

VCS & CCB 3RD VERIFICATION REPORT FOR LIANGDU AFFORESTATION PROJECT



Document Prepared By TÜV NORD CERT GmbH

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Summary

- **A brief description of the verification and the project.**

The project activity developed in Shuicheng District, Panzhou City, Liuzhi Special District, Liupanshui City, Guizhou Province, P. R. China, is afforestation of barren hill suitable for planting trees, which would continue to remain barren hill suitable for planting trees in the absence of the project activity, by direct planting native trees (China fir, Cypressess, Pinus yunnanensis and Masson pine). The project not only sequester carbon through biomass growth but also provide native habitat for numerous species and provide employment for local workers in the adjoining forest management activities. The planted area accounts to 23,720 ha of forest. The project started planting on 28-April-2015 and GHG accounting period was chosen by PP started from 01-January-2016 and it was registered by VCS under Project ID 2083 in conjunction with the Climate, Community and Biodiversity Standard (CCBS).

- **The purpose and scope of verification.**

The objective of the verification is to have an independent review ex post determination by a VVB (Validation and Verification Body) of the monitored GHG removals by sink that have occurred as a result of the implementation of the project activity during a defined monitoring period.

- **The monitoring period.**

This is the 3rd Monitoring period started from 01-January-2021 to 31-December-2021.

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

Verification is conducted using TÜV NORD CERT GmbH procedures in line with the requirements specified in the latest version of the VCS Validation and Verification Manual and applying auditing techniques. The verification team assessed the project activity's compliance against the VCS Version 4.3, the CCB Standard Third Edition (version 3.1), the selected methodology and the project monitoring report. The project is eligible under Project Scope 14. The verification criteria followed the guidance documents provided by VCS and CCB included the following:

VCS Version 4.3, VCS Program Guide Version 4.0, AFOLU Non- Permanence Risk Tool version 4.0, CCB Standards version 3.1, CCB Program Rules version 3.1 and the applied CDM methodology AR-ACM0003 – "Afforestation and reforestation of lands except wetlands" (version 2.0.0).

- **The number of findings raised during verification.**

In the course of the verification, 14 Corrective Action Requests (CARs), 13 Clarification Requests (CLs) were raised and successfully closed. No FAR was raised. The assessment is included in the report.

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

There are no restrictions of uncertainty.

- **Summary of the verification conclusion.**

TÜV NORD JI/CDM Certification Program carried out the Verified Carbon Standard (VCS) joint with Climate, Community & Biodiversity (CCB) 3rd periodic verification of the project, “Liangdu Afforestation Project” (2083) with regard to the relevant requirements of VCS standard Version 4.3 and CCB Standards version 3.1. TÜV NORD confirms all verification activities including objectives, scope and criteria, level of assurance, monitoring and monitoring report adhere to VCS Version 4.3 and CCB Standards version 3.1 and all associated updated as documented in this report, are complete.

TÜV NORD concludes that the project activity “Liangdu Afforestation Project” in China, as described in the final Monitoring Report version, meets all relevant requirements for VCS and CCB verification activity and correctly applied the methodology AR-ACM0003 version 2.0.0. Hence TÜV NORD is able to certify that the GHG removals by sink from the project during the monitoring period 01-January-2021 to 31-December-2021 amount to **308,429 tCO₂e**.

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1. INTRODUCTION

1.1 Objective

Timing Carbon Asset Management Co., Ltd. has commissioned the TÜV NORD JI/CDM Certification Program to carry out the Verified Carbon Standard (VCS) joint with Climate, Community & Biodiversity (CCB) 3rd periodic verification of the project for the monitoring period from 01-January-2021 to 31-December-2021. The objective of verification is to have an independent review ex-post determination by a DOE of the monitored GHG removals by sink that have occurred as a result of the project activity implemented during a defined monitoring period. The evaluation is done against the requirements of the VCS Version 4.3 and CCBS third edition (version 3.1), based on the monitoring report. In order to confirm that the GHG removals by sink sound reasonable and meet the identified criteria, the verification involves the assessment of monitoring plan conformance to VCS/CCB rules and applied methodology. Verification is requirement and is seen as necessary to provide assurance on the generation of VCU.

1.2 Scope and Criteria

The scope of the verification is to verify that: (a) the actual monitoring system and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan; (b) the GHG removals by sink data and express a conclusion with a reasonable level of assurance about whether he reported GHG removals by sink data are free from material misstatement; (c) the reported GHG emissions data is sufficiently supported by evidence. Verification shall ensure that the reported GHG removals by sink are complete and accurate in accordance with the applicable VCS criteria in order to be certified. Verification is conducted using TÜV NORD procedures in line with the requirements specified in the VCS Program and ISO14064-3 requirements and applying auditing techniques. Verification team assessed and determines that the implementation and operation of the project activity, and steps to report GHG removals by sink comply with the VCS rules. The verification involved a document review of relevant documentation and interview with the project participants. Verification is not meant to provide any consultancy towards the project participants; however, stated request for clarifications and/or corrective actions may have provided input for improvement of the monitoring.

1.3 Level of Assurance

All GHG sinks, sources and GHG emissions equal to or greater than 1% of the total GHG assertions are considered. The project area covers 23,720 ha and has generated average of 308,429 GHG removals per year during this monitoring period, and in regards to the GHG removals value achieved, subject to a 1% materiality threshold.

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

1.4 Summary Description of the Project

The Liangdu Afforestation Project is implemented by Guizhou Xinzhaxin Agricultural Technology Co., Ltd. and it aims in afforestation of barren hill suitable for planting trees, which would continue to remain barren hill suitable for planting trees. The total area of the Project has an extension of 23,720 hectares and it is

located inside the Shuicheng District, Panzhou City, Liuzhi Special District, Liupanshui City, Guizhou Province, China.

The project zone consists of 2 districts and 1 city¹ (Shuicheng District, Panzhou City, Liuzhi Special District) planted in different periods and 4 species have been chosen for the afforestation project: *China fir*, *Cypresses*, *Pinus yunnanensis* and *Masson pine*², these species grew up successfully, which has been verified by on-site inspection and interview with the project implementer.

The project activity generates GHG removals by sink by changing the status of land from barren hill suitable for planting trees to sustainable forest production systems which increase the forest cover in the project region thus generating a typical landscape formed by biological and productive areas that produce financial, social and environmental benefits. The project has resulted in the benefits as described in Section 1 of the Monitoring Report. The project is registered under the Verified Carbon Standard (VCS) and the Climate, Community and Biodiversity Standard (CCBS).

¹ Local government has changed Shuicheng County to Shuicheng District, officially renamed on December 30, 2020 and Pan County changed to Panzhou City for using official name.

² China fir (*Cunninghamia lanceolata* (Lamb.) Hook.), Cypress (*Cupressus funebris* Endl.), Pinus yunnanensis (local name of Pinus yunnanensis is consistent with its scientific name) and Masson pine (*Pinus massoniana* Lamb.)

2. VERIFICATION PROCESS

2.1 Audit Team Composition (*Rules 4.3.1*)

Lead Auditor/VCS-CCB Validator: Zhao Xuejiao (Fancy) is qualified by TÜV NORD in Validation and Verification of Clean Development Mechanism Requirements (CDM projects) and other voluntary schemes as VCS, ISO14064-2, GS, CCB and Social Carbon (SC). She has experience with more than 200 validation and verification projects including VCS forestry project and GS forestry project in China since year of 2010. She has a bachelor degree of Biological Engineering and master degree of Environmental Engineering. Based on the education background, she engaged in the sustainable development survey when worked as consultant for three years and worked with WWF, GEI (Global Environment Institute) and other NGOs for studying the social and cultural, ecological and biodiversity in China so that to achieve the sustainable development for many projects. Also based on more than 10 years site investigation and interview with local stakeholders and designers of the projects during the CDM, GS, SC, CCB and VCS validation and verification process, she knows how to conduct the community audit well and gained many of social expertise in China. Furthermore, as She has a bachelor degree of Biological Engineering and the main subject is plant pathology, hence she knows the knowledge of biodiversity and gained many biodiversity expertise during the validation and verification site inspection in China. She has conducted more than 20 CDM projects in Gansu Province and more than 15 VCS&CCB AR project validation and/or verification³, thus has the relevant social and cultural expertise in this region and also have relevant ecological and biodiversity experience due to the education background. She speaks mandarin which is the common language in China and the regional residents can speak and understand this language.

Technical Expert: Li Guifang has Bachelor degree in Agriculture Resources and Environment and Master degree in Plant Nutrition, and work experience more than 5 years in consultancy under the GHG, ecological and biodiversity to the development of forestry management and A/R projects, qualified by TÜV NORD in Scope 14. Thus she has the relevant agriculture, forestry and or other land use experience in China due to education background and working experience. She has conducted more than 15 VCS&CCB AR project validation and/or verification⁴, thus has the relevant social and cultural expertise and also have relevant ecological and biodiversity experience due to the education background. Furthermore, as her education background, she has engaged in the Agriculture and Environment, especially the plant research in some survey fields in China and with the consultancy work for forestry management and A/R projects, so that to develop the project well, she spent many time in site for community and biodiversity survey and research thus accumulated the related biodiversity and social expertise in China through interview with locals and conducted questionnaires survey and study the biodiversity in the sample plots etc.. She speaks mandarin which is the common language in China and the regional residents can speak and understand this language.

The verification team member and technical reviewer composition are listed in the below tables,

³ VCS+CCB projects including project No. 1855, 1865, 1866, 1847, 1825, 1826, 1832, 1864, 2070, 1895, the team leader has conducted the community validation and verification activities on site for all the listed projects. And for 2301, 2305, 2310, 1896, the team leader has conducted the community validation activities on site.

⁴ VCS+CCB projects including project No. 1855, 1865, 1866, 1847, 1825, 1826, 1832, 1864, 2070, 1895, the team member has conducted the community validation and verification activities on site for all the listed projects. And for 2301, 2305, 2310, 1896, the team member has conducted the community validation activities on site.

Table 2-1 Verification team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/Doc review	On-site inspection	Interview(s)	Verification findings
1.	Team Leader (also verifier)	EI	ZHAO	Xuejiao	-	☒	☒	☒	☒
2.	Team member (External Technical Expert)	EI	LI	Guifang	-	☒	☒	☒	☒

Table 2-2 Technical reviewer and approver

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer/ Approver	IR	Nuske	Alexandra	TÜV NORD CERT GmbH

2.2 Method and Criteria

A project specific Verification and Sampling plan was developed to guide the verification auditing process to ensure efficiency and effectiveness. The purpose of the verification and sampling plant is to present a risk assessment for determining the nature and extent of validation procedures necessary to ensure the risk of auditing error is reduces to a reasonable level. According to the ISO14064-3, the criteria are the policy, procedure or requirement used as reference against which evidence is compared. Therefore verification of the monitoring plan and the reported project results were measured for compliance against the following criteria:

- VCS Standard, v4.3^{/VCS/}
- VCS Program Guide, v4.2^{/VCSPG/}
- VCS Program Definitions, v4.2^{/VCSPD/}
- VCS AFOLU Non-Permanence Risk Tool, v4.0^{/NPRT/}
- CCB Climate, Community & Biodiversity Standards^{/CCBS/}
- CCB Program Rules, v3.1^{/CCBPR/}

The verification process derived from all items in the verification criteria stated above. Field sampling and techniques based on the project parameters, scope and best professional judgement of the verification team in order to meet a reasonable level of assurance. The verification consisted of the following three phase:

- Document review
- On-site assessment
- The resolution of outstanding issues and the issuance of the final verification report and certification.

The verification process derived from all items in the verification criteria stated above. Field sampling and techniques based on the project parameters, scope and best professional judgement of the verification team in order to meet a reasonable level of assurance.

The sampling plan during on-site verification is determined taking into account the accessibility and similitude of the areas and the tool for sampling was referred by verification team for the site verification.

The sampling design (number of plots, location) is considered to be in line with the requirements for validation (IAF Guidance on the Application of ISO/IEC Guide 66 - G.5.3.12.: $x=\sqrt{y}$, where x is the sampling size by verification team and y is the sample plots number determined by PP in MR), and it has ensured a representative cross-section of the properties in the areas.

Sample plots selected by VVB is calculated as below,

- Stratum 1, number of plots y is 6. $X=\sqrt{6}=3$
- Stratum 2, number of plots y is 8. $X=\sqrt{8}=3$
- Stratum 3, number of plots y is 4. $X=\sqrt{4}=2$
- Stratum 4, number of plots y is 3. $X=\sqrt{3}=2$
- Stratum 5, number of plots y is 3. $X=\sqrt{3}=2$
- Stratum 6, number of plots y is 3. $X=\sqrt{3}=2$
- Stratum 7, number of plots y is 3. $X=\sqrt{3}=2$
- Stratum 8, number of plots y is 3. $X=\sqrt{3}=2$
- Stratum 9, number of plots y is 3. $X=\sqrt{3}=2$
- Stratum 10, number of plots y is 3. $X=\sqrt{3}=2$

A ground inspection of the project area was conducted during the site visit and members of the verification team visited 22 sample plots within the project area.

During site visit, by sample plots observation and inspection, the verification team measured the sample plot diameter and area, counted the number of the trees inside plot, measured the DBH and height of the trees inside plot, and confirmed that the value of all trees from PP sampling data are correct and reasonable, hence it is verified that the calculation method used in the MR is correct and actual.

2.3 Document Review

The VCS&CCB MR^{MR/} and supporting background documents related to the project implementation and carbon sink, climate, community, biodiversity change monitoring were reviewed. Document review was conducted to ensure consistency with and identify any deviation from VCS and CCB program requirements. Desk review included an examination of the project details, data and parameters, and quantification of GHG removals.

Furthermore, the verification team used additional documentation by third parties like host party legislation, technical reports referring to the monitoring or to the basic conditions and technical data.

The references used in the course of this verification are summarized in Appendix 2.

The verification was performed basing on the documents check and site inspection/measurements, refer to the section 4 of this report for the verification process detail and corresponding documents review.

2.4 Interviews

The objective of the interview process was to solicit important information from personnel related to project and relevant to the verification process. Onsite interviews and information discussions were conducted with project implementer^{/11/}, local government officer^{/12/}, local residents^{/13/} and Project VCS&CCB development consultant^{/14/}. The interviews were performed by the verification team on-site (within the project area, in Shuicheng District, Panzhou City and Liuzhi Special District, Liupanshui City, Guizhou Province, China) and the following is a list of the main interviewees and subject.

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Luo ^{/11/}	Zhiwei	Guizhou Xinzhanxin Agricultural Technology Co., Ltd./ Project Manager	15-April-2022~17-April-2022	-Chronological description of the project activity with documents of key steps of the implementation. -Technical details of the project realization, project feasibility, designing, operational life time -Baseline and Additionality -Project Boundary -Eligibility criteria -ER calculation - Monitoring plan and arrangements -Crediting period -Project activity starting date -Ownership -local stakeholder consultation	Zhao Xuejiao, Li Guifang
2.	Fan ^{/12/}	Xuanyu	Panzhou City Forest Bureau/ Forest Section Staff	15-April-2022	-National legislation to forest - Provincial legislation to afforestation	Zhao Xuejiao, Li Guifang
3.	Yang ^{/12/}	Liangliang	Liupanshui City Forest Bureau/ Forest Section Staff	16-April-2022	-Local forestry development - Roles & responsibilities of the government	
4.	Zhang ^{/12/}	Zhimin	Liuzhi District Forest Bureau/	17-April-2022	-local communities situation -local biodiversity situation -local climate	

			Forest Section Staff		-local environment	
5.	Yan ^{/13/}	Ke	Shangbaotian Village / Resident	15-April-2022	-job opportunities -living condition -training	Zhao Xuejiao, Li Guifang
6.	Yu ^{/13/}	Lirui	Shangbaotian Village / Resident	15-April-2022	-local stakeholder consultation -impact to local residents	
7.	Yu ^{/13/}	Yi	Jiamashi Village / Resident / worker as forest technician	15-April-2022	-impact to local environment -impact to local biodiversity	
8.	Wang ^{/13/}	Tingfeng	Jiamashi Village / Resident	15-April-2022		
9.	Wang ^{/13/}	Zhumin	Jianshanping Village / Resident	15-April-2022		
10.	Feng ^{/13/}	Yue	Jianshanping Village / Resident	15-April-2022		
11.	Peng ^{/13/}	Juanyou	Heijing Village / Resident / worker as forest technician	15-April-2022		
12.	Liu ^{/13/}	Yu	Heijing Village / Resident	15-April-2022		
13.	Zhu ^{/13/}	Yanqiu	Pingchuan Village / Resident	15-April-2022		
14.	Yuan ^{/13/}	Rongxin	Pingchuan Village / Resident	15-April-2022		
15.	Ma ^{/13/}	Jin	Pashan Village / Resident	15-April-2022		
16.	Xu ^{/13/}	Dongyan	Pashan Village / Resident	15-April-2022		
17.	Yu ^{/13/}	Ling	Jiupu Village / Resident	15-April-2022		
18.	Zhang ^{/13/}	Zhi	Jiupu Village / Resident	15-April-2022		
19.	Tang ^{/13/}	Rongtong	Yangzhai Village / Resident	15-April-2022		
20.	Wang ^{/13/}	Fu	Yangzhai Village / Resident	15-April-2022		

21.	Tang ^{/13/}	Yueqin	Shuiba Village / Resident	15-April-2022		
22.	Zong ^{/13/}	Dongchun	Shuiba Village / Resident	15-April-2022		
23.	Shi ^{/13/}	Daqian	Gamu Village / Resident/ worker as forest technician	15-April-2022		
24.	Shen ^{/13/}	Lian	Gamu Village / Resident	15-April-2022		
25.	Fu ^{/13/}	Shaohua	Shuitang Village / Resident/ worker as forest technician	16-April-2022		
26.	Wang ^{/13/}	Weirong	Shuitang Village / Resident	16-April-2022		
27.	Huang ^{/13/}	Finchun	Shuangjing Village / Resident	16-April-2022		
28.	Li ^{/13/}	Ailing	Shuangjing Village / Resident/ worker as forest technician	16-April-2022		
29.	Yu ^{/13/}	Fei	Qingshu Village / Resident	16-April-2022		
30.	Luo ^{/13/}	Xuanyou	Qingshu Village / Resident	16-April-2022		
31.	Su ^{/13/}	Qiuli	Cichong Village / Resident	16-April-2022		
32.	Du ^{/13/}	Ran	Cichong Village / Resident	16-April-2022		
33.	Gao ^{/13/}	Fang	Pingqing Village / Resident	16-April-2022		
34.	Huo ^{/13/}	Minghai	Pingqing Village / Resident	16-April-2022		
35.	Feng ^{/13/}	Zhen	Shatang Village / Resident/ worker as	16-April-2022		

			forest technician			
36.	Tian ^{/13/}	Yi	Shatang Village / Resident/ worker as forest technician	16-April-2022		
37.	Luo ^{/13/}	Ping	Xinhe Village / Resident	17-April-2022		
38.	Wang ^{/13/}	Ming	Xinhe Village / Resident	17-April-2022		
39.	Yu ^{/13/}	Hengfeng	Qingganglin Village / Resident	17-April-2022		
40.	Lu ^{/13/}	Yinhong	Qingganglin Village / Resident	17-April-2022		
41.	Yao ^{/13/}	Wenting	Sanjiazhai Village / Resident	17-April-2022		
42.	Yao ^{/13/}	Feng	Sanjiazhai Village / Resident	17-April-2022		
43.	Yu ^{/13/}	Yang	Boyu Village / Resident/ worker as forest technician	17-April-2022		
44.	Yan ^{/13/}	Feng	Boyu Village / Resident	17-April-2022		
45.	Zou ^{/13/}	Bei	Nahai Village / Resident	17-April-2022		
46.	Cai ^{/13/}	Ke	Nahai Village / Resident/ worker as forest technician	17-April-2022		
47.	Xie ^{/13/}	Lanjing	Changwan Village / Resident/ worker as forest technician	17-April-2022		
48.	Bi ^{/13/}	Meili	Changwan Village / Resident	17-April-2022		
49.	Liu ^{/14/}	Yanyan	Timing Carbon Asset	15-April-2022~17-April-2022	-Financial aspects -Deviations -Crediting period	Zhao Xuejiao, Li Guifang

			Management Co., Ltd./ V.P		-Project activity starting date -Baseline study assumptions -Additionality -Monitoring - Editorial issues of the VCS&CCB PD	
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2.5 Site Inspections

The verification site inspection was conducted on 15-April-2022~17-April-2022. A ground inspection of the project area was conducted during the site visit and members of the verification team visited 22 sample plots within the project area. During the site inspection the verification team was accompanied by the forest developer, local government officers, consultant and forest technicians.

During the site inspection, the 22 sample plots are determined by the verification team by checking the map of the project location and PP sampling plots inventory^{/SPI/}, details as following table,

Table 2-1 Locations for site inspection

Site Visit time	Area	Sample No.	Coordinates		Inspection Results
15-April-2022	Strata 2	ID-P11	25°23'18"N	104°41'26"E	Refer to table 4-7 of this report for the measurement records conducted by verification team.
	Strata 9	ID-P2	25°35'00"N	104°39'30"E	
	Strata 2	ID-P3	25°34'20"N	104°39'30"E	
	Strata 7	ID-P1	25°39'14"N	104°34'20"E	
	Strata 4	ID-P19	25°42'53"N	104°17'30"E	
	Strata 10	ID-P17	25°44'06"N	104°32'26"E	
	Strata 6	ID-P16	25°44'58"N	104°31'34"E	
	Strata 6	ID-P7	25°54'50"N	104°36'00"E	
16-April-2022	Strata 1	ID-P6	26°04'20"N	104°47'45"E	
	Strata 3	ID-P5	26°05'10"N	104°52'10"E	
	Strata 2	ID-S37	26°12'40"N	104°53'50"E	
	Strata 5	ID-S10	26°21'35"N	104°47'00"E	
	Strata 1	ID-S11	26°19'30"N	104°58'00"E	
	Strata 10	ID-S5	26°30'05"N	105°05'08"E	
	Strata 8	ID-S6	26°31'52"N	105°05'46"E	
17-April-2022	Strata 4	ID-S2	26°35'01"N	105°09'15"E	
	Strata 1	ID-L21	26°19'48"N	105°21'40"E	
	Strata 5	ID-L22	26°19'44"N	105°21'54"E	
	Strata 9	ID-L36	26°01'18"N	105°18'16"E	
	Strata 3	ID-L17	26°08'59"N	105°26'14"E	
	Strata 7	ID-L27	26°06'40"N	105°26'36"E	
	Strata 8	ID-L6	26°05'10"N	105°33'29"E	

There are total 10 project stratifications for carbon calculation in the 2 districts and 1 city, the verification team visited targeted area for each project stratification, total 22 sample plots. Refer to the section 4.4.1 of this report for the details of the sampling approach conducted by the verification team during site inspection and refer to table 4-7 of this report for the details of the sampling results concluded by the verification team.

2.6 Resolution of Findings

Material discrepancies identified in the course of the validation are addressed either as CARs, CLs or FARs.

A Corrective Action Request (CAR) is established where:

- The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
- The VCS Version 4.3 requirements have not been met;
- The CCBS third edition requirements have not been met;
- There is a risk that the emission reductions cannot be monitored or calculated.

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

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

A detailed list of the CARs CLs and FAR raised and discussed in the course of this validation is included in Appendix 3 of this report.

In the course of the validation 14 Corrective Action Requests (CARs), 13 Clarification Requests (CLs) were raised and successfully closed. The assessment is included in the report.

2.6.1 Forward Action Requests

This is the first verification, and there is no FAR raised in the validation report^{VAL/}.

2.7 Eligibility for Validation Activities

The VVB TÜV NORD CERT GmbH hold accreditation for both validation and verification for the relevant sectoral scope 14.

As per the VCS standard Version 4.3, “Validation (including project crediting period renewal validation) and the first verification of a project (in a given project crediting period) may be undertaken by the same validation/verification body, however, the subsequent verification shall be undertaken by a different validation/verification body”, this is the 3rd periodical verification and the validation and 1st periodical verification was conducted by CTI by checking the 1st verification report^{VER/}, so it fulfills with the requirement of Rotation of Validation/Verification Bodies in VCS standard Version 4.3.

3. VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The verification team is not aware of project involvement in other forms of environmental credits from its activities. The project has not been registered, and is not seeking registration, under any other GHG programs.

3.2 Methodology Deviations

During the monitoring period, there are no methodology deviations.

3.3 Project Description Deviations (*Rules 3.5.7 – 3.5.10*)

During the monitoring period, there are no deviations to project description.

3.4 Minor Changes to Project Description (*Rules 3.5.6*)

During the monitoring period, there are no minor changes to project description.

3.5 Grouped Project (G1.13 – G1.15, G4.1)

This section is not applicable as the project is not a grouped project.

4. VERIFICATION FINDINGS

4.1 Public Comments (Rules 4.6)

The MR is available in both English^{/MR/} and Chinese (as is a summary document of the MR)^{/MRS/}. Both the documents were made available on the CCB website (<https://registry.verra.org/app/projectDetail/CCB/2083>) for the public consultation period.

The public comment period was held from 25-March-2022 to 24-April-2022. No public comments were received for this project as confirmed by checking the dedicated webpage, the date after the VCS and CCB public comment period for draft project documents expired.

4.2 Summary of Project Benefits

As per the information available in the MR^{/MR/} against the project benefits as determined in the PD^{/PD/} and confirmed by the PP during the on-site interview, the climate objectives consist in the afforestation of degraded land, which would continue to remain degraded, increasing the carbon stocks in the following pools: above-ground biomass and below-ground biomass. Community objectives would ensure the creation of employment and provide relevant training (skilled labour force), which would positively influence the livelihoods and well-being of the population. Biodiversity objectives would preserve the conservation of wildlife and of biodiversity in the Region.

The project seeks to provide experience of forest planting and management in low-latitude and high-altitude mountain area, the mitigation of the local soil erosion caused by over grazing and the improvement of the ecological environment of surrounding area as the unique project benefits, and generate GHG emission removals, create forest cover, provide employment, training and improve skills to community members thus improve their livelihood and well-being, and beneficial to biodiversity conservation and globally Critically Endangered or Endangered species.

By comparing the information given in the PD^{/PD/}, it is confirmed that this section of project benefits is completed appropriately, the achievements during this monitoring period is verified by the verification team and confirmed as correct and actual.

For the achievement in Climate benefits, via checking all the ex-ante determined data in PD^{/PD/} as listed in the section 3.1.1 of the MR and monitoring results for all the monitored parameters as listed in the section 3.1.2 of the MR, it is verified that the carbon stocks in the following pools: above-ground biomass and below-ground biomass have been increased during this monitoring period which has been assessed detail in the section 4.4 of this report for verifying that all achievements reported are substantiated with information provided in the section 3 of MR^{/MR/}.

For the achievement in Community benefits, via checking all the monitoring results for all the monitored parameters as listed in the section 4.3.1 of the MR, it is verified that the community objectives would ensure the creation of employment and provide relevant training (skilled labour force), which would positively influence the livelihoods and well-being of the population during this monitoring period which has been assessed detail in the section 4.5 of this report for verifying that all achievements reported are substantiated with information provided in the section 4 of MR^{/MR/}.

For the achievement in Biodiversity benefits, via checking all the monitoring results for all the monitored parameters as listed in the section 5.3.1 of the MR, it is verified that the biodiversity objectives would preserves the conservation of wildlife and of biodiversity in the project zone during this monitoring period

which has been assessed detail in the section 4.6 of this report for verifying that all achievements reported are substantiated with information provided in the section 5 of MR^{/MR/}.

Refer to below related sections 4.4, 4.5 and 4.6 for detail assessment.

As stated in section 2.4.4 of the monitoring report, sustainable financing from carbon revenue for the site is essential to enable conservation action to ensure project implementation and continuation achievement of CCB benefits.

Thus it is concluded that all achievements reported are substantiated with information provided in the body of the monitoring report and confirmed by the assessment in the body of the verification report.

4.3 General

4.3.1 Implementation Status (G1.9)

The project activity is mainly implemented and in operation in accordance with the description contained in the validated PD^{/PD/}. As confirmed during the on-site inspection, interviews, the project implementer has implemented the activities as described in the registered PD in compliance with the VCS and CCBS requirements. The actual planted area accounts to 23,720 ha with 4 species native trees (China fir, Cypresses, Pinus yunnanensis and Masson pine) which is same to the registered PD.

The implementation status of the project activity are identified and the assessment steps are taken as the following,

Table 4-1 Assessment of implementation status of the project activity

Item	Assessment
The existence of any material discrepancies between project implementation and the project description.	No material discrepancies have been noted since last verification; absence of such material discrepancies was confirmed through onsite inspection and interviews with the project personnel.
The implementation status of the monitoring plan and the completeness of monitoring, including the suitability of the implemented monitoring system (i.e., process and schedule for obtaining, recording, compiling and analyzing the monitored data and parameters).	The monitoring has been carried out mainly in accordance with the monitoring plan contained in the validated monitoring plan. The project stratifications for carbon calculation are ex-post determined as 10 which is consistent with the registered PD. And the total sample plots are calculated as 39. According to the tool "Calculation of the number of sample plots for measurements within A/R CDM project activities (Version 02.1.0)"^{/TNSP/}, the number of plots within each stratum is calculated and total is confirmed as 39. As per the monitoring plan in the PD, it has stated that if there are changes in the area and boundary, the carbon stratification of the project needs to update. In addition, if the number of carbon stratum and the area change, the number of sample plots need to be recalculated, the project needs to consider tree species, patterns and other factors in actual planting, and update stratification to post-stratification.

	Due to there is no change to the area, boundary, tree species and planting, thus the post-stratification is consistent with the ex-ante determined in the registered PD and suitable for actual project implementation which is verified as reasonable and correct as per the methodology and tool. It is verified that the actual monitoring complies with the actual implementation of the project and that data have been assessed to correctly support the emission removals being claimed.
The existence of any material discrepancies between the actual monitoring system, and the monitoring plan set out in the project description and the applied methodology.	As assessed above, there is no change of the sampling plots in the actual monitoring system comparing with the monitoring plan. Through detailed review and data testing on implementation of all relevant aspects of actual monitoring system, it is confirmed there is no material discrepancy between methodology and actual monitoring system. The actual monitoring system is implemented in line with the applied methodology.
Whether the GHG emission reductions or removals generated by the project have become included in an emissions trading program or any other mechanism that includes GHG allowance trading.	It is confirmed, applying professional judgment, that there is very low risk of GHG removals having included in any other trading program or any other mechanism that includes GHG allowance trading which has been assessed and verified in the validation process.
Whether the project has received or sought any other form of environmental credit, or has become eligible to do so since validation or previous verification.	The verification team is unaware of any other environmental crediting program that project would be eligible to participate in since validation.
Whether the project has participated or been rejected under any other GHG programs since validation or previous verification.	There is no evidence of the project's rejection from any other GHG programs as the GS ^{/gs/} , VCS ^{/vcs/} and CDM ^{/unfccc/} project data base since last verification.
Sustainable development contributions.	The project provides many benefits that will help to achieving China's Sustainable Development Goals. The project generates GHG emission removals by the afforestation of barren hill suitable for planting trees which would remain barren hill suitable for planting trees; it also generates social and environmental co-benefits as conservation of the biodiversity thus confirmed benefits the SDG goal 5, 8, 13 and 15 as clearly defined and analyzed in MR.
List any previously validated methodology deviations, project description deviations, and minor changes to the project description (each verification report must contain an	This is the 3 rd periodic verification, via checking the registered PD and via site inspection, it is confirmed that there is no previously validated methodology deviations, project description deviations, and minor changes to the project description.

exhaustive list of all deviations or changes applied to the project).	
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Based on above assessment, it is concluded that the project has been implemented as described in the project description.

CAR 01, CAR 02, CAR 03, CAR 04, CAR 05 and CL 01 were raised and successfully closed. Refer to Appendix 3 for details.

4.3.2 Risks to the Community and Biodiversity Benefits (G1.10)

The PD states the overall risks to the project are low, no major risks have arisen that may cause any loss of project benefits for the local community, climate and biodiversity, so that the long-term viability is assured. Natural risk identified are fire, diseases and insects, pesticide in PD^{/PD/}.

Fire risk is considered low because planting area is mostly barren land, local government sets the fireproofing period when using fire is forbidden in the open air and no fires occurred in the project areas as confirmed during the on-site inspection. Also during this monitoring period, the fire was strictly controlled by local forest bureau who experienced in local natural risk control to minimize the potential effect which has been verified by interview with the local officer^{/12/}. And PP has established fire prevention procedure in Integrated Forest Management Manual^{/IFMM/} and carried out educational activities with the forest law and regulations on forest fire prevention which was confirmed by on-site interview with the local residents^{/13/} and also found the forest law and regulations on forest fire prevention were listed on the local notice boards. Via on-site interview with local residents^{/13/}, technicians^{/13/} and government officers^{/12/} and checking the working log^{/WL/} carried out by technicians, it is verified that there was no fire disaster occurred during this monitoring period in project area.

The planted trees may would be damaged by insects and disease, but the risk is considered low because it can be prevented by supervision and routine overseeing and the PP have in place a full Integrated Forest Management Manual^{/IFMM/}. The biological measures to control pests and diseases will be mainly adopted. Via on-site interview with local residents^{/13/}, technicians^{/13/} and government officers^{/12/} and checking the working log^{/WL/} carried out by technicians, it is verified that there was no insects and disease disaster occurred during this monitoring period in project area.

The chemical pesticides are allowed to be used only if there is a serious pest problem erupted in the project area, while improper pesticide application would be harmful to natural environment, but the risk is considered low because pesticide is strictly managed by well trained staff to minimize the potential effect^{/IFMM/}. As no insects and disease disaster occurred, the environmental friendly measures such as mixed species arrangements and seed and seedling quarantine have been adopted during this monitoring period. Via on-site interview with local residents^{/13/}, technicians^{/13/} and government officers^{/12/} and checking the working log^{/WL/} carried out by technicians, it is verified that there was no pesticide application occurred as no insects and disease disaster occurred.

Human-induced risks are considered because emission of greenhouse gases by humans has brought a profound impact and a huge threat to human survival and development. However, by implementation of the project, entire community participated in the project will maintain a direct line of communication with community members and relevant stakeholders through in-person meetings, and the project will generate GHG emission removals through growing of the trees thus improve local ecological environment. Via checking the training records^{/TTR/}, it is confirmed that PP has set the science training for the community on

the knowledge and skills of adaptation to climate change since project start as confirmed during the on-site visit and interview with local officers and technicians, hence all the employees was provided related skill training periodically thus there was no human-induced risks occurred during this monitoring period.

Based on above assessment, it is confirmed that reasonable actions were in place and taken to mitigate risks to community and biodiversity benefits during this monitoring period.

CL 02 was raised and successfully closed. Refer to Appendix 3 for details

4.3.3 Community and Biodiversity Benefit Permanence (G1.11)

The measures needed and taken to extend project benefits beyond the project lifetime include the selection of the species planted which assure the endurance^{/SPC/}, the land use agreements with the land owner and project owner^{/LUA/}, commercial logging will be forbidden^{/PL/}. The measures taken will extend many of the project benefits in the project lifetime.

By the on-site visit it is confirmed that reasonable measures have been taken to enhance project benefits beyond the project lifetime, including forest management, aspects protecting the project lands and attempts to tie community success to project success.

Thus it is concluded that reasonable measures have been taken to enhance project benefits beyond the project lifetime in accordance with the validated project description document.

4.3.4 Stakeholder Access to Information (G3.1- G3.3)

At the time of validation process, the PD as well as a summary in local languages were made available to the community through summary sheet of the project. The full project documentations was published on VCS and CCB website for public comments. Thus the local communities and other stakeholders can easily download documents from the website. The project owner has published the Monitoring Manual and Monitoring Plan to the local stakeholders on the notice board which has been confirmed by checking the photo of the communities and stakeholders watching notice board^{/RVAR/} and interview with local residents^{/I3/}.

Within the project area was made a Participatory Rural Appraisal (PRA) survey in September 2014 before the project started with stakeholder meeting by the PP inviting local villagers, permanent workers in the project, forestry experts and government officers to inform people of the possible impact in terms of economics, social and biodiversity aspects that the project might have on the community. This was confirmed by the PPs and by the Participatory Rural Appraisal (PRA) survey report^{/PRA/} provided during the site visit. Via checking the contents in the PRA, it is concluded that the project design details, relevancy and adequacy of the information has been provided to communities, and the analysis of project benefits to communities including all the potential impacts are provided to the stakeholders to let all the participants know the project's potential costs, risks and benefits. All the costs, risks and benefits are identified completely and adequately in the PRA process and during the site visit, by interviewed with the local stakeholders, it is verified that they understand the project's potential costs, risks and benefits to communities with the project development and process. There is no any important costs, risks and benefits missed.

Furthermore, during this 3rd monitoring period, the project's potential costs, risks and benefits to communities with the project implementation and project's process has been explained to local stakeholders through stakeholder meeting held on 19-October-2021 which has been confirmed by checking the meeting records^{/LSCR/}, also the progress of project implementation has been informed to all stakeholders through village committee meetings, technicians and bulletin boards which including the registration date

of the project, the date of issuance of VCUs in 2nd monitoring period and quantities of the VCUs, also has informed all the stakeholders that 60% of profit gained from the previous phase issuance has been distributed to all village committees and farmers who owned the forest land tenure of this project as per the Carbon sink afforestation cooperation and development agreement^{/CCDA/}.

Via site interview with the representatives of local residents^{/I3/} and checking the receipts of reception^{/ROR/}, it is verified that local committees and farmers who owned the forest land tenure of this project have received the related money and they agreed with the share from the previous phase issuance.

Besides, the questionnaires survey was conducted in November 2021 which has been confirmed by checking the 100 filled questionnaires^{/CMQ/} collected during this period and cross verified by on-site interview with the local stakeholders^{/I2/,I3/}. Via site interview, it is confirmed that all the participants agree with the continuous of project implementation and thought more benefits will be created with the forest grow and management, no negative comments were raised.

The project implementer published the monitoring plan and monitoring manual on the local notice boards to explain the monitoring process to communities and other stakeholders which has been verified by checking the photo of the communities and stakeholders watching^{/RVAR/}.

Next, the monitoring results, monitoring plan and summary of the monitoring plan in local language, have been made publicly available on the CCB website (<https://registry.verra.org/app/projectDetail/CCB/2083>), which can be downloaded by stakeholders.

During the on-site verification, stakeholder meetings with the villagers, local officers, technicians and stakeholders have been carried out in Forestry Bureau of Panzhou City on 15-April-2022, Forestry Bureau of Shuicheng District on 16-April-2022 and Liuzhi Special District on 17-April-2022, through face-to-face interview and by filling the questionnaires prepared by auditor to collect their comments if any. By on-site checking the photo^{/RVAR/}, it is confirmed by the verification team that the monitoring plan and monitoring manual were published in the notice boards for each of the 125 villages of the 2 districts and 1 city before the site visit time. And by checking the photo of notification posted on every 125 village notice boards before 15-April-2022^{/NVSM/} and on-site observation, it is verified that the local villagers received notification and the importance of inviting the local stakeholder comments have been considered. During the meeting, project implementer introduced the monitoring results during this monitoring period, also informed the carbon credit of the previous monitoring period was issued and 60% of profit gained from the previous monitoring periods have been distributed to village committees and villagers who owned forest land tenure of this project and copies of monitoring report is available to anyone requests it. Verification team has participated and interview the stakeholders separately to access their real thought of the project, and the results are also verified by checking the meeting minute and questionnaires filled by stakeholders^{/VSM/}.

Therefore, it is concluded that the method for dissemination of project information, especially to local communities, appears to be effective.

CL 03, CL 04, CL 05, CL 06, CL 07 and CL 08 were raised and successfully closed. Refer to Appendix 3 for details.

4.3.5 Stakeholder Consultation (G3.4 – G3.5)

The PD discusses the way stakeholders were involved in the project design initially, furthermore, the MR discusses the meeting and consultation regarding design, implementation, monitoring and benefits are shared with stakeholders and communities. Pertinent information about the project is being well

disseminated by the project, through traditional channels of communication. Adequate levels of information are reaching stakeholders.

As stated in PD, a consultation through PRA and meetings with the stakeholders was made for introducing people about the project impacts and ask them to raise their opinions of the project design and their willingness to participate the implementation. This has been confirmed by checking the PRA^{/PRA/} and related meeting questionnaires^{/QUE/}. The stakeholders are invited to provide their comments regarding the project implementation and impacts to them, also PP considered their participation in decision-making by asking all the participants to fill the questionnaires. Via checking all the questionnaires^{/QUE/} and by interview with the representatives during site visit, it is confirmed that all the participants agreed the implementation of the project, therefore, from that point, the project design was not modified and the project started with local stakeholder's agreement. Therefore, it is verified that the comments from community groups and other stakeholders have been considered and would influence project implementation if necessary through effective consultation.

Before the project started, the stakeholder input on project implementation has been documented though meeting minutes and questionnaires as stated above.

Furthermore, during this monitoring period, the stakeholder input on project implementation have been monitored through in-person meeting held on 19-October-2021 which has been confirmed by checking the meeting records^{/LSCR/}, and questionnaires survey conducted in November 2021 which has been confirmed by checking the 100 filled questionnaires^{/CMQ/} collected during this period and cross verified by on-site interview with the local stakeholders^{/I2/,/I3/}. In addition, during the on-site verification, stakeholder meetings with the villagers, local officers, technicians and stakeholders have been carried out from 15-April-2022 to 17-April-2022, through face-to-face interview and by filling the questionnaires prepared by auditor to collect their comments if any. During the meeting, project implementer introduced the monitoring results during this monitoring period and the comments from all the stakeholders have been documented as meeting minute. Via checking all the documents, it is verified that there is no grievances and negative comments received during this monitoring period, which has been also confirmed during the stakeholder meetings in verification process.

During on-site interview with project owner and technicians, it is confirmed that the project owner has a plan for continued communication. It is carried out by maintaining a direct line of communication with community members and relevant stakeholders through technicians located in each field. The technicians will conduct continuous in-person meetings with identified community groups and other stakeholders. And the project owner will consider all the recommendations and comments to improve or change project implementation if necessary. This is verified by on-site interview with project owner and technicians and also by checking the daily working log^{/WL/} recorded by the technicians which including the stakeholder consultation process and results. Furthermore, the project owner promised that they will carry out the continued communication as planning.

Based on above demonstration, it is confirmed that all consultation and participatory process have been undertaken directly with communities and other stakeholders through village notice boards and stakeholder meeting, questionnaire survey. Via checking 100 filled questionnaires^{/CMQ/}, it is confirmed that the community monitoring was conducted by sampling method in the 71 villages (where stakeholder meeting did not cover) and the results are based on the sample size rather than the entire population of the Local stakeholders.

Via the MR, it is confirmed that there are 15,305 villagers are identified as the community group that impacted by project including 15,200 local villagers who own forest land tenure of this project and 105

worked as long-term skilled technicians which are confirmed by checking the labor contracts^{/LC/} and payrolls^{/PAY/}. While there are 70% located in 71 villages, which includes 10,714 villagers, all the 10,714 villagers are located in 71 villages which is a limited area. Simple random sampling approach was selected for this project due to relatively homogenous life and living conditions being studied. Therefore, simple random sampling (SRS) approach was followed by the PP to determine the sample size for community survey, and it is able to confirm the selection of sampling approach is appropriate as per VVB's local knowledge. Target population is defined as 10,714 villagers.

As per the MR, a simple random sampling was drawn by the PP from the list of 10,714 villagers in line with the Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities (hereafter can be referred to as the 'sampling guideline') (version 04.0).

Based on the "Sampling and Surveys for CDM Project Activities and Programme of Activities" version 09.0 and "Guideline of Sampling and surveys for CDM project activities and programmes of activities" version 04.0. it confirmed that the Sample size calculation by Simple Random Sampling can be done using following formulae:

$$n \geq \frac{1.645^2 N \times p(1-p)}{(N-1) \times 0.1^2 \times p^2 + 1.645^2 p(1-p)}$$

Where

n	Sample size
N	Total number of people from impacted community groups
P	Expected proportion, which is confirmed as reasonable based on the experience of PP combined with the local condition
1.645	Represents the 90% confidence required
0.1	Represents the 10% relative precision

N is 10,714 as determined of total local villagers, P is determined as 75% (due to the expected proportion of participation is 75%), as per the level of confidence, VVB expects that 90% of the samples taken shall comply with the project requirements.

Hence the n is calculated as

$$1.645^2 \times 10,714 \times 0.75 \times (1-0.75) / \{(10,714-1) \times 0.1^2 \times 0.75^2 + 1.645^2 \times 0.75 \times (1-0.75)\} = 90.$$

The sample size is determined as 90 which is verified as reasonable based on the "Sampling and Surveys for CDM Project Activities and Programme of Activities" version 09.0 and "Guideline of Sampling and surveys for CDM project activities and programmes of activities" version 04.0.

Hence, it is verified that 100 questionnaires were randomly distributed to 100 samples to conduct the survey is verified as representative.

Hence, it is concluded that the project's method for conducting communities and stakeholders consultations is effective.

4.3.6 Stakeholder Participation in Decision-making and Implementation (G3.6)

Before the project implementation, as assessed in the registered PD^{/PD/}, a consultation through PRA and meetings with the stakeholders was made for introducing people about the project impacts and ask them to raise their opinions of the project design and their willingness to participate the following implementation.

This has been confirmed by checking the PRA^{/PRA/} and related meeting questionnaires^{/QUE/}. The stakeholders are invited to provide their comments regarding the project implementation and impacts to them, also PP considered their participation in decision-making by asking all the participants to fill the questionnaires. Via checking all the questionnaires^{/QUE/} and by interview with the representatives^{/12,13/} during site visit, it is confirmed that all the participants agreed the implementation of the project, therefore, from that point, the project design was not modified and the project started with local stakeholder's agreement.

During the project implementation, local consultations, community monitoring, dissemination of project and monitoring information are taken. The identified stakeholders are local government and villagers located in surrounding villages. Representatives of stakeholders covering different locations in project zone, different age, gender and culture background have been distributed by questionnaires and all the feedback are considered by project owner for changing the project implementation if necessary. Via checking all the questionnaires^{/QUE/} and by interview with the representatives^{/12,13/} during site visit, it is confirmed that all the participants agreed the project implementation and they confirmed they have effectively participated and involved in project implementation, monitoring, and evaluation by communication with project owner, noticed by village notice boards and asked to fill the related questionnaires. Therefore, from that point, the project monitoring was not modified.

Due the nature of stakeholders identified and the actions taken by the project owner for their involvement can confirm the project enabled community participation in project implementation.

Furthermore, via on-site interview with the local women stakeholders and technicians, it is verified that they are encouraged by PP to participate the working, stakeholder meeting and maintaining the regular communications with Sorority Director and Nationalities Officer of local counties. Thus the culture- and gender-sensitivity of implementation of such actions has been demonstrated.

4.3.7 Anti-discrimination (G3.7)

During the interview with the project owner, local officers and technicians, it is verified that the project proponent and all other entities involved in project design and implementation are not involved in or complicity in any form of discrimination or sexual harassment with respect to the project due to the labor contract was signed based on the <Labor Law of the People's Republic of China>^{/llc/} with anti-discrimination assurance. <Labor Law of the People's Republic of China> is the national law to protect the legitimate rights and interests of workers, the clause 12 in this law is related to anti-discrimination assurance. Thus this law as specific policy is put in place by the project proponents to prevent discrimination, thus it is ensured that the project proponent and all other entities involved in project design and implementation will not violate the standard's anti-discrimination requirement. The stakeholder involvement was inclusive without any discrimination of gender, cultural identity and religion. The own policies guarantee that no type of discrimination is tolerated at any point of the project implementation.

The stakeholder involvement was inclusive without any discrimination of gender, cultural identity and religion. The national policies^{/llc/} guarantee that no type of discrimination is tolerated at any point of the project implementation.

Furthermore, via checking the labor contracts with technicians^{/LC/} and interview with the women stakeholders and technicians, it is verified that 60 women were employed as technicians and they are under the protection of the national laws and policies and no any form of discrimination or sexual harassment with respect to the project.

4.3.8 Stakeholder Feedback and Grievance Redress Procedure (G3.8)

A grievance redress process is in place as per the PD^{/PD/} and validation report^{/VAL/}. A specific staff is in charge of recording and collecting conflicts and grievances of local communities and individual farmers. He was nominated who is the first responsible for responding to requests from the community. Stakeholders can either appeal through village representatives or directly to the local forestry bureau. If the grievance cannot be settled by the forestry bureau, then it can be submitted to the county's first-level arbitration department or court.

During the on-site interview with the specific staff and checking his recordings^{/CGL/} about the conflicts and grievances of local communities during this monitoring period, it is verified that there is no any grievances raised in this implementation period.

Hence, it is confirmed that the formal grievance process was outlined sufficiently in the monitoring report and confirmed on-site during discussion with project personnel and it is concluded that the grievance redress procedure has been implemented according to the project's validated design.

4.3.9 Worker Relations (G3.9 – G3.12)

The steps taken to verify the project proponent has taken actions and implemented measures to ensure that the relationship between the project and workers meet the CCB requirements have been listed as below:

1. Build the capacity of the communities through job training and employment

Forest Management Manual^{/IFMM/} includes technical advice is provided for each technician and trainings are offered for all the technicians immediately once they were hired and continuously for different topics like physical safety measures, health, forest land inspection, use of monitoring and measuring instruments and data records which are useful for effective forest management and monitoring. By checking the training records of the technicians^{/TTR/}, it is verified that the trainings are offered for all the technicians immediately once they were hired. Furthermore, during this monitoring period from January-2021 to December-2021, a special training providing orientation for the field measurement, project monitoring, community surveys was provided to technical staffs on 10-October-2021 to achieve a successful and efficient monitoring survey for carbon sink, biodiversity measurement and community survey, which was carried out prior to the monitoring activities for this monitoring period. Via checking the training records^{/TTR/}, it is confirmed that 40 technicians who conducting field measurement and 65 technicians who conducting community surveys were the core of the entire monitoring team in the project and all of them have participated in the training courses and the training contents and materials as provided in the MR is verified as actual and complete by checking the training records^{/TTR/}.

So based on checking the 1st and 2nd periodical verification reports^{/VER/} and checking the training records^{/TTR/} for this monitoring period, it is concluded that the continuous training is confirmed as provided.

In addition, via on-site interview with the local villagers, it is verified that Monitoring Manual^{/MM/} has been distributed to each village by notice board and the local officers from forest bureau had provided the live demonstrations.

Thus it is demonstrated that the project is building local capacity through job skills training and manual distribution.

2. People from the communities are given an equal opportunity to fill work positions

The project makes an effort to hire locally as confirmed by the project manager during the on-site visit and hiring criteria are based on skill sets without discrimination. For this monitoring period, PP hired 105 persons (55 are women) from the local communities are involved in the project activity during this monitoring period and they are properly hired as long-term technicians for forest management, inspection and monitoring by verifying the labor contracts^{/LC/}. Furthermore, via checking the monthly payroll^{/PAY/} to technicians and maintenance workers, it is verified that an equal opportunity and payment are given to the employments.

Furthermore, it is confirmed that the 105 long-term technicians are involved in this monitoring period is same to the 105 in the 2nd monitoring period which is verified as correct by checking the labor contracts^{/LC/} and payroll^{/PAY/}.

3. The project is in compliance with all relevant laws and regulations regarding worker's rights and workers are informed of their rights

A relevant law to which the PPs shall comply is available in the validated PD^{/PD/} and in the monitoring report, the hiring process is governed by the labor code and all workers have a contract in which its duties, rights and laws that protect them are reported, this is confirmed via checking the labor contracts^{/LC/} and on-site interview with local government officer^{/I2/} and forest technicians^{/I3/}.

4. Inform workers of risks and how to minimize risk and Minimize workplace risk using best work practices.

The PD states that the project owner shall meet <Safety and Healthy in Forestry Work> published by ILO and <Labor Law of the People's Republic of China> regarding workers' health and safety. Both the two regulations are confirmed as international and national rule and laws which can be used as the occupational safety regulations to obey. The activities that endanger workers are those related to workplace accidents due to the use of dangerous machinery that requires qualified personnel and basic supplies and uniform to prevent accidents and the workers are also trained providing information and practical exercises to prevent any risk which has been verified by checking the training records^{/TTR/}. During the monitoring period, due to the fire risk, basic supplies and uniform for evacuation plan is available to the technicians which has been confirmed during site observation and interview with the technicians^{/I3/}.

Based on above step-wise assessment, it is concluded that the relationship between workers and the project upholds the intent and design presented in the validated project description.

CL 09 and CAR 06 were raised and successfully closed. Refer to Appendix 3 for details.

4.3.10 Management Capacity (G4.2 – G4.3)

The steps taken to verify the project proponent has taken actions and implemented measures to ensure the capacity exists to implement the project over the project lifetime is demonstrated as below:

1. Key technical and management skills

Key technical skills required to implement the project are mentioned in the PD^{/PD/}. Via checking the staff list^{/LC/},^{/PAY/}, it is confirmed that for each individual, experience and education and other qualifications are cited. The PPs and team have the skills necessary to be required to implement the project successfully, including community engagement, biodiversity assessment and carbon measurement and monitoring skills. The project team at the time of the validation process is confirmed in the monitoring report. During the on-site verification process, the varication team conducted the sampling to the sample plots for carbon and biodiversity measurement, it is confirmed that the PPs and team have the skills to the project implementation and CCB measurement and monitoring.

2. Financial health

During the on-site visit and checking the business license^{/BL/} of the participant parties, it is confirmed that the project proponent Guizhou Xinzhanxin Agricultural Technology Co., Ltd. is a privacy and legally registered company. Other involved entities Timing Carbon Asset Management Co., Ltd. is also a legally registered company in China. The PD states that neither the project owner and nor the other parties have been suspected of charged with or found guilty of corruption, bribery, embezzlement, fraud, favoritism, cronyism, nepotism or collusion. Furthermore, through checking the company information in National Enterprise Credit Information Publicity System^{/necif/}, it is confirmed that during this monitoring period, both the companies are legally operated, the financial health is verified.

Besides, via checking the Annual Financial Reports in 2021 provided by Guizhou Xinzhanxin Agricultural Technology Co., Ltd. and Timing Carbon Asset Management Co., Ltd.^{/AFR/} and checking the public website of Shell Energy (China) Ltd^{/necif/}, it is concluded that both parties are financial healthy and the companies have conducted financial audit annually and the results are no financial issues.

Finally, by checking the website, it is confirmed that during this monitoring period neither the project owner and nor the other party have been suspected of charged with or found guilty of corruption, bribery, embezzlement, fraud, favoritism, cronyism, nepotism or collusion. Via checking the public website of credit information system^{/CGL/} of Chinese company^{/necif/}, it is confirmed that the statement in MR is actual and credible. Thus, it is concluded that the financial health of the implementing organizations is verified and they can ensure adequate financial support over the project lifetime.

3. Not complicit in any form of corruption

As legally registered companies according to above assessment, the project proponent and other involved entity in project implementation have the obligation to comply with relevant regulations, including anti-corruption law. This is verified by checking the company information in National Enterprise Credit Information Publicity System^{/necif/} and on-site observation with company business license^{/BL/}. Thus it is concluded that the project is not involved or complicit in any form of corruption during this monitoring period.

Therefore, it is verified that the project has the capacity to implement the project in accordance with the validated project description^{/PD/}.

CAR 07 was raised and successfully closed. Refer to Appendix 3 for details.

4.3.11 Commercially Sensitive Information (Rules 3.5.13 – 3.5.14)

None of the commercially sensitive information found in all the documents of the project.

4.3.12 Rights Protection and Free, Prior and Informed Consent (G5.1-G5.5)

The steps taken to verify actions and measures implemented by the project proponent to protect the rights of Indigenous Peoples, communities and other stakeholders are listed as below:

1. Property rights

Prior to the project initiation, the project lands are collective-owned by local villages, this is verified by checking the Certification of land rights^{/CLR/}. The local farmers have the right to the use of land^{/LUA/}. The project owner and forestry department are responsible for the comprehensive implementation and management of the project ^{/LUA/, /ERP/}.

And during this verification, via interview with the local farmers^{/13/}, it is confirmed that there was no changed of the land property right, with the growing of the trees, the project lands are still collective-owned by local villages.

Furthermore, via interview with PP representative^{/11/} and local villagers^{/13/}, it is confirmed that Guizhou Xinzhanxin Agricultural Technology Co., Ltd. has represented the land owners finished the VCS+CCB development and previous periodical issuance, 60% of profit gained from the previous phase issuance has been distributed to all village committees and villagers who owned the forest land tenure of this project by Guizhou Xinzhanxin Agricultural Technology Co., Ltd as per the Carbon sink afforestation cooperation and development agreement^{/CCDA/}. Via site interview with the representatives of local residents and checking the receipts of reception^{/ROR/}, it is verified that local residents have received the related money and they agreed with the share from the previous phase issuance and all agreed that Guizhou Xinzhanxin Agricultural Technology Co., Ltd. represent them to have the continuous right related to carbon sink project.

2. Does not encroach uninvited on private, community or government property.

The project proponent and forestry department from local government are responsible for the comprehensive implementation and management of the project as defined in the land use agreement and project approval^{/LUA/, /AAPP/}. Via on-site interview with the local officer and villagers, it is verified that no entity can encroach the project area as private, community or government property and change the land usage type.

3. Free, prior and informed consent

The local villagers have the right to the use of land, and Guizhou Xinzhanxin Agricultural Technology Co., Ltd. is authorized by local villages to implement the project as a project proponent, which is confirmed by checking the land use agreement^{/LUA/}. Thus it is verified that prior and informed consent has been obtained from villagers whose property rights are affected by the project through a transparent and agreed process.

4. Appropriate restitution or compensation

As stated in the validated PD, it is verified that the project area are mostly barren hill suitable for planting trees with no residents in baseline scenario, thus it is confirmed that there were no residents to be migrated. And by checking the PRA process results, it is verified that all the local stakeholders voluntarily agreed the implementation of the project before started, and as above statement, it is confirmed that the state-owned forest farms and local villagers have the right of land, and this will not be changed by the project implementation.

Furthermore, via interview with PP representative^{/11/} and local villagers^{/13/}, it is confirmed that Guizhou Xinzhanxin Agricultural Technology Co., Ltd. has represented the land owners finished the VCS+CCB development and previous periodical issuance, 60% of profit gained from the previous phase issuance has been distributed to all village committees and villagers who owned the forest land tenure of this project by Guizhou Xinzhanxin Agricultural Technology Co., Ltd as per the Carbon sink afforestation cooperation and development agreement^{/CCDA/}. Via site interview with the representatives of local residents and checking the receipts of reception^{/ROR/}, it is verified that local residents have received the related money and they agreed with the share from the previous phase issuance due to the share is consistent with the determination value in the carbon sink project cooperation agreement signed between village committee and Guizhou Xinzhanxin Agricultural Technology Co., Ltd.^{/CCDA/}.

In conclusion, no compensation is requested from the state-owned forest farms and local villagers due to all lands are wastelands and no occupation is involved, however, Guizhou Xinzhanxin paid share of carbon revenue to all village committees and villagers who owned the forest land tenure of this project as per the

carbon sink project cooperation agreement signed between village committee and Guizhou Xinzhanxin^{/CCDA/} which is verified as beneficial to local communities.

5. Do not lead to the involuntary removal or relocation

Based on above assessment, it is concluded that the project does not complicit of involuntary relocation as within the project area there are no communities living or depending on the resources located inside the areas through checking the land use agreement and project approval^{/LUA/, /AAPP/} and onsite observations and interview with technicians from forest farms and local villagers^{/I3/}.

6. Reduce illegal activities

Via on-site interview with local government officers, communities, technicians and on-site observation, it is verified that there are no illegal activities inside the project area or in neighboring areas; the area is considered as being peaceful and excluded from social conflict. Furthermore, any illegal logging activities will be fined or sentenced to punishment according to Chinese laws^{/law/}, and the forests are preserved by project staff regularly as determined in the Integrated Forest Management Manual^{/IFMM/}, thus it is confirmed no illegal deforestation occurred during this monitoring period. In conclusion, the project's climate, community and biodiversity impacts will not be affected by the illegal activities.

7. None of unresolved dispute

As local villages have voluntarily authorized the right of forest management to the project proponent during the project crediting period, thus there are no ongoing unresolved conflicts over land rights territories and resources in the project zone. This is confirmed by on site interview with officers from local Forestry Bureau^{/I2/} and local residents^{/I3/} and checking the land use agreement^{/LUA/}. And as stated by local officer, it is confirmed that the local government was responsible to supervise the local villager's right to the land. And the project did not violate the ownership of the land by the villagers and stakeholders, and then did not encroach uninvited on private property, community property, or government property during this monitoring period, which is in line with the CCB rules.

Besides, via site interview with the representatives of local residents and checking the receipts of reception^{/ROR/}, it is verified that local residents have received the related money and they agreed with the share from the previous phase issuance due to the share is consistent with the determination value in the carbon sink project cooperation agreement signed between village committee and Guizhou Xinzhanxin Agricultural Technology Co., Ltd.^{/CCDA/}.

So, during this monitoring period has no ongoing disputes.

Therefore, it is concluded that the project has protected the rights of Indigenous Peoples, communities and other stakeholders in accordance to the third edition of the CCB standard and the validated project description^{/PD/}.

CL 10 was raised and successfully closed. Refer to Appendix 3 for details.

4.3.13 Legal Status (G5.6)

Both the validated PD^{/PD/} and the MR^{/MR/} provide an extensive list of internal agreements, regulations, national and local laws and explain their applicability to the project and the way compliance with the law is achieved by the project where applicable. The laws and regulations are confirmed through checking the public website^{/law/, /regul/} which has been compared with the actual situation of the project by on-site observation during this monitoring period, and by interview with the local officers, it is verified that the project is not in violation of any local or national laws or regulations.

4.4 Climate

4.4.1 Accuracy of GHG Emission Reduction and Removal Calculations

Monitoring approach

The monitoring has been carried out in accordance with the monitoring plan contained in the validated PD/PD/.

The following table describe for each parameter which data are fixed ex-ante. Data and parameters fixed ex-ante as listed in the monitoring report have been cross-checked and reviewed as applicable against the validated PD and applied methodology.

The following list shows the default values used in this verification for GHG removals calculation:

Table 4-2 Assessment of ex-ante determined parameters

Parameter	Description	Value applied		Assessment										
A_i	Area of all stratum i (ha)	23,720		In the ex-ante estimation, the value of 23,720 ha was taken by Field measurement ^{t/MAP/} , this value is confirmed as reasonable and consistent with the validated PD, thus used for ex post GHG removals calculation.										
$BEF_{2,j}$	Biomass expansion factor for conversion of stem biomass to above-ground biomass	<table><tr><th>Tree species</th><th>$BEF_{2,j}$</th></tr><tr><td>China fir</td><td>1.634</td></tr><tr><td>Masson pine</td><td>1.472</td></tr><tr><td>Cypress</td><td>1.732</td></tr><tr><td>Pinus yunnanensis</td><td>1.619</td></tr></table>	Tree species	$BEF_{2,j}$	China fir	1.634	Masson pine	1.472	Cypress	1.732	Pinus yunnanensis	1.619		In the ex-ante estimation, the default values were taken from The People's Republic of China Second National Communication on Climate Change, issued by NDRC, 2013 ^{/CCI/} . The default values are confirmed as reasonable due to these are National authority data, thus used for ex post GHG removals calculation.
Tree species	$BEF_{2,j}$													
China fir	1.634													
Masson pine	1.472													
Cypress	1.732													
Pinus yunnanensis	1.619													
CF_{TREE}	Carbon fraction of tree biomass for tree species or group of tree species j (t C t ⁻¹ d.m.)	<table><tr><th>Tree species</th><th>CF_{TREE}</th></tr><tr><td>China fir</td><td>0.520</td></tr><tr><td>Masson pine</td><td>0.460</td></tr><tr><td>Cypress</td><td>0.510</td></tr><tr><td>Pinus yunnanensis</td><td>0.511</td></tr></table>	Tree species	CF_{TREE}	China fir	0.520	Masson pine	0.460	Cypress	0.510	Pinus yunnanensis	0.511		In the ex-ante estimation, the default values were taken from The People's Republic of China Second National Communication on Climate Change, issued by NDRC, 2013 ^{/CCI/} . The default values are confirmed as reasonable due to these are National authority data, thus used for ex post GHG removals calculation.
Tree species	CF_{TREE}													
China fir	0.520													
Masson pine	0.460													
Cypress	0.510													
Pinus yunnanensis	0.511													
D_j	Basic wood density (tonnes d.m.m ⁻³)	<table><tr><th>Tree species</th><th>D_j</th></tr><tr><td>China fir</td><td>0.307</td></tr><tr><td>Masson pine</td><td>0.380</td></tr><tr><td>Cypress</td><td>0.478</td></tr><tr><td>Pinus yunnanensis</td><td>0.483</td></tr></table>	Tree species	D_j	China fir	0.307	Masson pine	0.380	Cypress	0.478	Pinus yunnanensis	0.483		In the ex-ante estimation, the default values were taken from The People's Republic of China Second National Communication on Climate Change, issued by NDRC, 2013 ^{/CCI/} . The default values are confirmed as reasonable due to these are National authority data, thus used for ex post GHG removals calculation.
Tree species	D_j													
China fir	0.307													
Masson pine	0.380													
Cypress	0.478													
Pinus yunnanensis	0.483													
R_j	Root-shoot ratio of tree species j (Dimensionless)	<table><tr><th>Tree species</th><th>R_j</th></tr><tr><td>China fir</td><td>0.246</td></tr><tr><td>Masson pine</td><td>0.187</td></tr><tr><td>Cypress</td><td>0.220</td></tr></table>	Tree species	R_j	China fir	0.246	Masson pine	0.187	Cypress	0.220		In the ex-ante estimation, the default values were taken from The People's Republic of China Second National Communication on Climate Change, issued by NDRC, 2013 ^{/CCI/} . The default		
Tree species	R_j													
China fir	0.246													
Masson pine	0.187													
Cypress	0.220													

		Pinus yunnanensis	0.146	values are confirmed as reasonable due to these are National authority data, thus used for ex post GHG removals calculation.
t _{VAL} (for calculation of n)	Two-sided Students t-value, at infinite degrees of freedom for the required confidence level (Dimensionless)	1.645		This value is used to determine the total number of sample plots (n) as stated in the A/R Methodological Tool "Calculation of the number of sample plots for measurements within A/R CDM project activities" (Version 02.1.0)^{TNSP/}. As per the tool, Use the 90% confidence level for determination of biomass stock in A/R CDM project activities, and value is defined as 1.645 in the tool. This is the 3rd monitoring period, the total number of sample plots (n) has been determined in 1st monitoring period so that the monitoring can be done for measuring the sampling, hence, it is verified that the value listed as ex-ante parameter in MR is correct and in line with the methodological tool.

It is confirmed that the parameters listed above are fixed ex-ante and used for baseline and project emissions calculation in accordance with the applied methodology and methodological tools.

The following table describe for each parameter which is to be measured according to the monitoring plan and how the verification team has verified that the actual monitoring complies with the monitoring plan and that data have been assessed to correctly support the GHG removals being claimed.

Table 4-3 Assessment of ex-post determined parameters

Parameter	Description	Value applied	Assessment
V _{TREE,j} ; V _{TREE,l,p,j,i}	Stem volume of tree species <i>j</i> ; Stem volume of tree <i>l</i> of species <i>j</i> in sample plot <i>p</i> of stratum <i>i</i>	Refer to MR and ER sheet for details.	This is a calculated value and for the ex-post estimation during verification, using allometric equations based on tree dimensions (comprise of height and diameter at breast height) to calculate the stem volume. This parameter is listed in the validated PD as the stem volume was designed in the PD to calculate the tree biomass, and the related allometric equations were used in the MR to calculate the stem volume. This approach is confirmed as in line with the applied methodology and its tools. Also the allometric equation is verified as conservative for the estimation of GHG removals.
H _{l,p,j,i} ; DBH _{l,p,j,i}	Height of tree <i>l</i> of species <i>j</i> in sample plot <i>p</i> of stratum <i>i</i> ; Diameter at breast height of	Refer to MR and ER sheet for details.	These two parameters are monitored by Field measurements in sample plots and they are two tree dimensions used as entry data into the stem volume equations for the calculation of stem volume of trees as stated in above column. And the

	tree l of species j in sample plot p of stratum i (m, cm)		allometric equation used will be demonstrated to be appropriate for the purpose of estimation of tree biomass by applying the tool “Demonstrating appropriateness of allometric equations for estimation of aboveground tree biomass in A/R CDM project activities”. All the field measured data are measured at the sample plots according to the sampling plan, and then the data are collected and recorded for an electronic copy with the combination of the maps for the ERs calculation. All the measured data and calculation process are provided and verified. The values were measured by the monitoring equipment of Tape, Range pole and Vernier caliper. Hypsometer and metric tape were used to measure the height of the tree and range pole with the tree height mark, and vinyl tape, wooden stake was used to measure the diameter at breast height. It is verified that the approach is in line with the National standard: LY/T 2253-2014 <Guidelines on carbon accounting and monitoring for afforestation project> issued by National Forest Bureau^{/GCA/} and HJ 710.1-2014 “Technical guidelines for biodiversity monitoring—terrestrial vascular plants” issued by Ministry of environmental protection^{/TGBM/}. All the devices have a state-recognized certificate of qualification which has been verified by checking the products qualification^{/PQ/} and confirmed as no need to be calibrated. Based on the verification team's local expertise and searching the applicable national calibration regulations for these devices, it is verified that there is no need to do the calibration for these kind of equipment. Hence, it is concluded that the measurement devices and calibration information is correct and applicable to the monitoring of this project. During the onsite visit, the verification team conducted randomly re-measurement in sample plot selected by verification team for each stratum of the project activity, and verified the initial field measurement records provided by the PP, cross checked with the field measurement results and found they are consistent with the data presented in the MR and the ER calculation spreadsheet.
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			Refer to below sub section of “ Sampling Approach ” for details of the PP sampling plan assessment and sampling approach taken by verification team during site inspection.																										
A_i ; $A_{PLOT,i}$	Area of stratum i ; Size of sample plot in stratum / (ha)	<table> <tr> <th>Strata i</th> <th>A_i</th> </tr> <tr> <td>Unit</td> <td>ha</td> </tr> <tr> <td>1</td> <td>5,033.33</td> </tr> <tr> <td>2</td> <td>7,000</td> </tr> <tr> <td>3</td> <td>3,666.67</td> </tr> <tr> <td>4</td> <td>300</td> </tr> <tr> <td>5</td> <td>499.67</td> </tr> <tr> <td>6</td> <td>200</td> </tr> <tr> <td>7</td> <td>3,500</td> </tr> <tr> <td>8</td> <td>1,920.33</td> </tr> <tr> <td>9</td> <td>500</td> </tr> <tr> <td>10</td> <td>1,100</td> </tr> <tr> <td>Total</td> <td>23,720</td> </tr> </table> $A_{PLOT,i} : 0.07$ (ha)	Strata i	A_i	Unit	ha	1	5,033.33	2	7,000	3	3,666.67	4	300	5	499.67	6	200	7	3,500	8	1,920.33	9	500	10	1,100	Total	23,720	The areas of stratum are measured through GPS measuring equipment. 23,720 ha planted area and 10 strata are ex-post defined. For the field measurements, a circular sample plot with a diameter of 30m design has chosen; the sample plot design is determined in the registered PD^{/PD/} and plots are measured with a fiberglass tape from a fixed central point, and adjusted by the slope when needed which is verified as in line with the National standard: LY/T 2253-2014 <Guidelines on carbon accounting and monitoring for afforestation project> issued by National Forest Bureau^{/GCA/}. During site measurement by verification team for each plot, the radius is measured as 15m and the plot area is equal to 0.07 ha.
Strata i	A_i																												
Unit	ha																												
1	5,033.33																												
2	7,000																												
3	3,666.67																												
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6	200																												
7	3,500																												
8	1,920.33																												
9	500																												
10	1,100																												
Total	23,720																												
$N_{i,j}$	Number of the tree species j of strata i (the trees planted in baseline scenario are excluded)	Refer to ER sheet for details	The number of tree species in each sample plot excluded the trees planted in baseline scenario was measured by field measurement through counting the number inside the sample plot. Via checking the PP sampling plots inventory^{/SPI/}, it is verified that only the trees actually planted in the project were monitored. The trees planted in baseline scenario are excluded for monitoring and thus not used for calculate the project carbon stock. Via site inspection, it is confirmed that for each sample plot, the trees planted in the baseline scenario have not been marked, and planted trees in the project hanging signs which can be clearly distinguished from the original trees, which means that those no sign trees do not counted in the monitoring of the project. Therefore, it is verified that the monitoring results of parameter of $N_{i,j}$ did not contain the trees in the baseline scenario which is confirmed as reasonable. During the onsite visit, the verification team conducted randomly re-counting in sample plots selected by verification team for each stratum of the project activity cross-checked with the field measurement numbers of project planted trees provided by the PP, and found they are consistent																										

			with the data presented in ER calculation spreadsheet (the trees planted in baseline scenario are excluded from the calculation of project carbon stock).																																						
n	Number of sample plots required for estimation of biomass stocks within the project boundary (Dimensionless)	24	The number of sample plots is calculated based on the methodological Tool: Calculation of the number of sample plots for measurements within A/R CDM project activities (Version 02.1.0)^{/TNSP/} using the below equation $n = \left(\frac{t_{VAL}}{E}\right)^2 \times \left(\sum_i w_i \times s_i\right)^2$ This value is used to calculate number of sample plots for measurements as stated in the A/R Methodological Tool “Calculation of the number of sample plots for measurements within A/R CDM project activities” (Version 02.1.0)^{/TNSP/}. This is the 3rd monitoring period, the total number of sample plots (n) is not changed comparing with last verification, hence, it is verified that the value listed as monitored parameter in MR is correct and in line with the methodological tool.																																						
n _i	Number of sample plots allocated to strata <i>i</i> (Dimensionless)	<table><tr><th>Strata <i>i</i></th><th>n_i (calculation result)</th></tr><tr><td>Unit</td><td>-</td></tr><tr><td>1</td><td>6</td></tr><tr><td>2</td><td>8</td></tr><tr><td>3</td><td>4</td></tr><tr><td>4</td><td>0</td></tr><tr><td>5</td><td>0</td></tr><tr><td>6</td><td>0</td></tr><tr><td>7</td><td>3</td></tr><tr><td>8</td><td>1</td></tr><tr><td>9</td><td>0</td></tr><tr><td>10</td><td>1</td></tr></table> Thus <table><tr><th>Strata <i>i</i></th><th>n_i (Sample Plots Number)</th></tr><tr><td>Unit</td><td>-</td></tr><tr><td>1</td><td>6</td></tr><tr><td>2</td><td>8</td></tr><tr><td>3</td><td>4</td></tr><tr><td>4</td><td>3</td></tr><tr><td>5</td><td>3</td></tr></table>	Strata <i>i</i>	n _i (calculation result)	Unit	-	1	6	2	8	3	4	4	0	5	0	6	0	7	3	8	1	9	0	10	1	Strata <i>i</i>	n _i (Sample Plots Number)	Unit	-	1	6	2	8	3	4	4	3	5	3	The number of sample plots allocated to strata <i>i</i> is calculated based on the methodological Tool: Calculation of the number of sample plots for measurements within A/R CDM project activities (Version 02.1.0) using the below equation $n_i = n \times \frac{w_i \times s_i}{\sum_i w_i \times s_i}$ This value used to calculate number of sample plots for measurements as stated in the A/R Methodological Tool “Calculation of the number of sample plots for measurements within A/R CDM project activities” (Version 02.1.0)^{/TNSP/}. This is the 3rd monitoring period, the Number of sample plots allocated to strata <i>i</i> (n_i) is not changed comparing with last verification, hence, it is verified that the value listed as monitored parameter in MR is correct and in line with the methodological tool.
Strata <i>i</i>	n _i (calculation result)																																								
Unit	-																																								
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6	3																										
7	3																										
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9	3																										
10	3																										
E	Acceptable margin of error (i.e. one-half the confidence interval) in estimation of biomass stock within the project boundary (t d.m. ha ⁻¹)	11.587	Acceptable margin of error in estimation of biomass stock is calculated by 10% of the mean biomass stock within the project boundary. The mean biomass stock within the project boundary was calculated by the estimation value from the registered PD which has been checked by the verification team as correct in the sample plots calculation sheet^{/SPCS/}. This value is used to calculate number of sample plots for measurements as stated in the A/R Methodological Tool “Calculation of the number of sample plots for measurements within A/R CDM project activities” (Version 02.1.0)^{/TNSP/}. This is the 3rd monitoring period, the Acceptable margin of error (E) is not changed comparing with last verification, hence, it is verified that the value listed as monitored parameter in MR is correct and in line with the methodological tool.																								
W _i	Relative weight of the area of stratum i (i.e. the area of the stratum i divided by the project area) (Dimensionless)	<table><tr><th>Strata i</th><th>w_i</th></tr><tr><td>Unit</td><td>/</td></tr><tr><td>1</td><td>0.21220</td></tr><tr><td>2</td><td>0.29511</td></tr><tr><td>3</td><td>0.15458</td></tr><tr><td>4</td><td>0.01265</td></tr><tr><td>5</td><td>0.02107</td></tr><tr><td>6</td><td>0.00843</td></tr><tr><td>7</td><td>0.14755</td></tr><tr><td>8</td><td>0.08096</td></tr><tr><td>9</td><td>0.02108</td></tr><tr><td>10</td><td>0.04637</td></tr></table>	Strata i	w _i	Unit	/	1	0.21220	2	0.29511	3	0.15458	4	0.01265	5	0.02107	6	0.00843	7	0.14755	8	0.08096	9	0.02108	10	0.04637	This is a calculated value. The relative weight of the area of stratum i is equal to the area of the stratum i divided by the project area. This value used to calculate number of sample plots for measurements as stated in the A/R Methodological Tool “Calculation of the number of sample plots for measurements within A/R CDM project activities” (Version 02.1.0) ^{/TNSP/}. This is the 3rd monitoring period, the relative weight of the area of stratum i (w_i) is not changed comparing with last verification, hence, it is verified that the value listed as monitored parameter in MR is correct and in line with the methodological tool.
Strata i	w _i																										
Unit	/																										
1	0.21220																										
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9	0.02108																										
10	0.04637																										
S _i	Estimated standard deviation of biomass stock per unit area in strata i (t d.m. ha ⁻¹)	<table><tr><th>Strata i</th><th>s_i</th></tr><tr><td>Unit</td><td>t d.m. ha⁻¹</td></tr><tr><td>1</td><td>38.996</td></tr><tr><td>2</td><td>37.945</td></tr><tr><td>3</td><td>36.831</td></tr><tr><td>4</td><td>30.712</td></tr><tr><td>5</td><td>28.895</td></tr></table>	Strata i	s _i	Unit	t d.m. ha ⁻¹	1	38.996	2	37.945	3	36.831	4	30.712	5	28.895	The values of this parameter are calculated by biomass stock per unit area multiply the existing standard deviation data related to the project area. Standard deviation is derived from the existing data related to the project area issued by the Liupanshui Forest Bureau based on the results of years of forestry surveys^{/SDPA/}.										
Strata i	s _i																										
Unit	t d.m. ha ⁻¹																										
1	38.996																										
2	37.945																										
3	36.831																										
4	30.712																										
5	28.895																										

		<table><tr><td>6</td><td>27.078</td></tr><tr><td>7</td><td>26.570</td></tr><tr><td>8</td><td>25.778</td></tr><tr><td>9</td><td>24.948</td></tr><tr><td>10</td><td>40.638</td></tr></table>	6	27.078	7	26.570	8	25.778	9	24.948	10	40.638	This value is used to calculate number of sample plots for measurements as stated in the A/R Methodological Tool “Calculation of the number of sample plots for measurements within A/R CDM project activities” (Version 02.1.0) ^{/TNSP/} . This is the 3 rd monitoring period, the Estimated standard deviation of biomass stock (s _i) is not changed comparing with last verification, hence, it is verified that the value listed as monitored parameter in MR is correct and in line with the methodological tool.
6	27.078												
7	26.570												
8	25.778												
9	24.948												
10	40.638												
u _c	Uncertainty in carbon change ΔC _{TREE} (Dimensionless)	3.67%	This parameter was not included in the registered PD since it is only applicable for calculating uncertainty discount ex post. The parameter is used to determine the uncertainty discount, the value is calculated by below equation as per the tool of “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities” version 04.2. $u_{\Delta C} = \frac{t_{VAL} \times \sqrt{\sum_{i=1}^M w_i^2 \times \frac{s_{\Delta,i}^2}{n_i}}}{ \Delta b_{TREE} }$ As per the tool, “if u_{ΔC} estimated from above Equation is greater than 10 percent, ΔC_{TREE} is made conservative by applying uncertainty discount according to the procedure provided in Appendix 2”. The value of u_{ΔC} is calculated as 3.67%, hence, the uncertainty discount is not used for this monitoring period. This value is used to calculate uncertainty discount as stated in the A/R Methodological Tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities” (Version 04.2)^{/TEC/}. Hence, it is verified that the value listed as monitored parameter in MR is correct and in line with the methodological tool.										
b _{TREE}	Mean change in tree biomass per hectare within the biomass estimation strata (t d.m.ha ⁻¹)	22.60649	This parameter was not included in the registered PD since it is only applicable for calculating uncertainty discount ex post. The parameter is used to calculate uncertainty in carbon stock u_{ΔC}, the value is calculated by all the sample plots results. Variance is calculated as mean change value based on the biomass/ha values for all the sample plots for each stratum. This value is used to calculate uncertainty in carbon stock as stated in the A/R										

			Methodological Tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities” (Version 04.2) ^{TEC/} . Hence, it is verified that the value listed as monitored parameter in MR is correct and in line with the methodological tool.
t _{VAL} (for calculation of u _C)	Two-sided Students 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 (Dimensionless)	1.699	This parameter was not included in the registered PD since it is only applicable for calculating uncertainty discount ex post. t_{VAL} (for calculation of u_{ΔC}) is the parameter from Tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities” (Version 04.2)^{TEC/} used to calculate u_{ΔC}. And the value is derived from “Calculation of the number of sample plots for measurements within A/R CDM project activities” (Version 02.1.0) due to n (total number of sample plots within the tree biomass estimation strata) is 39 and M (the total number of tree biomass estimation strata) is 10. Thus degrees of freedom equal to n-M is 29, via checking the tool of “Calculation of the number of sample plots for measurements within A/R CDM project activities” (Version 02.1.0)^{TNSP/}, the value of t_{VAL} is 1.699 by degree of freedom is 29 at confidence level of 90%. This value is used to calculate uncertainty in carbon stock as stated in the A/R Methodological Tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities” (Version 04.2)^{TEC/}. Hence, it is verified that the value listed as monitored parameter in MR is correct and in line with the methodological tool.

It is confirmed that the validated monitoring plan has been properly implemented and followed by the PPs and all parameters needed for calculate GHG removals have been monitored.

Sampling approach by PP

PP has adopted a sampling method in the MR according to the validated PD/^{PD/}, according to the A/R methodological tool “Calculation of the number of sample plots for measurements within A/R CDM project activities” version 02.1.0/^{TNSP/} to determine the sample plots number for measurement and monitoring during this monitoring period. The number of sampling plots is calculated as below sub-steps:

I. Post stratification

The post stratification is same to the prior stratification as defined in the approved PD/^{PD/} due to there is no change the project design and the project is implemented as per the registered PD/^{PD/}, the post stratification during this monitoring period is listed in below table,

Table 4-4 Post-stratification during this monitoring period

Strata	Area (ha)	Tree species	Year to plant
Total	23,720	-	
1	5,033.33	China fir	2015
2	7,000	China fir	2016
3	3,666.67	China fir	2017
4	300	Cypresses	2015
5	499.67	Cypresses	2016
6	200	Cypresses	2017
7	3,500	Pinus yunnanensis	2015
8	1,920.33	Pinus yunnanensis	2016
9	500	Pinus yunnanensis	2017
10	1,100	Masson pine	2015

Thus, it is verified that post stratification has been implemented taking into account of the growth rates of species, planting period and patterns same to the ex-ante determination in the registered PD. Via on-site inspection, it is verified that the ex-post stratification is correct and reasonable in line with the actual status of the project implementation.

II. Calculation of number sample plots

As a follow up to ex post stratification, the calculation of number sample plots and their allocation to the project strata has been revised.

PP calculated numbers based on the A/R methodological tool “Calculation of the number of sample plots for measurements within A/R CDM project activities” version 02.1.0. As determined in the validated PD, the plot size is set to be a circular area with a diameter of 30m and the area of each sampling plot is calculated about 706.86 m², which is much less than 5% of the total project area, thus according to the tool, this is defined as a small sampling fraction (that is, when area sampled is less than 5% of the project area), the following simplified equation can be used for estimating the number of sample plots:

$$n = \left(\frac{t_{VAL}}{E} \right)^2 \times (\sum_i w_i \times s_i)^2 \quad (1)$$

Where:

- n = Number of sample plots required for estimation of biomass stocks within the project boundary; dimensionless
- t_{VAL} = Two-sided Students t-value at infinite degrees of freedom for the required confidence level; dimensionless
- E = Acceptable margin of error (i.e. one-half the confidence interval) in estimation of biomass stock per unit area within the project boundary; t d.m. ha⁻¹, i.e. in the units used for s_i
- 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 per unit area in stratum i ; t d.m. ha⁻¹
 i = 1, 2, 3, biomass stock estimation strata within the project boundary

Number of sample plots allocated to a strata is calculated as:

$$n_i = n \times \frac{w_i \times s_i}{\sum_i w_i \times s_i} \quad (2)$$

Where:

- n_i = Number of sample plots allocated to strata i ; dimensionless
 n = Number of sample plots required for estimation of biomass stocks within the project boundary; dimensionless
 w_i = Relative weight of the area of strata i (i.e. the area of the stratum i divided by the project area); dimensionless
 s_i = Estimated standard deviation of biomass stock per unit area in strata i ; t d.m. ha⁻¹

Based on the assessment for the above parameters in the monitoring parameters part, the mean biomass stock with the project boundary and the standard deviation of biomass stock in each strata were estimated as per the request in the tool using existing value related to the local project area, which were used to calculate the final number of sample plots based on formula (1) and (2) as mentioned above, via checking the MR against the methodological tool, it is verified that the values are determined correct based on the tool.

The sample plots were allocated to each stratum based on size of each stratum relative to the total project area.

The number of sampling plots used for monitoring and measurement are listed in table below,

Table 4-5 Number of sample plots in each stratum

Strata	W_i	S_i	t_{VAL}	E	n	n_i	Number of sample plots
1	0.21220	38.996	1.645	11.587	24	6	6
2	0.29511	37.945				8	8
3	0.15458	36.831				4	4
4	0.01265	30.712				0	3
5	0.02107	28.895				0	3
6	0.00843	27.078				0	3
7	0.14755	26.570				3	3
8	0.08096	25.778				1	3
9	0.02108	24.948				0	3
10	0.04637	40.638				1	3

The total numbers of sample plots for the **23,720** ha are 39 After determined the number of the plots, PP randomly selected the location for all the sample plots. Via checking the project area KML file^{/KML/}, it is verified that there are totally 125 planting plots included in the project area. The PP has randomly selected the 39 sample plots from these planting plots. Via checking the sampling plots selection records^{/SSSR/}, it is

confirmed that the location of the sample plots are selected randomly using the Excel random function and ArcGis software. And the location of the sampling plots have been clearly and correctly listed in the MR.

Sampling approach by verification team

During the site visit, the verification team performed sample of 22 samples selected by PP. Field sampling and techniques based on the project parameters, scope and best professional judgement of the verification team in order to meet a reasonable level of assurance.

The sampling approach during on-site verification is determined taking into account the accessibility and similitude of the areas and the tool for sampling was referred by verification team for the site verification. The sampling design (number of plot, location) is considered to be in line with the requirements for validation (IAF Guidance on the Application of ISO/IEC Guide 66 - G.5.3.12.: $x=\sqrt{y}$), and it has ensured a representative cross-section of the properties in the areas.

Verification team performed sample calculated as below,

- Stratum 1, number of plots y is 6. $X=\sqrt{6}=3$
- Stratum 2, number of plots y is 8. $X=\sqrt{8}=3$
- Stratum 3, number of plots y is 4. $X=\sqrt{4}=2$
- Stratum 4, number of plots y is 3. $X=\sqrt{3}=2$
- Stratum 5, number of plots y is 3. $X=\sqrt{3}=2$
- Stratum 6, number of plots y is 3. $X=\sqrt{3}=2$
- Stratum 7, number of plots y is 3. $X=\sqrt{3}=2$
- Stratum 8, number of plots y is 3. $X=\sqrt{3}=2$
- Stratum 9, number of plots y is 3. $X=\sqrt{3}=2$
- Stratum 10, number of plots y is 3. $X=\sqrt{3}=2$

Verification team randomly selected 22 sample plots from each strata from the PP sampling plots inventory^{/SP//} and a ground inspection of the project area was conducted during the site visit and members of the verification team visited 22 sample plots from 39 PP samples within the project area.

The measurement results carried during verification team operation and the raw data of rest of the 17 sample plots were checked against the ER spread sheets and the same was found to be acceptable without any deviation. The measurement results carried out by verification team are concluded as below table:

Table 4-6 Measurement results conducted by verification team

Strata	Sample No.	Longitudes (E)	Latitudes (N)	Number of saplings	Mean DBH (cm)	Mean Height (m)
1	ID-P6	104°47'45"E	26°04'20"N	185(China fir)	6.6	6.9
1	ID-S11	104°58'00"E	26°19'30"N	189(China fir)	6.0	6.8
1	ID-L21	105°21'40"E	26°19'48"N	189(China fir)	6.7	6.7
2	ID-P11	104°41'26"E	25°23'18"N	196(China fir)	5.3	5.9
2	ID-P3	104°39'30"E	25°34'20"N	192(China fir)	5.4	6.0
2	ID-S37	104°53'50"E	26°12'40"N	187(China fir)	5.4	5.9
3	ID-P5	104°52'10"E	26°05'10"N	189(China fir)	4.6	5.2
3	ID-L17	105°26'14"E	26°08'59"N	188(China fir)	4.6	5.1
4	ID-P19	104°17'30"E	25°42'53"N	183(Cypresses)	6.7	6.5

4	ID-S2	105°09'15"E	26°35'01"N	183(Cypresses)	6.6	6.5
5	ID-S10	104°47'00"E	26°21'35"N	175(Cypresses)	6.3	6.1
5	ID-L22	105°21'54"E	26°19'44"N	177(Cypresses)	6.3	6.1
6	ID-P16	104°31'34"E	25°44'58"N	196(Cypresses)	5.5	5.4
6	ID-P7	104°36'00"E	25°54'50"N	196(Cypresses)	5.6	5.5
7	ID-P1	104°34'20"E	25°39'14"N	187(Pinus yunnanensis)	6.6	7.0
7	ID-L27	105°26'36"E	26°06'40"N	187(Pinus yunnanensis)	6.6	7.1
8	ID-S6	105°05'46"E	26°31'52"N	196(Pinus yunnanensis)	6.0	6.4
8	ID-L6	105°33'29"E	26°05'10"N	191(Pinus yunnanensis)	6.0	6.4
9	ID-P2	104°39'30"E	25°35'00"N	198(Pinus yunnanensis)	5.2	5.6
9	ID-L36	105°18'16"E	26°01'18"N	198(Pinus yunnanensis)	5.2	5.6
10	ID-P17	104°32'26"E	25°44'06"N	193(Masson pine)	5.6	5.6
10	ID-S5	105°05'08"E	26°30'05"N	189(Masson pine)	5.6	5.6

Verification team compared the above information they got from the on-site measurement and the raw data from the monitoring survey^{/FSR/}, it can be concluded that the monitoring results in MR are acceptable and accurate.

Thus in conclusion, the GHG data monitoring follows project own procedures with regard to management and monitoring. Verification team has assessed the information provided by the PP by reviewing the data and information to verify their completeness, the validated monitoring plan in PD, the applied methodology and methodological tools; evaluating the data management and the quality assurance and quality control of the reported GHG removals.

GHG Emission Reduction and Removal Calculations

The GHG removals are calculated according the applied methodology AR-ACM0003 version 02 and validated PD^{/PD/} as below steps,

I. Baseline net GHG removals by sinks

The baseline net GHG removal by sinks are equal to zero as determined in the validated PD.

For the carbon stock in baseline dead wood biomass and litter biomass, the related information has been changed in MR accordingly by consider the baseline scenario is updated to barren hills suitable for afforestation.

Via checking the applied methodology, it is confirmed that the carbon pool related carbon stock in baseline dead wood biomass and litter biomass is an optional selection due to the carbon stock in these pools may increase due to implementation of the project activity. Through checking the registered PD, it is confirmed that this carbon pool was not selected and there is no project stock related to carbon stock in baseline dead wood biomass and litter biomass for the project scenario, hence it is reasonable that the carbon stock in baseline dead wood biomass and litter biomass is negligible for conservative.

II. Actual net GHG removals by sinks

The actual net GHG removals by sinks were estimated as the change in the carbon stocks in project occurring in the selected carbon pool, minus the increase in non-CO₂ GHG emissions within the project boundary as a result of the implementation of the A/R CDM project activity (Equation (2) in the applied methodology) and validated PD, which is shown as follows:

$$\Delta C_{ACTUAL,t} = \Delta C_{P,t} - GHG_{E,t} \quad (3)$$

Where:

- $\Delta C_{ACTUAL,t}$ = Actual net GHG removals by sinks, in year t ; t CO₂-e
- $\Delta C_{P,t}$ = Change in the carbon stocks in project, occurring in the selected carbon pools, in year t ; t CO₂-e
- $GHG_{E,t}$ = Increase in non-CO₂ GHG emissions within the project boundary as a result of the implementation of the A/R CDM project activity, in year t , as estimated in the tool *"Estimation of non-CO₂ GHG emissions resulting from burning of biomass attributable to an A/R CDM project activity"*; t CO₂-e

According to the tool, the use of fire for site preparation and/or to clear the land of harvest residue prior to replanting is specifically excluded from the project management and therefore non-CO₂ GHG emissions are estimated as zero.

$$GHG_{E,t} = 0$$

Change in the carbon stocks in project, occurring in the selected carbon pools in year t shall be calculated as follows:

$$\Delta C_{P,t} = \Delta C_{TREE_PROJ,t} + \Delta C_{SHRUB_PROJ,t} + \Delta C_{DW_PROJ,t} + \Delta C_{LI_PROJ,t} + \Delta SOC_{AL,t} \quad (4)$$

Where:

- $\Delta C_{P,t}$ = Change in the carbon stocks in project, occurring in the selected carbon pools, in year t ; t CO₂-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 CO₂-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 CO₂-e
- $\Delta C_{DW_PROJ,t}$ = Change in carbon stock in dead wood 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 CO₂-e
- $\Delta C_{LI_PROJ,t}$ = Change in carbon stock in litter 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 CO₂-e
- $\Delta SOC_{AL,t}$ = Change in carbon stock in SOC in project, in year t , in areas of land meeting the applicability conditions of the tool *"Tool for estimation of change in soil organic carbon stocks due to the implementation of A/R CDM project activities"*, as estimated in the same tool; t CO₂-e

For conservativeness, only change in carbon stock in tree biomass of project will be considered as determined in the validated PD. Therefore, the above equation can be simplified as:

$$\Delta C_{P,t} = \Delta C_{TREE_PROJ,t} \quad (5)$$

And the tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activity” (Version 04.2)^{TEC/} is used to estimate the change in carbon stock above the ground. According to the tool, change in carbon stock in trees between two points of time is estimated by using one of the following methods or a combination thereof:

- (a) Difference of two independent stock estimations;
- (b) Direct estimation of change by re-measurement of sample plots;
- (c) Estimation by proportionate crown cover;
- (d) Demonstration of “no-decrease”.

Method (b) has been determined in the validated PD as per the methodological tool and is used in the monitoring of the following verification.

Thus the change in the carbon stocks in project was estimated as the change in carbon stock in tree biomass following methodological tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities” (Version 04.2)^{TEC/}, as described below.

a. Estimation of carbon stock in trees biomass

According to the tool, Method (b) (Direct estimation of change by re-measurement of sample plots) is applied for the monitoring during the verification.

Under this method, the change in carbon stock and the associated uncertainty are estimated as follows:

$$\Delta C_{TREE} = C_{TREE,t1} - C_{TREE,t2} \quad (6)$$

$$u_{\Delta C} = \frac{\sqrt{(u_1 \times (C_{TREE,t1})^2 + (u_2 \times (C_{TREE,t2})^2)}}{|\Delta C_{TREE}|} \quad (7)$$

Where:

- ΔC_{TREE} = Change in the carbon stocks in trees during the period between two points of time t1 and t2; t CO₂-e
- $C_{TREE,t1}$ = Carbon stock in trees as estimated at time t1; t CO₂-e
- $C_{TREE,t2}$ = Carbon stock in trees as estimated at time t2; t CO₂-e
- $u_{\Delta C}$ = Uncertainty in ΔC_{TREE}
- u_1 = Uncertainties in $C_{TREE,t1}$
- u_2 = Uncertainties in $C_{TREE,t2}$

For this monitoring, $C_{TREE,t2}$ means carbon stock in trees as estimated from 01-January-2016 to 31-December-2020. $C_{TREE,t1}$ means carbon stock in trees as estimated from 01-January-2016 to 31-December-2021.

It is the 3rd verification over this monitoring period, $C_{TREE,t1}$ =968,837 t CO₂e, $C_{TREE,t2}$ =660,408 t CO₂e.

Hence, for this monitoring period, $\Delta C_{TREE} = C_{TREE,t1} - C_{TREE,t2}$

Carbon stock in trees at a point of time is estimated by using one of the following methods or a combination thereof:

- (a) Estimation by measurement of sample plots;
- (b) Estimation by modelling of tree growth and stand development;
- (c) Estimation by proportionate crown cover;
- (d) Updating the previous stock by independent measurement of change.

For this monitoring period, Method (a) is used for the ex-post estimation during the monitoring period.

Tree biomass per hectare in a sample plot is estimated by applying one of the plot measurement methods provided in Appendix 1 of the Tool. PP choose the measurement of fixed area plots for the calculation for this project during this monitoring period.

In this method, sample plots of the same size (e.g. or of a hectare) are installed in a stratum. All trees in a sample plot above a minimum dimension are measured and the biomass of each tree is estimated. The biomass of the individual tree is added and the sum is divided by the area of the sample plot to obtain the plot biomass value.

According to the Tool, under this method, random sample plots are installed in the strata (e.g. systematic sampling with a random start) and measured.

This method is more efficient when the sample plots are optimally allocated to the strata keeping in view the expected mean tree biomass per hectare and its variability in the strata. The number of sample plots and their allocation to strata may be estimated by using the A/R methodological tool '*Calculation of the number of sample plots for measurements within A/R CDM project activities*'.

The carbon stock in trees in the tree biomass estimation strata is estimated as follows:

$$C_{TREE,i,j} = \sum_{i,j} A_i \times N_{i,j} \times \frac{44}{12} \times CF_{TREE,j} \times B_{TREE,j} \quad (8)$$

$$B_{TREE,j} = V_{TREE,j} \times D_j \times BEF_j \times (1 + R_j) \quad (9)$$

Where:

- $C_{TREE,i,j}$ = Carbon stock in trees of tree species j of strata i ; t CO₂-e
- A_i = Area of strata i ; Mu
- $N_{i,j}$ = Number of the tree species j of strata i ; trees/ha
- $CF_{TREE,j}$ = Carbon fraction of tree biomass for tree species j ; t C/t d.m.
- $B_{TREE,j}$ = Biomass of one tree of tree species j ; t d.m.
- $V_{TREE,j}$ = Stem volume of one tree of tree species j ; t d.m.
- D_j = Density of tree species j ; t d.m/m³

BEF_j = Biomass expansion factor for conversion of tree stem biomass to above-ground tree biomass, for tree species j ; dimensionless

R_j = Root-shoot ratio for tree species j ; dimensionless

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

$$B_{TREE,l,j,p,i} = V_{TREE,l,p,j,i} \times D_j \times BEF_j \times (1 + R_j) \quad (10)$$

Where:

$B_{TREE,l,p,j,i}$ = Biomass of tree l of species j in sample plot p of strata i ; t d.m.

$V_{TREE,l,p,j,i}$ = Stem volume of tree l of species j in sample plot p of strata i , estimated from the tree dimension(s) as entry data into a volume table or volume equation; m^3

D_j = Density of tree species j ; t d.m/ m^3

BEF_j = Biomass expansion factor for conversion of tree stem biomass to above-ground tree biomass, for tree species j ; dimensionless

R_j = Root-shoot ratio for tree species j ; dimensionless

Due to the stem volume was designed in the PD to calculate the tree biomass, allometric equations were used in the MR as per the tool. This approach is confirmed as in line with the applied methodology and its tools. Also the allometric equation is verified as conservative for the estimation of GHG removals.

For the Stem volume of tree l of species j in sample plot p of stratum i $V_{TREE,l,p,j,i}$, the tree dimensions used as entry data into a volume equations are Height of tree ($H_{l,p,j,i}$) and Diameter at breast height of trees ($DBH_{l,p,j,i}$). The following allometric equations are used to calculate the above-ground biomass of each tree species:

Table 4-7 Allometric equations of tree species

Tree species	Allometric equations for above-ground biomass
<i>China fir</i> ⁵	$V_{TREE,j} = 0.000080597 \times D^{(1.96709 - 0.0059006 \times (D+H))} \times H^{(0.7699 + 0.0072346 \times (D+H))}$
<i>Masson pine</i>	$V_{TREE,j} = 0.000094602 \times D^{(1.88156 - 0.0030651 \times (D+H))} \times H^{(0.76840 + 0.0046574 \times (D+H))}$
<i>Cypresses</i>	$V_{TREE,j} = 0.000085626 \times D^{(1.9148 - 0.0045828 \times (D+H))} \times H^{(0.74041 + 0.00668 \times (D+H))}$
<i>Pinus yunnanensis</i>	$V_{TREE,j} = 0.00010729 \times D^{(1.95029 - 0.0047643 \times (D+H))} \times H^{(0.63241 + 0.0075891 \times (D+H))}$

Chinese Fir - the data source of allometric equations is confirmed as DB52/T 702_2011 <The binary standing tree volume table of Chinese Fir>⁵ which is Local Standards in Guizhou Province thus verified as applicable to the project located in Guizhou.

⁵ Via checking the formular data source from DB52/T 702_2011 <The binary standing tree volume table of Chinese Fir>, it is confirmed that the project is located in a central production area of Chinese Fir, hence, the formular of $0.000080597 \times D^{(1.96709 - 0.0059006 \times (D+H))} \times H^{(0.7699 + 0.0072346 \times (D+H))}$ which is corresponding to the general production area is applied by the project which is verified as in line with the data source.

Masson pine - the data source of allometric equations is confirmed as DB52/T 703_2011 < The binary standing tree volume table of *Pinus Massoniana* plantation>^{/AEM/} which is Local Standards in Guizhou Province thus verified as applicable to the project located in Guizhou.

Cypress- the data source of allometric equations is confirmed as DB52/T 773_2012 < The binary standing tree volume table of *Cypresses* >^{/AEC/} which is Local Standards in Guizhou Province thus verified as applicable to the project located in Guizhou.

Pinus yunnanensis - the data source of allometric equations is confirmed as DB52/T 763_2012 < The binary standing tree volume table of *Pinus yunnanensis* >^{/AEP/} which is Local Standards in Guizhou Province thus verified as applicable to the project located in Guizhou.

Both data source are checked as per the tool of “Demonstrating appropriateness of allometric equations for estimation of aboveground tree biomass in A/R CDM project activities” (version 01.0), as stated in this tool, a species-specific or group-of-species-specific allometric equation derived from trees growing in edapho-climatic conditions similar to those in the project area is considered appropriate, and hence can be used for ex post estimation of tree biomass, if at least one of the following conditions is satisfied:

- (a) The equation is used in the national forest inventory, or the national GHG inventory, of the host Party;
- (b) The equation has been used in commercial forestry sector of the host Party for ten years or more;
- (c) The equation was derived from a data set of at least 30 sample trees, and the value of coefficient of determination (R^2) obtained was not less than 0.85.

Via checking DB52/T 702_2011 < The binary standing tree volume table of Chinese Fir>^{/AECF/}, DB52/T 703_2011 < The binary standing tree volume table of *Pinus Massoniana* plantation>^{/AEM/} and DB52/T 773_2012 < The binary standing tree volume table of *Cypresses* >^{/AEC/} and DB52/T 763_2012 < The binary standing tree volume table of *Pinus yunnanensis* >^{/AEP/}, it is verified that four data sources are the local standards in Guizhou Province where the projected area located and the equations are used for the national forest inventory in the host country China, so the equations are verified as fulfill the condition (a) thus confirmed as appropriate.

Based on the above calculation equations, it is concluded that for the two tree species, volume equations were used to convert measured Height of trees ($H_{l,p,j,i}$) and Diameter at breast height of trees ($DBH_{l,p,j,i}$) to stem volume of trees for each tree with sampling plot stem volume of each tree in sample plot was converted to above-ground tree biomass using basic wood density and biomass expansion factors, and the above-ground tree biomass was expanded to total tree biomass using root-shoot ratios.

Finally, based on above calculation process, during this monitoring period, for each stratum, the monitoring and calculation results of the carbon stock change is as following,

Table 4-8 The monitoring results based on sample plots

Strata ID	Tree species	Area (ha)	$b_{tree,l}$ (t d.m. ha-1)	W_i	S_i^2	$W_i * b_{tree,l,t}$	n_i	S^2_{bTREE}
Proj-1	China fir	5033.33	24.21	0.21220	3.1758	5.13736	6	0.03651
Proj-2	China fir	7000.00	19.46	0.29511	11.2407	5.74284	8	0.19902
Proj-3	China fir	3666.67	10.03	0.15458	0.0008	1.55044	4	0.00000
Proj-4	Cypresses	300.00	35.87	0.01265	0.0562	0.45376	3	0.00000
Proj-5	Cypresses	499.67	29.75	0.02107	0.0785	0.62683	3	0.00002
Proj-6	Cypresses	200.00	24.01	0.00843	0.1737	0.20240	3	0.00001

Proj-7	Pinus yunnanensis	3500.00	37.63	0.14755	0.1566	5.55231	3	0.00226
Proj-8	Pinus yunnanensis	1920.33	30.79	0.08096	0.0691	2.49276	3	0.00034
Proj-9	Pinus yunnanensis	500.00	21.63	0.02108	0.0030	0.45596	3	0.00000
Proj-10	Masson pine	1100.00	8.45	0.04637	0.1021	0.39183	3	0.00014

For the parameters calculation process and results, Refer to ER sheet for details.

III. Leakage

As per the PD and applied methodology and tool, the leakage is calculated as follows:

$$LK_t = LK_{AGRIC,t} \quad (11)$$

Where:

LK_t = GHG emissions due to leakage, in year t; tCO₂-e

$LK_{AGRIC,t}$ = Leakage due to the displacement of agricultural activities in year t, as estimated in the tool "Estimation of the increase in GHG emissions attributable to displacement of pre-project agricultural activities in A/R CDM project activity"; tCO₂-e

According to the applicable methodology leakage has to be estimated based on the methodological tool "Estimation of the increase in GHG emissions attributable to displacement of pre-project agricultural activities in A/R CDM project activity" /TEI/. Leakage emission resulting from displacement of the activities is composed of decrease in carbon stock in the carbon pools of the land and change in soil organic carbon stock due to land-use change in the land.

$$LK_{AGRIC,t} = \frac{44}{12} \times (DC_{BIOMASS,t} + DSOC_{LUC,t}) \quad (12)$$

Where:

$LK_{AGRIC,t}$ = Leakage due to the displacement of agricultural activities in year t; tCO₂-e

$DC_{BIOMASS,t}$ = Decrease in carbon stock in the carbon pools of the land receiving the activity displaced in year t; t d.m

$DSOC_{LUC,t}$ = Change in soil organic carbon (SOC) stock due to land-use change in the land receiving the displaced activity in year t; tC ha

As already discussed in the previous sections, the project was implemented by manual operation, rather than mechanical operation and the project does not expect any displacement of agricultural activities and any harvesting activity, thus the leakage is accounted to 0.

Besides, as per the paragraph 10 of tool "Estimation of the increase in GHG emissions attributable to displacement of pre-project agricultural activities in A/R CDM project activity-Ver. 2.0" /TEI/, it is confirmed that the Leakage emission attributable to the displacement of grazing activities need to be considered and the conditions in (a) to (e) in paragraph 10 is considered insignificant and accounted as zero.

The validation team checked the Baseline Survey Report^{/BLS/} and Biodiversity Baseline Survey Report^{/BDS/} and confirmed that all the project sites were previously barren hill suitable for planting trees in baseline scenario, hence, there were no any grazing activities occurred in the project area before the project implementation. And there are no any grazing activities occurred in the project area after the project implementation which has been verified by site inspection and interview with local officers due to the project area lands belongs to Karst landforms. Then the project does not involve in leakage caused by grazing activities as there were no grazing activities before and after the project implementation.

Then no need to consider the leakage caused by grazing activities for this project.

In conclusion, the leakage is 0 for this project activity.

Via checking the details calculation in the ER sheet, it is confirmed that the uncertainty is calculated as 3.67% which is less than 10%, therefore no discount of the mean biomass should be applied according to the tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities"^{/TEC/}.

In conclusion, it is confirmed that the calculation of GHG removals by sink has been carried out in accordance with the formulae and methods described in the validated monitoring plan^{/PD/} and applied methodology and tools.

For this monitoring period, PP claimed the VCUs in vintage as below:

01-January-2021– 31-December-2021

The total GHG removals by sink being claimed for vintage periods and total this monitoring period account as follows:

Period	GHG removals by sink	Buffer 10%	VCUs
01-January-2021~31-December-2021	308,429 tCO ₂ e	30,843 tCO ₂ e	277,586 tCO ₂ e
Total	308,429 tCO₂e	30,843 tCO₂e	277,586 tCO₂e

CAR 08, CAR 09 and CAR 10 were raised and successfully closed. Refer to Appendix 3 for details.

4.4.2 Quality of Evidence to Determine GHG Emission Reductions and Removals

During the verification assessment, the evidence provided by the PPs was sufficient in both quantity and quality to support the determination of GHG removals reported by the project. The threshold for materiality to the total GHG removals reported was met for this project; materiality is a concept that the errors, omissions and misrepresentations could affect the GHG removals assertion and influence the intended users.

The source and nature of the evidence (external or internal, oral or documented) for the determination of GHG emission reductions or removals has been assessed and verified in above section 4.4.1 together with each calculation step, thus the reliability of the evidence is confirmed. The evidence provided to determine GHG removals reported in the Monitoring Report included values, notations, units and sources; the evidences has been cross-checked with supplied GHG removals calculation spreadsheet^{/XLS/}.

The procedure for data generation and aggregation, recording, transfer and final transposition into the MR was also verified and found to be in compliance with the monitoring plan in the validated PD.

For the measuring devices, the confirmation of no need to conduct calibration has been assessed and verified in above section 4.4.1 together with the assessment of monitoring parameters, the implemented approach is verified as appropriate and in line with the national regulations.

Therefore it is confirmed through cross-checks that adequate monitoring mechanism are in place where the required parameters need to be monitored, and the quantity and quality of the evidence used to determine the GHG reductions and removals is concluded as sufficient and appropriate.

4.4.3 Non-Permanence Risk Analysis

The project utilized the VCS Procedural Document “AFOLU Non-Permanence Risk Tool” (version 4.0)^{/NPRT/} to assess risk according to internal risk, external risk, natural risk and mitigation measures for minimizing risk. At all levels has been evaluated the rationale, appropriateness and justifications of risk rating chosen by PPs.

Each risk category was calculated based on the VCS guidance and the input provided by the PPs. The risk has been reassessed at time of the first verification and with that prior to any issuance of VCUs. The information was verified and cross-checked through document and literature review^{/AAPP/&/PDAO/&/IFMM/}, onsite visits of the project area and interviews conducted^{/IMO1/}. Details of the assessment are provided as follow.

Risk factor	Verification findings
Internal risks	
Project management	The management team includes individuals who have successfully managed projects through validation of GHG credits under the CDM, CCER, VCS Program ^{/vcs/,ccer/,unfccc/} , therefore this mitigation is scored as -2. There is a specific mitigation plan made by project proponent for potential risks to the project, which includes a process for monitoring progress and documenting lessons learned or corrections that may be needed, and incorporating them into project decision-making in this monitoring period, which has been verified in the Monitoring Manual ^{/MM/} , therefore this mitigation is scored as -2.
Financial viability	According to the reported barren hills and wasteland data in the project design ^{/PDAO/} , the forestry departments at all levels counted and approved the afforestation area, and allocated the funds and provincial-level funds and local funds issued by the state to the counties. So project cash flow breakeven point is greater than 10 years from the current risk assessment. The cash out of the project is mainly for implementation of the project during the first three years, which has been fully secured by the project owner and buyer. Therefore this mitigation is scored as 6.
Opportunity cost	The NPV from the project is negative while the NPV from the most reasonable alternative land use activity (the land barren hill suitable for planting trees with no use) is zero. Therefore this mitigation is scored as 0.
Project longevity	Since the main tree species planted in the project are <i>China fir</i> , <i>Cypresses</i> , <i>Pinus yunnanensis</i> and <i>Masson pine</i> which all have Suitable for the growth of Karst landforms, therefore the project longevity selected 30 years ^{/PL/} and the crediting period is selected as 29 years. Therefore this mitigation is scored as 0.
External risks	
Land tenure and resource access/impact	Project Approval ^{/AAPP/} is checked, it is verified that the land of the project is all collective-owned, and the project proponent holds a concession for operating and management of the forest on the land. And during this verification, via interview with the local residents ^{/I3/} , it is confirmed that there was no changed of the land property right, with the growing of the

	trees, the project lands are still collective-owned by local villages. Therefore this mitigation is scored as 0.
Community Engagement	The project land are mostly barren hill suitable for planting trees by checking the baseline survey^{/BLS/}, no residents living within the project area^{/PRA/}. And for the households living within 20km of the project boundary outside the project area, nearly all of them have been consulted during the Participatory Rural Appraisal^{/PRA/} of the project and the community monitoring survey by questionnaires^{/QUE/} prior the project started. According to the stakeholder meetings and filled questionnaires^{/CMQ/} conducted for this monitoring period, it is verified that the project generates net positive impacts on the social and economic well-being of the local communities who derive livelihoods from the project area during this monitoring period. Therefore this mitigation is scored as -5.
Political Risk	The project is located in China. According to World Bank Institute's WGI, the six indicators of China are respectively -0.36, 0.44, -0.23, -0.29, -0.28 and -1.56, averaged over the most recent five years, so the mean score is -0.38, then the final score is 4. China has an established Designated National Authority under the CDM and has at least one registered CDM Afforestation/Reforestation project, therefore this mitigation is scored as -2. Total Score is 2.
Natural risks	
Fire	Major. Fire risk is considered low in the early phase of the project because planting area is mostly barren hill suitable for planting trees, after the trees grow to a certain age (over 30 years), the risk of fire may increase, and the project proponent will adopt the necessary measures for fire preventing. Thus, LS= 2 Furthermore, local government sets the fireproofing period when using fire is forbidden in the open air and no fires occurred in the project areas for this monitoring period as confirmed during the on-site visit and checking the daily working log^{/WL/} recorded by the technicians. Also the fire will be strictly controlled by project proponent who experienced in local natural risk control to minimize the potential effect and established fire prevention procedure in Integrated Forest Management Manual^{/IFMM/}. Therefore the mitigation is scored as 0.25.
Pest and disease outbreaks	Insignificant. According to historical records, the pest and disease risk are not common, and the mixed plantation will prevent the trees from pest and disease outbreaks in a certain way based on technical experience. Hence the risk is less than every 10 years. LS=2 The planted trees may would be damaged by insects and disease, but the risk is considered low because it can be prevented by routine overseeing and the PP have in place a full Integrated Forest Management Manual^{/IFMM/}. The biological measures to control pests and diseases will be mainly adopted. The chemical pesticides are allowed to be used only if there is a serious pest problem erupted in the project area, while improper pesticide application would be harmful to natural environment, but the risk is considered low because pesticide will be strictly managed by well trained staff to minimize the potential effect^{/IFMM/}. As the biological measures to control pests and diseases will be mainly adopted, the pesticide application will be limited. During this monitoring period, there was no pest and disease risk occurred which is confirmed by checking the checking the daily working log^{/WL/} recorded by the

	technicians and interview with the officer from local forest bureau and local residents. Therefore the mitigation is scored as 0.25.
Extreme Weather	Minor There is basically no extreme weather in the project area based on weather reports collected from historic records from local government ^{/whr/} ; and there was no extreme weather in the project area during this monitoring period as confirmed by checking the daily working log ^{/WL/} recorded by the technicians and historic records for this monitoring period from local government ^{/whr/} and interview with the officer from local forest bureau and local residents. LS=1. Therefore the mitigation is scored as 0.25.
Geological risk	Minor The geological risk such as earthquakes around the project area are mostly low intensity, so the damage will be minor. According to historical records from local government ^{/whr/} , there is no earthquakes or volcanoes occurred in recent 30 years around the project area as confirmed during the on-site interview with local officer. And there was no geological risk in the project area during this monitoring period as confirmed by checking the daily working log ^{/WL/} recorded by the technicians and historic records for this monitoring period from local government ^{/whr/} and interview with the officer from local forest bureau and local residents. LS=2. Furthermore, local government will be responsible for the recovery of the forest if there is an earthquake occurred as confirmed during the on-site visit. Also the project proponent is experienced in local natural risk control to minimize the potential effect and established specific instruction in geological risk control in Integrated Forest Management Manual ^{/IFMM/} . Therefore the mitigation is scored as 0.25.
Other risks	None is observed.

In summary, the PPs have accounted for risk factors in a reasonable manner and have reached an overall risk rating that encompasses all risks of non-permanence; the project is able to effectively manage risks to project benefits during the monitoring period and project lifetime. Risk mitigation strategies were confirmed to have been implemented as planned in the validated PD and are summarized in the non-permanence risk assessment conducted by the project. During the verification activity no additional risks to project benefits are identified.

The overall risk rating according to the applied tool is 10%. The validation team concludes that this risk rating is purely based on the tool cited above, according to VCS requirements.

The non-permanence risk report^{/NPRR/} and Risk Calculation Sheet^{/RCS/} are provided by PP. The risk analysis is assessed for its appropriateness. The overall risk rating for the specific monitoring period is 10% and it represents the buffer applied (VCUs that must be deposited in the AFOLU pooled buffer).

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

The monitoring results, monitoring plan and summary of the monitoring report in local language, have been made publicly available on the VCS and CCB website, which can be confirmed by checking the corresponding webpage.

In addition, hard copies of the monitoring plan and monitoring manual have been distributed among local stakeholders by PP and local government which is confirmed and verified by interview with the local stakeholders.

Furthermore, the project implementer published the monitoring plan and monitoring manual on the local notice boards to explain the monitoring process to communities and other stakeholders which has been verified by checking the photo of the communities and stakeholders watching^{/RVAR/} and seen by verification team during site inspection.

Finally, meetings with stakeholders have been carried out during site verification. During the meeting, project implementer introduced the monitoring results during this monitoring period and copies of monitoring report is available to anyone requests it. Verification team has participated and the results are also verified by checking the meeting minute and questionnaires filled by stakeholders^{/VSM/}.

In conclusion, the results of climate monitoring were disseminated in accordance with the validated project description.

4.4.5 Optional Gold Level: Climate Change Adaptation Measures (GL1.3)

N/A

4.4.6 Optional Gold Level: Climate Change Adaptation Benefits (GL1.4)

N/A

4.5 Community

4.5.1 Community Impacts (CM2.1)

The analysis of the net benefits to the communities is conducted making comparison with the baseline scenario. The asset which are assessed are the human capital, social capital, physical capital, financial capital, natural capital and no negative well-being impacts have been identified, while it is expected that the forest will generate benefits on the quality of the environment and on living conditions of the local residents and workers. By the interview with the project implementer, technicians and local stakeholders, this is was confirmed. Being the monitoring period mostly related to the retro-active period, the analysis and the assessment did at the time of the project validation is not changed.

The MR states that the project will generate positive community impacts through increasing local job opportunities and household income, living level and living environment, especially increase local women's job opportunities and social status, increased the opportunities for communication of the village so that to provide actual direct benefits to community groups-local village committees and residents in villages including women, also achieve goals in afforestation and promote forest management and protection and achieve public awareness of protecting local ecological environment to beneficial to the local forest bureaus, and improve the local ecological environment and improve people's living level to beneficial to the local governments. The analysis of the net benefits to the community groups is conducted to each category of community group, local residents and workers. Each benefit has been verified by checking the labor contracts^{/LC/}, periodical payroll^{/PAY/}, training records^{/TTR/} during this monitoring period and on-site observation and interview with local officers, residents, workers and women.

Hence, it is concluded that all the impacts for each community group identified in the project description were accurate during this monitoring period.

CAR 11 was raised and successfully closed. Refer to Appendix 3 for details.

4.5.2 Negative Community Impact Mitigation (CM2.2)

As per the validated PD^{/PD/} and confirmed by the project implementer^{/11/}, local residents^{/13/} and technicians^{/13/} during the interview, the project does not generate negative impacts on communities and are not expected given the nature of the project.

But PP still established a problem-solving mechanism and provided a variety of ways for communities to report problems which has been confirmed by site interview with local stakeholders and PP has promised to conduct thorough investigation at the place where the problems occur and solve these negative effects if received the comments.

CL 11 was raised and successfully closed. Refer to Appendix 3 for details.

4.5.3 Net Positive Community Well-being (CM2.3)

As stated in §4.5.1 of this report, the project is designed and implemented to produce net positive well-being impacts on local communities. The MR states that the project is implemented to produce net positive well-being impacts on local communities as designed in the validated PD^{/PD/}.

It states that project generates positive community impacts through providing job, creating more local job opportunities and reduce migrant rural workers by providing long-terms job, increasing household income by paid salary to technicians and distributed to all village committees and villagers who owned the forest land tenure of this project with 60% share of the profit gained from the previous phase issuance, improving gender equity by providing more jobs to women than men, promoting technical and economic capability of local communities by providing related trainings and skills and enhancing social communication by organizing local culture activities, so that to provide actual direct benefits to community group-local villages.

The positive impacts including change to economic indicators of the region, the cultural and economic history of the mentioned communities and the interactions between the communities, also changes on the ecosystem services, the expected changes in the well-being conditions and other characteristics of communities are stated in the MR as per validated PD. Descriptions in MR has been checked, it is verified that the impacts on the community groups in this monitoring period is correct via checking actual labor contracts^{/LC/}, periodical payroll^{/PAY/}, training records^{/TTR/} during this monitoring period and by site inspection and interview with local stakeholders and local officers from government.

Via checking the project implementation comparing with the project design, it is verified that the expected changes are reasonable and can be achieved.

Thus it is concluded that the net impact of project activities on community groups is all positive.

CL 12 was raised and successfully closed. Refer to Appendix 3 for details.

4.5.4 Protection of High Conservation Values (CM2.4)

No HCVs was identified related to community well-being in the project zone based on above assessment and assessed in the validated PD^{/PD/}, thus none of the HCVs related to community well-being will be negatively affected by the project.

4.5.5 Other Stakeholder Impacts (CM3.2-CM3.3)

The MR states that no negative offsite effects are expected during this monitoring period same as the validated PD^{/PD/}. Oppositely, the project provides valued experience of forest management and carbon trading to other stakeholder, which in some way could encourage more followers to engage in similar

projects for sustainable development. The local officer^{/12/} and technicians^{/13/}, during the on-site visit and the interview, confirmed that the project did not result in net negative impact on other stakeholders during this monitoring period. Being the monitoring period mostly related to the retro-active period, the analysis and the assessment did at the time of the project validation is not changed.

4.5.6 Community Monitoring Plan (CM4.1, CM4.2, GL2.2, GL2.3, GL2.5)

The PP carried out the community monitoring as per established community monitoring plan in the validated PD^{/PD/}.

To validate the community monitoring results during this monitoring period, the verification team take stepwise verification as following,

a. Check the dates, frequency and method as per PD

As designed in the validated PD^{/PD/}, the monitoring parameters reflect the actual changes in well-being resulting from the project activities for community groups were measured and monitored by interview for each community groups affected by the project and collect all the relevant information through questionnaires.

During this monitoring period, the project owner established a monitoring team including all the technicians conducting interviews with local communities affected by the project, this has been confirmed by site interview with the technicians^{/12/} and local stakeholders^{/13/}.

As per the frequency defined in the PD, the monitoring should be conducted before every verification event, the PP hold stakeholder meeting on 19-October-2021^{/LSCR/}, and distributed 100 questionnaires to collect the interview results for the representatives of local residents living in project zone in November 2021 and got 100 valid questionnaires back^{/CMQ/}, thus it is verified that the monitoring frequency is in line with the validated PD design^{/PD/}.

b. Check the monitoring results

Via checking the 100 questionnaires^{/CMQ/} collected by monitoring team, it is verified that the questionnaires were distributed to different community groups as defined in the PD including Local villagers, female workers, local officers from forest bureau and governments, representatives from local village committees, and the key variables set in the questionnaire are in line with the plan in validated PD^{/PD/}.

Via comparing the information in the questionnaires, it is verified that monitoring results listed in the MR is correct and actual.

c. Evaluation of monitoring

The monitoring procedures and approaches during this monitoring period were carried out as listed in the PD, via checking the results, it is verified that PP established a series of procedures including organizing monitoring team, training, preparation and survey. The sub procedures are verified as capable to finish this monitoring, which is confirmed by interview with the monitoring team member^{/11/, 13/, 14/} and based on the experience of the monitoring team.

By combining the information in the questionnaires, during this monitoring period, the monitoring results are assessed as below table,

Variables	Monitoring methods applied	Affected community groups	Assessment of Result of monitoring
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The change of living environment	Stakeholder meetings, questionnaire survey and interview	Local villagers Government of 2 districts and 1 city	98% of Local Villagers and 100% officer of Government of 2 districts and 1 city believed that during this monitoring period, the living environment include air quality, soil environment and conditions for planting cash crops has improved which verified by checking the stakeholder meeting records ^{/LSCR/} questionnaires ^{/CMQ/} .
The change of living conditions	Questionnaire survey and interview	Government of 2 districts and 1 city	100% officer of Government of 2 districts and 1 city believed that villagers' living level have been improved during this monitoring period, due to the implementation of the project and the happiness due to job opportunities provided by the project and the crop harvest which verified by checking the questionnaires ^{/CMQ/} .
Benefits delivered to women	Payroll of the female technicians 60% profits gained from the previous issuance Stakeholder meeting and Questionnaire survey, opinion logbook and interview	Local villagers	100% of the female technicians and villagers believed that their social status has been improved during this monitoring period which verified by checking the stakeholder consultation records during this monitoring period ^{/LSCR/,/OL/CMQ/} . Via checking the monthly payroll ^{/PAY/} to technicians and maintenance workers, it is verified that 55 female technicians increased their income during this monitoring period. In addition, via interview with PP representative ^{/11/} and local villagers ^{/13/} , it is confirmed that 60% of profit gained from the previous phase issuance has been distributed to all village committees and farmers by PP. Via checking the receipts of reception ^{/ROR/} , it is verified that local residents have received the related money and households' income was increased.

Raise the status of women	Questionnaire survey and interview with women villagers and technicians in stakeholder meeting, Training provided	Village committees in project area	100% of the women technicians believe that the implementation of the project has raised status of women during this monitoring period which verified by checking the questionnaires^{/CMQ/}. The trainings were conducted on 10-October-2021 on an annual basis which verified by checking the training records^{/TTR/}, via the training, it is verified that women technicians participating in the project monitoring and training to gain the working experience and their social status in local communities were also raised,
Promote forest management and protection	Questionnaire survey and interview with local officers, villagers and technicians in stakeholder meeting, Training provided	Local villagers Government of 2 districts and 1 city Forestry Bureaus of 2 districts and 1 city	99% of the villagers believed that the improvement of forest management and protection is actually permanent benefit and the positive effect can linger on; 100% of officials from governments believed that the successful management and protection of trees is conducive to ecological environment governance and help governments to protect community safety and ecology during this monitoring period which verified by checking the questionnaires^{/CMQ/}. The trainings were conducted on 10-October-2021 on an annual basis which verified by checking the training records^{/TTR/}, via the training, it is verified that technicians promote the protection of the environment to the public, improving the ability of forest protection and management and the awareness of ecological protection.
The public awareness of protecting local ecological environment	Questionnaire survey and interview with local officers, village committees and technicians in stakeholder meeting	Government of 2 districts and 1 city Forestry Bureaus of 2 districts and 1 city	100% of the officers believe that the implementation of the project has increased the public awareness of protecting local ecological environment during this monitoring

			period which verified by checking the questionnaires ^{/CMQ/} .
Households' income	Payroll of the technicians 60% profits gained from the previous phase issuance	Local villagers	Via checking the monthly payroll ^{/PAY/} to technicians and maintenance workers, it is verified that 105 technicians increased their income during this monitoring period. In addition, via interview with PP representative ^{/11/} and local villagers ^{/13/} , it is confirmed that 60% of profit gained from the previous phase issuance has been distributed to all village committees and farmers who owned the forest land tenure of this project by PP. Via checking the receipts of reception ^{/ROR/} , it is verified that local residents have received the related money and households' income was increased.
Achieve goals in afforestation	Biodiversity survey report	Forestry Bureaus of 2 districts and 1 city	Via checking the biodiversity survey report ^{/BSR/} for this monitoring period, it is confirmed that the goals of afforestation had been achieved by implementation of the project during the 1 st monitoring period. And during this monitoring period, the forest has been managed and maintained well and the goals have been well kept which has been verified by VVB during site inspection also.

During the on-site verification, stakeholder meeting with different community groups has been carried out from 15-April-2022 to 17-April-2022 through face-to-face interview and by filling the questionnaires prepared by auditor to collect their comments if any. During the meeting, the affected community group representatives are interviewed separately by verification team, and all the representatives confirmed that the project increase of household income due to the implementation of the project which provided 60% of carbon profit, more local job opportunities, improve their capability and technical skills and increase social activities, achieve goals in afforestation and promote forest management and protection, and improve the local ecological environment and improve people's living level.

Based on above evaluation from the affected communities, it is verified that the monitoring results reflect the actual community impact from each community groups affected by the project.

Thus it is concluded that the community monitoring during this monitoring period was carried out in accordance to the validated project description.

CAR 12 was raised and successfully closed. Refer to Appendix 3 for details.

4.5.7 Community Monitoring Plan Dissemination (CM4.3)

The community monitoring results, community monitoring plan have been made publicly available on the VCS and CCB website, which can be confirmed by checking the corresponding webpage.

In addition, hard copies of the community monitoring plan and community monitoring manual have been distributed among local stakeholders by PP and local government which is confirmed and verified by photo check^{/RVAR/} and interview with the local stakeholders.

Furthermore, the project implementer published community monitoring plan and community monitoring manual on the local notice boards to explain the monitoring process to communities and other stakeholders which has been verified by checking the photo of the communities and stakeholders watching^{/RVAR/} and seen by verification team during site inspection.

Finally, interviews with stakeholders have been carried out during site verification. During the interview, project implementer introduced the community monitoring results during this monitoring period and copies of community monitoring results is available to anyone requests it. Verification team has participated and the results are also verified by checking the interview minute and questionnaires filled by stakeholders^{/VSM/}.

In conclusion, the results of community monitoring were disseminated in accordance with the validated project description.

4.5.8 Optional Gold Level: Short-term and Long-term Community Benefits (GL2.2)

N/A

4.5.9 Optional Gold Level: Smallholder/community member Risks (GL2.3)

N/A

4.5.10 Optional Gold Level: Marginalized and/or Vulnerable Community Groups (GL2.4)

N/A

4.5.11 Optional Gold Level: Net Impacts on Women (GL2.5)

N/A

4.5.12 Optional Gold Level: Benefit Sharing Mechanisms (GL2.6)

N/A

4.5.13 Optional Gold Level: Governance and Implementation Structures (GL2.8)

N/A

4.5.14 Optional Gold Level: Smallholders/Community Members Capacity Development (GL2.9)

N/A

4.6 Biodiversity

4.6.1 Biodiversity Changes (B2.1)

The monitoring report states that the project seeks to change the biodiversity intact through the Scientific and rational afforestation of barren hill suitable for planting trees.

PP evaluated the biodiversity element of species of plants and animals as per the validated PD, it is considered as appropriate to the project to identify and quantify the native species of plants and animals within the project boundary.

A list of biodiversity variables is reported in the monitoring report and the justification used to attribute biodiversity changes to the project's activities was assessed by verification team as following,

1. For Species of plants, besides the successfully grew 4 species of the trees to establish an artificial forest, it is verified that there were many crops, arbor, herb, shrub, bushes and grasses growing around the planted trees which has significantly increased the plant cover during this monitoring period and a total of 4 species of plants were discovered and their quantities were written in the bracket as follows: *Arachniodes pseudoaristata* (45 plants), *Houpoea officinalis* (28 plants), *Gardenia jasminoides* (18 plants) and *Funaria hygrometrica* (390mm²), this is verified by on-site inspection to the sample plots and observation of the sample plots in project area and checking the biodiversity survey report for this monitoring period issued by Guizhou province academy of social sciences^{/BSR/}.
2. For species of animals, via checking the biodiversity survey report for this monitoring period issued by Guizhou province academy of social sciences^{/BSR/}, it is verified that there are total of 5 species of animals were found, including *Enicurus scouleri* (the number is 6), *Syrmaticus reevesii* (the number is 4), *Garrulax canorus* (the number is 2), *Pieris rapae* (the number is 7) and Toad (the number is 11). The traces of each species were different, which could prove the increase of animals during this monitoring period, and this is also verified by on-site inspection to the sample plots and remote observation of the project area.

In conclusion, the project's assessment of changes in biodiversity resulting from project activities in the project zone during the monitoring period are verified as accurate. There is no reason to believe the project area remains less rich in biodiversity than the project start.

CAR 13 was raised and successfully closed. Refer to Appendix 3 for details.

4.6.2 Mitigation Actions (B2.3)

As verified in the validated PD^{/PD/}, it is proved that the project has no negative impacts on biodiversity and thus no special measures need to be taken for maintenance or enhancement of biodiversity and high conservation value attributes.

Afforestation in this project uses local species which is confirmed in PD^{/PD/}, implement afforestation activity through scientific and reasonable method with no burning and slash, and protect the existing vegetation as much as possible and no invasive species were introduced in the project which has been determined in the project design and confirmed by site inspection.

Therefore, it is concluded that no negative impacts on biodiversity or HCV attributes recorded, so no measures were necessary to mitigate impacts, beyond the routine operation of the project.

4.6.3 Net Positive Biodiversity Impacts (B2.2)

The local tree species plantation has different positive impact on soil, climate and biodiversity; when local tree species are planted in degraded areas, an increase of flora and fauna biodiversity can be recorded. This afforestation activity is implemented with scientific and reasonable configuration method, with no burning and slash and reduce the fire and insect risk. With the planted trees gradually grow up to forest, project sites have become ecological community with the domain species of trees, which has improved biodiversity. Above assessment have been demonstrated in the section 4.6.1.

Furthermore, via on-site investigation and checking the map^{/MAP/}, it is verified that as the project site is located in Liupanshui City of Guizhou Province, the surrounding area is concentrated of wildlife. Therefore, revegetation of project sites facilitates biodiversity protection of the whole project zone confirmed by checking the biodiversity survey report^{/BSR/}.

Based on the situation of biodiversity within the project zone at baseline scenario, the project area will continue to be barren hill suitable for planting trees and with low biodiversity condition. The main change by the project scenario is to create forest cover of the project area with local native species which has great vitality and adaptation to project zone, this has been verified by site inspection.

The local tree species plantation has different positive impact on soil, climate and biodiversity; when local tree species are planted in project areas, an increase of flora and fauna biodiversity can be recorded, including species of animals could be increased and original wild animals around project area can be protected. As per the validated PD^{/PD/}, 11 National protected species are in the project zone confirmed by checking the biodiversity baseline survey report^{/BDS/} and checking the “Study on Rare and Endangered Plant Species Resources in Guizhou”^{/SRE/}, and 1 of them are confirmed as globally endangered species according to IUCN^{/IUCN/}. These species benefit from reduced threats as a result of the project activity.

These will be protected by the improvement on ecological environment of the surrounding area through the project activity implementation, the improvement on ecological environment of the surrounding area has been confirmed during the site observation.

Besides, this afforestation activity is implemented with scientific and reasonable configuration method, with efficient measures of fire prevention and insect control. And via on-site interview with local residents, technicians and officers, it is verified that there was no fire and insect disaster occurred during this monitoring period in project area.

In conclusion, the net impact of the project's activities on biodiversity are positive.

4.6.4 High Conservation Values Protected (B2.4)

No HCVs has been identified related to biodiversity based on above assessment and in line with the validated PD^{/PD/}.

4.6.5 Invasive Species (B2.5)

The species used are native trees developed in China which is verified by validated PD^{/PD/} and onsite observations. These are not considered as invasive species. In conclusion, all the planted trees are native species and no invasive species have been introduced into any area affected by the project.

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

Only native species are used in the project activities which is defined in the PD^{/PD/} and verified by checking the Seedling Purchase Contract^{/SPC/} and onsite observations, thus there are no adverse effects from non-native species.

4.6.7 GMO Exclusion (B2.7)

The PPs declared and assured that no GMOs has been and will be used in the project to generate GHG emissions reductions or removals which is defined in the PD^{/PD/} and verified by checking the Seedling Purchase Contract^{/SPC/} and onsite observations.

4.6.8 Inputs Justification (B2.8)

As assessment to the validated PD, it is verified that no fertilizers were used in the project during this monitoring period, chemical pesticides are allowed to be used only if there is a serious disease problem erupted in the project area, biological control agents are used in the project according to local Pest Control and Prevention Policy^{/IFMM/}. The chemical pesticides are allowed to be used only if there is a serious pest problem erupted in the project area, while improper pesticide application would be harmful to natural environment, but the risk is considered low because pesticide is strictly managed by well trained staff to minimize the potential effect^{/IFMM/}. As the biological measures to control pests and diseases was mainly adopted, the pesticide application was limited during this monitoring period. Via on-site interview with the project implementer and local officers, it is verified that there was no significant pesticide application occurred as no insects and disease disaster occurred.

Therefore, it is concluded that the use of each input is justified as per the PD and did not pose harm to the region's environment or communities during this monitoring period.

4.6.9 Negative Offsite Biodiversity Impacts (B3.1) and Mitigation Actions (B3.2)

The MR and PD both state that no potential negative impacts on biodiversity outside of the project zone would resulting from project activities; the project contributes to the conservation of the biodiversity and ecosystem. No actual impacts were observed during the site visit and/or reported during the monitoring period. Refer to 4.6.1 and 4.6.3 of this report for detail assessment.

4.6.10 Net Offsite Biodiversity Benefits (B3.3)

Net biodiversity impacts from a project that protects habitat within a project area is unlikely to be anything but neutral.

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

The PP carried out the biodiversity monitoring as per established biodiversity monitoring plan in the validated PD^{/PD/}.

To validate the biodiversity monitoring results during this monitoring period, the verification team take stepwise verification as following,

- a. Check the dates, frequency and method as per PD

As designed in the validated PD^{/PD/}, the monitoring parameters reflect the actual changes of biodiversity were measured and monitored by survey variables for biodiversity during this monitoring period as stated in the MR.

During this monitoring period, the project owner established a monitoring team including all the 105 technicians conducting biodiversity survey affected by the project, all technicians have performed biodiversity monitoring during the monthly forestland inspection to record the discovery of any biodiversity including both flora and fauna^{/BMS/}. This has been confirmed by site interview with the monitoring team member^{/I3/}. Then the biodiversity monitoring spreadsheets filled by the technicians^{/BMS/} were summarized yearly to report to Guizhou Xinzhanxin project manager, and by considering these records, the conclusion on biodiversity was obtained from a field survey conducted by the academy of social sciences of Guizhou province for two months, finally the biodiversity survey report^{/BSR/} completed by Guizhou province academy of social sciences based on the monitoring results by monitoring team and their field survey.

As per the frequency defined in the PD, the monitoring should be conducted during each verification for some State variables and once every year for some State variables, Pressure and Response variables, the monitoring team conducted site survey from start date of this monitoring period since Jan. 2021, thus it is verified that the monitoring frequency is in line with the validated PD design^{/PD/}.

b. Check the monitoring results

Via checking the biodiversity survey report^{/BSR/} completed by Guizhou province academy of social sciences based on the monitoring results^{/BMS/} by monitoring team, it is verified that the monitoring approach used for investigation is as per the design defined in the PD^{/PD/}. Fixed sample plots have been set to monitor the species of vegetation and animal population associated with forest which were the same as the sample plots set for monitoring of climate.

The sample plots are confirmed as fixed for the whole project lifetime for monitoring the change of the biodiversity which is considered as reasonable and appropriate.

Via comparing the information in the biodiversity survey report^{/BSR/}, it is verified that monitoring results listed in the MR is correct and actual.

c. Evaluation of monitoring

The monitoring procedures and approaches during this monitoring period were carried out as listed in the PD, via checking the results, it is verified that PP established a series of procedures including organizing monitoring team, training, preparation, determination of the sample plots and survey. The sub procedures are verified as capable to finish this monitoring, which is confirmed by interview with the monitoring team member^{/I3/} and based on the experience of the monitoring team.

By checking the information in the biodiversity survey report^{/BSR/} and biodiversity monitoring spreadsheets filled by the technicians^{/BMS/}, it is confirmed that the monitoring indicators are confirmed as consistent with the net positive change which created by the project.

Three indicator types which covering PRS (Pressure, State, and Response) scope have been listed.

For the State variables, forest cover, Species of vegetation and Animal population associated with forest has been monitored before every verification.

Forest cover is 23,720 ha which has been determined by checking the kml file of the project planting area.

For Species of vegetation, besides the 4 successfully grew species of the trees to establish an artificial forest, it is verified that there were many crops, arbor, herb, shrub, bushes and grasses growing around the planted trees which has significantly increased the plant cover during this monitoring period and a total of 4 species of plants were discovered and their quantities were written in the bracket as follows: Arachniodes pseudoaristata (45 plants), Houpoea officinalis (28 plants), Gardenia jasminoides (18 plants) and Funaria

hygrometrica (390mm²), this is verified by on-site inspection to the sample plots and observation of the sample plots in project area and checking the biodiversity survey report for this monitoring period issued by Guizhou province academy of social sciences^{/BSR/}.

For Animal population associated with forest, via checking the biodiversity survey report for this monitoring period issued by Guizhou province academy of social sciences^{/BSR/}, it is verified that there are total of 5 species of animals were found, including *Enicurus scouleri* (the number is 6), *Syrnaticus reevesii* (the number is 4), *Garrulax canorus* (the number is 2), *Pieris rapae* (the number is 7) and Toad (the number is 11). The traces of each species were different, which could prove the increase of animals during this monitoring period, and this is also verified by on-site inspection to the sample plots and remote observation of the project area.

For the Pressure variables, the risk to the project and the harmful impacts to biodiversity, indicators of fire, insects and disease has been monitored annually through examined by the forest rangers and confirmed by local Forest Bureau. Via site inspection and interview with the officer from Forest Bureau, it is verified that no fires occurred, and effected forest area suffered insects and disease are none^{/BMSI,/WLI/} in this monitoring period.

For the Response variables, forest area under control, recovered from control and trees re-planted have been monitored to reflect the project interventions relevant to biodiversity in this monitoring period. These have been monitored annually through examined by the forest rangers and confirmed by local Forest Bureau. Via site inspection and interview with the officer from Forest Bureau, it is verified that 23,720 ha forest area are under prevention control from fires, insects and diseases. And none of forest area recovered from fire, insects or diseases which has been verified by checking the biodiversity survey report^{/BSR/} and Records by forest technician^{/BMSI,/WLI/} and confirmed by local Forest Bureau.

During the on-site verification, the verification team investigated the sample spots and measured the vegetation to confirm the PP monitoring results, through comparing the both results, it is verified that the values are almost same.

Based on above evaluation from the biodiversity monitoring, it is verified that the monitoring results reflect the actual biodiversity impact from each species affected by the project. It is confirmed that based on the survey results, the forest cover has been created since the 1st monitoring period and the area size was keeping in this monitoring period. The population density of wild animals fluctuated within a certain extent and the number of vegetation populations is on the rise. And there is no fires and insects and disease risks occurred during this monitoring period and the area size of the forest under prevention control from fires and insects and diseases is not changed since 1st monitoring period. Hence, it is confirmed that no risks impact the biodiversity in the project area and no situation of forest area recovered and trees re-planted occurred during this monitoring period, thus it is verified that the biodiversity impacts are positive from the project and ecological conditions of the entire region have been improved. Thus it is concluded that the biodiversity monitoring during this monitoring period was carried out in accordance to the validated project description.

CAR 14 was raised and successfully closed. Refer to Appendix 3 for details.

4.6.12 Biodiversity Monitoring Plan Dissemination (B4.3)

The biodiversity monitoring results, biodiversity monitoring plan have been made publicly available on the VCS and CCB website, which can be confirmed by checking the corresponding webpage.

In addition, hard copies of the biodiversity monitoring plan and biodiversity monitoring manual have been distributed among local stakeholders by PP and local government, also all the technician explained how the project was monitored, which is confirmed and verified by interview with the local stakeholders.

Furthermore, the project implementer published biodiversity monitoring plan and biodiversity monitoring manual on the local notice boards to explain the monitoring process to communities and other stakeholders which has been verified by checking the photo of the communities and stakeholders watching^{/RVAR/} and seen by verification team during site inspection.

Finally, meeting with stakeholder had been carried out during site verification. During the meeting, project implementer introduced the biodiversity monitoring results during this monitoring period and copies of biodiversity monitoring results is available to anyone requests it. Verification team has participated and the results are also verified by checking the meeting minute and questionnaires filled by stakeholders^{/VSM/}.

In conclusion, the results of biodiversity monitoring were disseminated in accordance with the validated project description.

CL 13 was raised and successfully closed. Refer to Appendix 3 for details.

4.6.13 Optional Gold Level: Trigger Species Population Trends (GL3.3)

N/A

4.6.14 Optional Gold Level: Effectiveness of Threat Reduction Actions (GL3.4)

N/A

4.7 Additional Project Implementation Information

No additional project implementation is relevant for reporting here as details on project implementation are included in preceding sections.

4.8 Additional Project Impact Information

The project has been able to demonstrate impacts to all CCB indicators as mentioned throughout this report; no further steps to verify additional monitoring were warranted. The reported project impact information was sufficient and suitable for the verification of the project's CCB impacts.

5. VERIFICATION CONCLUSION

Search Co2 (Shanghai) Environmental Science & Technology Co. Ltd. has commissioned the TÜV NORD JI/CDM Certification Program to carry out the Verified Carbon Standard (VCS) joint with Climate, Community & Biodiversity (CCB) 3rd periodic verification of the project activity Liangdu Afforestation Project in China, VCS reference No. 2083, for the period 01-January-2021 to 31-December-2021, with regard to the relevant requirements for VCS and CCBS.

Based on the documented evidence and corroborated by an on-site assessment, TÜV NORD can confirm that:

- the project has been implemented and operated as per the validated PD;
- the project description is in compliance with the PD following the CCB Version 3.1 and VCS standards 4.3.
- the monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable VCS and CCB requirement;
- the monitoring is in place as per the applied baseline and monitoring methodology;
- the monitoring complies with the monitoring plan in the validated PD;
- the monitoring plan in the validated PD is as per the applied baseline and monitoring methodology.
- the project complies with the verification criteria for projects set out in the Third Edition of the CCB Standards.

The GHG removals by sink were calculated correctly on the basis of the approved monitoring methodology AR-ACM0003 “Afforestation and reforestation of lands except wetlands”, version 02.0 and the monitoring plan in the validated PD. Hence it is certified that the GHG removals by sink from the project during the monitoring period amount as follows:

Monitoring period: From 01-January-2021 to 31-December-2021

The total GHG removals by sink being claimed for vintage periods and total this monitoring period account as follows:

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
01-January-2021 to 31-December-2021	0	308,429	0	308,429
Total	0	308,429	0	308,429

For the total Monitoring period 01-January-2021 to 31-December-2021: the value is gross of the 10% (30,843 tCO₂e) buffer withholding based on the non-permanence risk assessment tool. This results in 277,586 tCO₂e equivalent of credits eligible for issuance as VCU.

Beijing, 08-October-2022

Fany Zhao

Zhao Xuejiao

TÜV NORD JI/CDM Certification Program

Validation Team Leader

Hanover, 10-October-2022

Alexandra Nuske

TÜV NORD JI/CDM Certification Program

Final Approval

APPENDIX 1: ABBREVIATIONS

Abbreviations	Full texts
ARR	Afforestation, Reforestation and Revegetation
AFOLU	Agriculture, Forestry and Other Land Use
BAU	Business as usual
CAR	Corrective Action Request
CCB	Climate, Community & Biodiversity
CCBA	Climate, Community & Biodiversity Association
CDM	Clean Development Mechanism
CL	Clarification Request
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
CP	Certification Program // Crediting Period
DNA	Designated National Authority
EB	CDM Executive Board
ER	Emission Reductions
ETS	Emission Trading Scheme
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GMO	Genetically modified organism
GS	Gold Standard
HCVs	High Conservation Values
IFM	Improved Forest Management
IPCC	Intergovernmental Panel on Climate Change
JNR	Jurisdictional and Nested REDD+
MP	Monitoring plan
MR	Monitoring Report
NDRC	National Development and Reform Commission
NPRA	Non-Permanence Risk Analysis
PD	Project Description
PP	Project Participant
PRA	Participatory Rural Appraisal
QC/QA	Quality control/Quality assurance
REDD	Reduced Emissions from Deforestation and Degradation
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard
VCSA	Verified Carbon Standard Association
VCU	Verified Carbon Unit
VVB	Validation/Verification Body

APPENDIX 2: DOCUMENTS REVIEWED OR REFERENCED

No.	Author	Reference	Title	References to the document	Provider
1.	Liupanshui City Forest Bureau	/AAPP/	Approval of afforestation project plan	Approval of afforestation project design approved by Liupanshui City Forest Bureau on 18/01/2015 for year 2015 Approval of afforestation project design approved by Liupanshui City Forest Bureau 22/02/2016 for year 2016 Approval of afforestation project design approved by Liupanshui City Forest Bureau 20/01/2017 for year 2017	PP
2.	Quality and Technical Supervision Bureau in Guizhou Province	/AEC/	Allometric equations of <i>Cypress</i>	DB52/T 773_2012 < The binary standing tree volume table of Cypresses >	PP
3.	Quality and Technical Supervision Bureau in Guizhou Province	/AECF/	Allometric equations of <i>China fir</i>	DB52/T 702_2011 < The binary standing tree volume table of Chinese Fir>	PP
4.	Quality and Technical Supervision Bureau in Guizhou Province	/AEM/	Allometric equations of <i>Masson pine</i>	DB52/T 703_2011 < The binary standing tree volume table of Pinus Massoniana plantation>	PP
5.	Quality and Technical Supervision Bureau in Guizhou Province	/AEP/	Allometric equations of <i>Pinus yunnanensis</i>	DB52/T 763_2012 < The binary standing tree volume table of Pinus yunnanensis >	PP
6.	Certified Public Accountants	/AFR/	Annual Financial Reports	Annual Financial Reports in 2021 for Guizhou Xinzhanxin Agricultural Technology Co., Ltd. and Timing Carbon Asset Management Co., Ltd.	PP
7.	UNFCCC	/ARM/	Afforestation and reforestation Methodology	AR-ACM0003 "Afforestation and reforestation of lands except wetlands", version 2.0.0	UNFCCC website
8.	Guizhou Provincial Academy of Social Sciences	/BDS/	Biodiversity baseline Survey Report	Biodiversity Baseline Survey Report issued by Guizhou Provincial Academy of Social Sciences in Feb. 2015	PP
9.	Local Administration	/BL/	Business License	Business License of all the participants of the project	PP

	for Industry and Commerce				
10.	Guizhou Provincial Academy of Social Sciences	/BLS/	Baseline Survey Report	Baseline Survey Report issued by Guizhou Provincial Academy of Social Sciences in Dec. 2014	PP
11.	Technicians	/BMS/	Biodiversity monitoring spreadsheets	Biodiversity monitoring spreadsheets filled by the technicians during monitoring survey for this monitoring period	PP
12.	Guizhou province academy of social sciences	/BSR/	Biodiversity survey report	Biodiversity survey report for this monitoring period issued by Guizhou province academy of social sciences dated 14-January-2022	PP
13.	NDRC	/CC/	Climate Change Index	The People's Republic of China Second National Communication on Climate Change, issued by NDRC, 2013	NDRC website
14.	CCBA	/CCBPR/	CCB Program Rules, version 3.1	https://verra.org/project/ccb-program/rules-requirements-and-guidance/	CCB website
15.	CCBA	/CCBS/	CCB Standard, version 3.1	https://verra.org/project/ccb-program/rules-requirements-and-guidance/	CCB website
16.	Guizhou Xinzhanxin Agricultural Technology Co., Ltd. and land owner (Village committee represent villagers)	/CCDA/	Carbon sink afforestation cooperation and development agreement	Carbon sink afforestation cooperation and development agreement signed between Guizhou Xinzhanxin Agricultural Technology Co., Ltd. and the village collective which had the ownership of forest land dated in Sep. 2014	PP
17.	Specific staff	/CGL/	Conflicts and grievances	Conflicts and grievances of local communities and individual villagers	PP
18.	County Bureau of land resources	/CLR/	Certification of land rights	Certification of land rights issued by County Bureau of land resources in 1 District and 2 Counties dated in Sep. 2014	PP
19.	Representatives of community groups	/CMQ/	Community Monitoring Questionnaires	100 valid questionnaires of Community Monitoring survey for this monitoring period	PP
20.	Technicians	/FSR/	Field Survey Records	Field survey records for carbon sink and biodiversity monitoring by monitoring team during January 2022	PP
21.	National Forest Bureau	/GCA/	Guidelines on carbon accounting and monitoring for	LY/T 2253-2014 <Guidelines on carbon accounting and monitoring for afforestation	Public Website

			afforestation project	project> issued by National Forest Bureau	
22.	Google	/GE/	Google Earth	Google Earth Map	Public software
23.	The State Council of China	/GGP/	Grain for Green Program	Grain for Green Program issued by the State Council of China	Public Website
24.	Guizhou Xinzhanxin Agricultural Technology Co., Ltd.	/IFMM/	Integrated Forest Management Manual	Integrated Forest Management Manual issued by Guizhou Xinzhanxin Agricultural Technology Co., Ltd.	PP
25.	International Union for Conservation of Nature	/IUCN/	International Union for Conservation of Nature	The IUCN Red List Categories and Criteria (version 3.1)	PP
26.	PP	/KML/	KML file of project area	KML file of project area submitted to VERRA	PP
27.	Project Owner	/LC/	Labor Contract	Labor Contract of technicians	PP
28.	PP	/LSCR/	Local stakeholder Consultation record	Local stakeholder Consultation record for meeting held on 19-October-2021	PP
29.	Local village committee in project area (landowner) and Project Owner	/LUA/	Land Use Agreement	Land Use Agreement signed by Local village committee in project area and Project proponent on 22-February-2015	PP
30.	Guizhou Forestry Investigation and Design Co., Ltd.	/MAP/	Map of project area	Map with land-use types and the boundaries of all the plots for identifying the project location and boundaries of the project	PP
31.	PP	/MM/	Monitoring Manual	Monitoring Manual created by PP in Jan. 2019	PP
32.	Timing Carbon Asset Management Co., Ltd.	/MR/	Monitoring report	3 rd periodic Monitoring report of "Liangdu Afforestation Project" Draft Version No. 01, dated 22-January-2022 Final Version No. 02, dated 05-October-2022	Timing Carbon Asset Management Co., Ltd.
33.	Timing Carbon Asset Management Co., Ltd.	/MRS/	Monitoring report Summary in Chinese version	3 rd periodic Monitoring report summary in Chinese version of "Liangdu Afforestation Project" Draft Version No. 01, dated 30-May-2021 Final Version No. 02, dated 15-September-2022	Timing Carbon Asset Management Co., Ltd.
34.	VCSA	/MRT/	Monitoring Report Template	CCB_VCS_Monitoring_Report_Template_CCBv3.0-VCSv3.4	VCS website

35.	Timing Carbon Asset Management Co., Ltd.	/NPRR/	Non-permanence risk report	Non-permanence risk report for this monitoring period, Version No. 01, dated 26-April-2022	Timing Carbon Asset Management Co., Ltd.
36.	VCSA	/NPRT/	AFOLU Non-Permanence Risk Tool, version 4.0	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website
37.	PP	/NVSM/	Letter of verification site meeting	Photo of notification posted on every 125 village notice boards before VVB site visit when the on-site verification began to arrange the auditor verification site meeting and invited local stakeholders representative	PP
38.	Project Owner	/PAY/	Periodical payroll	Periodical payroll to persons who planted trees and all the technicians	PP
39.	Timing Carbon Asset Management Co., Ltd.	/PD/	Project Description	Approved Project Description of "Liangdu Afforestation Project" (Version No. 03, dated 08/07/2020)	Timing Carbon Asset Management Co., Ltd.
40.	Guizhou Forestry Investigation and Design Co., Ltd.	/PDAO/	Project Design for Afforestation Operation	Afforestation Project Design Report for project activity issued by Guizhou Forestry Investigation and Design Co., Ltd. for year 2015 on 09/01/2015 Afforestation Project Design Report for project activity issued by Guizhou Forestry Investigation and Design Co., Ltd. for year 2016 on 20/01/2016 Afforestation Project Design Report for project activity issued by Guizhou Forestry Investigation and Design Co., Ltd. for year 2017 on 10/01/2017	PP
41.	VCSA&CCBA	/PDP/	Project Development Process	"VCS+CCB Project Development Process" (version 3.0)	VCS website
42.	Guizhou Forestry Investigation and Design Co., Ltd.	/PL/	Project Lifetime evidence	Project Lifetime evidence issued by Guizhou Forestry Investigation and Design Co., Ltd.	PP
43.	Devices Manufacturer	/PQ/	Products Qualification	Products qualification for all the measuring devices	PP
44.	Guizhou Provincial	/PRA/	Participatory Rural Appraisal	Participatory Rural Appraisal (PRA) report of the project issued by Guizhou Provincial	PP

	Academy of Social Sciences			Academy of Social Sciences on 24/02/2015	
45.	Local stakeholders	/QUE/	Questionnaires in PRA	Filled Questionnaires during PRA Process	PP
46.	Timing Carbon Asset Management Co., Ltd.	/RCS/	Risk Calculation Sheet	Risk Calculation Sheet for this monitoring period, Version No. 01, dated 26-April-2022	Timing Carbon Asset Management Co., Ltd.
47.	Local committees and farmers	/ROR/	Receipts of reception	Receipts of carbon profit share reception	PP
48.	PP	/RVAR/	Routine villager assembly record	Photos of routine villager assembly for access to the monitoring records for each of the 125 villages of the 2 districts and 1 city	PP
49.	Liupanshui Forest Bureau	/SDPA/	Standard deviation for project area	Standard deviation of the existing data related to the project area issued by the Liupanshui Forest Bureau based on the results of years of forestry surveys	PP
50.	Local Forest Bureau and local Garden nursery company	/SPC/	Seedling Purchase Contract	Seedling Purchase Contract signed between Local Forest Bureau and local Garden nursery company dated in 2015, 2016 and 2017	PP
51.	Timing Carbon Asset Management Co., Ltd.	/SPCS/	Sample plots calculation sheet	Sample plots calculation sheet	Timing Carbon Asset Management Co., Ltd.
52.	Timing Carbon Asset Management Co., Ltd.	/SPI/	Sampling plots inventory	PP Sampling plots inventory of 39 samples	Timing Carbon Asset Management Co., Ltd.
53.	Zhang Huahai	/SRE/	Study on Rare and Endangered Plant Species Resources in Guizhou	Study on Rare and Endangered Plant Species Resources in Guizhou [Resources and utilization] Zhang Huahai, 1001-4705(2009) 04-0063-05	PP
54.	Timing Carbon Asset Management Co., Ltd.	/SSSR/	Sampling plots selection records	Sampling plots selection records proved that the sampling plots are selected randomly by excel function	Timing Carbon Asset Management Co., Ltd.
55.	UNFCCC	/TAE/	Methodological tool	Demonstrating appropriateness of allometric equations for estimation of aboveground tree biomass in A/R CDM project activities (Version 01.0)	UNFCCC website

56.	UNFCCC	/TEC/	Methodological tool	Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities, version 04.2	UNFCCC website
57.	UNFCCC	/TEI/	Methodological tool	Estimation of the increase in GHG emissions attributable to displacement of pre-project agricultural activities in A/R CDM project activity, version 02.0	UNFCCC website
58.	Ministry of environmental protection	/TGMB/	Technical guidelines for biodiversity monitoring—terrestrial vascular plants	HJ 710.1-2014 “Technical guidelines for biodiversity monitoring—terrestrial vascular plants” issued by Ministry of environmental protection	Public Website
59.	UNFCCC	/TNSP/	Methodological tool	Calculation of the number of sample plots for measurements within A/R CDM project activities, Version 02.1.0	UNFCCC website
60.	Project Owner	/TTR/	Technical Training Record	Training records of carbon, community, biodiversity monitoring trainings for the project monitoring by explaining the monitoring plan and measurement method to technicians on 10-October-2021	PP
61.	CTI	/VAL/	Validation report	Approved Validation report of “Liangdu Afforestation Project” (Version No. 02, dated 08/07/2020)	VCS website
62.	VCSA	/VCSPD/	VCS Program Definitions, Version 4.2	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website
63.	VCSA	/VCSPG/	VCS Program Guide, Version 4.2	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website
64.	VCSA	/VCSS/	VCS Standard, Version 4.3	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website
65.	CTI	/VER/	Verification report	Verification report for previous periodical verifications https://registry.verra.org/app/projectDetail/CCB/2083	VCS website
66.	VCSA	/VRT/	Verification Report Template	CCB_VCS_Verification_Report_Template_CCBv3.0_VCSv3.4	VCS website
67.	PP	/VSM/	Verification Site Meeting Records	Verification Site meeting/interview Records including interview minute and questionnaires filled by stakeholders	PP
68.	Technicians	/WL/	Working log	Working log recorded by the technicians which including the	PP

				forest management work record, stakeholder consultation process and results	
69.	Timing Carbon Asset Management Co., Ltd.	/XLS/	Net anthropogenic GHG removals by sinks calculation spreadsheets	Net anthropogenic GHG removals by sinks calculation spreadsheets of "Liangdu Afforestation Project" for this monitoring period with vintage year Version No. 01, dated 26-April-2022	Timing Carbon Asset Management Co., Ltd.
70.	China Certified Emission Reduction Exchange Info-platform	/ccer/	China Certified Emission Reduction	http://cdm.ccchina.org.cn/ccer.aspx	Website
71.	Gold Standard Organization	/gs/	Gold Standard	http://www.goldstandard.org/	Website
72.	IPCC	/ipcc/	IPCC publications	www.ipcc-nggip.iges.or.jp	Website
73.	National Government	/law/	Laws related to forestry	<PRC Forest Law>, <PRC Forest Law Implementing Regulations>, <PRC Wildlife Protection Law>, <Forest Fire Prevention Regulations>, <Insect Control Regulation>, <PRC Production Safety Law>	Website
74.	Standing Committee of the National People's Congress of China	/llc/	Labor Law	Labor Law of the People's Republic of China	National public website
75.	National System	/neci/	National Enterprise Credit Information Publicity System	National Enterprise Credit Information Publicity System	National public website
76.	National Government	/regu/	Administrative regulations related to forestry	<Regulations for Implementing the Forest Law>, the <Regulations for Grain for Green>, the <Regulations for the Protection of Wild Plants and Animals>, the <Regulation for Nature Reserve>, the <Regulation for Forest Fire Control>, and the <Regulation for Forest Diseases and Pests Control>	National public website
77.	UNFCCC	/unfccc/	UNFCCC	http://cdm.unfccc.int	Website

78.	VCS	/vcs/	VCS	http://www.v-c-s.org/	Website
79.	Local government	/whr/	Local Weather	http://www.gzlps.gov.cn/	Website

APPENDIX 3: CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS AND FORWARD ACTION REQUESTS

Table 1. Remaining FAR from validation and/or previous verification

FAR ID	N/A	Section no.	-	Date :	-
Description of FAR					
Project participant response					Date :
Documentation provided by project participant					
☐	Changes in the MR	Section(s):		New version No.:	
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:				
DOE assessment					Date:
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☐ The finding is closed			

Table 2. CL from this validation

CL ID	01	Section no.	2.2.1	Date :	09/05/2022
Description of CL					
The key dates and milestones after the draft MR finished are not listed in the schedule table.					
Project participant response					Date : 04/07/2022
The dates for MR GSC and on-site verification have been made complete and shown as 25-March-2022 to 24-April-2022 and 15-April-2022 to 17-April-2022 respectively.					
Documentation provided by project participant					
☒	Changes in the MR	Section(s): 2.2.1		New version No.: 02	
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:	/CMQ/			
DOE assessment					Date: 31/08/2022
The revised MR is checked, it is confirmed that key dates and milestones after the draft MR finished have been provided accordingly which is verified as actual and correct.					
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CL ID	02	Section no.	2.2.6	Date :	09/05/2022
Description of CL					
1. The information given in the column of "Potential impact of risk on climate, community and/or biodiversity benefits" is not clarified with the related impacts. 2. Human-induced risks are not clarified.					
Project participant response					Date : 04/07/2022

1. Related impacts have been rephrased as: For disease and insects, it is stated that diseases and insects can damage leaves, crowns and stems, which may further reduce tree growth. The community's environment may be affected by the declined tree quality once the number of dead woods and trees goes up. In addition, some harmful insects may extend their population and cause extensive damage to project forests, which means, to certain degree, the plantation diversity can be affected accordingly. No diseases or insects occurred during the monitoring period. For pesticide, it is stated as: the drinking water of the community may be contaminated due to the use of pesticide. Additionally, the use of pesticides can reduce biodiversity in the ecosystem because it may destroy habitat of certain species and do damage to the food chain.

2. For human-induced risks: it has been specified as three aspects: namely the number of direct participants decreased, greenhouse gases generated by human and human-induced environment-related crime. Relevant mitigation actions have been in place to eliminate these potential risks.

Documentation provided by project participant

☒	Changes in the MR	Section(s): 2.2.6	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☐	Other:	/WL/	

DOE assessment

Date: 31/08/2022

1. The revised MR is checked, it is confirmed that the information has been changed to be the related impacts and confirmed as correct and actual.

2. The revised MR is checked, it is confirmed that the Human-induced risks are clarified.

Refer to section 4.3.2 of this report for detail assessment.

Conclusion

Tick the appropriate checkbox

- ☐ Additional action should be taken (finding remains open)
- ☒ The finding is closed

CL ID	03	Section no.	2.3.1	Date : 09/05/2022
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Description of CL

The actual information of stakeholder access to project documents process is not specified.

Project participant response

Date : 04/07/2022

The stakeholder access to project document process is specified as: the project registered documents have been published on VCS and CCB website (<https://www.vcsprojectdatabase.org/#/ccb-pipeline>) as well as with the project summary in Chinese version, so that the local communities and other stakeholders can easily download from the website. The project periodic development has been published on the notice board of 125 villages involved in the project, including PD, monitoring manual and monitoring plan, at the same time, the contact persons' information was also announced. If there is any negative feedback, a meeting will be immediately held in the village. Since the beginning of the project, there is no feedback being received.

Documentation provided by project participant

☒	Changes in the MR	Section(s): 2.3.1	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☒	Other:	/RVAR/	

DOE assessment

Date: 31/08/2022

The revised MR is checked, it is confirmed that the time and location of the MR published to local stakeholders is added. The project implementer published the monitoring plan and monitoring manual on the local notice boards to explain the monitoring process to communities and other stakeholders which has been verified by checking the photo of the communities and stakeholders watching^{/RVAR/}. The actual information of MR GSC in the CCB and VCS website is added, the monitoring results, monitoring plan and summary of the monitoring plan in local language, have been made publicly available on the CCB website (<https://registry.verra.org/app/projectDetail/CCB/2083>), which can be downloaded by stakeholders. The actual information of the auditor site verification stakeholders' meeting is added, during the on-site verification, stakeholder meeting with the villagers, local officers, technicians and stakeholders have been carried out from 15-April-2022 to 17-April-2022.

Refer to section 4.3.4 of this report for details assessment.

Conclusion

Tick the appropriate checkbox

- ☐ Additional action should be taken (finding remains open)
- ☒ The finding is closed

CL ID	04	Section no.	2.3.2	Date	09/05/2022
Description of CL					
Actual information of dissemination of Summary Project Documents is not clarified in 2.3.2.					
Project participant response					Date
					04/07/2022
The dissemination of Summary Project Documents is clarified as: After the project was registered, a brief project progress including project location, project registration date, expected annual emission reduction, monitoring period and expected verification date have already been posted for stakeholders. With the implementation of the project, the project verification documentation has already been made available on the VCS and CCB websites from 25-March-2022 to 24-April-2022 for all stakeholders to obtain detailed project information and progress verification. In addition, the Chinese version of monitoring reports, summaries, monitoring manuals and other relevant documents during this monitoring have been posted on the village bulletin board by the contact person of each village committee in January 2022, so that villagers can keep abreast of the project					
Documentation provided by project participant					
☒	Changes in the MR	Section(s): 2.3.2		New version No.: 02	
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:				
DOE assessment					Date:
					31/08/2022
The revised MR is checked, it is confirmed that the actual information of dissemination of Summary Project Documents added into the section 2.3.2. Refer to section 4.3.4 of this report for details assessment.					
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CL ID	05	Section no.	2.3.3	Date	09/05/2022
Description of CL					
1. Actual situation of Informational Meetings with Stakeholders is not correctly clarified in 2.3.3. 2. The impacted local villagers are not identified as per section 4 of the MR. 3. The 100 participants are not divided by different categories. 4. Why the questionnaires only distributed to 100 stakeholders need to be clarified.					
Project participant response					Date
					04/07/2022
1. The actual information concerning the meeting is specified as During this monitoring period on 19-October-2021, 65 villagers, village committee, forestry bureaus and government representatives from 54 villages were organized by the project proponent and the Forestry Bureau of Liupanshui to attend the stakeholders' meeting at the Forestry Bureau of Liupanshui City, in order to prepare for the project verification and collect the views of stakeholders before the project verification. The meeting site, meeting time and the meeting agenda have been made known to the meeting participants via the notice of meeting posted on the bulletin of the involved 54 villages. The meeting introduced the registration of the project, the plan of the verification work and how to collect and summarize the data. To assess the effectiveness of the meeting, attendance and agenda are two important metrics in the informational meetings. The full attendance of each meeting indicates that stakeholders put large share of value on the project. As for agenda, special attention has been paid to the number of topics discussed during the meeting to avoid unnecessary time added to each meeting. After the meeting, it is shown that 65 villagers agreed to continue to support the project and to cooperate fully with the verification efforts. 2. The stakeholder group in this project is defined as 15,200 villagers who own forest land tenure of this project and 105 technicians. In this light, there are 15,305 stakeholders in total. Because of the large number of stakeholders involved in this project, it was not possible to reach out everyone, so a targeted survey was used. As per the community monitoring plan, the two methods are employed namely the stakeholder meeting and the questionnaire-based survey. 3. The justification for 100 stakeholders has been specified in the footnote as the number of stakeholders involved in these 71 villages was 10,714, accounting for about 70% and a total of 100 people filled out the questionnaires. Due to the scattered project locations, the project owner selected villages that involved the largest number of stakeholders. The number is calculated based on random sampling method, refer to Section 4.3.1 for more information.					
Documentation provided by project participant					

☒	Changes in the MR	Section(s): 2.3.3	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☐	Other:	/CMQ/, /LSCR/	
DOE assessment			Date: 31/08/2022
1. The revised MR is checked, it is confirmed that the actual situation of Informational Meetings with Stakeholders added into the section 2.3.3 which is verified as actual by checking the meeting record^{/LSCR/}. 2. The revised MR is checked, it is confirmed that the impacted local villagers are identified as consistent with the section 4 of MR. 3. The revised MR is checked, it is confirmed that the 100 participants have been divided by different categories which is verified as correct by checking the questionnaires^{/CMQ/}. 4. The revised MR is checked, it is confirmed that the reason has been clarified accordingly. Refer to section 4.3.4 of this report for details assessment.			
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CL ID	06	Section no.	2.3.4	Date : 09/05/2022
Description of CL				
The detail information of community costs, risks, and benefits is not clarified completely.				
Project participant response				Date : 04/07/2022
Missing information of community costs, risks, and benefits has been made complete. It is shown that after the carbon credits from the first monitoring period were issued on 09-December-2020, villagers who own forest land tenure of this project received their share of the benefits, thus increasing the incomes of villagers and communities. In addition, the preparation work for the second verification is well underway. The carbon profit from the second monitoring period will be issued once it is issued. In addition, for technicians, each gets a monthly salary of CNY 200. Lastly, all the payments are made to the due group based on the Carbon Sink Project Cooperation Agreement.				
Documentation provided by project participant				
☒	Changes in the MR	Section(s): 2.3.5	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☒	Other:	/ROR/		
DOE assessment				Date: 31/08/2022
The revised MR is checked, it is confirmed that the detail information of community costs, risks, and benefits is clarified completely. Refer to section 4.3.4 of this report for details assessment.				
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed		

CL ID	07	Section no.	2.3.5	Date : 09/05/2022
Description of CL				
The detail information to stakeholder on verification process is not clarified.				
Project participant response				Date : 04/07/2022
The information is specified as The progress of project implementation has also been informed to all stakeholders through village committee meetings, technicians and bulletin boards, which can be summarized as follows: 1) the registration of the project was completed on 31-July-2020; 2) the carbon credit of the first monitoring period was issued on 30-November-2021 and 3) the second monitoring period actual quantity of issuance is 237,423 tCO₂e and the issue date is 30-November-2021. 60% of profit gained from the first-phase issuance has been distributed to all village committees and farmers who owned the forest land tenure of this project. 3) The preparation work for the second project verification and the issuance of the carbon credits from the second monitoring period is well underway and the carbon profit that is due to villagers who own forest land tenure of the project will be paid.				
Documentation provided by project participant				
☒	Changes in the MR	Section(s): 2.3.5	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☒	Other:	/NVSM/, /VSM/, /RVAR/		

DOE assessment		Date: 31/08/2022
The revised MR is checked, it is confirmed that the actual information to stakeholder on verification process is specified. During the on-site verification, stakeholder meetings with the villagers, local officers, technicians and stakeholders have been carried out through face-to-face interview and by filling the questionnaires prepared by auditor to collect their comments if any. By on-site checking the photo^{/RVAR/}, it is confirmed by the verification team that the monitoring plan and monitoring manual were published in the notice boards for each of the 125 villages of the 2 districts and 1 city before the site visit time. And by checking the photo of notification posted on every 125 village notice boards^{/NVSM/} and on-site observation, it is verified that the local villagers received notification and the importance of inviting the local stakeholder comments have been considered. During the meeting, project implementer introduced the monitoring results during this monitoring period and copies of monitoring report is available to anyone requests it. Verification team has participated and interview the stakeholders separately to access their real thought of the project, and the results are also verified by checking the meeting minute and questionnaires filled by stakeholders^{/VSM/}.		
Conclusion <i>Tick the appropriate checkbox</i>	☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CL ID	08	Section no.	2.3.6	Date : 09/05/2022
Description of CL				
The information of Site Visit and Opportunities to Communicate with Auditor is not clarified.				
Project participant response				Date : 04/07/2022
The information concerning the on-site visit and communication has been made complete as The auditor conducted surveys on site plots and project forests from 15-April-2022 to 17-April-2022. The project proponent organized stakeholder meetings with auditors' on-site participation in Forestry Bureau of Panzhou City on 15-April-2022, Forestry Bureau of Shuicheng District on 16-April-2022 and Liuzhi Special District on 17-April-2022 respectively. Technicians, villagers who own forest land tenure of this project, representatives from Forestry Bureau, county government, and project leader of Timing Carbon Asset Management Co., Ltd. and Guizhou Xinzhanxin Agricultural Technology Co., Ltd. to verify the project status. All the participants expressed their feelings and experiences to the auditor about the project. Auditor also asked the stakeholder representatives whether the implementation of the project had a significant impact on their lives and whether they had any complaints. The stakeholder representatives paid more attention to about how to quantify the amount of emission reduction produced by trees. They raised relevant questions on how the emission reduction was calculated and how the height and diameter of trees were measured. The project proponent and auditor provided detailed answers to stakeholder representatives for all the questions. After the meeting, the auditor interviewed each participant separately and asked for their opinions and suggestions. The stakeholder representatives have all expressed the willingness to continue to participate in the project, not only because of the employment opportunities that have been created for local rural communities but also the increasing incomes and improved living conditions. Officials also demonstrated their support for the project implementation.				
Documentation provided by project participant				
☒	Changes in the MR	Section(s): 2.3.6	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☐	Other:	/NVSM/, /VSM/		
DOE assessment				Date: 31/08/2022

The revised MR is checked, it is confirmed that the actual information of the Site Visit and Opportunities to Communicate with Auditor is added. During the on-site verification, stakeholder meetings with the villagers, local officers, technicians and stakeholders have been carried out from 15-April-2022 to 17-April-2022 through face-to-face interview and by filling the questionnaires prepared by auditor to collect their comments if any. By on-site checking the photo^{/RVAR/}, it is confirmed by the verification team that the monitoring plan and monitoring manual were published in the notice boards for each of the 125 villages of the 2 districts and 1 city before the site visit time. And by checking the photo of notification posted on every 125 village notice boards^{/NVSM/} and on-site observation, it is verified that the local villagers received notification and the importance of inviting the local stakeholder comments have been considered. During the meeting, project implementer introduced the monitoring results during this monitoring period and copies of monitoring report is available to anyone requests it. Verification team has participated and interview the stakeholders separately to access their real thought of the project, and the results are also verified by checking the meeting minute and questionnaires filled by stakeholders^{/VSM/}.

Conclusion

Tick the appropriate checkbox

- ☐ Additional action should be taken (finding remains open)
☒ The finding is closed

CL ID	09	Section no.	2.3.13	Date :	09/05/2022
Description of CL					
1. The number of technicians who conducted field measurement work is not consistent in this section. 2. The exact training contents is not clarified clearly.					
Project participant response					Date :
1. These 105 technicians which were consist of 40 technicians conducting field measurement and 65 technicians conducting community surveys were the core of the entire monitoring team in the project during this monitoring period. 2. The training is mainly in the aspects of physical safety, health and monitoring technology, such as measure tree height and DBH, etc. The training is to provide orientation and training for the project's technicians. These technicians are all from the villages where the project is located. They are very familiar with the local villagers and the natural environment, and also have the ability to learn the knowledge of forest monitoring, so they represent local capacity.					
Documentation provided by project participant					
☒	Changes in the MR	Section(s):	2.3.13	New version No.:	02
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:	/CMQ/			
DOE assessment					Date:
1. The revised MR is checked, it is confirmed that the numbers have been provided consistently. 2. The revised MR is checked, it is confirmed that the exact training contents have been clarified clearly. Refer to section 4.3.59 of this report for details assessment.					
Conclusion					
<i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CL ID	10	Section no.	2.5.1	Date :	09/05/2022
Description of CL					
If the ownership of the forest land of the Project changed or impacted for this monitoring period is not clarified.					
Project participant response					Date :
During the monitoring period, the trees were growing well, and the ownership of the trees remained unchanged. The actual implementation for this monitoring period does not impact the recognition of property rights. Therefore, the village committees and villagers who own the forest land tenure of this project received the carbon credit profits for the previous monitoring periods paid by Guizhou Xinzhanxin. Guizhou Xinzhanxin will keep on completing the work of this monitoring period in accordance with the contract to ensure that the villagers who owned the forest land tenure of this project can receive the payment on time					
Documentation provided by project participant					
☒	Changes in the MR	Section(s):	2.5.1	New version No.:	02

☐	Changes in XLS	Worksheet(s):	New version No.:
☐	Other:		
DOE assessment			Date: 31/08/2022
The revised MR is checked, during this verification, via interview with the local farmers ^{/13/} , it is confirmed that there was no changed of the land property right, with the growing of the trees, the project lands are still collective-owned by local villages.			
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CL ID	11	Section no.	4.1.2	Date :	09/05/2022	
Description of CL						
The negative community impact mitigation measures prepared by PP is not clarified.						
Project participant response					Date :	04/07/2022
In order to mitigate the negative well-being impact on community groups, the project proponent has established a problem-solving mechanism and provided a variety of ways for communities to report problems, including setting up an exclusive liaison in each village, make sure the opinion books are in place in the village committee and telephone numbers of project leaders readily available. In these ways, the problems and negative well-being impacts of community groups can be smoothly and timely reported to the project proponent. Once the project proponent is informed of these problems, the project leader will be designated to conduct thorough investigation at the place where the problems occur and solve these negative effects.						
Documentation provided by project participant						
☒	Changes in the MR	Section(s):	4.1.2	New version No.:	02	
☐	Changes in XLS	Worksheet(s):		New version No.:		
☒	Other:					
DOE assessment					Date: 31/08/2022	
The revised MR is checked, it is confirmed the information is added.						
As per the validated PD ^{/PD/} and confirmed by the project implementer ^{/11/} , local residents ^{/13/} and technicians ^{/13/} during the interview, the project does not generate negative impacts on communities and are not expected given the nature of the project.						
But PP still established a problem-solving mechanism and provided a variety of ways for communities to report problems which has been confirmed by site interview with local stakeholders and PP has promised to conduct thorough investigation at the place where the problems occur and solve these negative effects if received the comments.						
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed				

CL ID	12	Section no.	4.1.3	Date :	09/05/2022	
Description of CL						
The actual information of net positive community well-being is not completely clarified.						
Project participant response					Date :	04/07/2022
60% of profit gained from the previous monitoring periods have been distributed to all village committees and villagers who owned the forest land tenure of this project.						
Documentation provided by project participant						
☒	Changes in the MR	Section(s):	4.1.3	New version No.:	02	
☐	Changes in XLS	Worksheet(s):		New version No.:		
☒	Other:	/ROR/				
DOE assessment					Date: 31/08/2022	
The revised MR is checked, it is confirmed the information is added accordingly.						
Refer to section 4.5.3 of this report for detail assessment.						
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed				

CL ID	13	Section no.	5.3.2	Date :	09/05/2022
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Description of CL			
The actual information of biodiversity monitoring plan dissemination is not completely clarified.			
Project participant response			Date : 04/07/2022
It is clarified as Monitoring report has been posed for public comments and the public comment period runs from 27-January-2022 to 27-February-2022. Meanwhile, the summary of monitoring plans and monitoring results (Simplified Chinese version) has been prepared and posted on bulletin boards of all project-related villages by project proponents. The monitoring report and summary have been published on the VERRA website, and villagers understood the progress of the project. The project manager also communicated with the local villagers in an effective manner during the publicity, and the technician also have explained how the project was monitoring, how to collect data, and how to record the patrol inspection to villagers.			
Documentation provided by project participant			
☒	Changes in the MR	Section(s): 5.3.2	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☒	Other:	/RVAR/,/VSM/	
DOE assessment			Date: 31/08/2022
The revised MR is checked, it is confirmed the information is added accordingly. Refer to section 4.6.12 of this report for detail assessment.			
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

Table 2. CAR from this validation

CAR ID	01	Section no.	1.1	Date : 09/05/2022
Description of CAR				
It is observed that most of the benefits listed are not the actual achievements during this 3 rd monitoring period and accurate figures are missing. Revision is requested.				
Project participant response				Date : 04/07/2022
For impact 1, the actual achievement is revised as During the monitoring period, because of the continuous and healthy growth of 23,720 hectares of trees, the air quality and soil environment gradually improved. Except for the project area, the rest of the land in the project zone has witnessed improved soil quality. Therefore, by planting some cash crops, additional income can be brought to villagers for them to improve the living conditions. For impact 2, it is revised as during the monitoring period, there are 9 species found in the project area, which include 5 species of animals and 4 species of plants. This result is the manifestation of achievements since the implementation of this project help boost biodiversity by providing animals and plants with the ideal habitat.				
Documentation provided by project participant				
☒	Changes in the MR	Section(s): 1.1	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☐	Other:			
DOE assessment				Date: 31/08/2022
The revised MR is checked, it is confirmed that the description is added, actual benefits for this monitoring period have been provided in section 1.1 which is verified as consistent with detail information of section 3, 4 and 5 of MR as assessed in Section 4 of this report.				
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed		

CAR ID	02	Section no.	1.2	Date : 09/05/2022
Description of CAR				

1. The net estimated emission removals in the project area achieved during the project lifetime is not divided by different monitoring periods. 2. The Number of hectares of forest cover increased in the project area measured against the without-project scenario in 2 nd and 3 rd MP is listed as 0 ha, but it is not clear that the value is comparing with baseline or 1 st monitoring period. 3. Why the 105 long-term technicians is hired as part time work is not clarified.			
Project participant response			Date : 04/07/2022
1. Achievements during the Project Lifetime: The emission reductions is the first monitoring period (01-January-2016 to 31-December-2019) plus the second monitoring period (01-January-2020 to 31-December-2020) plus the third monitoring period (01-January 2021 to 31-December-2021). The equation is shown as: 968,837 tCO ₂ e=422,985 tCO ₂ e+237,423tCO ₂ e+308,429 tCO ₂ e. 2. Compared to the first monitoring period, the forest cover during the second and the third monitoring period is 0 ha. 3. Number of part-time tree planting workers and full-time forest monitoring technician employed. The temporary planting period of the project is from 28-April-2015 to 15-October-2017. Temporary planting is not involved in this monitoring period			
Documentation provided by project participant			
☒	Changes in the MR	Section(s): 1.2	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☐	Other:	/BSR/, /LC/, /PAY/	
DOE assessment			Date: 31/08/2022
1. The revised MR is checked, it is confirmed that the net estimated emission removals in the project area achieved during the project lifetime is has been divided by different monitoring period. 2. The revised MR is checked, it is confirmed that the Number of hectares of forest cover increased for this monitoring period is 0 ha with clarification of comparing with the 1 st monitoring period. 3. The revised MR is checked, it is confirmed that the long-term part time technicians have been specified which is verified as correct by checking the labor contracts ^{/LC/} and payroll ^{/PAY/} and confirmed by site interview with technicians.			
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CAR ID	03	Section no.	2.1.1	Date : 09/05/2022
Description of CAR				
1. The scientific name of all the tree species need to be provided in MR at least once. 2. The average annual GHG emission reduction since the project start verification is not provided.				
Project participant response				Date : 04/07/2022
1. The scientific names for China fir, Masson pine, Cypressess are provided as Cunninghamia lanceolata and Cupressus funebris Endl., Pinus massoniana Lamb respectively. 2. The GHG emissions reduction generated are 308,429 tCO ₂ e from 01-January-2021 to 31-December-2021, with an annual average GHG emission reduction of 145,253 tCO ₂ e from the first verification.				
Documentation provided by project participant				
☒	Changes in the MR	Section(s): 2.1.1	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☐	Other:			
DOE assessment				Date: 31/08/2022
1. The revised MR is checked, it is confirmed that the scientific name and local name of all the tree species have been added which is verified as correct. 2. The revised MR is checked, it is confirmed that the value is provided and confirmed as correctly calculated based on the previous verification reports ^{/VER/} .				
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed		

CAR ID	04	Section no.	2.1.6	Date : 09/05/2022
Description of CAR				

PP stated that project crediting period is 29 years from 01-January-2016 to 31-December-2044 which is not started since the trees planted, the clarification for how to deduct the carbon sinks value from 28-April-2015 to 31-December-2015 is missing.			
Project participant response			Date : 04/07/2022
The clarification has been made as due to the special requirements of the buyer of the project on the generation time of the project emission reduction, the emission reduction from 28-April-2015 to 31-December-2015 has been determined to be abandoned in the project registration stage. Therefore, the crediting period of the registered PD is from 01-January-2016 to 31-December-2044. In the project verification stage, according to the conservative principle, from the first monitoring period, the emission reduction calculated in MR is the total emission reduction generated by the project minus the emission reduction generated from 28-April-2015 to 31-December-2015. The emission reductions from 28-April-2015 to 31-December-2015 are 14,244 tCO ₂ which is calculated based on the height and DBH of the trees in the project measured in January 2016. The specific calculation is reflected in the ER table for the 1 st , 2 nd and 3 rd monitoring periods.			
Documentation provided by project participant			
☒	Changes in the MR	Section(s): 2.1.6	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☐	Other:		
DOE assessment			Date: 31/08/2022
The revised MR is checked, it is confirmed that the clarification has been added. Via checking the validation report ^{/VAL/} and PD ^{/PD/} , it is confirmed that the start date of project is defined as 28-April-2015 and the crediting period start date is determined as 01-January-2016 which is later than the start date. Via checking the VCS standard V4.3 ^{/VCS/} and VCS Program Definitions, v4.2 ^{/VCS PD/} , it is confirmed that the crediting period is the time period for which GHG emission reductions or removals generated by the project are eligible for issuance as VCUs, hence it is reasonable that the crediting period start date is later than the start date and this reason is clarified by PP as the business consideration. Furthermore, via checking the corresponding ER sheet for 3 rd monitoring period, it is verified that the GHG emission reductions or removals generated from 28-April-2015 to 31-December-2015 has been deducted from the total GHG emission reductions or removals generated during the 1 st , 2 nd and 3 rd monitoring period then derived the final value of GHG emission reductions or removals for the 3 rd monitoring period which is verified as correct.			
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CAR ID	05	Section no.	2.1.8	Date : 09/05/2022
Description of CAR				
The tool of 'Calculation of the number of sample plots for measurements within A/R CDM project activities' (Version 02.1.0) is missing in section 2.1.8.				
Project participant response				Date : 04/07/2022
The tool of 'Calculation of the number of sample plots for measurements within A/R CDM project activities' (Version 02.1.0) is added accordingly.				
Documentation provided by project participant				
☒	Changes in the MR	Section(s): 2.1.8	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☒	Other:			
DOE assessment				Date: 31/08/2022
The revised MR is checked, it is confirmed that the tool has been added which is in line with the registered PD.				
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed		

CAR ID	06	Section no.	2.3.14	Date : 09/05/2022
Description of CAR				

1. The type of community employment opportunities provided for this monitoring period is not specified.			
2. If any change of 105 persons comparing with last monitoring period is not clarified.			
Project participant response			Date : 04/07/2022
1. 105 locals were employed for project management as technicians for both project management and monitoring survey, is long-term technicians, with 52% of women and they were regularly trained in relevant skills.			
2. These 105 technicians have been working from the second monitoring period to the third monitoring period. So, there are no new technicians involved.			
Documentation provided by project participant			
☒	Changes in the MR	Section(s): 2.3.14	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☒	Other:	/LC/, /PAY/	
DOE assessment			Date: 31/08/2022
1. The revised MR is checked, it is confirmed that the type of community employment opportunities has been elaborated for this monitoring period which is verified as correct by checking the labor contracts ^{/LC/} .			
2. The revised MR is checked, it is confirmed that the 105 long-term technicians are involved in this monitoring period is same to the 105 in the 2 nd monitoring period which is verified as correct by checking the labor contracts ^{/LC/} and payroll ^{/PAY/} .			
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CAR ID	07	Section no.	2.4.4	Date : 09/05/2022
Description of CAR				
The evidence of the implementing organization is financial healthy to operate the project during this monitoring period is not provided.				
Project participant response				Date : 04/07/2022
The evidence of the implementing organization is financial healthy to operate the project during this monitoring period is provided as required.				
Documentation provided by project participant				
☒	Changes in the MR	Section(s): 2.4.4	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☒	Other:	/AFR/		
DOE assessment				Date: 31/08/2022
The revised MR is checked, via checking the Annual Financial Reports in 2021 provided by Guizhou Xinzhanxin Agricultural Technology Co., Ltd. and Timing Carbon Asset Management Co., Ltd. ^{/AFR/} and checking the public website of Shell Energy (China) Ltd ^{/necil/} , it is concluded that both parties are financial healthy and the companies have conducted financial audit annually and the results are no financial issues.				
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed		

CAR ID	08	Section no.	3.1.1&3.1.2	Date : 09/05/2022
Description of CAR				
1. For parameter t_{VAL} (for calculation of n), it is stated in the MR that this parameter was not included in the registered PD, which is not correct as this is listed in PD.				
2. For parameters $V_{TREE,j}$ and $V_{TREE,l,p,j,i}$, it is observed that the value for ID-P4 is not consistent with the ER sheet.				
Project participant response				Date : 04/07/2022
1. For parameter t_{VAL} , this is used to calculate sample plots.				
2. After double checking, the value for ID-P4 should be provided as 1.68601.				
Documentation provided by project participant				
☒	Changes in the MR	Section(s): 3.1.1&3.1.2	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	

☐	Other:	
DOE assessment		Date: 31/08/2022
1. The revised MR is checked, it is confirmed that the related description has been deleted and updated accordingly which is verified in line with the PD. 2. The revised MR is checked, it is confirmed that the related value has been updated to be consistent with the ER sheet.		
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed

CAR ID	09	Section no.	3.2.2	Date : 09/05/2022
Description of CAR				
For calculation of ΔC_{TREE} , PP stated that for this monitoring, $C_{TREE,t1}$ means carbon stock in trees as estimated from 01-January-2016 to 31-December-2021. $C_{TREE,t2}$ means carbon stock in trees as estimated from 01-January-2016 to 31-December-2020, however, the project did not start planting on 01-January-2016, revision is requested.				
Project participant response				Date : 04/07/2022
The justification for this is: the 968,837 is cumulative from 01-January-2016 and the value of 14,244 tonnes generated from 28 -April -2015 to 31-December -2015 is already deducted in the ER. And the special requirement from the project buyer has also been specified in the footnote of Section 2.1.6.				
Documentation provided by project participant				
☒	Changes in the MR	Section(s): 3.2.2	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☐	Other:	/FSR/		
DOE assessment				Date: 31/08/2022
The revised MR is checked, it is confirmed that the time are all corrected accordingly and confirmed as the actual time for this monitoring period by checking the Field Survey Records ^{/FSR/} .				
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed		

CAR ID	10	Section no.	3.2.4	Date : 09/05/2022
Description of CAR				
The calculation result of leakage for this monitoring period is missing.				
Project participant response				Date : 04/07/2022
The leakage emission is accounted as zero in this monitoring period. According to the Tool 15 "Estimation of the increase in GHG emissions attributable to displacement of pre-project agricultural activities in A/R CDM project activity", v2.0, Section 6, Paragraph 10 of the tool refers to the leakage emissions caused by the displacement of grazing activities are considered insignificant in some conditions, and hence accounted as zero. However, for the project, the baseline situation is barren land suitable for afforestation, which means there is no vegetation. In addition, the karst area is unsuitable for grazing, so the project does not involve grazing. Since there is no grazing, the condition of relocation of livestock from within the project area to outside the project area does not exist. Therefore, the leakage due to grazing mentioned in Tool 15 (a) Animals are displaced to existing grazing land and the total number of animals in the receiving grazing land (displaced and existing) does not exceed the carrying capacity of the grazing land; (b) Animals are displaced to existing non-grazing grassland and the total number of animals displaced does not exceed the carrying capacity of the receiving grassland; (c) Animals are displaced to cropland that has been abandoned within the last five years; (d) Animals are displaced to forested lands, and no clearance of trees, or decrease in crown cover of trees and shrubs, occurs due to the displaced animals; (e) Animals are displaced to zero-grazing system is not applicable.				
Documentation provided by project participant				
☒	Changes in the MR	Section(s): 3.2.4	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☐	Other:			
DOE assessment				Date: 31/08/2022

The revised MR is checked, it is confirmed that the calculation process and result of leakage for this monitoring period have been added.
Refer to section 4.4.1 of this report for detail assessment of the leakage.

Conclusion

Tick the appropriate checkbox

- ☐ Additional action should be taken (finding remains open)
☒ The finding is closed

CAR ID	11	Section no.	4.1.1	Date :	09/05/2022
Description of CAR					
The actual impacts, Benefit/Cost/Risk and Change in Well-being is not elaborated related to this monitoring period, revision is requested.					
Project participant response					Date :
The actual impacts, Benefit/Cost/Risk and Change in Well-being is now elaborated. For villagers, they can gain 1. improved living environment; 2. Increased household income; 3. Improvement of forest management and protection. For Village committees in project area, the following benefits can be achieved: 1.the increased opportunities for communication and increased income without going out to work; 2. Improved the working methods of the villagers, and increased income without going out to work. At the same time, women's job opportunities, income and social status have increased. For Forestry Bureaus of 2 district and 1 city, they can: 1. Achieve goals in afforestation, 2. promote forest management and protection 3. Improve public awareness of protecting local ecological environment. For Governments of 2 districts and 1 city in Liupanshui City, they can 1.Improve the local ecological living environment (in terms of government responsibilities for society); 2. Improve people's living level (in terms of government responsibilities for society); 3. Promote forest management and protection; 4. Improve the public awareness of protecting local ecological environment. These impacts are positive and has been supported by the justifications made in the section of change in well-being.					
Documentation provided by project participant					
☒	Changes in the MR	Section(s): 4.1.1		New version No.: 02	
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:				
DOE assessment					Date:
The revised MR is checked, it is confirmed that all the identified community groups have been added into the MR and the impacts, Benefit/Cost/Risk and Change in Well-being to all the groups were monitored and actual information of this monitoring period is added. Refer to section 4.5.1 and 4.5.6 for the detail assessment.					
Conclusion					
<i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CAR ID	12	Section no.	4.3.1	Date :	09/05/2022
Description of CAR					
1. The stakeholder meeting information is not provided. 2. The actual information during this monitoring period is not specified in the description. 3. The key variables are monitored for this monitoring period did not cover all the impacts to the identified community groups in section 4.1.1.					
Project participant response					Date :
					04/07/2022

1. The information has been provided as During this monitoring period, the project community was evaluated through stakeholder meeting in 54 villages and questionnaire-based survey in 71 villages. Due to the fact that these 71 villages accounted for the bulk of all stakeholders, sampling questionnaire-based survey was conducted. However, since the population of stakeholders is too large to study in its entirety, the random sampling method is employed to be representative of the general situation.
2. There are 100 questionnaires in total. Among the questionnaires, 92 of them have been distributed to villagers who own forest land tenure of the project, 4 of them have been handed out to village committees and the rest 4 to officers from the Government of 2 districts 1 city in Liupanshui City.
3. The key variables has now made complete to be consistent with the identified community group in Section 4.1.1 and the 7 variables can be briefly summarized as: 1) The change of living environment includes local villagers and the government. 2) The change of living conditions includes Governments of 2 district and 1 city. 3) The variable increased the collective communication of the village can include village committees in project area. 4) The variable-- promote forest management and protection can include local villagers, forestry bureaus and governments. 5) The public awareness of protecting local ecological environment can include governments and forestry bureaus. 6) Households' income can include local villagers. 7) Achievement of goals in afforestation can include forestry bureaus. Besides, the justification has been specified in the column of results of monitoring.

Documentation provided by project participant

☒	Changes in the MR	Section(s): 4.3.1	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☐	Other:		

DOE assessment

Date: 31/08/2022

1. The revised MR is checked, it is confirmed that the information of stakeholder meeting has been added which is confirmed as correct and actual by checking the records^{/LSCR/}.
2. The revised MR is checked, it is confirmed that the actual information during this monitoring period has been specified. During this monitoring period, the project owner established a monitoring team including all the technicians conducting interviews with local communities affected by the project, this has been confirmed by site interview with the technicians^{/12/} and local stakeholders^{/13/}.
3. The revised MR is checked, it is verified that all key variables are monitored for this monitoring period have considered all the impacts to all the community groups which has been defined in section 4.1.1. Refer to section 4.5.6 for the detail assessment.

Conclusion

Tick the appropriate checkbox

- ☐ Additional action should be taken (finding remains open)
☒ The finding is closed

CAR ID	13	Section no.	5.1.1	Date :	09/05/2022
Description of CAR					
1. The monitoring results for this monitoring period are not provided in line with the evidence. 2. The photo of observed plants and animals is not provided in section 5.1.1.					
Project participant response					Date : 04/07/2022
1. For species of plants, 4 species of plants were discovered and their quantities were written in the bracket as follows: Arachniodes pseudoaristata (45 plants), Houpoa officinalis (28 plants), Gardenia jasminoides (18 plants) and Funaria hygrometrica (390mm²). For animals, 5 species of animals were discovered and their specific quantities were written in the bracket as follows: Enicurus scouleri (the number is 6), Syrmaticus reevesii (the number is 4), Garrulax canorus (the number is 2), Pieris rapae (the number is 7) and Toad (the number is 11). 2. The photos for observed animal and plant have been provided as required.					
Documentation provided by project participant					
☒	Changes in the MR	Section(s): 5.1.1	New version No.: 02		
☐	Changes in XLS	Worksheet(s):	New version No.:		
☒	Other:	/BSR/			
DOE assessment					Date: 31/08/2022

1. The revised MR is checked, it is confirmed that the results have been updated in line with biodiversity survey report ^{/BSR/} for this monitoring period.
2. The revised MR is checked, it is confirmed that the photos of observed plants and animals have been provided in section 5.1.1 which is verified as same to the actual results in biodiversity survey report ^{/BSR/} for this monitoring period.
Conclusion <i>Tick the appropriate checkbox</i> ☐ Additional action should be taken (finding remains open) ☒ The finding is closed

CAR ID	14	Section no.	5.3.1	Date :	09/05/2022
Description of CAR					
1. The monitoring results of vegetations and animals are not consistent with the evidence. 2. Monitored animals are not only birds for this monitoring period, revision is requested. 3. The monitoring survey period for state variables is not provided. 4. The names of the observed animals are missing. 5. The monitoring method conducted for this monitoring period is not provided in detail.					
Project participant response					Date : 04/07/2022
1. The survey showed that during this monitoring period, 5 species of animals were discovered and their specific quantities were written in the bracket as follows: Enicurus scouleri (the number is 6), Syrmaticus reevesii (the number is 4), Garrulax canorus (the number is 2), Pieris rapae (the number is 7) ,and Toad (the number is 11). Besides, 4 species of plants were discovered and their quantities were written in the bracket as follows: Arachniodes pseudoaristata (45 plants), Houpoea officinalis (28 plants), Gardenia jasminoides (18 plants) and Funaria hygrometrica (390mm ²). 2.The monitored animals during this monitoring period are Enicurus scouleri, Syrmaticus reevesii, Garrulax canorus, and Pieris rapae, ranging from birds to amphibians. 3. The monitoring survey period for state variables is provided as: The field survey conducted by Academy of Social Sciences of Guizhou started in January 2022, lasting for one and a half months. The biodiversity survey report for this monitoring period was completed on 22-February-2022. 4. The observed animals are Enicurus scouleri, Syrmaticus reevesii, Garrulax canorus, and Pieris rapae. 5. The monitoring method conducted for this monitoring period is now provided in detail and can be summarized as the monitoring of sample plots and record-keeping of forest rangers.					
Documentation provided by project participant					
☒	Changes in the MR	Section(s):	5 3.1	New version No.:	02
☐	Changes in XLS	Worksheet(s):		New version No.:	
☒	Other:	/BSR/			
DOE assessment					Date: 31/08/2022
1. The revised MR is checked, it is confirmed that the monitoring results of vegetations and animals are updated to be consistent with the biodiversity monitoring report ^{/BSR/} . 2. The revised MR is checked, it is confirmed that birds are deleted to represent the animals. 3. The revised MR is checked, it is confirmed that the monitoring survey period for state variables is added. 4. The revised MR is checked, it is confirmed that names of the observed animals are added consistent with the biodiversity monitoring report ^{/BSR/} . 5. The revised MR is checked, it is confirmed that monitoring survey method has been stated clearly. Refer to section 4.6.11 of this report for detail assessment.					
Conclusion <i>Tick the appropriate checkbox</i> ☐ Additional action should be taken (finding remains open) ☒ The finding is closed					

Table 4. FAR from this verification

FAR ID	N/A	Section no.	-	Date :	-
Description of FAR					
Project participant response					Date :

Documentation provided by project participant			
☐	Changes in the MR	Section(s):	New version No.:
☐	Changes in XLS	Worksheet(s):	New version No.:
☐	Other:		
DOE assessment			Date:
Conclusion <i>Tick the appropriate checkbox</i>		☐ will be checked in next periodical verification	