land in which fire is used for site preparation in year <i>t</i>	Standard operating procedures (SOPs) prescribed under national forest inventory are applied. In the absence of these, SOPs from published handbooks, or from the IPCC GPG LULUCF 2003, are applied	measured whenever fire is used in site preparation

Stratification

Stratification in the PD is appropriate, which is confirmed above.

Besides, it is appropriate that the PD indicates if natural or anthropogenic impacts (e.g. local fires) or other factors (e.g. soil type) significantly alter the pattern of biomass distribution in the project area, then the ex post stratification is revised accordingly.

Sampling

Sampling method is included in the section 5.3 of the PD.

According to the applied methodological tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities”, sample plots are installed in one or more strata. This project adopts the method of stratified random sampling to design the sample land, the size of the sample plot is set to 0.06ha, and the shape of the sample plot is rectangular

(20m×30m). The number of plots to be established depending on the number of species, number of strata identified, monitoring precision and confidence interval, with the appropriate associated cost-effectiveness criteria. When selecting the samples on the slope, it is necessary to monitor the gradient and convert the horizontal long to the oblique long. The management methodology (irrigation, fertilization, etc.) within the samples must be the same as those outside the samples. If a fire breaks out, another sample could be selected near the original sample.

Sample Size in the PD is calculated as per the tool “Calculation of the number of sample plots for measurements within A/R CDM project activities) with the following equation:

$$n = \frac{N \times t_{VAL}^2 \times (\sum_i w_i \times s_i)^2}{N \times E^2 + t_{VAL}^2 \times \sum_i w_i \times s_i^2} \quad \text{Equation (16)}$$

Where:

n	=	Number of sample plots required for estimation of biomass stocks within the project boundary; dimensionless
N	=	Total number of possible sample plots within the project boundary (i.e. the sampling space or the population); dimensionless
t_{VAL}	=	Two-sided Student’s t-value, at infinite degrees of freedom, for the required confidence level; dimensionless,
w_i	=	Relative weight of the area of stratum i (i.e. the area of the stratum i divided by the project area); dimensionless
s_i	=	Estimated standard deviation of biomass stock in stratum i ; t d.m. (or t d.m. ha ⁻¹)
E	=	Acceptable margin of error (i.e. one-half the confidence interval) in estimation of biomass stock within the project boundary; t d.m. (or t d.m. ha ⁻¹), i.e. in the units used for s_i
i	=	1, 2, 3, ... biomass stock estimation strata within the project boundary

The result of the number of sample plots is confirmed:

Parameter	Data
Strata	1
N	555.83
w_i	1

S_i	13.688
t_{VAL}	1.645
E	4.563
n	23
No. of Sample plots	23

By on-site interview with the PP, the audit team confirms that the monitoring arrangements described in the monitoring plan are feasible within the project design, and the means of implementation of the monitoring plan are sufficient to ensure the emission reductions achieved by the Project can be reported ex post and verified. The audit team is of the opinion that the monitoring plan complies with the requirements of the methodology.

3.4 Non-Permanence Risk Analysis

The non-permanence risk analysis should be conducted according to the AFOLU Non-Permanence Risk Tool (version 4.2) /11/. PP provided the non-permanence risk report (version 4.0 dated 05/12/2024) and the relevant documentation, the non-permanence risk is analyzed as below:

Step 1. Internal Risks

According to the AFOLU Non-Permanence Risk Tool (version 4.2) /11/, project management (PM), financial viability (FV), opportunity cost (OC), project longevity (PL) shall be assessed using the specified table. Every risk factor has been identified and the relevant risk rating has been presented in the non-permanence risk report, which is assessed as bellow tables.

Through interviewing against the project proponent and the representatives of the collective and the local villagers of the Xinbao village, the validation team confirmed that during the entire crediting period of the Project, from the beginning of the Project to the end of the Project transfer period, i.e. 26/02/2023 to 31/08/2080 (57 years), taking into account the economics of project management and maintenance costs as well as legislation requirements, the project owner will only carry out conservation and there will be no harvesting and no logging of a regeneration nature on all trees within the project boundary, as stipulated in the annexes to the Contract for the transfer of management /16/. The project proponent as a natural gas production enterprise with a sense of social responsibility, voluntarily implemented the project in order to protect the local ecological environment and mitigate climate change, and the project proponent has arranged enough financial resources to complete the afforestation activities of the project.

According to the afforestation operation design report /17/ of this project, it is confirmed that the forest species of this project is a shelterbelt. There is no mandatory harvesting requirement for shelterbelts in China, and according to the Forest Law of the People's Republic of China /31/, shelterbelts can only be maintained and renewed, and no harvesting is allowed not only before but also after the project longevity.

Therefore, after the end of the project, it is in accordance with the law to manage and replant or allow regrowth of the forest within the project boundary. Carbon stocks will be maintained before and after the project longevity period.

1.1 Project Management			
Project Management		Score	Assessment
Q1	Does the project have an adaptive management plan in place that includes a monitoring plan? If No, the project fails the risk assessment. If Yes, proceed to Q2	Yes	Risk rating is appropriate. Management plan including monitoring plan /66/ was checked and confirmed. The project has an adaptive management plan in place that includes a monitoring plan.
Q2	Do any of the following project management risks apply to the project?		
a)	Species planted (where applicable) associated with more than 25 percent of the stocks on which GHG credits have previously been issued are not native nor proven to be adapted to the same or similar agro-ecological zone(s) as the project area.	0	Risk rating is appropriate as: c) Management team's capability were confirmed by reviewing CVs /67/ and training records /68/. d) Location of management team was confirmed during onsite inspection. Management team comprises several specialized departments managed by highly qualified national and international professionals across Business Management, System Design, Technology, Data Science, Climate Finance, as well as Forestry and Agriculture. Beijing MD Energy Technology Co., Ltd. as the consulting service organization for this project several specialized departments managed by highly qualified national and international professionals across Business Management, Technology, Chemical Engineering, Climate Finance, as well as Forestry and Agriculture. Management team is located within one day of travel from the project site, considering all parcels or polygons in the project area. Over 80% of the management team is based in Qingyang City in Gansu. The afforestation operations design company is headquartered locally. The project proponent is headquartered in Qingcheng County,
b)	Ongoing enforcement to prevent encroachment by outside actors is required to protect more than 50 percent of stocks on which GHG credits have previously been issued.	0	
c)	Management team does not include individuals with significant experience in all skills necessary to successfully undertake the project activities (i.e., any area of required experience is not covered by an individual with at least five years' experience in that area).	2	
d)	Management team does not maintain a presence in the country or is located more than one day of travel from the project site, considering all parcels or polygons in the project area.	0	
e)	Management team has previously failed to submit a loss report within two years of detecting a loss event.	0	
f)	ALM projects: Some or all of the farmers participating in the project have not received training on the improved ALM practices implemented as part of the project or the monitoring and reporting procedures implemented during the crediting period.	0	
g)	ALM projects: Some or all of the farmers participating in the project are unaware of the potential for yields to decrease temporarily due to the transition to improved agricultural practices.	0	

			Qingyang City, half an hour of travel from the project site. The consulting service organization is headquartered in Beijing, which is approximately 7 hours away from the project site. Others are not applicable.
Q3	Does the following mitigation apply to the project?		
h)	Mitigation: Management team includes individuals with significant (i.e., more than five years) experience in AFOLU project design and implementation, carbon accounting, and reporting (e.g., individuals who have successfully managed projects through validation, verification, and issuance of GHG credits) under the VCS Program or other approved GHG programs.	-2	Management team's capability was confirmed by reviewing CVs and training records /67//68/. Risk rating is appropriate.
i)	Mitigation (ALM projects): A comprehensive training plan for all farmers participating in the project is in place, covering implementation of planned ALM practices, monitoring and reporting obligations and their potential costs.	0	Not applicable.
Total Project Management [a + b + c + d + e + f + g + h + i]		0	
Note: When a risk or mitigation factor does not apply to the project, the score shall be zero for such factor Total shall not be less than zero.			

1.2 Financial Viability			
Financial Viability			Assessment
Q1	How long is the project's payback period (i.e., how many years will it take to breakeven)?	b)	Risk rating is appropriate.
a)	The payback period is greater than 20 years from the current risk assessment.	0	
b)	The payback period is greater than 10 years from the current risk assessment, but less than or equal to 20 years.	3	Calculation of the payback period, with revenue of VCU was confirmed by reviewing the calculation result of financial model /69/.

			The project derives its main income from the sales of VCU. There is a gap in time before the company can generate cash from operations. According to the latest projections, the project is expected to reach breakeven in 2040 (17 years from the current risk assessment). Risk rating is appropriate.
c)	The payback period is greater than seven and up to and including 10 years from the current risk assessment.	0	
d)	The payback period is greater than four and up to and including 7 years from the current risk assessment.	0	
e)	The payback period is four years or less from the current risk assessment.	0	
Q2	What percentage of funding has the project secured to cover the total cash out required before the project reaches breakeven?	i)	Risk rating is appropriate.
f)	Project has secured less than 15 percent of funding needed to cover the total cash out required before the project reaches breakeven.	0	
g)	Project has secured 15 percent to less than 40 percent of the funding needed to cover the total cash out required before the project reaches breakeven.	0	
h)	Project has secured from 40 percent to less than 80 percent of the funding needed to cover the total cash out required before the project reaches breakeven.	0	
i)	Project has secured 80 percent or more of the funding needed to cover the total cash out before the project reaches breakeven.	0	Source of the funding was confirmed by reviewing the Final Acceptance Certificates of Afforestation Completion /25/. Project has secured over 80 percent of the funding needed to cover the total cash out before the project reaches breakeven. Risk rating is appropriate.
Q3	Does the following mitigation apply to the project?		
j)	Mitigation: Project is protected by a legally binding agreement (See Section 2.2.4) to continue management practices that protect the credited carbon stocks over the duration of the project crediting period.	-2	Contracts of land lease and transfer of management between the PP and the local villagers /16/ was reviewed and it was confirmed that the project is protected by a

			legally binding agreement to continue management practices that protect the credited carbon stocks over the duration of the project crediting period. During the entire crediting period of the Project, taking into account continue the management practice as well as legislation requirements, the project owner will carry out conservation activities, replant or allow re-growth and there will be no harvesting and no logging of a regeneration nature on all trees within the project boundary Risk rating is appropriate.
Total Financial Viability [(b, c, d or e) + (f, g, h or i + j)]		3	Calculation of result was confirmed.
Total shall not be less than zero and the sub-total for question two with the mitigation shall not be less than zero (note: the mitigation only applies to Q2)			

1.2 Opportunity Cost

Opportunity Cost		Score	Assessment
Q1	Are the baseline activities subsistence-driven? If No, proceed to Q2. If Yes, proceed to Q3.	No	Baseline activities were not subsistence-driven, which has been confirmed through document review /16//17/. The baseline scenario for this project is the continuation of the pre-project land, in the absence of the Proposed Project, the sites of the project are all low-nutrient, low-supply land, and the terrain is steep, with few herbaceous plants growing, and no agricultural activities. Without its implementation, all the sites will keep the same circumstances with no natural renewal and afforestation within the project area. Risk rating is appropriate.
Q2	What is the NPV of the most profitable alternative land use activity compared to the NPV of the project activity? A response is only required if the answer to Q1 is No.	d)	Calculation result of NPV was confirmed. Risk rating is appropriate.

a)	Net present value (NPV) of the most profitable alternative land use activity is expected to be at least 100 percent more than that of the project activities.	0	
b)	NPV of the most profitable alternative land use activity is expected to be greater than 50 percent and up to 100 percent more than that of project activities	0	
c)	NPV of the most profitable alternative land use activity is expected to be greater than 20 percent and up to and including 50 percent more than that of project activities.	0	
d)	NPV of the most profitable alternative land use activity is expected to be 20 percent or less than that of project activities.	0	Calculation result of financial model /69/ was confirmed. The baseline scenario for the project under this methodology is continuation of the pre-project land use. NPV of the most profitable alternative land use activity is 0. And according to the project Financial Model /69/, NPV of project activities is RMB -172037. Therefore, NPV of the most profitable alternative land use activity is expected to be -100 percent less than that of project activities. Risk rating is appropriate.
e)	NPV of project activities is expected to be greater than 20 percent and up to 50 percent more profitable than that of the most profitable alternative land use activity.	0	
f)	NPV of project activities is expected to be over 50 percent more profitable than that of the most profitable alternative land use activity.	0	
Q3	Does the project have net positive community impacts? A response is only required if the answer to Q1 is Yes.		Not applicable. The answer to Q1 is No.
g)	Net positive community impacts of project activities are not demonstrated.	0	

h)	Net positive community impacts of project activities are demonstrated.	0	
Q4	Do any of the following mitigations apply to the project?	i)	Risk rating is appropriate.
i)	Mitigation: Project is protected by a legally binding agreement to continue management practices that protect the credited carbon stocks over the duration of the project crediting period.	-2	Contracts of land lease and transfer of management /16/ were confirmed. Contracts of land lease and transfer of management specifies that the project proponent will carry out conservation activities, replant or allow re-growth and there will be no harvesting and no logging of a regeneration nature on all trees within the project boundary. The credited carbon stocks will be protected over the duration of the project crediting period. Risk rating is appropriate.
j)	Mitigation: Project is protected by legally binding agreement to continue management practices that protect the credited carbon stocks for at least 100 years.	0	
k)	Mitigation: Where there is a potential for revenue loss compared to the most profitable alternative land use activity, project is a not for profit or has additional financial support (e.g., via grants, government funding, ecosystem services payments or SD VISTa assets) to overcome expected revenue loss.	-2	Risk rating is appropriate. The purpose of the project is a not for profit through interview against the project proponent and reviewing the documents /17/. The trees planted of the project are used as shelterbelts for soil and water conservation. There will be no harvesting activities.
Total Opportunity Cost (OC) = [as applicable, (a, b, c, d, e, f, g or h) + (i or j) + k]		0	
Total shall not be less than zero.			

1.4 Project Longevity

Project Longevity	Assessment
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Q1	Did the project request registration on or after 1 January 2024?	No	Risk rating is appropriate. The project requested registration before 01/01/2024.
Q2	Does the project have a legally binding agreement that covers at least a 100-year period from the project's start date? If Yes, the project is given a zero score for this risk category. If No, proceed to Q3.	No	Risk rating is appropriate. Contracts of land lease and transfer of management between the PP and the local villagers /16/ were reviewed and confirmed.
Q3	What is the project longevity in years? If you answered Yes to Q1 and the project longevity is less than 40 years, the project fails the risk assessment. If you answered No to Q1 and the project longevity is less than 30 years, the project fails the risk assessment. Please note that projects with project longevity of less than 40 years will be ineligible for the Core Carbon Principles label.	57	Risk rating is appropriate. Project longevity is longer than 30 years (57 years). Contracts of land lease and transfer of management between the PP and the local villagers /16/ were reviewed and confirmed.
Q4	Does the project have a management, financial and monitoring plan for the entire project longevity? If No, the project fails the risk assessment. If Yes, proceed to Q5.	Yes	Risk rating is appropriate. Management plan including financial and monitoring plan /66/ was checked and confirmed.
Q5	Is the project an ARR or IFM project with harvesting? If No, proceed to Q7. If Yes, proceed to Q6.	Yes	Risk rating is appropriate.
Q6	Can the project demonstrate a commitment to continue the management practice, replant or allow re-growth? If No, the project fails the risk assessment. If Yes, proceed to Q7.	Yes	Risk rating is appropriate. The project owner will only carry out conservation activities and there will be no harvesting and no logging of a regeneration nature on all trees within the project boundary, as required in the annexes to the Contract for the transfer of management /16/
Q7	Does the project have a legal Agreement or requirement to continue the management practice(s)? If No, proceed to a. If Yes, proceed to b.	Yes	Risk rating is appropriate. It is confirmed that the forest species of this project is a shelterbelt. There is no mandatory harvesting requirement for shelterbelts in China, and according to the Forest Law of the People's Republic of China /31/, shelterbelts can only be maintained and renewed, and no harvesting is allowed not only before but also after the project longevity.
a)	Without legal agreement or requirement to continue the management practice.	0	

b)	With legal agreement or requirement to continue the management practice.	11	Contracts of land lease and transfer of management /16/, and the Law of the People's Republic of China on Land Contract in Rural Areas /64/ were confirmed. Risk rating is appropriate.
Q8	Is the project a grouped project where contract durations with individual project activity instances are less than the project longevity?	No	Not applicable. The project is not a grouped project.
Total Project Longevity (PL) = [as applicable, (a or b)]		11	
Note: Total shall not be less than zero. Any project with a legally binding agreement that covers at least 100 years from the project start date will be assigned a score of zero. Any project that requests registration on or after 1 January 2024 with a project longevity of less than 40 years fails the risk assessment. Any project that requests registration before 1 January 2024 with a project longevity of less than 30 years fails the risk assessment. The selected project longevity shall be supported by a management, financial and monitoring plan.			

Step 2: External Risks

According to the AFOLU Non-Permanence Risk Tool (version 4.2) /11/, land and resource tenure (LT), community engagement (CE), political risk (PC), project longevity shall be assessed using the specified table. Every risk factor has been identified and the relevant risk rating has been presented in the non-permanence risk report as bellows:

2.1 Land Tenure (Ownership) and Resource Access or Impacts			
Land Tenure (Ownership) and Resource Access or Impacts		Score	Assessment
Q1	Has due process been undertaken to discover any disputes over ownership and land, resource access, or use rights? If <i>No</i> , the project fails the risk assessment. If <i>Yes</i> , proceed to Q2.	Yes	Process undertaken to discover any disputes was confirmed. Risk rating is appropriate.
Q2	Has the project executed a binding legal agreement(s) (such as a contract) securing the legal right to control and operate project activities over the entire project area with all entities that have verified ownership claims or verified land, resource access, or use rights (such as customary rights holders)? If <i>No</i> , the project fails the risk assessment. If <i>Yes</i> , proceed to Q3.	Yes	Contracts of land lease and transfer were confirmed. If there is any problem that cannot be solved through consultation between the stakeholders and project proponent, the Xinbao Village Committee shall mediate as a neutral third party. If the village collective can not solve the problem, it shall hold a meeting with the project proponent to discuss and determine the solution in time until it is satisfactorily solved. If mediation is not possible, it may be submitted to Huachi County Rural Land Contract Mediation and Arbitration Commission for Dispute settlement or to Huachi County People's Court for arbitration in accordance with the provisions of Contracts of Land Lease and Transfer and the Arbitration Law of the People's Republic of China, the Mediation and Arbitration Law of the People's Republic of China on Dispute Settlement and Arbitration of Rural Land Contract and Management. Risk rating is appropriate.

Q3	Do the same or different entities hold land ownership and resource access or use rights?	b	Risk rating is appropriate. According to the Registered forest land rights of the Project and the Contracts of land lease and transfer of management between the PP and the local villagers /15//16/, the ownership of the land/forest land is still in the collective, and the right to use the forest land as well as the ownership of the forest trees is transferred from 34 villagers to the project owner.
a)	Ownership and resource access or use rights are held by the same entity(ies).	0	
b)	Ownership and resource access or use rights are held by different entity(ies) (e.g., the government own the land, and the project proponent holds a lease or concession).	2	Contracts /16/ were confirmed. Risk rating is appropriate.
Q4	Is the project in a country/jurisdiction with a history of national, sub-national, or local government ("Government") intervention in land or resource use?	e	Risk rating is appropriate.
c)	Government has previously expropriated significant areas of land (i.e., 10% or more) in the project area in the past 20 years.	0	
d)	Government has previously changed land rights in the project's jurisdiction (e.g., cancelled, or blocked land titles, expropriated land or issued overlapping land titles) in the past 20 years.	0	
e)	No instances of Government intervention in the past 20 years or specific instances of expropriation and government intervention in land rights in the project area have been conclusively resolved against the government in a court of competent jurisdiction.	0	In compliance with the Article 38 of the Law of the People's Republic of China on Land Contract in Rural Areas /64/, there were no instances of Government intervention in the past 20 years or specific instances of expropriation and government intervention in land rights in the project area which have been conclusively resolved against the government in a court of competent jurisdiction, which was confirmed by the village committee. Article 38 of the Law of the People's Republic of China on Land Contract in Rural Areas /64/ requires that

			the nature of land ownership and land use shall not be changed, so no instances of Government intervention in the past. Risk rating is appropriate.
Q5	What percent of the project area is affected by disputes over land tenure or ownership?	h	Risk rating is appropriate.
f)	Disputes exist in more than 5 percent of the project area.	0	
g)	Disputes exist in up to and including 5 percent of the project area.	0	
h)	No disputes exist.	0	Risk rating is appropriate. Confirmed by the village committee during onsite inspection. All the land owners in the project area have forest right certificates. According to the Measures for Land Registration /65/, each plot of land of a landowner has been examined or inspected on the spot by the administrative department of land and resources of the people's government at or above the county level where the land is located, and cross-checked by the people's government at or above the county level, and land ownership would not be registered if dispute existed.
Q6	What percent of the project area has disputes over access or use rights?	k	Risk rating is appropriate. No disputes exist. Confirmed by the village committee during onsite inspection.
i)	Disputes exist in more than 5 percent of the project area.	0	
j)	Disputes exist in up to and including 5 percent of the project area.	0	
k)	No disputes exist.	0	

Q7	Have the risks of upstream and sea impacts undermining the carbon stocks of a WRC project been demonstrated as insignificant or effectively mitigated for the ten years that follow the risk assessment?	Not applicable	Risk rating is appropriate. The project is not a WRC project.
l)	Potential upstream and sea impacts are not demonstrated to be insignificant or effectively mitigated.	0	
m)	Potential upstream and sea impacts are demonstrated to be insignificant or effectively mitigated.	0	
Q8	Do any of the following mitigation apply to the project?		
n)	Mitigation: Project area is protected by a legally binding commitment (e.g., a license, conservation easement, conservation servitude, or protected area) to continue management practices that protect carbon stocks for the duration of the project crediting period.	0	Not applicable. Registered forest land rights of the Project /15/ and Contracts of land lease and transfer of management between the PP and the local villagers /16/
o)	Mitigation: Where disputes over land tenure, ownership or access or use rights exist, documented evidence is provided that demonstrates the project is taking action to try to resolve the disputes or clarify overlapping claims.	-2	Contracts of land lease and transfer of management between the PP and the local villagers /16/ were confirmed. The Contracts of land lease and transfer of management /16/ protects the project proponent's assets in the unlikely case of a land tenure issue after the trees were planted. When the issue arises, both parties are required to make good faith efforts to resolve the dispute through negotiations, and the possible arbitration by the Madengbian Residential Area, and Xinbao Village Committee. Risk rating is appropriate.
Total Land Tenure [(a or b) + (c, d or e) + (f, g or h) + (i, j or k) + (l or m) + n + o]		0	Calculation was confirmed.

Total shall not be less than zero

2.2 Stakeholder Engagement

Stakeholder Engagement		Score	Assessment
Q1	Are local populations, including those living in the project area or within 20 km of the boundary of the project area, reliant on the project area? If No, the risk rating for stakeholder engagement is zero. If Yes, proceed to Q2.	No	Confirmed during onsite interviews against the local stakeholders and the village committee and document review /26//27//28/. Surrounding stakeholders are not reliant on the project area. To be conservative, the project proponent additionally consulted more than 50 percent of stakeholders living within the project area. During notification on stakeholder consultation survey, the village committee officers visited the stakeholders door by door to ensure that every stakeholder received the message. Risk rating is appropriate.
Q2	Have more or less than 50 percent of stakeholders living within and reliant on the project area been consulted?		N/A
a)	Less than 50 percent of stakeholders living within the project area and who are reliant on the project area have been consulted.	0	
b)	More than 50 percent of stakeholders living within the project area and who are reliant on the project have been consulted.	0	
Q3	Have more or less than 20 percent of stakeholders living outside the project area within 20 km of the project area, and who are reliant on the project area been consulted?		N/A
c)	Less than 20 percent of stakeholders living outside the project area within 20 km of the project area, and who are reliant on the project area have been consulted.	0	
d)	More than 20 percent of stakeholders living outside the project area within 20 km of the project area, and who are reliant on the project area have been consulted.		

Total Stakeholder Engagement [as applicable, (a or b) + (c or d)]	0	Calculation was confirmed.
Total shall not be less than zero		

2.3 Political Risk			
Political Risk		Score	Assessment
Q1	What is the governance score for the country?	-0.32	Confirmed with data of World Bank
a)	Governance score of less than -0.79	6	
b)	Governance score of -0.79 to less than -0.32	4	
c)	Governance score of -0.32 to less than 0.19	2	
d)	Governance score of 0.19 to less than 0.82	1	
e)	Governance score of 0.82 or more	0	
Q2	Does the following mitigation apply to the project?		
f)	Mitigation: The project is in a country that: 1) is party to the Paris Agreement and has submitted an NDC to the UNFCCC Secretariat in the last five years; 2) includes AFOLU commitments (conditional or unconditional) in its NDC, and 3) has a documented and active climate change plan that includes the project activity.	-2	Risk rating is appropriate. China is a party to the Paris Agreement and has submitted an NDC to the UNFCCC Secretariat in the last five years; China includes AFOLU commitments (conditional or unconditional) in its NDC /102/. https://unfccc.int/documents/497393
Total Political [(a, b, c, d or e) + f)]		0	Calculation was confirmed.
Total shall not be less than zero			

Step 3: Natural Risks

According to the AFOLU Non-Permanence Risk Tool (version 4.2) /11/, natural Risks shall be assessed using the specified table. Every risk factor has been identified and the relevant risk rating has been presented in the non-permanence risk report as bellows:

3.1 Natural Risk Assessment						
Natural Risk		Historic Natural Risk Score (LS)	Mitigation (M)	Sub-total Risk (LS x M)	Affected by Climate Change?	Assessment
a)	Fire (F)	1	0.25	0.25	Yes	It is confirmed that the project is located in a region where the forest fire risk index is low and the probability of forest fire is very small /70//71/. The occurrence of forest fires is largely caused by human factors, and through the continuous strengthening of forest prevention measures /66//74/, forest fire hazards can be effectively prevented and reduced. Besides, national and regional government promulgate regulations to prevent forest fires /72//73/ and made every effort to take forest fire prevention measures, and the regulations were well implemented /78/. Futhermore, PP has made adequate preparations to prevent forest fires /66/. Risk rating is appropriate.
b)	Pest and disease outbreaks (PD)	1	0.25	0.25	Yes	It is confirmed that the project is located in a semi-arid region which inherently presents less favorable conditions for the proliferation of many forest pests and diseases /75//76/. The spatial distribution of the project's woodlots (mixed forests) /17//24//75//76//77/ helps in reducing the scale and severity of potential outbreaks.

						Besides, pests and diseases mostly affect seedlings or young trees (and very rarely mature trees) that can be replanted, so the impact on carbon stocks of a potential outbreak would be transient. Furthermore, national and regional government promulgate regulations to prevent pests and disease outbreaks /78//79/, and the regulations were well implemented /80/. PP has made adequate preparations to prevent pests and disease outbreaks /66/. Risk rating is appropriate.
c)	Extreme weather (W)	1	0.25	0.25	Yes	Huachi County is located in the inland area of northwest China, deep inland, far from the sea /18//19/. Because of its special geographical location and climatic characteristics, Huachi County is not affected by typhoons. Since the average annual temperature in this region is above 0 degrees Celsius /75//76/, it is not considered to be a cold or hot region, so the possibility of extreme cold weather and compounded extreme heat is extremely low. The possibility of persistent heavy precipitation and drought is extremely low /75//76/. Trees of the project have shown to be particularly drought resistant and showed significantly higher growth and survival rates /81//82//83//84/. Therefore, growing and mature trees are unlikely to be significantly affected by drought events, whereas seedlings may be affected, but then the impact on carbon stocks is transient. Furthermore, national and regional government promulgate regulations on prevention and preparedness for meteorological disasters /85//86//87//88/.

						and the regulations were well implemented /89/. PP has made adequate preparations dealing with extreme weather /66/. Risk rating is appropriate.
d)	*Geological risk (G)	1	0.25	0.25	No	The probability of the geological risk is very low considering the local geological conditions /75//76/. Furthermore, national and regional government promulgate regulations on prevention and preparedness for meteorological disasters /90//91//92/ and the regulations were well implemented /93/. PP has made adequate preparations dealing with extreme weather /66/. Risk rating is appropriate.

3.2 Future Climate Impact

Type	Category Index	Projected Change Value	CID Impact Score	Project Impact	Assessment
Heat and cold (hc)	Mean air temperature	2.10	2.00	Positive	It was confirmed that the project is situated close to the low-latitude area. As a shelterbelt, the project can effectively regulate the regional climate of the project by increasing the surface vegetation, reducing the heat reaching the ground, and making the temperature in the forest

					significantly lower than that outside the forest /94/.
					Risk rating is appropriate.
	Extreme heat	5.20	1.00	Positive	It was confirmed that the project can effectively regulate the local climate by increasing the surface vegetation. At high temperature, the leaves and branches of the trees are able to reflect and absorb most of the solar radiation, reducing the amount of heat reaching the ground and thereby lowering the temperature within the project area /95/. Risk rating is appropriate.
	Cold spells	2.60	2.00	Positive	It was confirmed that the project can effectively regulate the local climate by increasing the surface vegetation. At low temperature, the leaves and branches of trees can play a certain role in heat preservation, reflect and block the diffusion of surface radiation, reduce heat loss, and thus to a certain extent increase the temperature in the project area /95/. Risk rating is appropriate.
Wet and dry (wd)	Mean precipitation	2.90	1.00	Positive	It was confirmed that the species of trees of the project are particularly drought resistant, and need less water.

					The project can increase the precipitation in the project area, mainly in the following aspects /96/: a. Increased water vapor content in the atmosphere through plant transpiration, b. It can trap and block the precipitation, increase the infiltration amount of precipitation, and indirectly affect the water cycle in the project area. Risk rating is appropriate.
	River flood	0.08	4.00	Positive	It was confirmed that the project can reduce the inflow of sediment into the middle and lower reaches, enhance the interception, conversion and transfer capacity of precipitation, transfer part of surface runoff into underground runoff, and slowly supplement to rivers, so as to regulate the distribution of water resources, reduce the flood flow during the rainy season, and reduce the occurrence of flood disasters /97/. Risk rating is appropriate.
	Landslide	4.00	4.00	Positive	It was confirmed that the roots of the plants in the project can firmly fix the soil, and can significantly improve the soil suction under both dry and rainfall conditions, improve the stability of debris flow and slope /98/.

					Risk rating is appropriate.
	Soil Moisture	0.00	1.00	Positive	It was confirmed that the roots of the plants in this project can firmly fix the soil and effectively improve the water holding capacity of the soil /98/. Risk rating is appropriate.
	Agricultural and ecological drought	3.00	5.00	Positive	It was confirmed that the project can reduce the inflow of sediment into the middle and lower reaches, enhance the interception, conversion and transfer capacity of precipitation, transfer part of surface runoff into underground runoff, and slowly supplement to rivers, the implementation of the project is conducive to increasing runoff, which will promote agricultural development around the project area /97/. Risk rating is appropriate.
	Fire weather		3.00	Positive	It was confirmed that the project can reduce the fire occurrence in the following aspects /94//97/: a. can absorb more solar radiation, reduce the surface temperature, thus reducing the risk of fire; b. Can regulate local climate, reduce surface temperature and increase air humidity. Trees release water through

					transpiration, which helps to cool the surrounding environment and increase humidity; c. It can block wind speed and reduce the direct impact of wind on fuel. Risk rating is appropriate.
Wind (w)	Mean wind speed	0.90	0.00	Positive	It was confirmed that the implementation of this project can effectively reduce wind speed. The increase of vegetation makes the surface more “rough”, which obstructs wind and thus reduces wind speed /99/. Risk rating is appropriate.
	Tropical cyclone	13.00	5.00	Positive	Tropical cyclone is formed in tropical or subtropical oceans. The project located in the temperate continental climate zone /100/. This clause does not apply to the project. Risk rating is appropriate.
Coastal (co)	Coastal flood	4.00	5.00	Does not apply	Not applicable, confirmed by the map of project location.
	Coastal erosion	-80.00	2.00	Does not apply	Not applicable, confirmed by the map of project location.

Projected Future Climate Impact on Natural Risk		Aggregated Sub-total Risk	Future Climate Impact Factor	Total (Aggregated sub-total risk x future climate impact factor)	Assessment
Natural risk associated with climate change impact (NR-c)	1.00	1.00	1.00	Automatic Calculation by the tool was confirmed.	
Natural risk NOT associated with climate change impact (NR-nc)	0.00	1.00	0.00		
Sea Level Rise(SLR)	N/A	N/A	0	Not applicable, confirmed by the map of project location. The project located in Madengbian Residential Area, Xinbao Village, Yule Town, Huachi County, Qingyang City, Gansu Province, People's Republic of China, belongs to the inland area of China and is not near the sea.	
Total Natural Risk (NR-c + NR-nc +SLR)				1	Assessment
Total shall not be less than zero.					Calculation was confirmed.
If the total natural risk is above 35 the project fails the risk assessment.					

Step 4: Overall non-permanence risk rating and buffer determination

According to the above step, the overall non-permanence risk rating, calculated automatically using the Risk Assessment Calculator in the Verra Project Hub, is as follows:

Risk Category		Rating
a)	Internal risk	14
b)	External risk	0
c)	Natural Risk	1
Overall risk rating (a + b + c)		15
TOTAL NUMBER OF CREDITS TO BE DEPOSITED IN THE AFOLU POOLED BUFFER ACCOUNT		1489.95

Through reviewing the non-permanence risk report and the documents provided by PP (e.g. the business license, development/afforestation agreement, etc.), and other public available information, the audit team confirmed that the risk score of every risk factor is appropriate, the non-permanence risk analysis is correctly conducted according to the AFOLU Non-Permanence Risk Tool (version 4.2) /11/ based on the actual situation of the project.

4 VALIDATION OPINION

4.1 Validation Summary

China Classification Society Certification Co. Ltd. (hereafter referred to as “CCSC”) has been commissioned by Beijing MD Energy Technology Co., Ltd. to perform the validation of the project activity “National Shale Oil Low-Carbon Intelligent Demonstration Base Carbon Sink Afforestation Project” (hereafter referred to as “the project”) on the basis of requirements of Verified Carbon Standard (VCS) Version 4.5, VCS Validation and Verification Manual, and the approved Clean Development Mechanism (CDM) methodology AR-AMS0007 version 03.1, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The validation scope is defined as an independent and objective review of the Project Description (PD), the project’s baseline study and monitoring plan, the emission reduction calculation spreadsheet and other relevant documents refer to VCS and CDM requirements. The GHG statement is the responsibility of the project proponent. The validation report are summarizing the findings of the validation.

4.2 Validation Conclusion

China Classification Society Certification Co. Ltd. (CCSC) has performed the validation of on the basis of requirements of Verified Carbon Standard (VCS) Version 4.5.

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

Five Corrective Action Requests (CAR) and seventeen Clarification Requests (CL) were raised in the validation process and successfully closed upon the project participant taken actions and submitted the revised PD and supporting evidence. No Forward Action Request (FAR) was raised during this validation.

The review of the project design documentation and additional documents related to baseline and monitoring methodology and subsequent background investigation have provided the CCSC with sufficient evidence to validate the fulfilment of the stated criteria. In detail the conclusions can be summarized as follows:

- The baseline scenario is correctly defined as per the applied methodology and relate tools;
- The project is additional;
- All data and information used for ex-ante calculation of emission reductions is of projected and/or hypothetical nature;
- A reasonable level of assurance has been applied;
- The monitoring plan in the validated PD is as per the applied methodology AR-AMS0007 version 03.1;
- The project has been implemented and operated as per the PD;
- The project complies with the validation criteria for projects set out in VCS Version 4.5;

The calculation of the ex-ante emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 497 tCO₂e are most likely to be achieved within the 20-year crediting period started from 26/02/2023.

It is CCSC's responsibility to provide an independent validation statement on the Project's compliance with the VCS Program requirements as set out in the VCS Program Rules. The conclusions of this report show that the project, as it was described in the project description contained in the PD, is in line with all criteria applicable for the validation against the VCS standard version 4.5 without any qualifications or limitations.

Crediting period: From 26/02/2023 to 25/02/2043

Validated estimated GHG emission reductions and carbon dioxide removals for the project crediting period:

The non-permanence risk rating (%)	15%
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If applicable, the Long-term Average (LTA), whether it has been properly updated, and if it has been reached.

The harvesting is not part of the project activities. Under the project for crediting period of 20 years, the project proponent ensure no harvesting the trees.

Vintage period	Estimated baseline emissions (tCO ₂ e)	Estimated project emissions (tCO ₂ e)	Estimated leakage emissions (tCO ₂ e)	Estimated buffer pool allocation (tCO ₂ e)	Estimated reductions VCUs (tCO ₂ e)	Estimated removals VCUs (tCO ₂ e)	Estimated total VCU issuance (tCO ₂ e)
26-February-2023 to 25-February-2024	0	0	0	0.00	0	0	0
26-February-2024 to 25-February-2025	0	0	0	0.03	0	0	0
26-February - 2025 to 25-February-2026	0	6	0	0.85	0	5	5
26-February - 2026 to 25-February-2027	0	19	0	2.80	0	16	16
26-February - 2027 to 25-February-2028	0	58	0	8.72	0	49	49

26-February - 2028 to 25-February-2029	0	120	0	17.97	0	102	102
26-February - 2029 to 25-February-2030	0	241	0	36.18	0	205	205
26-February - 2030 to 25-February-2031	0	298	0	44.65	0	253	253
26-February-2031 to 25-February-2032	0	390	0	58.49	0	331	331
26-February-2032 to 25-February-2033	0	401	0	60.19	0	341	341
26-February-2033 to 25-February-2034	0	432	0	64.78	0	367	367
26-February-2034 to 25-February-2035	0	448	0	67.16	0	381	381

26-February-2035 to 25-February-2036	0	515	0	77.28	0	438	438
26-February-2036 to 25-February-2037	0	664	0	99.62	0	564	564
26-February-2037 to 25-February-2038	0	732	0	109.73	0	622	622
26-February-2038 to 25-February-2039	0	856	0	128.45	0	728	728
26-February-2039 to 25-February-2040	0	950	0	142.55	0	808	808
26-February-2040 to 25-February-2041	0	1099	0	164.84	0	934	934
26-February-2041 to 25-February-2042	0	1297	0	194.49	0	1102	1102

26-February-2042 to 25-February-2043	0	1408	0	211.17	0	1197	1197
Total	0	9933	0	1489.95	0	8443	8443

APPENDIX 1: COMMERCIALY SENSITIVE INFORMATION

Section	Information	Justification	Assessment method and conclusion
Not applicable	Not applicable	Not applicable	Not applicable

APPENDIX 2: ABBREVIATIONS

Abbreviations	Full texts
ARR	Afforestation, Reforestation and Revegetation
AFOLU	Agriculture, Forestry and Other Land Use
CAR	Corrective Action Request
CCB	Climate, Community & Biodiversity
CCBA	Climate, Community & Biodiversity Association
CCER	China Certified Emission Reductions
CCSC	China Classification Society Certification Co. Ltd.
CDM	Clean Development Mechanism
CL	Clarification Request
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DOE	Designated Operation Entity
DNA	Designated National Authority
DRC	Development and Reform Committee
EB	Executive Board
EF	Emission Factor
EIA	Environmental Impact Assessment
EPB	Environment Protection Bureau
ER	Emission Reductions
ERPA	Emission Reduction Purchase Agreement
ETS	Emission Trading Scheme
FAR	Forward Action Request
FSR	Feasibility Study Report

GHG(s)	Greenhouse gas(es)
GS	Golden Standard
IFM	Improved Forest Management
IPCC	Intergovernmental Panel on Climate Change
JNR	Jurisdictional and Nested REDD+
MEE	Ministry of Ecology and Environment of the People's Republic of China
MP	Monitoring Plan
MR	Monitoring Report
NPRA	Non-Permanence Risk Analysis
PD	Project Description
PDD	Project Design Document
PP	Project Participant
QC/QA	Quality control/Quality assurance
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard
VCU	Voluntary Carbon Unit
VVB	Validation / Verification Body

APPENDIX 3: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWERS

CCS 认证公司

Appendix 9

CERTIFICATE OF COMPETENCE

Date of issue: 04/01/2023

Mr. Liu Dongsen

Has been qualified in accordance with *CDM Personnel Competence Requirements and Professional Competence Evaluation Instructions (CDMI0301)* as

- ☒ CDM validator for Technical Area(s): TA1.2
- ☒ CDM verifier for Technical Area(s): TA1.2
- ☐ Technical expert for Technical Area(s): _____



Tian Wei
CCSC General Manager

CCS 认证公司

Appendix 9

CERTIFICATE OF COMPETENCE

Date of issue: 04/01/2023

Mr. Liao Ling

Has been qualified in accordance with *CDM Personnel Competence Requirements and Professional Competence Evaluation Instructions (CDMI0301)* as

- ☒ CDM validator for Technical Area(s): TA1.1/TA1.2/TA13.1/TA14.1
- ☒ CDM verifier for Technical Area(s): TA1.1/TA1.2/TA13.1/TA14.1
- ☐ Technical expert for Technical Area(s): _____



Tian Wei
CCSC General Manager

CCS 认证公司

Appendix 9

CERTIFICATE OF COMPETENCE

Date of issue: 30/06/2023

Mr. Tan Wenbin

Has been qualified in accordance with *CDM Personnel Competence Requirements and Professional Competence Evaluation Instructions (CDMI0301)* as

- CDM validator for Technical Area(s): TA1.2/TA3.1/TA5.2/TA8.1/TA10.1
- CDM verifier for Technical Area(s): TA1.2/TA3.1/TA5.2/TA8.1/TA10.1
- ☐ Technical expert for Technical Area(s): _____



Tian Wei
CCSC General Manager

CCS 认证公司

Appendix 9

CERTIFICATE OF COMPETENCE

Date of issue: 04/01/2023

Mr. Ma Yuxiang

Has been qualified in accordance with *CDM Personnel Competence Requirements and Professional Competence Evaluation Instructions (CDMI0301)* as

- ☐ CDM validator for Technical Area(s): _____
- ☐ CDM verifier for Technical Area(s): _____
- Technical expert for Technical Area(s): TA14.1



Tian Wei
CCSC General Manager

CCS 认证公司

Appendix 9

CERTIFICATE OF COMPETENCE

Date of issue: 04/01/2023

Mr. Tang Zhiang

Has been qualified in accordance with *CDM Personnel Competence Requirements and Professional Competence Evaluation Instructions (CDMI0301)* as

- CDM validator for Technical Area(s): TA1.1/TA1.2/TA2.1/TA3.1/TA4.1/TA9.2/TA13.1
- CDM verifier for Technical Area(s): TA1.1/TA1.2/TA2.1/TA3.1/TA4.1/TA9.2/TA13.1
- ☐ Technical expert for Technical Area(s): _____



Tian Wei
CCSC General Manager

APPENDIX 4: DOCUMENTS REVISED OR REFERENCED

Title	Author	References to the document	Provider
/1/ VCS-PD sent to CCSC for validation	Beijing MD Energy Technology Co., Ltd.	Version 1.0 03/11/2023	PP
/2/ Final VCS-PD to request registration	Beijing MD Energy Technology Co., Ltd.	Version 4.0 05/12/2024	PP
/3/ Non-Permanence Risk Report with the calculation tool	Beijing MD Energy Technology Co., Ltd.	Version 3.0 12/06/2024	PP
/4/ Emission Reductions Calculation Spreadsheet	Beijing MD Energy Technology Co., Ltd.	Version 3.0 12/06/2024	PP
/5/ CDM Methodology Afforestation and reforestation project activities implemented on lands other than wetlands	CDM-EB	AR-AMS0007 version 03.1 https://cdm.unfccc.int/methodologies/PAmethodologies/approved	Others
/6/ Estimation of non-CO ₂ GHG emissions resulting from burning of biomass attributable to an A/R CDM project activity	CDM-EB	AR-AM-Tool08-v4.0.0	Others
/7/ Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities	CDM-EB	AR-AM-Tool12-v3.1	Others
/8/ Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities	CDM-EB	AR-AM-Tool14-v4.2	Others
/9/ Estimation of the increase in GHG emissions attributable to displacement of pre-project agricultural activities in A/R CDM project activity	CDM-EB	AR-AM-Tool15-v2.0	Others
/10/ Calculation of the number of sample plots for measurements within A/R CDM project activities	CDM-EB	A/R Methodological Tool EB 58, Annex 15	Others

/11/ VCS AFOLU Non-Permanence Risk Tool (Version 4.2)	VCS	AFOLU-Non-Permanence-Risk-Tool-v4.2	Others
/12/ VCS standard	Verra	Version 4.5 Dated 29/08/2023	Others
/13/ VCS Project Description template	Verra	Version 4.3 Dated 29/08/2023	Others
/14/ Business license of the project owner	Government of Qingcheng County, Qingyang City	23/12/2020	PP
/15/ Registered forest land rights of the Project	Forest and Grassland Bureau of Huachi County, Qingyang City	/	PP
/16/ Contracts of land lease and transfer of management between the PP and the local villagers	PP and the local villagers	01/08/2022	PP
/17/ Afforestation Operation Design Report	Design institute, Gansu Changhong Engineering Ltd.	06/2022	PP
/18/ Maps of the Project (kml file)	/	/	PP
/19/ Topographic map	/	/	PP
/20/ VCS service contract	Beijing MD Energy Technology Co., Ltd. and PP	13/07/2023	PP
/21/ Afforestation contracts	Afforestation engineering companies of PP	10/01/2023	PP
/22/ Saplings purchase contract	Afforestation engineering companies of PP	20/02/2023 01/03/2023 06/03/2023	PP
/23/ Certificates of saplings	Inspection organizations (local authorities)	21/03/2023 24/04/2023 09/03/2023	PP
/24/ Planting records	PP	2023	PP
/25/ Final Acceptance Certificates of Afforestation Completion	Afforestation engineering companies of PP	20/07/2023	PP

/26/ Stakeholders procedures	PP	/	PP
/27/ Notification on Stakeholder Consultation Survey	PP	25/05/2022	PP
/28/ Stakeholder's questionnaires	stakeholders	08/06/2022	PP
/29/ China's National Plan on Implementation of the 2030 Agenda for Sustainable Development	China	09/2016 https://www.gov.cn/xinwen/2016-10/13/5118514/files/44cb945589874551a85d49841b568f18.pdf	Others
/30/ Global indicator framework for the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development	UN	https://unstats.un.org/sdgs/indicators/indicators-list/	Others
/31/ Forest Law of the People's Republic of China	China	01/07/2020	Others
/32/ Regulations for the Implementation of the Forest Law of the People's Republic of China	China	29/01/2020	Others
/33/ Technical regulations for afforestation	National standard	GB/T 15776-2016	Others
/34/ Guiding Opinions of the General Office of the State Council on Scientific Greening	State Council of China	Guobanfa [2021] No. 19 Dated 18/05/2021	Others
/35/ Huachi County's "14th Five-Year Plan" Water Conservation Plan	Government of Huachi County	12/2020	Others
/36/ Huachi County National Economic and Social Development Statistical Bulletin in 2022	Government of Huachi County	28/04/2023	Others
/37/ Law of the People's Republic of China on the Protection of Women's Rights and Interests	China	01/10/1992	Others
/38/ Labour Law of People's Republic of China	China	01/01/1995	Others
/39/ People's Republic of China Second National Communication on Climate Change	NDRC	2013	Others
/40/ A Method of Estimation Aboveground Biomass of Sparse Tree-	Yonglei Shi	doi: 2022.DOI:10.2711	Others

Shrub Using Optical Remote Sensing	Zhihui Wang Shiming Li Chunyi Li Peiqing Xiao Pan Zhang Xiaoge Chang	6/d.cnki.gjzgc.202 2.000486	
/41/ Comparison of general allometric equations of biomass estimation for major tree species types in China	LIU Jianfeng, NI Jian	doi: 10.11928/j.issn.1 001- 7410.2021.04.23	Others
/42/ A Study on Nutrient Content and Biomass of Populus Bolleana	Chen Zhangshui	Forest Research, 1988, 1(5): 535- 540	Others
/43/ Study on the growth pattern of Xinjiang Poplar in Hexi Irrigation Area of Gansu Province	Zong Fusheng	02/2014	Others
/44/ Nutrients and Biomass of Different-aged Populus bolleana Plantations	Wang Yonghong	11/2015	Others
/45/ Study on Ecological Compensation Standard for Forest-based Carbon Sequestration Projects from the Perspective of Forest Farmers — Based on Two Typical Tree Species in Gansu Province	Li Zhuolun	05/2022	Others
/46/ Modeling Study of Generic Allometric Biomass Equations for Common Tree Species in China	Liu Jianfeng	30/03/2021	Others
/47/ Study on Chinese-fir and spruce carbon storages under different rotations based on the FORECAST model	Jie Chengyue	06/2011	Others
/48/ Growth Characteristics of Different Tree Species for Shelterbelt in Huajialing	Zhao Heran	01/2015	Others
/49/ Determination of Rotation Felling Period of Camphor pine Plantation in Maoershan	Shangzhi	2020	Others
/50/ Study on Estimation Method of Aboveground Biomass for Sparse Tree-shrub Using Optical Remote Sensing Data	Shi Yonglei	05/2022	Others

/51/ Determination of The Finance Maturity of Maoershan Mongolian Scotspine plantation	Chen Yao	04/2010	Others
/52/ Declaration on non-double counting for GHG program	PP	06/12/2023	PP
/53/ Declaration on the timber harvesting in management plan	PP	06/12/2023	PP
/54/ Declaration on non clearance of native ecosystem	PP	06/12/2023	PP
/55/ Declaration non immigration and non cultural heritage	PP	06/12/2023	PP
/56/ Photos of project site prior to the project start	PP	2022	PP
/57/ Industry standard “Age Class and Age Group Division of Major Tree Species” (LY/T2908-2017)	State Forestry Administration	27/10/2017	Others
/58/ Certificate stating that the project boundary does not involve agricultural activities conversion, clearance, depletion and degradation	Xinbao Village Committee	25/05/2024	PP
/59/ Stakeholder Management Program	PP	/	PP
/60/ Project announcement	PP	25/05/2022	PP
/61/ Article 10 of the Constitution of the People’s Republic of China	National People’s Congress, China	Adopted by the First Session of the Thirteenth National People’s Congress on March 11, 2018	Others
/62/ Land Management Law of People’s Republic of China	National People’s Congress, China	26/08/2019	Others
/63/ Civil Code of the People’s Republic of China	National People’s Congress, China	Adopted at the Third Session of the Thirteenth National People’s Congress on May 28, 2020	Others
/64/ Law of the People's Republic of China on Land Contract in Rural Areas	National People’s Congress, China	Revision 2018 29/12/2018	Others
/65/ Measures for Land Registration	China Government	https://www.gov.cn/ziliao/flfg/2008	Others

		01/03/content_849402.htm dated 30/12/2007	
/66/ Management plan including financial and monitoring plan	PP	Version 1.0	PP
/67/ CVs of project management	PP	/	PP
/68/ Training records of project management and operation team	PP	/	PP
/69/ Project financial model	PP	/	PP
/70/ Research on Fire Risk Zoning in China Based on Cluster Analysis	QIN Tao, ZHOU Hui-xin, DENG Jing	Resource Development & Market 2015 31(12) doi: 10 . 3969 /j. issn . 1005 — 8141. 2015. 1 2. 012	Others
/71/ Map of burned area - observed fire	MODIS data	https://earthmap.org	Others
/72/ Regulations on Prevention of forest fires	State Council	01/12/2008	Others
/73/ Gansu Province Implementation Measures for the Forest Fire Prevention Regulations	/	/	Others
/74/ Introduction of measures to prevent forest fires	Government of Huachi County	https://www.hcx.gov.cn/zwdt/bmdt/content_36043	Others
/75/ Introductions of Huachi County: General information	/	/	Others
/76/ Introductions of Huachi County: Geography	/	/	Others
/77/ Introductions of Huachi County: Agricultural meteorology and Pests	/	/	Others
/78/ Forest Diseases and Pests Control Regulation of the People's Republic of China	State Council	18/12/1989	Others
/79/ Gansu Province Forest Pest and Disease Control Regulations	Gansu People's Congress	28/07/2018	Others

/80/ Introductions to the pest control of Huachi County	Huachi Government	/	Others
/81/ Research on weather and climate extremes over China: Brief introduction and recent progress of the national key R&D program of China for earth system and global change	Chen HS, Zhang YC, Zhang WJ, et al.	2024. Transactions of Atmospheric Sciences http://dqkxxb.cnjournals.org	Others
/82/ Research on Afforestation Technology of Pinus tabulaeformis in Semi-arid Regions	Niu Xiangwen	Shanxi Agricultural Economics 2019(03):104 DOI:10.16675/j.cnki.cn14-1065/f.2019.03.069	Others
/83/ Research on Drought Resistance Mechanism and Classification Model of Major Afforestation Tree Species in Northern China	Zhang Jianguo, Li Jiye	Journal of Hebei Forestry College, 1995(03):187-193	Others
/84/ Research on Drought Resistance of Mongolian pine in Arid Desert Regions	Wang Fei	Journal of Gansu Agricultural University 2016	others
/85/ Regulations on Prevention of and Preparedness for Meteorological Disasters	State Council	27/01/2010 07/10/2017 revision	Others
/86/ Gansu Province Regulations on Prevention of and Preparedness for Meteorological Disasters	Gansu People's Congress	02/06/2022	Others
/87/ National Emergency Plan for Meteorological Disasters	State Council	11/12/2009	Others
/88/ Gansu Province Emergency Plan for Meteorological Disasters	Gansu Government	26/12/2021	Others
/89/ Introductions to the Prevention of and Preparedness for Meteorological Disasters of Huachi County	/	/	Others
/90/ Regulation on the Prevention and Control of Geologic Disasters	State Council	01/03/2004	Others
/91/ Gansu Province Geological Disaster Prevention and Control 14th Five-Year Plan	Gansu Government	2022	Others

/92/ Gansu Province Earthquake Prevention and Mitigation Regulations	Gansu People's Congress	29/07/2011 31/03/2022 revision	Others
/93/ Introductions to the Geological Disaster Prevention of Huachi County	/	/	Others
/94/ The influence of afforestation on land surface temperature in China	Wang Licping, et al.	National Remote Sensing Bulletin 2021 Vol 25 DOI : 10.11834/jrs.20211284	Others
/95/ Afforestation in China cools local land surface temperature	Shu-Shi Peng, et al.	PNAS research article https://www.pnas.org/doi/10.1073/pnas.1315126111#:~:text=Afforestation%20is%20found%20to%20decrease%20daytime%20LST%20by,by%20about%200.2%20%C2%B1%200.5%20%C2%B0C%20on%20average.	Others
/96/ Review on Montane Forest Eco-hydrology in Arid Area	Zhibin He, et al.	Advances in Earth Science, 2016, Vol. 31 doi: 10.11867/j.issn.1001-8166.2016.10.1078	Others
/97/ A summary and perspective of forest vegetation impacts on water yield	Li Wenhua, et al.	Journal of Natural Resources, 2001 No.5 DOI: 10.3321/j.issn:1000-3037.2001.05.002	Others
/98/ Atmosphere-plant-soil interactions: theories and mechanisms	Wu Hongwei, et al.	Chinese Journal of Geotechnical Engineering, 2017,	Others

		39(1):1-47 DOI: 10.11779/CJGE20 1701001	
/99/ A review on the climatic regulation effects of afforestation and its impact mechanisms	Huang Lin, et al.	Acta Ecologica Sinica, 2021, 41(2): 469-478 DOI: 10.5846/stxb202003290731	Others
/100/ History of Huachi County	/	/	Others
/101/ Responding to Climate Change: China's Policies and Actions	MOE, China	2022,2023	Others
/102/ China NDC	MOE, China	28/10/2021 https://unfccc.int/documents/497393	Others

APPENDIX 5: CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS AND FORWARD ACTION REQUESTS

Draft report clarifications and corrective action requests by audit team	Summary of project participant response	Audit team conclusion
CL-1 The unit of the area shall be converted from “mu” to SI unit “ha”. Besides, planting area and number of saplings of each specie, Mongolian pine, Spruce, and Xinjiang poplar, involved in the project is required to be included in section 1.1 and 1.12 of the PD.	The unit of the area has been modified from “mu” to SI unit “ha”. And meanwhile, planting area and number of saplings of each specie, Mongolian pine, Spruce, and Xinjiang poplar, involved in the project have been added to section 1.1 and 1.12 of the PD.	PD has been revised accordingly. ER corrected using the revised number of saplings of each specie, Mongolian pine, Spruce, and Xinjiang poplar has been confirmed. This CL is closed.
CL-2 Section 1.4.1 of the PD shall include the information required by the template: <i>For all projects, describe and justify how the project is eligible to participate in the VCS Program. The response should:</i> <i>Justify that the project activity is included under the scope of the VCS Program and not excluded under Table 2.1 of the VCS Standard.</i> <i>Provide information to demonstrate that the project meets requirements related to the pipeline listing deadline, the opening meeting with the validation/verification body, and the validation deadline.</i> <i>Demonstrate that the</i>	The information requires by the template has been added to section 1.4.1 of the PD. The project activity is included under the scope of the VCS Program and not excluded under Table 2.1 of the VCS Standard. The project will generate GHG removals through small-scale afforestation activity on a non-forest and non-wetlands. Thus, the project falls under the Afforestation/Reforestation (A/R) Small-scale Methodology AR-AMS0007, approved under the CDM, which is recognized and used under the VCS Standards. The project shall comply with all rules and requirements stated in the following documents: Verified Carbon Standard (VCS) Program guide Version 4.4,	PD has been revised accordingly. It is confirmed that the project activity is included under the scope of the VCS Program and not excluded under Table 2.1 of the VCS Standard. The project meets requirements related to the pipeline listing deadline, the opening meeting with the validation/verification body, and the validation deadline. The applied methodology is eligible under the VCS Program. The project is not a fragmented part of a larger project or activity according to the

<i>applied methodology is eligible under the VCS Program. Where applying a methodology with scale and/or capacity limits, demonstrate that the project is not a fragmented part of a larger project or activity that would otherwise exceed such limits. If applicable, demonstrate that no single cluster of project activity instances exceeds the capacity limit.</i> <i>• Include any other relevant eligibility information.</i>	VCS Standard, Version 4.5, VCS Methodology Requirements, v4.4, AFOLU Non-Permanence Risk Tool, v4.2 As a result, the Proposed Project is included under the scope of the VCS Program and not excluded under Table 2.1 of the VCS Standard. The project meets requirements related to the pipeline listing deadline, the opening meeting with the validation/verification body, and the validation deadline. The project start date is 10 January 2023 according to the afforestation contract signed by the project owner and the afforestation engineering company. The date of submission is 3 November 2023 which is earlier than the date specified by the VCS standard, AFOLU projects shall initiate the pipeline listing process (as set out in the Registration and Issuance Process) within three years of the project start date. The project is eligible under the scope of the VCS Program as the project includes AFOLU activities (project category ARR), it with ex-ante emission removal estimates is 497tCO_{2e} per year, less than 20,000tCO_{2e} per year stipulated by VCS Standard. The project will complete validation within eight years of the project start date according to the time specified by VCS Standard. The applied methodology is eligible under the VCS Program. The project is not a fragmented part of a larger project or activity according to the commitment of the	commitment of the Project Proponent about non-repetition of declaration. This CL is closed.
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	Project Proponent about non-repetition of declaration.	
CL-3 Section 1.4.2 of the PD shall include the information required by the template: <i>For AFOLU projects, describe and justify how the project is eligible to participate in the VCS Program. The response should:</i> <i>Justify and demonstrate that all selected AFOLU project categories are appropriate and that all related category requirements are met.</i> <i>Provide evidence that native ecosystems have not been converted, cleared, drained, or degraded to generate GHG credits in Section 2.4.3 below.</i> <i>For ARR, ALM, WRC, or ACoGS project areas, provide evidence that clearing or conversion did not take place within 10 years of the project start date in Section 2.4.3 below.</i>	The information requires by the template has been modified to section 1.4.2 of the PD. All selected AFOLU project categories are appropriate and that all related category requirements are met. The project is eligible ARR activity that increase carbon sequestration and reduce GHG emissions by establishing, increasing, or restoring vegetative cover through the planting, sowing, or human-assisted natural regeneration of woody vegetation. The native ecosystems have not been converted, cleared, drained, or degraded to generate GHG credits. In the absence of the Proposed Project, the sites of the project are all low-nutrient, low-supply land, and the terrain is steep, with few herbaceous plants growing. Thus, the native ecosystems have not been converted, cleared, drained, or degraded to generate GHG credits. The project areas were not cleared of existing natural non-degraded ecosystems due to the project activity. - According to Contract for the transfer of management and Afforestation Operation Design Report, the sites of the project are all low-nutrient, low-supply land, and the terrain is steep, with few herbaceous plants growing. - And according to the supporting documents issued by the Villagers Committee of Xinbao Village, Yule Town, Huachi County, the project areas were not cleared of existing natural non-degraded ecosystems due	PD has been revised accordingly. The project is eligible ARR activity that increase carbon sequestration and reduce GHG emissions by establishing, increasing, or restoring vegetative cover through the planting, sowing, or human-assisted natural regeneration of woody vegetation. The native ecosystems have not been converted, cleared, drained, or degraded to generate GHG credits. The project areas were not cleared of existing natural non-degraded ecosystems due to the project activity. No clearance of the native ecosystems will be taken place during the project activities. The project area has distributed native species and/or species that have adapted to local ecological conditions, these include Mongolian pine, Spruce, and Xinjiang populus. And these trees species of the project have passed quarantine inspection, doesn't any invasive species. The project area does not take place clearing or conversion within 10 years of the project start date. This CL is closed.

	to the project activity, and has not an invasive species and threatening ecosystem health. According to the commitment issued by the Project Proponent, the project area shall not be cleared of native ecosystems within the 10-year period prior to the project start date. The project area shall not be cleared of native ecosystems within the 10-year period prior to the project start date. No clearance of the native ecosystems will be taken place during the project activities. The project area has distributed native species and/or species that have adapted to local ecological conditions, these include Mongolian pine, Spruce, and Xinjiang populus. And these trees species of the project have passed quarantine inspection, doesn't any invasive species. The project area does not take place clearing or conversion within 10 years of the project start date. According to the supporting documents issued by the Villagers Committee of Xinbao Village, Yule Town, Huachi County and the commitment issued by the Project Proponent, do not cut down trees in the project area within the 10-year period from the project start date.	
CL-4 The relevant dates of the implementation schedule shall be described in the section 1.12 of the PD.	The relevant dates of the implementation schedule have been added in the section 1.12 of the PD.	It is confirmed that the relevant dates of the implementation schedule have been added in the table of the section 1.12 of the PD. This CL is closed.
CL-5 The reason of no double claiming with emissions trading programs or binding emission limits shall be described in	The reason of no double claiming with emissions trading programs or binding emission limits has been described in the section 1.17.1 of the	PD has been revised accordingly. The reason of no double claiming with emissions trading programs or binding

the section 1.17.1 of the PD.	PD. The Project Proponent belongs to the oil and gas extraction industry, which is not covered by the National Carbon Emission Trading, according to Notice on the Key Work of Starting the National Carbon Emission Trading Market.	emission limits is confirmed. This CL is closed.
CL-6 Sustainable development contributions in the section 1.18 of the PD shall include the information included in the template: <i>A summary description of project activities that result in sustainable development (SD) contributions (i.e., technologies/measures implemented, activity location).</i> <i>An explanation of how project activities will result in expected SD contributions.</i> <i>A description of how the project contributes to achieving any nationally stated sustainable development priorities, including any provisions for monitoring and reporting these.</i>	Sustainable development contributions in the section 1.18 of the PD have been corrected which include the information required by the PD template.	PD has been revised accordingly. Sustainable development contributions in the section 1.18 of the PD have been revised. This CL is closed.
CL-7 Stakeholder diversity and changes over time of the section 2.1.1 "Stakeholder Identification" of the PD shall include the information required by the PD template: <i>Describe the social, economic, and cultural diversity within stakeholder groups, the</i>	Stakeholder diversity and changes over time of the section 2.1.1 has been corrected which include the information required by the PD template.	PD has been revised accordingly. This CL is closed.

<i>differences and interactions between the stakeholder groups, and any changes in the make-up of each group over time.</i>		
CL-8 Stakeholder engagement process in the section 2.1.2 “Stakeholder Consultation and Ongoing Communication” of the PD shall include the information required by the template: <i>Describe the process to engage stakeholders in a culturally appropriate manner (e.g., dates of announcements or meetings, language and gender sensitivity). Describe the process or methods used to document the outcomes.</i>	Stakeholder engagement process in the section 2.1.2 “Stakeholder Consultation and Ongoing Communication” of the PD has been corrected which include the information required by the PD template.	PD has been revised accordingly. This CL is closed.
CL-9 Consultation outcome in the section 2.1.2 “Stakeholder Consultation and Ongoing Communication” of the PD shall include the information required by the template: <i>Summarize the discussion around consent to project design and implementation, risks, costs and benefits of the project, all relevant laws and regulations covering workers’ rights in the host country, the discussion of FPIC and the VCS validation and verification process.</i>	Consultation outcome in the section 2.1.2 “Stakeholder Consultation and Ongoing Communication” of the PD has been corrected which include the information required by the PD template.	PD has been revised accordingly. This CL is closed.
CL-10 Ongoing communication in the section 2.1.2 “Stakeholder	Ongoing communication in the section 2.1.2 “Stakeholder Consultation and Ongoing Communication” of the PD has been	PD has been revised accordingly.

Consultation and Ongoing Communication” of the PD shall include the information required by the template: <i>Describe the mechanisms for ongoing communication with stakeholders.</i>	corrected which include the information required by the PD template.	This CL is closed.
CL-11 Stakeholder input in the section 2.1.2 “Stakeholder Consultation and Ongoing Communication” of the PD shall include the information required by the template: <i>Include details on any updates to the project design or justify why updates were not necessary or appropriate.</i>	Stakeholder input in the section 2.1.2 “Stakeholder Consultation and Ongoing Communication” of the PD has been corrected which include the information required by the PD template.	PD has been revised accordingly. This CL is closed.
CL-12 Stakeholder input in the section 2.3.4 “Property Rights” of the PD shall include the information required by the template: <i>Describe the measures implemented to protect and preserve the property rights of IPs, LCs, and customary rights holders.</i>	Stakeholder input in the section 2.3.4 “Property Rights” of the PD has been corrected which include the information required by the PD template.	PD has been revised accordingly. This CL is closed.
CL-13 In the table of the applicability of tools in the section 3.2 of the PD, “Applicability conditions” and “Justification of compliance” shall be include appropriated information.	Requested information has been added in the table of the applicability of tools in the section 3.2 of the PD “ Applicability conditions” and “Justification of compliance”.	PD has been revised accordingly. This CL is closed.
CL-14 The upper ER limit of the project scale applying the CDM small scale methodology is 60,000tCO₂e, not	The upper ER limit of the project scale has been corrected to 60,000tCO₂e, applying the CDM small scale methodology.	PD has been revised accordingly. This CL is closed.

300,000tCO ₂ e		
CL-15 Evidence for the Soil disturbance attributable to project area which will always be less than 10% of the total surface shall be provided.	According to the Afforestation Operation Design Report and site survey, the digging pits of size 0.80 m × 0.60 m (length × width) at a spacing of 2 m × 3 m, which is equal to a coverage of 8 per cent. The relevant evidence document has been provided to VVB.	The evidence, Afforestation Operation Design Report, has been checked and confirmed. The digging pits of size 0.80 m × 0.60 m (length × width) at a spacing of 2 m × 3 m, which is equal to a coverage of 8 per cent. This CL is closed.
CL-16 Project boundary shall be determined and justified as per the methodology.	The project boundary has been added according to the methodology.	PD has been revised accordingly. This CL is closed.
CL-17 Stratification shall be determined as per the requirements of the methodology: <i>If biomass distribution over the project area is not homogeneous, stratification should be carried out to improve the precision of biomass estimation. Different stratifications may be appropriate for the baseline and project scenarios in order to achieve optimal precision of estimation of net GHG removals by sinks. In particular:</i> <i>(a) For baseline net GHG removals by sinks, it is usually sufficient to stratify the area according to major vegetation types and their crown cover and/or land use types;</i> <i>(b) For actual net GHG removals by sinks the stratification for ex ante estimations is based on the project planting/management plan and the stratification for ex post estimations is based</i>	Stratification has determined as per the requirements of the methodology, which has been revised in the PD. Based on the actual situation that the terrain, climate, soil and other site conditions of the forested land in the project area are basically the same, and the afforestation time, initial planting density and operation and management measures are the same. The planting area is stratified to be one stratum.	PD has been revised accordingly. Stratification complies with the requirements of the methodology. This CL is closed.

on the actual implementation of the project planting/management plan. If natural or anthropogenic impacts (e.g. local fires) or other factors (e.g. soil type) significantly alter the pattern of biomass distribution in the project area, then the ex post stratification is revised accordingly.		
CAR-1 Project start date shall be determined as per the VCS Standard: The project start date of an AFOLU project is the date on which activities that lead to the generation of reductions or removals are implemented (e.g., preparing land for seeding, planting, changing agricultural or forestry practices, rewetting, restoring hydrological functions, or implementing management or protection plans).	The project start date has been corrected according to the VCS Standard. The project construction began to preparing land for planting according to the afforestation log provided by the afforestation engineering company on 26 February 2023 which is the project start date.	PD has been revised accordingly. The determination of the revised project start date has been confirmed by document review. This CAR is closed.
CAR-2 The crediting period start date shall be determined as per the VCS Program Definition: <i>The start date of an AFOLU project or jurisdictional REDD+ program is the date on which activities that led to the generation of GHG emission reductions or removals are implemented (e.g., planting, changing agricultural or forestry practices, rewetting, restoring hydrological functions, or implementing management or protection plans).; Equivalent to "Project Start Date".</i>	According to the VCS Program Definition, the crediting period start date has been corrected.	PD has been revised accordingly. This CAR is closed.
CAR-3 The KML file includes areas which is out of the project, which has	The KML file has been resupply and which includes areas is consistent with the project area. The KML file has been provided to VVB for review.	The revised KML file has been confirmed consistent

to be revised.		with the project area. This CAR is closed.															
CAR-4 The estimated GHG removals is calculated with incorrect number of trees.	The calculation of the estimated GHG removal has been modified. <table> <tr> <th>Species of tree</th><th>Total planting area (ha)</th><th>Total planting quantity</th></tr> <tr> <td>Mongolian pine</td><td>16.675</td><td>27750</td></tr> <tr> <td>Spruce</td><td>10.005</td><td>16650</td></tr> <tr> <td>Xinjiang poplar</td><td>6.670</td><td>7400</td></tr> <tr> <td>Total</td><td>33.35</td><td>51800</td></tr> </table>	Species of tree	Total planting area (ha)	Total planting quantity	Mongolian pine	16.675	27750	Spruce	10.005	16650	Xinjiang poplar	6.670	7400	Total	33.35	51800	Recalculated estimated GHG removals has been confirmed and PD has been revised accordingly. This CAR is closed.
Species of tree	Total planting area (ha)	Total planting quantity															
Mongolian pine	16.675	27750															
Spruce	10.005	16650															
Xinjiang poplar	6.670	7400															
Total	33.35	51800															
CAR-5 A sampling plan shall be included in the monitoring plan of the PD.	A sampling plan has been added in the monitoring plan of the PD.	PD has been revised accordingly. This CL is closed.															