

VCS & CCB 3RD VERIFICATION REPORT FOR GUINAN AFFORESTATION PROJECT



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Summary

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

The project activity developed in Sandu county, Huishui county, Pingtang county, Luodian county, Longli county, Guiding county and Dushan county, Qiannan Buyi and Miao Autonomous Prefecture, Guizhou Province, P. R. China, is afforestation of barren land suitable for afforestation with a small number of poor growth and low survival rate trees in the absence of the project activity, by direct planting native trees (China fir, Masson pine and Pinus yunnanensis). 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 46,000 ha of forest. The project started planting on 23-March-2015 and GHG accounting period was chosen by PP started from 01-January-2016 and it was registered by VCS under Project ID 2070 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 by Shenzhen CTI International Certification Co., Ltd following the requirements specified in the latest version of the VCS Validation and Verification Manual and applying auditing techniques. CTI assessed the project activity's compliance against the VCS Standard 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 Standard Version 4.3,
- VCS Program Guide Version 4.2,
- AFOLU Non-Permanence Risk Tool Version 4.0,
- CCB Standards version 3.1,
- CCB Program Rules version 3.1
- CDM Methodology AR-ACM0003 version 2.0.0 – “Afforestation and reforestation of lands except wetlands”.

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

In the course of the verification, 9 Corrective Action Requests (CARs), 13 Clarification Requests (CLs) were raised and successfully closed. The assessment is included in the report.

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

There are no restrictions of uncertainty.

- **Summary of the verification conclusion.**

Shanghai Libra Investment & Management Co., Ltd has commissioned the Shenzhen CTI International Certification Co., Ltd to carry out the 3rd periodic verification under Verified Carbon Standard (VCS) joint with Climate, Community & Biodiversity (CCB) of the project, “Guinan Afforestation Project” (VCS&CCB

Ref. No. 2070) with regard to the relevant requirements of VCS Standard Version 4.3 and CCB Standards version 3.1.

CTI confirms all verification activities including objectives, scope and criteria, level of assurance, monitoring and monitoring report adhere to VCS Standard Version 4.3 and CCB Standards Version 3.1 and all associated updated as documented in this report, are complete.

In conclusion, CTI confirms that the project activity “Guinan Afforestation Project” in China, as described in the Monitoring Report, meets all relevant requirements for VCS and CCB verification activity and correctly applied the methodology AR-ACM0003 version 2.0.0. Hence CTI 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 **584,127 tCO₂e**.

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1. INTRODUCTION

1.1 Objective

Shanghai Libra Investment & Management Co., Ltd has commissioned the Shenzhen CTI International Certification Co., Ltd 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 VVB 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 Standard 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 VCUs.

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 CTI 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 46,000 ha and has generated average of 584,127 VCUs per year during this monitoring period, and therefore can be considered as a large project per the VCS rules for this monitoring period, in regards to its scale, 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 Guinan Afforestation Project is implemented by Guizhou Baiheng Fertiliser Co., Ltd and it aims in afforestation of barren land suitable for afforestation with a small number of poor growth and low survival rate trees. The total area of the Project has an extension of 46,000 hectares and it is located inside the

Sandu county, Huishui county, Pingtang county, Luodian county, Longli county, Guiding county and Dushan county, Qiannan Buyi and Miao Autonomous Prefecture, Guizhou Province, China.

The project zone consists of 7 counties (Sandu county, Huishui county, Pingtang county, Luodian county, Longli county, Guiding county and Dushan county) planted in different periods and three species have been chosen for the afforestation project: *China fir*, *Masson pine* and *Pinus yunnanensis*, all of them 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 land suitable for afforestation with a small number of poor growth and low survival rate 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 has been registered under the Verified Carbon Standard (VCS) and the Climate, Community and Biodiversity Standard (CCBS) with VCS&CCB Ref. No. 2070.

2. VERIFICATION PROCESS

2.1 Audit Team Composition (*Rules 4.3.1*)

Lead Auditor/VCS-CCB Validator: Lin Shunrong is qualified by CTI in Validation and Verification of Clean Development Mechanism Requirements (CDM projects) and other voluntary schemes as VCS, CCB and SD. She has experience with more than 100 validation and verification projects including CDM, VS and GS projects involved in renewal energy and agriculture sectors. She has a bachelor degree of Horticulture and master degree of International Agriculture Development. Furthermore, she has conducted more than 5 CDM projects in Guizhou Province and nearly 10 VCS&CCB AR project validation and or verification¹, 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 Review Expert: Yan Shun has Bachelor degree in Plant Protection, and work experience more than 20 years as a stationmaster in plant protection, cultivation, and agriculture technology extension station, qualified by CTI in Scope 14. Thus he has the relevant agriculture, forestry and or other land use experience in China due to education background and working experience. Furthermore, he has conducted nearly 10 VCS&CCB AR project validation and or verification², thus has the relevant social and cultural expertise in this region and also have relevant ecological and biodiversity experience due to the education background. He speaks mandarin which is the common language in China and the regional residents can speak and understand this language.

Technical Reviewer: Lin Wu is qualified by CTI in Validation and Verification of Clean Development Mechanism Requirements (CDM projects) and other voluntary schemes as VCS, CCB and SD. He has a master degree of chemistry and has experience with more than 100 validation and verification projects including CDM, VCS and GS projects involved in renewal energy, energy efficiency, chemical industry, biomass generation, waste handling, agriculture sector and environment management system audit. He has been trained under the scope 14 and CCB including the knowledges and audit skills of ecological, biodiversity and sustainable development, and has the relevant social and cultural expertise in this region due to working experience. He 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,

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)	IR	LIN	Shunrong	CTI	☒	☒	☒	☒

¹ VCS+CCB projects including project No. 2087, 2083, 2082, 2379, 2387, 2378, 2374, 2375, 2377, 2376.

² VCS+CCB projects including project No. 2087, 2083, 2082, 2379, 2387, 2378, 2374, 2375, 2377, 2376.

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	IR	Lin	Wu	CTI
2.	Technical expert for TR	OR	YAN	Shun	Xianfeng County Agricultural Technology Extension Station
3.	Approver	IR	ZHOU	Lu	CTI

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, v4.3/50/
- VCS Program Guide, v4.2/49/
- VCS Program Definitions, v4.2/48/
- VCS AFOLU Non-Permanence Risk Tool, v4.0/47/
- CCB Climate, Community & Biodiversity Standards/45/
- CCB Program Rules, v3.1/44/

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 method of the project consisted of the following steps:

- Contract review
- Appointment of team members and technical reviewers
- Publication of the VCS&CCB 3rd Monitoring Report (VCS&CCB MR)/1/
- A desk review of the VCS&CCB MR/1/ submitted by the client and additional supporting documents with the use of customised validation documents checklist
- Verification planning
- On-Site assessment
- Sample plots investigation and follow-up interviews with personnel of the project developer and local stakeholders
- Draft verification reporting
- Resolution of Corrective Action Requests (CARs) and Clarification Requests (CLs)

- Final verification reporting
- Technical review
- Final approval of the verification.

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 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: $x=\sqrt{y}$, 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 3. $X=\sqrt{3}=2$
- Stratum 3, number of plots y is 5. $X=\sqrt{5}=3$
- Stratum 4, number of plots y is 3. $X=\sqrt{3}=2$
- Stratum 5, number of plots y is 6. $X=\sqrt{6}=3$
- Stratum 6, 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 15 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 CTI verified that the calculation method used in the MR is correct and actual.

2.3 Document Review

The VCS&CCB MR/1/ and supporting background documents related to the project implementation and carbon sink, climate, community, biodiversity change monitoring were reviewed. Documents 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/I1/, local government officer/I2/, local residents/I3/ and Project VCS&CCB development consultant/I4/. The interviews were performed by the verification team on-site (within the project area, in Sandu county, Huishui county, Pingtang county, Luodian county, Longli county, Guiding county and Dushan county, Qiannan Buyi and Miao Autonomous Prefecture, 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/I1/	Wei	Guizhou Baiheng Fertiliser Co., Ltd/ Project Manager	06-June-2022~09-June-2022	-Chronological description of the project activity with documents of key steps of the implementation. -Technical details of the project realization, project designing, operational life time -Project Boundary -ER calculation - Monitoring arrangements -Carbon sink measurements -Crediting period -Project activity starting date -Ownership -local stakeholder consultation	Lin Shunrong
2.	Li/I2/	Jian	Huishui County Forestry Bureau/ Forest Section Staff	06-June-2022	-National legislation to forest - Provincial legislation to afforestation -Local forestry development	Lin Shunrong
3.	Gao/I2/	Haijun	Luodian County Forestry Bureau/ Forest Section Staff	07-June-2022	- Roles & responsibilities of the government -local communities changed by the project	
4.	Zhang/I2/	Chengming	Pingtang County Forestry Bureau/ Forest Section Staff	07-June-2022	-local biodiversity situation changed by the project -local climate -local environment changed by the project	
5.	Tian/I2/	De	Dushan County	08-June-2022		

			Forestry Bureau/ Forest Section Staff			
6.	Li/I2/	Junya	Sandu County Forestry Bureau/ Forest Section Staff	08-June-2022		
7.	Zhou /I2/	Juanhui	Guiding County Forestry Bureau/ Forest Section Staff	09-June-2022		
8.	Shu/I2/	Junya	Longli County Forestry Bureau/ Forest Section Staff	09-June-2022		
9.	Liu/I3/	Qin	Local Resident/ worker as forest technician	06-June-2022	-job opportunities -living condition -training -local stakeholder consultation -impact to local residents during this MP -impact to local environment during this MP -impact to local biodiversity during this MP	Lin Shunrong
10.	Zou/I3/	Qing	Local Resident	06-June-2022		
11.	Meng/I3/	Min	Local Resident	06-June-2022		
12.	Deng/I3/	Qinni	Local Resident	06-June-2022		
13.	Shi/I3/	Xuehui	Local Resident	06-June-2022		
14.	Lin /I3/	Xiang	Local Resident	06-June-2022		
15.	Xiao/I3/	Ting	Local Resident/ worker as forest technician	07-June-2022		
16.	Qin/I3/	Demei	Local Resident	07-June-2022		
17.	Zong/I3/	Xinfeng	Local Resident	07-June-2022		
18.	Zong/I3/	Xunjie	Local Resident	07-June-2022		
19.	Pan/I3/	Rui	Local Resident	07-June-2022		
20.	Li/I3/	Jie	Local Resident/	07-June-2022		

			worker as forest technician			
21.	Du/I3/	Fei	Local Resident	07-June-2022		
22.	Chen/I3/	Ya	Local Resident	07-June-2022		
23.	Xiong /I3/	Bei	Local Resident	07-June-2022		
24.	Bi /I3/	Zhuoyuan	Local Resident	08-June-2022		
25.	Meng/I3/	Qi	Local Resident	08-June-2022		
26.	Zheng/I3/	Yi	Local Resident	08-June-2022		
27.	Tang/I3/	Jiang	Local Resident	08-June-2022		
28.	Qiu/I3/	He	Local Resident/ worker as forest technician	08-June-2022		
29.	Zhou /I3/	Qinqing	Local Resident	08-June-2022		
30.	Gu/I3/	Wei	Local Resident/ worker as forest technician	08-June-2022		
31.	Hu/I3/	Ji	Local Resident	08-June-2022		
32.	Jiang/I3/	Xuanqi	Local Resident	08-June-2022		
33.	Tang/I3/	An	Local Resident	08-June-2022		
34.	Zhang /I3/	Hui	Local Resident	08-June-2022		
35.	Hu/I3/	Jia	Local Resident	08-June-2022		
36.	Zhou /I3/	Li	Local Resident/ worker as forest technician	09-June-2022		
37.	Qin/I3/	Qiwei	Local Resident	09-June-2022		
38.	Lin /I3/	Jun	Local Resident	09-June-2022		
39.	Ma/I3/	Guozhen	Local Resident	09-June-2022		

40.	Zhou/14/	Lingling	Shanghai Libra Investment & Managemen t Co., Ltd/ Technical Director	06-June- 2022~09- June-2022	-Financial aspects -Deviations -Monitoring period -Project activity starting date -Assumptions -Sampling plan and implementation -Monitoring measurements - Editorial issues of the VCS&CCB MR	Lin Shunrong
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2.5 Site Inspections

The objectives for on-site inspections are listed as below,

1. Verify if the project is implemented as per the design in the registered PD.

During site visit, by site inspection of sample plots, CTI confirmed that the project is implemented as per the design in the registered PD, strata has been correctly defined and no change of the project compared with previous verification.

2. Confirm if the the reported GHG emissions data during this monitoring period is reasonable based on the actual growth of the tree species.

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 CTI verified that the calculation method used in the MR is correct and actual and the reported GHG emissions data during this monitoring period is reasonable.

3. Interview with representatives from local stakeholders to verify if the impacts to the community groups during this monitoring period are actual and achieved.

As per the interview list as above section 2.4, CTI has interviewed the representatives from local stakeholders and verified that the impacts to community groups as listed in MR are actually achieved in this monitoring period.

The verification site inspection was conducted on 06-June-2022~09-June-2022. A ground inspection of the project area was conducted during the site visit and members of the verification team visited 15 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 15 sample plots are determined by the verification team by checking the map of the project location and PP sampling plots inventory/27/, details as following table,

Table 2-1 Locations for site inspection

Site Visit time	Area	Sample No.	Coordinates		Inspection Results
06-June-2022	Strata 1	ID3	E106°30'01"	N 25°53'46"	Refer to table 4-7 of this report for the measurement records
	Strata 1	ID5	E106°31'35"	N 25°51'12"	
	Strata 4	ID39-34	E106°38'00"	N 25°52'50"	

07-June-2022	Strata 6	ID11	E106°52'53"	N25°30'43"	conducted by verification team.
	Strata 1	ID14	E106°59'00"	N 25°46'36"	
	Strata 2	ID19	E107°15'21"	N25°49'29"	
08-June-2022	Strata 2	ID21	E107°20'21"	N25°49'01"	
	Strata 3	ID23	E107°27'32"	N25°47'25"	
	Strata 3	ID29	E107°41'01"	N 25°44'29"	
	Strata 5	ID25	E25°53'26"	N107°36'23"	
09-June-2022	Strata 5	ID36	E107°48'00"	N 25°58'21"	
	Strata 4	ID36-2	E107°49'37"	N 25°57'36"	
	Strata 3	ID39-11	E106°55'52"	N 26°07'18"	
	Strata 5	ID39	E107°07'33"	N 26°21'26"	
	Strata 6	ID42	E106°55'41"	N 26°26'46"	

There are total 6 project stratifications for carbon calculation in the 7 counties, the verification team visited targeted area for each project stratification, total 15 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 Standard 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 9 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 second periodical verification, via checking the 1st periodical verification report/71/, CTI verified that there is no FAR raised in the 2nd periodical verification report/71/.

2.7 Eligibility for Validation Activities

The VVB Shenzhen CTI International Certification Co., Ltd 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 was conducted by TUV NORD, 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*)

1. During the monitoring period, there is one project description deviation related to the change to project description were applied during this verification period which is same to the 1st and 2nd periodical verification/71/ as below details,

Via checking the PD section 2.1.8 and 2.1.9, CTI confirmed that the identified community groups of the project are Village Communities in 7 counties: (including 153,786 local villagers of which 34,500 are migrant rural workers and 20,700 are female rural workers), Forestry bureaus of 7 counties, Governments of 7 counties, Village committees in 7 counties. However, in the section 4.2.1 of PD, not all the community groups will be monitored.

In MR section 4.1.1, CTI verified that the Community Groups are identified as consistent with the PD section 2.1.8 and 2.1.9 including all the groups for actual monitoring, CTI confirmed that the PP has conducted monitoring for these community groups as assessed in section 4.5.1 and 4.5.6 of this report.

Thus, the Community Groups in MR section 4.1.1 is found not consistent with the section 4.2.1 of registered PD. By comparing the differences, CTI verified that the description in section 4.2.1 of registered PD is not the whole identified groups as stated in section 2.1.8 and 2.1.9 of the registered PD. In order to be more accurate and sufficient assess the impacts to all the communities, the MR descriptions are more complete and representative.

Furthermore, due to the update of section 4.1.1 of the MR, the related key variables are monitored for each identified group are also changed comparing with the community monitoring plan in section 4.4.1 of the registered PD. More variables added corresponding to the impacts to each of the community group. Thus CTI verified that the monitoring results in the MR is more complete and representative comparing with the plan in PD.

In conclusion, by comparing the value listed in section 4.1.1 of the MR against the approved PD, CTI confirmed that the description of this change is a not a significant change comparing with the approved PD, it is considered as a deviation and no validation for project description deviation is required according to CCB Rules 3.5.7.

In conclusion, CTI confirmed that identified stakeholders in the total area of the project area and project zone has not changed, thus no impact to the application of the methodology, additionality and the appropriateness of the baseline scenario during this monitoring period and thus no need to do re-validation of the this deviation change.

2. Besides, during the monitoring period, there is one project description deviation related to the change to project description were applied during this verification period which is same to the 2nd periodical verification/71/ as below details,

The project is described to take place on barren or degraded lands in PD and MR. However, the polygons on the KML file uploaded to the registry include land that is forested prior to the project start date. Hence, PP has provided the related description of deviation in the MR and VVB has assessed as below,

Via checking the Project Design for Afforestation Operation/9/ and on-site investigation, it is confirmed that in the absence of the project, some of the lands in project area were not totally barren lands, but with some poor growth and sparse forests which has been defined by local forest bureau as "barren land suitable for afforestation" according to the "Chinese terms in resource and technology" issued by China Science Publishing & Media Ltd/76/. Hence, the PD has defined the land as barren or degraded lands which is the suitable land for forest with number of trees planted. The description in PD is not accurate hence the deviation has been stated.

CTI has checked and assessed that the project area were suitable land for forest with small number of trees planted prior to the project start.

To verify this, below verification and assessments have been carried out by VVB:

- a) Via checking the google earth map of the project area prior to project start date, it is observed that there were some areas within project areas not barren but with trees shown in the map. VVB has contacted with Guizhou Forestry Survey and Design Co., Ltd. who conducted project design to confirm the baseline and project design and checking the Project Design for Afforestation Operation/9/, CTI verified that the original project design had not define some project areas with small number of trees planted as the non-barren areas. But the actual situation of some project areas with small number of trees planted has already been considered during the validation process and 1st verification process.
- b) Via checking the provisions of the appendix "afforestation density table of main tree species, afforestation zoning and table of main afforestation tree species" in the National Standard Afforestation Technical Regulations of the People's Republic of China/77/, CTI confirmed that the afforestation density of China fir, Masson pine and Pinus yunnanensis is usually 4,350-6,000 plant/ha in barren lands. While by checking the Project Design for Afforestation Operation/9/ and as stated in the PD, CTI confirmed that the designed planting density of the project is 3,100 plant/ha which is lower than the general density in the National Standard, via contacted with the Guizhou Forestry Survey and Design Co., Ltd., it is confirmed that they have considered the original trees in the project area prior to project start date.
- c) Furthermore, via checking the MR for 1st, 2nd and 3rd monitoring period, CTI confirmed that the actual afforestation density is 1,620 plant/ha due to location and survival rate of trees, and the monitoring marks of some trees (tree number signs) cannot be identified, which is defined based on the actual monitoring after the planting finished and without considering the original trees in the project area prior to the project start date which is much lower than the general density in the National Standard. Hence, CTI confirmed that original trees in the project area prior to the project start date is not accounted into the actual tree numbers of the project, thus it is verified that since the 1st monitoring period, the GHG sinks calculation is not over estimated.
- d) During the site visit in the verification process, CTI found that the tree species planted in the project are consistent with the original tree species existed prior to the project started, so the definition of carbon stratification designed in the PD is reasonable.
- e) Furthermore, via site visit checking the sampling plots, CTI confirmed that for the baseline carbon sinks calculation, to be conservative, most of the project area are suitable land for forest with very little grasses, brushed and number of poor growing trees, by considering the project did not impact the original number of poor growing trees, the original trees have been marked by local forest bureau and

PP which can be distinguished clearly from the trees planted in the project which has been verified by VVB during site visit, the related description provided in MR have been checked, VVB confirmed that obvious signs have been attached to the existing trees and trees actually planted in the project, which can ensure the distinguish of baseline and project scenario and then only the trees actually planted in the project was counted for monitoring. And based on above assessment, the afforestation density is 1,620 plant/ha is confirmed as reasonable by considering that the original trees are not included for GHG removals calculation.

- f) Therefore, based on the principle of cost-effectiveness, the calculation of the baseline stocks and GHG removals of these original trees were not considered since the 1st monitoring period.

In conclusion, by comparing the deviation description against the approved PD, CTI confirmed that the description of this change is a not a design change comparing with the approved PD, the difference is that the definition of "barren land suitable for afforestation" is not accurately used in the PD. Hence, it is considered as a deviation and no validation for this project description deviation is required according to CCB Rules 3.5.7.

In conclusion, CTI confirmed that the project design has not changed and the actual monitoring is conducted in the actual trees planted in the project and the original trees are not included for GHG removals calculation, thus no impact to the application of the methodology, additionality and the appropriateness of the baseline scenario during this monitoring period and thus no need to do re-validation of this deviation change.

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/1/ and Chinese (as is a summary document of the MR)/2/. Both the documents were made available on the CCB website (<https://registry.verra.org/app/projectDetail/CCB/2070>) for the public consultation period.

The public comment period was held from 25-April-2022 to 24-May-2022. No public comments were received for this project as confirmed by checking the above dedicated webpage.

4.2 Summary of Project Benefits

As per the information available in the MR/1/ against the project benefits as determined in the PD/7/ 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 continuous of employment and provide relevant training during this monitoring period (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 provides 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, enhance forest cover density, continuously provide employment, training and improve skills to community members thus improve their livelihood and well-being, and beneficial to biodiversity conservation and species.

By comparing the information given in the PD/7/, CTI 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. Refer to below related sections 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 CTI 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/7/ during this monitoring period. As confirmed during the on-site inspection, interviews, CTI verified that 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 46,000 ha with three species native trees (China fir, Masson pine and Pinus yunnanensis) 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; 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 is ex post determined as 6 which is consistent with the registered PD. And the total sample plots are calculated as 26. According to the tool "Calculation of the number of sample plots for measurements within A/R CDM project activities (Version 02.1.0)"/63/, the number of plots within each stratum is calculated and total is confirmed as 26. 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 strata 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. CTI 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, CTI 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.	The VVB has checked this criteria by reviewing all relevant registries including CDM/72/, GS/65/, China CER/78/ and other GHGs programs such as GCC/80/, IREC/79/ or subnational, various regional schemes and provincial/state-based schemes. Besides, due to all project areas involved in this project has unique identified GPS coordinates and has been listed in the submitted KML file, hence, it can't be counted in any other

	voluntary market or emission reduction mechanism. CTI confirmed that there is no potential risk of 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. Besides, based on validation team's local expertise, China has a cap & trade scheme only cover the high-emission industries, such as power generation sector that emitted at least 26,000 tons of CO₂e/year which has been verified in the public website/81/, and it is confirmed that the project activity is not included the mandatory emission control scheme and there is no emission cap enforced for the project owner by checking the enforced company list in public information/82/. In conclusion, CTI confirmed, applying above 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 and verification 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/65/, VCS/73/ and CDM/72/ project data base since validation.
Sustainable development contributions.	The project generates GHG emission removals by the afforestation of barren land suitable for afforestation with a small number of poor growth and low survival rate trees; it also generates social and environmental co-benefits as conservation of the biodiversity thus confirmed benefits the SDG 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 exhaustive list of all deviations or changes applied to the project).	This is the 3 rd periodic verification, and via checking the validation report/8/ and 1 st and 2 nd periodic verification report/71/, CTI verified that no previously validated methodology deviations and minor changes to the project description. And as per the 1 st and 2 nd periodic verification report/71/, CTI verified that there are project description deviations listed in both the MR and verification report/71/ and has also been specified in this verification report, refer to above section 3.3. of this report for details assessment.

	Hence CTI concluded that each verification report has contained an exhaustive list of all deviations or changes applied to the project.
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Based on above assessment, CTI concluded that the project has been implemented as described in the project description except the project description deviations related to the identified community groups of the project, related impacts to the groups and project area were suitable land for forest with small number of trees planted prior to the project start.

CAR 01, CAR 02, CAR 03, CAR 04 and CL 01, CL 02 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/7/.

Fire risk is considered low because planting area is mostly barren land suitable for afforestation with a small number of poor growth and low survival rate trees, 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/39/ 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 checking the patrolling working log recorded by technicians/30/ and on-site interview with local residents/13/, technicians/13/ and government officers/12/, CTI 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/39/. The biological measures to control pests and diseases will be mainly adopted. Via checking the patrolling working log recorded by technicians/30/ and on-site interview with local residents/13/, technicians/13/ and government officers/12/, CTI 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/39/. 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 checking the patrolling working log recorded by technicians/30/ and on-site interview with local residents/13/, technicians/13/ and government officers/12/, CTI verified that there was no significant 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/38/, 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, CTI confirmed that reasonable actions were in place and taken to mitigate risks to community and biodiversity benefits during this monitoring period.

CL 03 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/12/, the land use agreements with the land owner and project owner/14/, commercial logging will be forbidden/11/. The measures taken will extend many of the project benefits in the project lifetime.

By the on-site visit CTI 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 CTI 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 were 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/17/ and interview with local residents/13/.

Within the project area was made a Participatory Rural Appraisal (PRA) survey in Sep. 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/16/ provided during the site visit. Via checking the contents in the PRA, CTI 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, CTI 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, as identified in the PD and MR, the stakeholders including 34,500 villagers who own forest land tenure of this project and 105 technicians worked as long-term workers. These big size group of the stakeholder is the focus of attention during this monitoring period. To fully and comprehensively grasp the

impact exerted on the stakeholders from 245 villages, during this 3rd monitoring period, the project's potential costs, risks and benefits to communities with the project implementation has been explained to local stakeholders through three different ways which assessed as below:

Firstly, stakeholder meeting held on 21-October-2021 invited 90 stakeholders in 68 villages (via checking the map of the project zone, it is confirmed that 68 villages are geographically adjacent to each other, and the stakeholders of local villagers account for 16%, therefore, the stakeholder meeting was held as one of the means of stakeholder consultation is confirmed as reasonable). PP has posted notification of meeting including meeting site, meeting schedule and the meeting agenda on the bulletin boards of the involved 68 villages 10 days prior to the scheduled meeting date. Via on-site visiting the notice of meeting posted on the bulletin board in some villages and checking the photo of bulletin board with notice of meeting posted of these villages, VVB confirmed that the approaches are actual and reasonable for the local villagers as they access to the bulletin board easily and see the information of the village frequently. 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 1st monitoring period and the expected 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 1st has been distributed and 2nd verification issuance will be distributed to all village committees and villagers who owned the lands for afforestation. Via site interview with the representatives of local residents and checking the receipts of reception/20/, CTI verified that local residents have received the related money and they agreed with the share from the 1st and 2nd verification issuance.

Secondly, a questionnaires survey conducted in from October to November in 2021 covering 70 villages (the stakeholders of local villagers account for 70%) has been confirmed by checking the 100 filled questionnaires/33/ collected during this period and cross verified by on-site interview with the local stakeholders/12/,/13/, CTI verified 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.

Due to the 70 villages including higher proportion of the stakeholders, PP conducted questionnaire survey using a sampling method, details are stated as below,

There are 34,605 villagers are identified as the community group that impacted by project including 34,500 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 and payrolls. While there are 70% located in 70 villages, which includes 24,224 villagers, all the 24,224 villagers are located in 70 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 24,224 villagers.

As per the MR, a simple random sampling was drawn by the PP from the list of 24,224 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 04.0/84/).

Following "Sampling and Surveys for CDM Project Activities and Programme of Activities" version 09.0/83/ and "Guideline of Sampling and surveys for CDM project activities and programmes of activities" version 04.0/84/, the verifier checked the sampling results of PP with the following steps:

For determine the sample size, to verify the accuracy and correctness of sampling survey data, VVB has checked the sampling approach as per the "Guideline of Sampling and surveys for CDM project activities

and programmes of activities” version 04.0/84/, this simple random sampling approach found to be appropriate as the villagers are assumed as homogenous as per the identification in the registered PD.

Via checking the paragraph 12 of 2.1.1 section of the guideline, 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 farmers
- P Expected proportion, which is defined as 0.75 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 24,224 as determined of total number of farmers, P is determined as 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

$$1.645^2 \times 24,224 \times 0.75 \times (1-0.75) / \{ (24,224-1) \times 0.1^2 \times 0.75^2 + 1.645^2 \times 0.75 \times (1-0.75) \} = 90.$$

The sample size of the questionnaire survey considering the parameters is calculated in a conservative way, and the least number of the sample size is 90 as above calculation method according to the “Guideline of Sampling and surveys for CDM project activities and programmes of activities” version 04.0/84/. The sample size calculation process is verified by the VVB and confirmed as in line with the sampling guideline, thus the result is confirmed as correct and reasonable. Furthermore, to be conservative, PP has randomly selected 90 samples in 70 villages and 90 questionnaires were distributed to villagers and the rest 10 were distributed to representatives of governments, forestry bureaus and village committees respectively to conduct the community questionnaire survey.

Hence, based on above assessment, CTI is able to confirm that the sampling approach was consistent with the related requirements and 100 questionnaires are considered as reasonable level for conducting the community questionnaire survey.

Thirdly, PP posted questionnaires and feedback hotline telephone numbers on the bulletin boards of the rest 107 village committees (the stakeholders of local villagers account for 14%) and appointed a village official in each village to collect and summarize everyone's feedback and suggestions and PP summarized all the collected comments into the opinion statistical book/33/. Via checking the book, CTI verified that totally 160 stakeholders provided their feedbacks on the project and 100% of the villagers expressed their support for the project and believed that the project would bring benefits to the local environment and their own living standards.

In conclusion, through three ways, CTI confirmed that the stakeholders in all 245 villages have access to provide the comments to the project and there are 34,605 villagers are identified as the community group, and based on the above sampling method, if using 34,605 as the population number, the sample size n is calculated as

$$1.645^2 \times 34,605 \times 0.75 \times (1-0.75) / \{ (34,605-1) \times 0.1^2 \times 0.75^2 + 1.645^2 \times 0.75 \times (1-0.75) \} = 90$$

While the PP has collected total 350 people's comments through three ways, which is confirmed more than 90, thus verified that villages and village representatives directly involved in the engagement activities is sufficient representation of all stakeholders.

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/17/.

Next, the monitoring results, monitoring report and summary of the monitoring report in local language, have been made publicly available on the CCB website (<https://registry.verra.org/app/projectDetail/CCB/2070>), 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 each Forestry Bureau of 7 Counties from 06-June-2022 to 09-June-2022 respectively by interview with stakeholders and by filling the questionnaires prepared by auditor. By on-site checking the photo/17/, CTI confirmed by the verification team that the monitoring plan and monitoring manual were published in the notice boards for each of the 245 villages of the 7 counties before the site visit time. And by checking the letter issued by project owner to the local forest bureau/34/ and on-site observation, CTI verified that the local forest bureau received letter and considered the importance of inviting the local stakeholder comments. 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/18/. Via the interview results, CTI confirmed that all the stakeholder admitted that the implementation of the project had a positive impact on their lives and they had no complaints, while only several stakeholders raised relevant questions about how the emission reduction was calculated and how the height and diameter of trees were measured, both PP and auditor explained the answers to stakeholder representatives for all the questions and they finally confirmed they understand the process.

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

CL 04, CL 05, CL 06, CL 07, CL 08 and CL 09 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/16/ and related meeting questionnaires/19/. 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/19/ and by interview with

the representatives during site visit, CTI 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, CTI 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 through meeting minutes and questionnaires as stated above.

Furthermore, during this 3rd monitoring period, the stakeholder input on project implementation have been monitored through **three ways as assessed in above section by** in-person meetings and questionnaires survey conducted from October to November in 2021 **and posted questionnaires to collect the comments** which has been confirmed by checking the **meeting records**, 100 filled questionnaires **and opinion statistical book/33/** collected during survey period and cross verified by on-site interview with the local stakeholders/12/,13/.

PP has summarized all the collected results into a summary of survey results which including all the survey results in three ways, and the original raw data gathered from the surveys including meeting records, questionnaires and opinion book/33/ have been provided to VVB during site visit.

In addition, during the on-site verification, stakeholder meetings with the villagers, local officers, technicians and stakeholders have been carried out in each Forestry Bureau of 7 Counties from 06-June-2022 to 09-June-2022 by interview with stakeholders and by filling the questionnaires prepared by auditor. 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 the interview results, CTI confirmed that all the stakeholder admitted that the implementation of the project had a positive impact on their lives and they had no complaints, while only several stakeholders raised relevant questions about how the emission reduction was calculated and how the height and diameter of trees were measured, both PP and auditor explained the answers to stakeholder representatives for all the questions and they finally confirmed they understand the process.

Via checking all the documents, CTI 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, CTI 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/30/ 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, CTI confirmed that all consultation and participatory process have been undertaken directly with communities and other stakeholders through village notice boards and stakeholder meetings. Via checking 100 filled questionnaires/33/, it is confirmed that the representatives for all the identified community and community groups have been considered and invited which including four groups: farmers, technicians, government officials and village committee members, and at least 3 representatives in each community group, and by considering the farmers' number are large and impacted more, So the

least numbers of relevant representatives is 80, thus it is confirmed that PP has considered more than the least. And 100 representatives from local stakeholders filled the questionnaires whom covered different locations, different ages, different occupations and different education levels.

Also 38 representatives from local stakeholders participated in the verification process stakeholder interview. The sampling during on-site verification of interview with representatives from stakeholders is determined considering the accessibility and similitude of the areas, the COVID-19 epidemic status and the tool for sampling was referred by verification team for the site verification of interview.

The verification team reviewed the 100 filled questionnaires/33/ and crosschecked with the interview during the on-site period, including 38 random representatives from local stakeholders interview. The 38 representatives are derived from the 100 representatives from local stakeholders who filled the questionnaires in the PP community survey. As per the Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities, V09.0/74/ (hereafter referred to as the “sampling standard”), CTI has applied acceptance sampling to verify the results of the stakeholder survey conducted by PP. Using own professional judgement, it is assumed that the Acceptable Quality Level (AQL) is 1% and the Unacceptable Quality Level (UQL) is 20% for this project. The maximum error of producer’s risk is assumed at 5% and consumer’s risk is assumed at 10%, in compliance with the sampling standard/74/. Based on these assumptions, the verification team refers to the sampling standard and sampling guideline and found that sample size should be not less than 18 and acceptance number is 1. Hence before the on-site visit, CTI determined 29 as the sample size and randomly selected 29 representatives from the 100 representatives from local stakeholders and inform the PP to ask these persons to participate the communication with auditor. For the randomly selection of 19, a pre-randomized order of numbers ranging from 1-100 as calculated by Excel’s RAND() function was brought to the field and a farmer list prepared in the field. If for example, the first number is 5, then the name that was listed 5th on the filled questionnaires would be the one to be surveyed.

During on-site visit, 29 representatives (total sample size) were chosen by the verification team randomly to check the correctness of data in PP questionnaire survey that need to be determined. This considered to be a good practice. The 29 selected representatives are interviewed and site inspected by verification team. Via the information got during site interview and filling the information in the questionnaire provided by VVB, it is found that all information is consistent with the PP’s survey results. No discrepancy is found between the PP questionnaire records and the site interview results. As there are no discrepant records, i.e. the discrepant record is less than the acceptance number of 1, the community survey results are accepted as per “Sampling and Surveys for CDM Project Activities and Programme of Activities”/74/.

Hence, CTI 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/7/, 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/16/ and related meeting questionnaires/19/. 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/19/ and by interview with the representatives/12/,/13/ during site visit, CTI 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/19/ and by interview with the representatives/12/,13/ during site visit, CTI 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, CTI 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, CTI 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>/68/ 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/68/ guarantee that no type of discrimination is tolerated at any point of the project implementation.

Furthermore, via checking the labor contracts with technicians/35/ and interview with the women stakeholders and technicians, CTI verified that 46 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/7/ and validation report/8/. 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/31/ about the conflicts and grievances of local communities during this monitoring period, CTI verified that there was no any grievances raised in this implementation period.

Hence, CTI confirmed that the formal grievance process was outlined sufficiently in the monitoring report and confirmed on-site during discussion with project personnel and CTI 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/39/ 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/38/, CTI verified that the trainings are offered for all the technicians immediately once they were hired. Furthermore, during this monitoring period, a special training providing orientation for the field measurement, project monitoring, community surveys was provided to technical staffs on 13-October-2021 to achieve a successful and efficient monitoring survey, which was carried out prior to the monitoring activities for this monitoring period. Via checking the training records/38/, CTI confirmed that 26 technicians who conducting field measurement and 69 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/38/.

So based on checking the 1st and 2nd periodical verification report/54/ and checking the training records/38/ 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, CTI verified that Monitoring Manual/40/ 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. Actually 105 persons (nearly half are women) from the local communities are involved in the project activity during this monitoring period. Via checking the labor contracts/35/ for this monitoring period and comparing with the technicians' labor contracts/35/ in last monitoring period, CTI confirmed that 105 persons are properly hired as technicians for forest management, inspection and monitoring. Furthermore, via checking the monthly payroll/36/ to technicians

and maintenance workers, CTI verified that an equal opportunity and payment are given to the employments.

Furthermore, CTI confirmed that the 105 long-term technicians are involved in this monitoring period is not changed by comparing with the 105 in the first monitoring period which is verified as correct by checking the labor contracts/35/ and payroll/36/.

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/7/ and in the monitoring report, the hiring process is governed by the labour 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/35/ and on site interview with local government officer/12/ and forest technicians/13/.

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>/68/ 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/38/. 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/13/.

Furthermore, CTI confirmed that the description of potential risks and how to mitigate them has been provided in PD and via checking the training records and interview with technicians, CTI confirmed that PP has taken measures to mitigate the risks and no any risk occurred during this monitoring period.

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

CL 10 was 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/7/. Via checking the staff list of above three actors/35/,/36/, CTI 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, CTI 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/22/ of the participant parties, CTI confirmed that the project proponent Guizhou Baiheng Fertiliser Co., Ltd is a privacy and legally registered company. Other involved entities Shanghai Libra Investment & Management Co., Ltd and Shell Energy (China) Ltd. are 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/69/, CTI 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 Baiheng Fertiliser Co., Ltd and Shanghai Libra Investment & Management Co., Ltd/37/ and checking the public website of Shell Energy (China) Ltd/75/, CTI 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, CTI 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/31/ of Chinese company/69/, CTI confirmed that the statement in MR is actual and credible. Thus, CTI 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/69/ and on-site observation with company business license/22/. Thus CTI concluded that the project is not involved or complicit in any form of corruption during this monitoring period.

Therefore, CTI verified that the project has the capacity to implement the project in accordance with the validated project description/7/.

CAR 05 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 taken 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/32/. The local villagers have the right to the use of land/14/. The project owner and forestry department are responsible for the comprehensive implementation and management of the project /14/.

And during this verification, via interview with the local farmers/13/, CTI 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/, CTI confirmed that Guizhou Baiheng Fertiliser Co., Ltd has represented the land owners finished the VCS+CCB development and 1st and 2nd periodical issuance, 60% of profit gained from the 1st and 2nd verification issuance has been distributed to all village committees and villagers who owned the lands for afforestation by Guizhou Baiheng Fertiliser Co., Ltd as per the Carbon sink afforestation cooperation and development agreement/13/. Via site interview with the representatives of local residents and checking the receipts of reception/20/, CTI verified that local residents have received the related money and they agreed with the share from the 1st and 2nd verification issuance and all agreed that Guizhou Baiheng Fertiliser 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/14/, /10/. Via on-site interview with the local officer and villagers, CTI verified that no entity can encroach the project area as private, community or government property and change the land usage type during this monitoring period.

3. Free, prior and informed consent

The local villagers have the right to the use of land, and Guizhou Baiheng Fertiliser Co., Ltd is authorized by local villages to implement the project as a project proponent, which is confirmed by checking the land use agreement/14/. Thus CTI 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, CTI verified that the project area are mostly barren land suitable for afforestation with a small number of poor growth and low survival rate trees with no residents in baseline scenario, thus CTI confirmed that there were no residents to be migrated. And by checking the PRA process results/16/, CTI verified that all the local stakeholders voluntarily agreed the implementation of the project before started, and as above statement, CTI 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/, CTI confirmed that Guizhou Baiheng Fertiliser Co., Ltd has represented the land owners finished the VCS+CCB development and 1st and 2nd periodical issuance, 60% of profit gained from the 1st and 2nd verification issuance has been distributed to all village committees and villagers who owned the lands for afforestation by Guizhou Baiheng Fertiliser Co., Ltd as per the Carbon sink afforestation cooperation and development agreement/13/. Via site interview with the representatives of local residents and checking the receipts of reception/20/, CTI verified that local residents have received the related money and they agreed with the share from the 1st and 2nd verification issuance due to the share is consistent with the determination value in the carbon sink project cooperation agreement signed between village committee and Guizhou Baiheng Fertiliser Co., Ltd/13/.

In conclusion, no compensation is requested from local villagers due to all lands are wastelands and no occupation is involved, however, Guizhou Baiheng Fertiliser Co., Ltd paid share of carbon revenue to local villagers as per the carbon sink project cooperation agreement signed between village committee and Guizhou Baiheng Fertiliser Co., Ltd/13/ which is verified as beneficial to local communities.

5. Do not lead to the involuntary removal or relocation

Based on above assessment, CTI 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/14/, /10/ and onsite observations and interview with technicians from forest farms and local villagers/13/.

6. Reduce illegal activities

Via on-site interview with local government officers, communities, technicians and on-site observation, CTI 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/67/, and the forests are preserved by project staff regularly as determined in the Integrated Forest Management Manual/39/, thus CTI 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/12/ and local residents/13/ and checking the land use agreement/14/. During this monitoring period, as stated by local officer/12/, CTI confirmed that the local government supervised the local villager's right to the land, and confirmed that 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, and thus no any unresolved disputes occurred for the project, which is in line with the CCB rules.

Therefore, CTI 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/7/.

CL 11 and CL 12 were raised and successfully closed. Refer to Appendix 3 for details.

4.3.13 Legal Status (G5.6)

Both the validated PD/7/ and the MR/1/ 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/67/, /70/ 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, CTI 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/7/.

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)	46,000		In the ex-ante estimation, the value of 46,000 ha was taken by Field measurement, 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>Pinus yunnanensis</td><td>1.619</td></tr></table>	Tree species	$BEF_{2,j}$	China fir	1.634	Masson pine	1.472	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. 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											
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>0.5</td></tr><tr><td>Masson pine</td><td>0.5</td></tr><tr><td>Pinus yunnanensis</td><td>0.5</td></tr></table>	Tree species	CF_{TREE}	China fir	0.5	Masson pine	0.5	Pinus yunnanensis	0.5		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. 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	0.5											
Masson pine	0.5											
Pinus yunnanensis	0.5											
D_j	Basic wood density	<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>Pinus yunnanensis</td><td>0.483</td></tr></table>	Tree species	D_j	China fir	0.307	Masson pine	0.380	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. 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											
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>Pinus yunnanensis</td><td>0.146</td></tr></table>	Tree species	R_j	China fir	0.246	Masson pine	0.187	Pinus yunnanensis	0.146		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. The default values are confirmed as reasonable due to these are National authority
Tree species	R_j											
China fir	0.246											
Masson pine	0.187											
Pinus yunnanensis	0.146											

			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 not listed in the PD as ex-ante parameter. 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). 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 so that the monitoring can be done for measuring the sampling, hence, CTI verified that the value listed as ex-ante parameter in MR is correct and in line with the methodological tool.

CTI 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 j ; Stem volume of tree l of species j in sample plot p of stratum i	Refer to 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 l of species j in	Refer to ER sheet for details.	These two parameters are monitored by Field measurements in sample plots and they are two tree dimensions used as

	sample plot p of stratum i; Diameter at breast height of tree l of species j in sample plot p of stratum i (m, cm)		entry data into the stem volume equations for the calculation of stem volume of trees as stated in above column. And the 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. CTI 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^{/56/} and HJ 710.1-2014 “Technical guidelines for biodiversity monitoring—terrestrial vascular plants” issued by Ministry of environmental protection^{/64/}. All the devices have a state-recognized certificate of qualification which has been verified by checking the products qualification^{/41/} 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, CTI verified that there is no need to do the calibration for these kinds of equipment. Hence, CTI 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
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			measurement results and found they are consistent with the data presented in the MR and the ER calculation spreadsheet. 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 i (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>10,000</td> </tr> <tr> <td>2</td> <td>5,500</td> </tr> <tr> <td>3</td> <td>7,000</td> </tr> <tr> <td>4</td> <td>2,500</td> </tr> <tr> <td>5</td> <td>15,000</td> </tr> <tr> <td>6</td> <td>6,000</td> </tr> <tr> <td>Total</td> <td>46,000</td> </tr> </table> $A_{PLOT,i}$: 0.07 (ha)	Strata i	A_i	Unit	ha	1	10,000	2	5,500	3	7,000	4	2,500	5	15,000	6	6,000	Total	46,000	The areas of stratum is measured through GPS measuring equipment. 46,000 ha planted area and 6 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/7/ 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/56/. During site measurement by verification team for each plot, the radius is measured as 30 m and the plot area is equal to 0.07 ha.
Strata i	A_i																				
Unit	ha																				
1	10,000																				
2	5,500																				
3	7,000																				
4	2,500																				
5	15,000																				
6	6,000																				
Total	46,000																				
$N_{i,j}$	Number of the tree species j of strata i (except for trees planted in baseline scenario)	Refer to ER sheet for details	The number of tree species in each sample plot was measured by field measurement through counting the number inside the sample plot minus the number of trees planted in baseline scenario. Only the trees actually planted in the project were monitored. The carbon credit of the original trees in the baseline scenario will not be monitored or counted in the project credit. In each sample plot, the trees planted in the project have been marked by hanging tree number signs, and original trees before the project do not hanging signs, which means that these no sign trees do not counted in the monitoring of the project, that is to say, the parameter of $N_{i,j}$ did not contain the trees in the baseline scenario. 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 provided by the PP, and found they are consistent with the data presented in ER calculation																		

			spreadsheet by not counted original trees in the baseline scenario.																																
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) 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 not listed in the PD as a monitored parameter. But 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). The total number of sample plots (n) has been determined so that the monitoring can be done for measuring the sampling, hence, CTI 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>3</td> </tr> <tr> <td>3</td> <td>5</td> </tr> <tr> <td>4</td> <td>2</td> </tr> <tr> <td>5</td> <td>6</td> </tr> <tr> <td>6</td> <td>2</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>3</td> </tr> <tr> <td>3</td> <td>5</td> </tr> <tr> <td>4</td> <td>3</td> </tr> <tr> <td>5</td> <td>6</td> </tr> <tr> <td>6</td> <td>3</td> </tr> </table>	Strata <i>i</i>	n _i (calculation result)	Unit	-	1	6	2	3	3	5	4	2	5	6	6	2	Strata <i>i</i>	n _i (Sample Plots Number)	Unit	-	1	6	2	3	3	5	4	3	5	6	6	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 is not listed in the PD as a monitored parameter. But 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). The Number of sample plots allocated to strata <i>i</i> (n_i) has been determined so that the monitoring can be done for measuring the sampling, hence, CTI verified that the value listed as monitored parameter in MR is correct and in line with the methodological tool.
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E	Acceptable margin of error (i.e. one-half the confidence	11.129	Acceptable margin of error in estimation of biomass stock is calculated by 10% of the mean biomass stock within the project boundary.																																

	interval) in estimation of biomass stock within the project boundary (t d.m. ha ⁻¹)		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/26/. This value is not listed in the PD as a monitored parameter. But 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). The Acceptable margin of error (E) has been determined so that the monitoring can be done for measuring the sampling, hence, CTI 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>i</i></th> <th>w_i</th> </tr> <tr> <td>Unit</td> <td>/</td> </tr> <tr> <td>1</td> <td>0.217</td> </tr> <tr> <td>2</td> <td>0.120</td> </tr> <tr> <td>3</td> <td>0.152</td> </tr> <tr> <td>4</td> <td>0.054</td> </tr> <tr> <td>5</td> <td>0.326</td> </tr> <tr> <td>6</td> <td>0.130</td> </tr> <tr> <td>Total</td> <td>-</td> </tr> </table>	Strata <i>i</i>	w _i	Unit	/	1	0.217	2	0.120	3	0.152	4	0.054	5	0.326	6	0.130	Total	-	This is a calculated value. The relative weight of the area of stratum <i>i</i> is equal to the area of the stratum <i>i</i> divided by the project area. This value is not listed in the PD as a monitored parameter. But 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). The relative weight of the area of stratum <i>i</i> (w_i) has been determined so that the monitoring can be done for measuring the sampling, hence, CTI verified that the value listed as monitored parameter in MR is correct and in line with the methodological tool.
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s _i	Estimated standard deviation of biomass stock per unit area in strata i (t d.m. ha ⁻¹)	<table> <tr> <th>Strata <i>i</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>40.638</td> </tr> <tr> <td>4</td> <td>39.772</td> </tr> <tr> <td>5</td> <td>26.570</td> </tr> <tr> <td>6</td> <td>25.778</td> </tr> </table>	Strata <i>i</i>	s _i	Unit	t d.m. ha ⁻¹	1	38.996	2	37.945	3	40.638	4	39.772	5	26.570	6	25.778	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 Anshun Forest Bureau based on the results of years of forestry surveys/60/. This value is not listed in the PD as a monitored parameter. But 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		
Strata <i>i</i>	s _i																				
Unit	t d.m. ha ⁻¹																				
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			activities" (Version 02.1.0). The Estimated standard deviation of biomass stock (s_i) has been determined so that the monitoring can be done for measuring the sampling, hence, CTI verified that the value listed as monitored parameter in MR is correct and in line with the methodological tool.
$u_{\Delta C}$	Uncertainty in carbon change ΔC_{TREE} (Dimensionless)	2.47%	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 $u_{\Delta C}$ estimated from above Equation is greater than 10 per cent, ΔC_{TREE} is made conservative by applying uncertainty discount according to the procedure provided in Appendix 2". The value of $u_{\Delta C}$ is calculated as 2.47%, hence, the uncertainty discount is not used for this monitoring period. This value is not listed in the PD as a monitored parameter. But 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). Hence, CTI 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)	23.24279	The parameter is used to calculate uncertainty in carbon stock $u_{\Delta C}$, 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 not listed in the PD as a monitored parameter. But 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). Hence, CTI verified that the value listed as monitored parameter in MR is correct and in line with the methodological tool.

t_{VAL} (for calculation of $u_{\Delta C}$)	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)	1.725	t_{VAL}(for calculation of $u_{\Delta C}$) 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) used to calculate $u_{\Delta C}$. 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 26 and M(the total number of tree biomass estimation strata) is 6. Thus degrees of freedom equal to $n-M$ is 20, via checking the tool of “Calculation of the number of sample plots for measurements within A/R CDM project activities” (Version 02.1.0), the value of t_{VAL} is 1.725 by degree of freedom is 20 at confidence level of 90%. This value is not listed in the PD as a monitored parameter. But 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). Hence, CTI verified that the value listed as monitored parameter in MR is correct and in line with the methodological tool.
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CTI 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, 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 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 due to there is no change the project design and the project is implemented as per the registered 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	46,000	-	
1	10,000	China fir	2015
2	5,500	China fir	2016

3	7,000	Masson pine	2015
4	2,500	Masson pine	2016
5	15,000	Pinus yunnanensis	2015
6	6,000	Pinus yunnanensis	2016

Thus, CTI 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, CTI 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, CTI 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	0.217	38.996	1.645	11.129	24	6	6
2	0.120	37.945				3	3
3	0.152	40.638				5	5
4	0.054	39.772				2	3
5	0.326	26.570				6	6
6	0.130	25.778				2	3

The total numbers of sample plots for the **46,000** ha are 26. After determined the number of the plots, PP randomly selected the location for all the sample plots. Via checking the project area KML file/6/, CTI verified that there are totally 245 planting plots included in the project area. The PP has randomly selected the 26 sample plots from these planting plots. Via checking the sampling plots selection records/28/, CTI confirmed that the location of the sample plots were 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 26 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 3. $X=\sqrt{3}=2$

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

Verification team randomly selected 15 sample plots from each strata from the PP sampling plots inventory/27/ and a ground inspection of the project area was conducted during the site visit and members of the verification team visited 15 sample plots from 26 PP samples within the project area.

The measurement results carried during verification team operation and the raw data of rest of the 11 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)
Strata 1	ID3	E106°30'01"	N 25°53'46"	116 (China fir)	7.19	7.28
Strata 1	ID5	E106°31'35"	N 25°51'12"	109 (China fir)	7.17	7.30
Strata 4	ID39-34	E106°38'00"	N 25°52'50"	107 (Masson pine)	6.95	7.11
Strata 6	ID11	E106°52'53"	N25°30'43"	128 (Pinus yunnanensis)	7.14	7.16
Strata 1	ID14	E106°59'00"	N 25°46'36"	122 (China fir)	7.21	7.36
Strata 2	ID19	E107°15'21"	N25°49'29"	124 (China fir)	6.99	7.11
Strata 2	ID21	E107°20'21"	N25°49'01"	104 (China fir)	6.97	7.13
Strata 3	ID23	E107°27'32"	N25°47'25"	111 (Masson pine)	6.90	7.05
Strata 3	ID29	E107°41'01"	N 25°44'29"	118 (Masson pine)	6.91	7.07
Strata 5	ID25	E25°53'26"	N107°36'23"	106 (Pinus yunnanensis)	7.25	7.41
Strata 5	ID36	E107°48'00"	N 25°58'21"	115 (Pinus yunnanensis)	7.25	7.43
Strata 4	ID36-2	E107°49'37"	N 25°57'36"	101 (Masson pine)	6.94	7.10
Strata 3	ID39-11	E106°55'52"	N 26°07'18"	124 (Masson pine)	6.91	7.05
Strata 5	ID39	E107°07'33"	N 26°21'26"	100 (Pinus yunnanensis)	7.24	7.38
Strata 6	ID42	E106°55'41"	N 26°26'46"	138 (Pinus yunnanensis)	7.16	7.15

Verification team compared the above information they got from the on-site measurement and the raw data from the monitoring survey/29/, 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/7/ 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.

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) 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.

Because it is the second verification over this monitoring period, $C_{TREE,t1} = 1,919,883 \text{ tCO}_2\text{e}$, $C_{TREE,t2} = 1,335,756 \text{ tCO}_2\text{e}$.

Hence, $\Delta C_{TREE} = C_{TREE,t1} - C_{TREE,t2}$

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; m³
- 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

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 trees ($H_{l,p,j,i}$) 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
China fir	$V_{TREE,j} = 000088296 \times D^{(1.94097 - 0.0044583 \times (D+H))} \times H^{(0.76012 + 0.0056841 \times (D+H))}$
Masson pine	$V_{TREE,j} = 0.000094602 \times D^{(1.88156 - 0.0030651 \times (D+H))} \times H^{(0.76840 + 0.0046574 \times (D+H))}$
Pinus yunnanensis	$V_{TREE,j} = 0.00010729 \times D^{(1.95029 - 0.0047643 \times (D+H))} \times H^{(0.63241 + 0.0075891 \times (D+H))}$

The data source of allometric equations is confirmed as DB52/T 702_2011 < The binary standing tree volume table of China fir>/52/, DB52/T 703_2011 < The binary standing tree volume table of Pinus Massoniana plantation >/53/ and DB52/T 763_2012 < The binary standing tree volume table of Pinus yunnanensis >/54/.

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 China fir>/52/, DB52/T 703_2011 < The binary standing tree volume table of Pinus Massoniana plantation >/53/ and DB52/T 763_2012 < The binary standing tree volume table of Pinus yunnanensis >/54/, CTI verified that the three 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, CTI concluded that for the two tree species, volume equations were used to convert measured Height of trees ($H_{i,p,j,i}$) and Diameter at breast height of trees ($DBH_{i,p,j,i}$) 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 i	Unit	Total	1	2	3	4	5	6
$A_{PROJ,i}$	ha	46,000	10,000	5,500	7,000	2,500	15,000	6,000
w_i	/		0.21739	0.11957	0.15217	0.05435	0.32609	0.13043
s_i^2	t dm·ha ⁻¹		2.08244	4.52893	0.86372	0.36423	3.15691	2.18463
E	t dm·ha ⁻¹	11.129						
t_{VAL} (to calculate n)	/	1.645						
t_{VAL} (to calculate $u_{\Delta C}$)	/	1.725						
n		24						
n_i		26	6	3	5	3	6	3
$u_{\Delta C}$		2.47%						
ΔC_{TREE}	t CO ₂	584,127						

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

Via checking the details calculation in the ER sheet, CTI confirmed that the uncertainty is calculated as 2.47% 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”.

In conclusion, CTI 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/7/ 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	584,127 tCO ₂ e	58,413 tCO ₂ e	525,714 tCO ₂ e
Total	584,127 tCO₂e	58,413 tCO₂e	525,714 tCO₂e

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. As defined by VCS Standard Version 4.3, the materiality will be 1%.

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/3/.

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 CTI 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)/47/ 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/10/&9/&/39/, onsite visits of the project area and interviews conducted/11/. 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/72/, VCS Program/73/, 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/40/, therefore this mitigation is scored as -2.
Financial viability	According to the reported barren land suitable for afforestation with a small number of poor growth and low survival rate trees data in the project design/9/, 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 continued to be barren land suitable for afforestation with a small number of poor growth and low survival rate 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 China fir, Masson pine and Pinus yunnanensis which all have Suitable for the growth of Karst landforms, therefore the project longevity selected 30 years/11/ and the crediting period is selected to be 29 years. Therefore this mitigation is scored as 0.
External risks	
Land tenure and resource access/impact	Project Approval/10/ is checked, CTI 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. Therefore this mitigation is scored as 0.
Community Engagement	The project lands are mostly barren land suitable for afforestation with a small number of poor growth and low survival rate trees by checking the baseline survey/23/, no residents living within the project area/33/. 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/16/ of the project and the community monitoring survey by questionnaires. According to the PRA report and filled questionnaires, 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 land suitable for afforestation with a small number of poor growth and low survival rate 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. 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/39/. Via checking the patrolling working log recorded by technicians/30/, it is verified that no fires occurred in the project areas for this monitoring period as confirmed during the on-site visit. 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/39/. 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/39/. 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 patrolling working log recorded by technicians/30/ and interview with the officer from local forest bureau/12/ and local residents/13/. 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/74/; and there was no extreme weather in the project area during this monitoring period as confirmed by checking the historic records for this monitoring period from local government/74/ 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/74/, 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 historic records for this monitoring period from local government/74/ and interview with the officer from local forest bureau and local residents. LS=1. 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/39/. 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/4/ and Risk Calculation Sheet/5/ 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/17/ 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/18/.

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.

The MR states that the project will generate positive community impacts through increasing local job opportunities and household income, living level and living environment, improving technical skills of artificial seedling and increasing household income and living level, especially to local women's capability and well-being, increased the 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 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 biodiversity survey report for this monitoring period issued by Guizhou province academy of social sciences/25/, the labor contracts/35/, periodical payroll/36/, training records/38/ during this monitoring period and on-site observation and interview with local officers/12/, residents/13/, workers/13/ and women/13/.

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

CAR 06 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/7/ 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 during this monitoring period.

However, in order to mitigate the negative well-being impact on community groups, PP has established a problem handling mechanism which has been stated in the MR and confirmed by site inspection and interview with local representatives. Via site interview with PP, CTI confirmed that the problem-solving mechanism has been established as below, which is an open and transparent way to raise issues, a clear way to receive issues and a standardized process for dealing with them.

As confirmed by PP, in order to effectively manage and run a successful project, project leaders develop problem-solving techniques that are viable and suitable. The problem-solving techniques include the

definition of problem, generation of alternative solutions, evaluation of alternatives and follow-up on solutions.

Due to the project is an afforestation project, human-induced risks may affect community, climate and biodiversity which has been assessed in the section 4.3.2. For these risks, problem-solving mechanism should be kicked into the gear to make sure that once issues related to community, climate and biodiversity surface, the relevant personnel shall report the issues to the PP, and the PP shall bring solutions like patrol inspection that can help mitigate the risks in place. At the same time, the effectiveness of mitigation measures will be measured and well-recorded to help to improve the mechanism in a constant manner which has been confirmed by PP as one of the mitigation measures.

Thus it is verified that the negative community impact mitigation are established to be conducted if any negative impacts occurred.

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/7/.

It states that project generates positive community impacts to 105 long-term technicians and project land owners through improved the living environment, increase household income and living level by providing permanent and temporary job, paid salary to planting workers and technicians and distributed to all village committees (project land owners) with 60% share of the profit gained from the previous VCUs 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 increased the collective communication of the village by organizing local communication activities through the project such as holding trainings and stakeholder meetings, 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, CTI verified that the impacts on the community groups in this monitoring period is correct via checking actual labor contracts/35/, receipts of carbon profit reception/20/, periodical payroll/36/, training records/38/ during this monitoring period and by site inspection and interview with local stakeholders/13/ and local officers from government/12/.

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

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

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/7/, 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/1/ states that no negative offsite effects are expected during this monitoring period same as the validated PD/7/ and last verification/71/. 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.

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/7/.

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/7/, 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 monitoring team hold stakeholder meeting on 21-October-2021 and distributed 100 questionnaires to collect the interview results for the representatives of local residents living in project zone from October to November in 2021 and got 100 valid questionnaires back, thus CTI verified that the monitoring frequency is in line with the validated PD design/7/.

- b. Check the monitoring results

Via checking the meeting records of stakeholder meeting on 21-October-2021 and 100 questionnaires collected by monitoring team/33/, CTI 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/7/.

Via comparing the information in the meeting records/33/, questionnaires/33/, biodiversity survey report for this monitoring period issued by Guizhou province academy of social sciences/25/, labor contracts/35/, receipts of carbon profit reception/20/, periodical payroll/36/, training records/38/, CTI 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, CTI 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, CTI confirmed that during this monitoring period, the monitoring results are assessed as below table,

Variables	Monitoring methods applied	Affected community groups	Assessment of Result of monitoring
The change of living environment	Stakeholder opinion collection activity and interview	Local villagers Government of 7 counties	98% of local villagers and 100% officer of government of 7 counties believed that during this monitoring period, the living environment has improved which verified by checking the Stakeholder and Community Monitoring records /33/.
The change of living level	Stakeholder opinion collection activity and interview	Government of 7 counties	100% officer of Government of 7 counties 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 Stakeholder and Community Monitoring records /33/.
Increased the collective communication of the village	Stakeholder opinion collection activity and interview, Training provided	Village committees in project area	100% of the village committees and villager representatives think the opportunities for communication of the villagers has been enhanced during this monitoring period which verified by checking the Stakeholder and Community Monitoring records /33/. The trainings were conducted on an annual basis which verified by checking the training records/38/. Stakeholder meeting was held on 21-October-2021/33/.
Promote forest management and protection	Stakeholder opinion collection activity and interview with local officers, villagers and technicians in stakeholder meeting	Forestry Bureaus of 7 counties	99% of the villagers believed that the implementation of the project has helped raise their awareness of forest protection; 100% of officials from governments and forestry bureaus believed that the awareness of forest management and protection has been greatly improved during this monitoring period which verified by checking the Stakeholder and Community Monitoring records /33/. The trainings were conducted on an annual basis which verified by checking the training records/38/, 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.

Households' income	Payroll of the workers 60% profits gained from the previous VCUs issuance has been distributed to all village committees and villagers who owned the lands for afforestation	Local villagers	Via checking the monthly payroll/36/ to technicians and maintenance workers, CTI verified that 105 technicians increased their income. Furthermore, via site interview with the representatives of local residents and checking the receipts of reception/20/, CTI verified that related local residents have received the related money and they agreed with the share from the previous VCUs issuance.
Achieve goals in afforestation	Biodiversity survey report	Forestry Bureaus of 7 counties	Via checking the 1 st verification report/71/ and biodiversity survey report/25/ for this monitoring period, CTI confirmed that the goals of afforestation had been achieved by implementation of the project.

During the on-site verification, stakeholder meeting with different community groups has been carried out in each Forestry Bureau of 7 Counties from 06-June-2022 to 09-June-2022 respectively by interview with stakeholders and by filling the questionnaires prepared by auditor. During the meeting, the affected community group representatives are interviewed separately by verification team, and all the participated representatives confirmed that the project increase of household income due to the implementation of the project which provided 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, CTI verified that the monitoring results reflect the actual community impact from each community groups affected by the project.

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

CAR 07 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^{/17/} 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^{/17/} 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^{/18/}.

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 land suitable for afforestation with a small number of poor growth and low survival rate trees.

PP evaluated the biodiversity element of species of plants and animals as per the validated PD/7/, 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 were assessed by verification team as following,

1. For species of plants, besides the three successfully grew species of the tree to establish an artificial forest, CTI verified that there were many crops, 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 observed during this monitoring period, and this is also verified by on-site inspection to the sample plots and remote observation of the project area and checking the biodiversity survey report for this monitoring period issued by Guizhou province academy of social sciences/25/.

2. For species of animals, via checking the biodiversity survey report for this monitoring period issued by Guizhou province academy of social sciences/25/, CTI verified that there were 7 species of animals were found. The traces of each species were different, and some of them was photographed around the monitoring points and sample spots, which could prove the increase of animals during this monitoring period, and this is also verified by on-site inspection to the monitoring points and sample spots 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 08 was raised and successfully closed. Refer to Appendix 3 for details.

4.6.2 Mitigation Actions (B2.3)

As verified in the validated 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, 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, CTI 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/15/, CTI verified that as the project site is located in Qiannan Autonomous Prefecture 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/25/.

Based on the situation of biodiversity within the project zone at baseline scenario, the project area will continue to be barren land suitable for afforestation with a small number of poor growth and low survival rate 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, 10 national protected species inhabit in the nature reserve, 3 of them

are globally endangered species according to IUCN/59/. 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, CTI 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.

4.6.5 Invasive Species (B2.5)

The species used is native trees developed in China which is verified by validated 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 and verified by checking the Seedling Purchase Contract /12/ 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 and verified by checking the Seedling Purchase Contract/12/ and onsite observations.

4.6.8 Inputs Justification (B2.8)

As assessment to the validated PD, CTI 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/39/. 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/39/. 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/11/ and local officers/12/ and checking the patrolling working log recorded by technicians/30/ for this monitoring period, CTI verified that there was no significant pesticide application occurred as no insects and disease disaster occurred.

Therefore, CTI 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 result 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/7/.

To validate the biodiversity monitoring results during this monitoring period/25/, the verification team take stepwise verification as following,

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

As designed in the validated PD/7/, 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/24/. This has been confirmed by site interview with the monitoring team member/13/. Then the biodiversity monitoring spreadsheets filled by the technicians/24/ were summarized yearly to report to Guizhou Baiheng 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 one and a half months, finally the biodiversity survey report/25/ 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 State variables and once every year for Pressure and Response variables, the monitoring team conducted site survey from start date of this monitoring period since Jan. 2021, thus CTI verified that the monitoring frequency is in line with the validated PD design/7/.

- b. Check the monitoring results

Via checking the biodiversity survey report/25/ completed by Guizhou province academy of social sciences based on the monitoring results by monitoring team, CTI verified that the monitoring approach used for investigation is as per the design defined in the PD/7/. 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/25/, CTI 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, CTI 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/13/ and based on the experience of the monitoring team.

By checking the information in the biodiversity survey report/25/ and biodiversity monitoring spreadsheets filled by the technicians/24/, CTI 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 flora and fauna biodiversity has been monitored. The area of forest cover increases 46,000 ha, 4 species of plants were discovered in 26 sample plots and the survey result with specific quantities or areas in the bracket is shown as follows: Xanthium sibiricum (30 plants), Urtica (44 plants), Psilotum nudum (28 plants), and Sphagnum palustre (760mm²), 7 species of animals were discovered in 26 sample plots and their specific species and quantities are shown as follows: Ardea cinerea (the number is 2), Streptopelia chinensis (the number is 1), Charadriiformes (the number is 1), Upupa epops (the number is 1), Macaca mulatta (the number is 17), Lepus sinensis (the number is 16), and Toad (the number is 3).

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, CTI verified that no fires occurred, and effected forest area suffered insects and disease are none/24/, /30/ 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, CTI verified that 46,000 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/25/ and biodiversity monitoring spreadsheets/24/ and patrolling working log recorded by technicians/30/.

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, CTI verified that the values are almost same.

Based on above evaluation from the biodiversity monitoring, CTI verified that the monitoring results reflect the actual biodiversity impact from each species affected by the project.

Thus CTI concluded that the biodiversity monitoring during this monitoring period was carried out in accordance to the validated project description.

CAR 09 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/17/ 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/18/.

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

Shanghai Libra Investment & Management Co., Ltd has commissioned the Shenzhen CTI International Certification Co., Ltd to carry out the Verified Carbon Standard (VCS) joint with Climate, Community & Biodiversity (CCB) 3rd periodic verification of the project activity Guinan Afforestation Project in China, VCS reference No. 2070, 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, CTI can confirm that:

- the project has been implemented and operated as per the validated PD;
- the project description deviation were assessed does not impact the applicability of the methodology, additionality and the appropriateness of the baseline/without-project scenario, and the project remains in compliance with the CCB Version 3.3 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

Verified GHG emission removals in the above verification period:

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	584,127	0	584,127
Total	0	584,127	0	584,127

For the total Monitoring period 01-January-2021 to 31-December-2021: the value is gross of the 10% (58,413 tCO₂e) buffer withholding based on the non-permanence risk assessment tool. This results in **525,714 tCO₂e** equivalent of credits eligible for issuance as VCUs.

Shunrong Lin

Lin Shunrong
CTI
Validation Team Leader
15-December-2022

Zhou Lu

Zhou Lu
CTI
Final Approval
15-December-2022

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	Title	References to the document	Provider
1.	Shanghai Libra Investment & Management Co., Ltd	Monitoring report	3 rd periodic Monitoring report of “Guinan Afforestation Project” Draft Version No. 01, dated 14-April-2022 Version No. 02, dated 09-August-2022 Final Version No. 03, dated 12-December-2022	Shanghai Libra Investment & Management Co., Ltd
2.	Shanghai Libra Investment & Management Co., Ltd	Monitoring report Summary in Chinese version	3 rd periodic Monitoring report summary in Chinese version of “Guinan Afforestation Project” Draft Version No. 01, dated 14-April-2022 Final Version No. 02, dated 09-August-2022	Shanghai Libra Investment & Management Co., Ltd
3.	Shanghai Libra Investment & Management Co., Ltd	Net anthropogenic GHG removals by sinks calculation spreadsheets	Net anthropogenic GHG removals by sinks calculation spreadsheets of “Guinan Afforestation Project” Version No. 01, dated 14-April-2022	Shanghai Libra Investment & Management Co., Ltd
4.	Shanghai Libra Investment & Management Co., Ltd	Non-permanence risk report	Non-permanence risk report for this monitoring period, Version No. 01, dated 26-July-2022	Shanghai Libra Investment & Management Co., Ltd
5.	Shanghai Libra Investment & Management Co., Ltd	Risk Calculation Sheet	Risk Calculation Sheet for this monitoring period, Version No. 01, dated 26-July-2022	Shanghai Libra Investment & Management Co., Ltd
6.	PP	KML file of project area	KML file of project area submitted to VERRA	PP
7.	Shanghai Libra Investment & Management Co., Ltd	Project Description	Approved Project Description of “Guinan Afforestation Project” (Version No. 02, dated 23/01/2020)	Shanghai Libra Investment & Management Co., Ltd
8.	TUV NORD	Validation report	Approved Validation report of “Guinan Afforestation Project” (Version No. 01, dated 12/02/2020)	VCS website
9.	Guizhou Forestry Investigation and Design Co., Ltd.	Project Design for Afforestation Operation	Project Design for Afforestation Operation for project activity issued by Guizhou Forestry Investigation and Design Co., Ltd. for year 2015 on 06/01/2015 Project Design for Afforestation Operation for project activity issued by Guizhou Forestry Investigation and Design Co., Ltd. for year 2016 on 02/01/2016	PP
10.	Qiannan Buyi and Miao Autonomous Prefecture Forest Bureau	Approval of afforestation project plan	Approval of afforestation project plan approved by Qiannan Buyi and Miao Autonomous Prefecture Forest Bureau on 16/01/2015 for year 2015 Approval of afforestation project plan approved by Qiannan Buyi and Miao	PP

			Autonomous Prefecture Forest Bureau 09/01/2016 for year 2016	
11.	Guizhou Forestry Investigation and Design Co., Ltd.	Project evidence	Lifetime evidence issued by Guizhou Forestry Investigation and Design Co., Ltd.	PP
12.	Local Forest Bureau and local Garden nursery company	Seedling Purchase Contract	Seedling Purchase Contract signed between Local Forest Bureau and local Garden nursery company dated in 2015 and 2016	PP
13.	Guizhou Baiheng Fertiliser Co., Ltd. and land owner (Village committee represent villagers)	Carbon afforestation cooperation and development agreement	Carbon sink afforestation cooperation and development agreement signed between Guizhou Baiheng Fertiliser Co., Ltd. and the village collective which had the ownership of forest land dated in Sep. and Oct. 2014	PP
14.	Local village committee in project area (landowner) and Project Owner	Land Agreement	Use Land Use Agreement signed by Local village committee in project area and Project Owner in Feb. 2015.	PP
15.	Guizhou Forestry Investigation and Design Co., Ltd.	Map of project area	1. Map with land-use types and the boundaries of all the plots for identifying the project location and boundaries of the project 2. Separate KML file shows the correct project boundaries	PP
16.	Guizhou Provincial Academy of Social Sciences	Participatory Rural Appraisal	Participatory Rural Appraisal (PRA) report of the project issued by Guizhou Provincial Academy of Social Sciences on 13/02/2015	PP
17.	PP	Routine villager assembly record	Photos of routine villager assembly for access to the monitoring records for each of the 245 villages of the 7 counties	PP
18.	PP	Verification Site Meeting Records	Verification Site meeting/interview Records including interview minute and questionnaires filled by stakeholders	PP
19.	Local stakeholders	Questionnaires in PRA	Filled Questionnaires during PRA Process	PP
20.	PP and farmers	Receipts of reception	Receipts of carbon profit share reception for 2 nd periodical VCUs issuance	PP
21.	Guizhou Provincial Academy of Social Sciences	Biodiversity Survey Report	Biodiversity Survey Report issued by Guizhou Provincial Academy of Social Sciences on 28-February-2022	PP
22.	Local Administratio	Business License	Business License of all the participants of the project	PP

	n for Industry and Commerce			
23.	Guizhou Provincial Academy of Social Sciences	Baseline Survey Report	Baseline Survey Report issued by Guizhou Provincial Academy of Social Sciences in Nov. 2014	PP
24.	Technicians	Biodiversity monitoring spreadsheets	Biodiversity monitoring spreadsheets filled by the technicians during 3 rd monitoring period	PP
25.	Guizhou province academy of social sciences	Biodiversity survey report	Biodiversity survey report for this monitoring period issued by Guizhou province academy of social sciences dated 10-April-2020	PP
26.	Shanghai Libra Investment & Management Co., Ltd	Sample plots calculation sheet	Sample plots calculation sheet	Shanghai Libra Investment & Management Co., Ltd
27.	Shanghai Libra Investment & Management Co., Ltd	Sampling plots inventory	PP Sampling plots inventory of 26 samples	Shanghai Libra Investment & Management Co., Ltd
28.	Shanghai Libra Investment & Management Co., Ltd	Sampling plots selection records	Sampling plots selection records proved that the sampling plots are selected randomly by excel function	Shanghai Libra Investment & Management Co., Ltd
29.	Technicians	Field Survey Records	Field survey records for carbon sink monitoring by monitoring team in January 2022	PP
30.	Technicians	Patrolling Working log	Patrolling Working log recorded by the technicians which including the forest management work record, stakeholder consultation process and results	PP
31.	Specific staff	Conflicts and grievances	Conflicts and grievances of local communities and individual villagers	PP
32.	County Bureau of land resources	Certification of land rights	Certification of land rights issued by County Bureau of land resources in 7 counties dated in Sep. 2014	PP
33.	Representatives of community groups	Stakeholder and Community Monitoring records	Stakeholder meeting minute dated on 21-October-2021 100 valid questionnaires of Community Monitoring during 3 rd monitoring period Opinion statistical book including all the collected comments	PP
34.	PP	Letter of verification site meeting	Letter issued by project owner to the local forest bureaus to arrange the auditor verification site meeting and invited local stakeholders representative	PP

35.	Project Owner	Labor Contract	Labor Contract of project staffs and person who worked as technicians	PP
36.	Project Owner	Periodical payroll	Periodical payroll to all the technicians	PP
37.	Certified Public Accountants	Annual Financial Reports	Annual Financial Reports in 2021 provided by Guizhou Baiheng Fertiliser Co., Ltd and Shanghai Libra Investment & Management Co., Ltd	PP
38.	Project Owner	Technical Training Record	Technical Training Record dated on 18-October-2021	PP
39.	Guizhou Baiheng Fertiliser Co., Ltd.	Integrated Forest Management Manual	Integrated Forest Management Manual issued by Guizhou Baiheng Fertiliser Co., Ltd.	PP
40.	PP	Monitoring Manual	Monitoring Manual created by PP in Jan. 2019	PP
41.	Devices Manufacturer	Products Qualification	Products qualification for all the measuring devices	PP
42.	UNFCCC	Afforestation and reforestation Methodology	AR-ACM0003 "Afforestation and reforestation of lands except wetlands", version 2.0.0	UNFCCC website
43.	VCSA&CCB A	Project Development Process	"VCS+CCB Project Development Process" (version 3.0)	VCS website
44.	CCBA	CCB Program Rules, version 3.1	https://verra.org/project/ccb-program/rules-requirements-and-guidance/	CCB website
45.	CCBA	CCB Standard, version 3.1	https://verra.org/project/ccb-program/rules-requirements-and-guidance/	CCB website
46.	VCSA	Monitoring Report Template	CCB_VCS_Monitoring_Report_Template_CCBv3.0_VCSv3.4	VCS website
47.	VCSA	AFOLU Non-Permanence Risk Tool, version 4.0	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website
48.	VCSA	VCS Program Definitions, Version 4.2	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website
49.	VCSA	VCS Program Guide, Version 4.2	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website
50.	VCSA	VCS Standard, Version 4.3	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website
51.	VCSA	Verification Report Template	CCB_VCS_Verification_Report_Template_CCBv3.0_VCSv3.4	VCS website
52.	Quality and Technical Supervision Bureau in Guizhou Province	Allometric equations of <i>China fir</i>	DB52/T 702_2011 < The binary standing tree volume table of China fir>	PP
53.	Quality and Technical Supervision	Allometric equations of <i>Masson pine</i>	DB52/T 703_2011 < The binary standing tree volume table of Pinus Massoniana plantation >	PP

	Bureau in Guizhou Province			
54.	Quality and Technical Supervision Bureau in Guizhou Province	Allometric equations of <i>Pinus yunnanensis</i>	DB52/T 763_2012 < The binary standing tree volume table of <i>Pinus yunnanensis</i> >	PP
55.	NDRC	Climate Change Index	The People's Republic of China Second National Communication on Climate Change, issued by NDRC, 2013	NDRC website
56.	National Forest Bureau	Guidelines on carbon accounting and monitoring for afforestation project	LY/T 2253-2014 <Guidelines on carbon accounting and monitoring for afforestation project> issued by National Forest Bureau	Public Website
57.	Google	Google Earth	Google Earth Map	Public software
58.	The State Council of China	Grain for Green Program	Grain for Green Program issued by the State Council of China	Public Website
59.	International Union for Conservation of Nature	International Union for Conservation of Nature	The IUCN Red List Categories and Criteria (version 3.1)	PP
60.	Qiannan Forest Bureau	Standard deviation for project area	Standard deviation of the existing data related to the project area issued by the Qiannan Forest Bureau based on the results of years of forestry surveys	PP
61.	UNFCCC	Methodological tool	Demonstrating appropriateness of allometric equations for estimation of aboveground tree biomass in A/R CDM project activities (Version 01.0)	UNFCCC website
62.	UNFCCC	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
63.	UNFCCC	Methodological tool	Calculation of the number of sample plots for measurements within A/R CDM project activities, Version 02.1.0	UNFCCC website
64.	Ministry of environmental protection	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
65.	Gold Standard Organization	Gold Standard	http://www.goldstandard.org/	Website
66.	IPCC	IPCC publications	www.ipcc-nggip.iges.or.jp	Website
67.	National Government	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

68.	Standing Committee of the National People's Congress of China	Labor Law	Labor Law of the People's Republic of China	National public website
69.	National System	National Enterprise Credit Information Publicity System	National Enterprise Credit Information Publicity System	National public website
70.	National Government	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
71.	VVBs	1 st and 2 nd Verification report	1 st and 2 nd Verification reports to the project	Website
72.	UNFCCC	UNFCCC	http://cdm.unfccc.int	Website
73.	VCS	VCS	http://www.v-c-s.org/	Website
74.	Local government	Local Weather	http://www.Qiannan.gov.cn/	Website
75.	Shell	Shell Energy (China) Ltd	https://www.shell.com.cn/	public website
76.	China Science Publishing & Media Ltd	Chinese terms	<Chinese terms in resource and technology>	PP
77.	National Standard Afforestation Technical Regulations of the People's Republic of China	Afforestation density	Afforestation density table of main tree species, afforestation zoning and table of main afforestation tree species https://wenku.baidu.com/view/2d4989c9daef5ef7bb0d3c10.html	public website
78.	China CER platform	CCER	http://cdm.ccchina.org.cn/ccer.aspx	Public Website
79.	IREC	IREC	https://www.irecstandard.org/#/	Website
80.	Global Carbon Council	GCC	https://www.globalcarboncouncil.com/	Website
81.	Ministry of Ecology and Environment of China	China cap & trade scheme	http://www.mee.gov.cn/xxgk2018/xxgk/xxgk02/202101/t20210105_816131.html	Public Website
82.	Ministry of Ecology and	Enforced company list	http://mee.gov.cn/xxgk2018/xxgk/xxgk03/202012/W020201230736907682380.pdf	Public Website

	Environment of China			
83.	UNFCCC	Sampling Standard	Sampling and Surveys for CDM Project Activities and Programme of Activities, version 09.0	UNFCCC website
84.	UNFCCC	Sampling Guideline	Guideline of Sampling and surveys for CDM project activities and programmes of activities, version 04.0	UNFCCC 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					
VVB assessment				Date:	

Table 2. CL from this verification

CL ID	01	Section no.	2.2.1	Date :	20/06/2022
Description of CL					
The key dates and milestones after the draft MR finished are not listed in the schedule table.					
Project participant response				Date :	26/07/2022
The key dates and milestones after the draft MR finished are MR GSC and on-site verification. Their dates are 25-April-2022 to 24-May-2022 and 06-June-2022 to 09-June-2022 respectively.					
Documentation provided by project participant					
MR-version 02/1/					
VVB assessment				Date:	05/08/2022
The revised MR is checked, CTI confirmed that key dates and milestones after the draft MR finished have been provided accordingly which is verified as actual and correct. CL 01 is closed.					

CL ID	02	Section no.	2.2.4	Date :	20/06/2022
Description of CL					
The description of project description deviation is not updated to reflect this monitoring period by comparing with last verification.					
Project participant response				Date :	26/07/2022
The description inconsistency has been made clear as: Besides, the original project design document described that all project sites were previously barren land, but the term barren land was changed to suitable land for afforestation during the monitoring period, so this deviated from the previous project design document. After checking the afforestation plan with the local Forestry Bureau, a small number of trees were planted before the project started but due to poor growth and low survival rate, the Forestry Bureau approved the supplementary planting to increase forest cover without affecting the original species. To ensure there is no confusion with the trees planted before the project started, each tree planted in the project was marked with prominent sign to distinguish it from the others, and to be conservative, if the markers of the trees planted in the project fall off, they will not be counted. This deviation has been explained during the second monitoring period, so it is not a unique change in this monitoring period. With the issuance of the second verification, this deviation has been approved.					
Documentation provided by project participant					
MR-version 02/1/					
VVB assessment				Date:	05/08/2022

The revised MR is checked, CTI confirmed that description of project description deviation is updated accordingly.

There is one project description deviation related to the changes to project description was applied during this verification period which is same to the 1st periodical verification/71/, and another project description deviation related to the land type was applied during this verification period which is same to the 2nd periodical verification/71/, hence this deviation already approved in the last two times issuance of the VCU's and also is applicable to this verification.

Refer to section 3.3 of this report for detail assessment of the deviations.

CL 02 is closed.

CL ID	03	Section no.	2.2.6	Date	20/06/2022
Description of CL					
1. The potential impact of risk on climate, community and/or biodiversity benefits for identified risks are not clarified clearly.					
2. The Human-induced risk is missing.					
Project participant response					Date : 26/07/2022
1. The potential impact of risk on climate, community and/or biodiversity benefits for identified risks have been clarified by adding content to corresponding column.					
In case of Diseases and Insects, it is added 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.					
In case of Pesticides, it is added that 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.					
In case of Fertilizer, it is added that the applied fertilizer may run off into waterways or get broken down by soil, releasing the greenhouse gas into the atmosphere. In addition, chemical fertilizer may cause some diseases and do harm to people's health. In terms of biodiversity, excess nutrients may affect biodiversity and the normal functioning of the ecosystem.					
2. For Human-induced risk, the missing information has been made complete by filling out specific content to their corresponding columns. The human-induced risk is mainly embodied in two aspects. The first aspect is the potential decrease of willingness to participate the project and the corresponding mitigation method is via timely communication with technicians to help them understand the long-term benefits of the project thus give them a boost in the willingness of participation. The second aspect is the greenhouse gas emission generated by human. To mitigate the adverse impact exerted on human survival and development, two measures were taken. First, via the implementation of this project, greenhouse gases emission removals will be generated. Secondly, the project proponent will train the community on the knowledge of skills of climate change adaptability.					
Documentation provided by project participant					
MR-version 02/1/					
VVB assessment					Date: 05/08/2022
1. The revised MR is checked, CTI confirmed that potential impact of risk on climate, community and/or biodiversity benefits have been clarified clearly.					
2. The revised MR is checked, CTI confirmed that Human-induced risk is clarified.					
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/38/, 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.
Refer to section 4.3.2 of this report for detail assessment.
CL 03 is closed.

CL ID	04	Section no.	2.3.1	Date : 20/06/2022
Description of CL				
The actual information of stakeholder access to project documents process is not specified.				
Project participant response				Date : 26/07/2022
As for actual information of stakeholder access to documents, it is specified that the project-related documents can be easily available through different channels. In addition, the on-site verification and stakeholders' interviews were held in Forestry Bureau of Huishui County on 06-June-2022, in Forestry Bureau of Pintang County and Luodian County on 07-June-2022, in Forestry Bureau of Dushan County and Sandu County on 08-June-2022, and Forestry Bureau of Guiding County and Longli County on 09-June-2022. Stakeholder meeting in the project areas were organized locally by the Forestry Bureau of 7 Counties.				
Documentation provided by project participant				
MR-version 02/1/				
VVB assessment				Date: 05/08/2022
The revised MR is checked, CTI 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/17/. 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/2070), 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 in each Forestry Bureau of 7 Counties from 06-June-2022 to 09-June-2022 respectively. Refer to section 4.3.4 of this report for details assessment. CL 04 is closed.				

CL ID	05	Section no.	2.3.2	Date : 20/06/2022
Description of CL				
Actual information of dissemination of Summary Project Documents is not clarified in 2.3.2.				
Project participant response				Date : 26/07/2022
It has been added that after the project was registered, a brief project progress including project location, project registered date, expected annual emission reduction, monitoring period and expected verification date has 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-April-2022 to 24-May-2022 for all stakeholders to obtain detailed project information and progress verification. In addition, the monitoring reports, summaries, monitoring manuals and other relevant documents in Chinese version had been posted on the village bulletin board by the contact person of each village committee so that villagers can keep abreast of the project.				
Documentation provided by project participant				
MR-version 02/1/				
VVB assessment				Date: 05/08/2022
The revised MR is checked, CTI confirmed that the actual information of dissemination of Summary Project Documents is clarified in 2.3.2. Refer to section 4.3.4 of this report for details assessment. CL 05 is closed.				

CL ID	06	Section no.	2.3.3	Date : 20/06/2022
Description of CL				

1. Actual situation of Informational Meetings with Stakeholders is not clarified in 2.3.3.
2. The stakeholders' information who filled the questionnaires is not divided by categories and the reasonability of 100 distributed is not specified.
3. Stakeholders meeting with auditor is not specified.

Project participant response

Date : 26/07/2022

1. The actual situation of informational meetings with stakeholder is specified as: during this third monitoring period on 21-October-2021, 90 villagers, village committee, forest bureau and government representatives from 68 villages were organized by the project proponent and the Forestry Bureau of Qiannan Buyi and Miao Autonomous Prefecture to attend the stakeholders' meeting at the Forestry Bureau of Guiding County, in order to prepare for the project verification and collect the views of stakeholders before the project verification. The meeting introduced the registration of the project, estimated emission reduction issuance date of the second monitoring period, the plan of the verification work and how to collect and summarize the data. It has also been made clear in the meeting that according to Carbon Sink Cooperation Agreement 60% of the profit from previous monitoring periods will be distributed to village committees and villagers who owned the forest land tenure of this project. The villagers agreed to continue to support the project and to cooperate fully with the verification efforts
2. The stakeholders' information who filled the questionnaires is divided by categories including nationality, educational level, career, gender and age range, with corresponding proportion.
3. The auditor on-site verification stakeholder meeting were held in Huishui County on 06-June-2022, in Pintang County and Luodian County on 07-June-2022, in Dushan County and Sandu County on 08-June-2022 and in Guiding County and Longli County on 09-June-2022. Stakeholder meeting in the project areas were organized by the Forestry Bureau of 7 Counties. Villagers, technicians, tree planting workers, representatives from Forestry Bureau and project leader from Guizhou Baiheng were invited to attend this meeting.

Documentation provided by project participant

MR-version 02/1/

VVB assessment

Date: 05/08/2022

1. The revised MR is checked, CTI confirmed that the actual situation of informational meetings with stakeholders is clarified in 2.3.3.
2. The revised MR is checked, CTI confirmed that the 100 participants have been divided by different categories.
3. The revised MR is checked, CTI confirmed that the information of stakeholders meeting with auditor is added.

Refer to section 4.3.4 of this report for details assessment.

CL 06 is closed.

CL ID	07	Section no.	2.3.4	Date :	20/06/2022
Description of CL					
Actual community costs, risks, and benefits are not clarified in 2.3.4 considering the carbon profit of last issuance of VCUs of this project and the actual situation of this monitoring period.					
Project participant response					Date : 26/07/2022
It has been specified that all the attendees can express their understanding of the risks and costs. According to the development and consultant cooperation signed, 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, which can be proved by the receipt from villagers. A proportion of benefit will be used to afford the costs of manpower, equipment, fertilizer, and other materials for forest management.					
Documentation provided by project participant					
MR-version 02/1/					
VVB assessment					Date: 05/08/2022
The revised MR is checked, CTI confirmed that the actual community costs, risks, and benefits have been clarified in 2.3.4, the carbon profit of last issuance of VCUs of this project and the actual situation of this monitoring period have been specified.					
Refer to section 4.3.4 of this report for details assessment.					
CL 07 is closed.					

CL ID	08	Section no.	2.3.5	Date : 20/06/2022
Description of CL				
The detail information to stakeholder on verification process is not clarified.				
Project participant response				Date : 26/07/2022
The detail information to stakeholder on verification process is clarified as: The status and process of the project for CCB and VCS verification has been published through routine villager assembly and posted on notice boards of each village before 06-June-2022 when the on-site verification began. On the other hand, when project proponent and Guizhou Baiheng had known the on-site visit time, the technicians began to notice the villagers from door to door. The mobile phone number of contact person of the project was published on the meeting notice so the villagers can directly make a call-in case they have any problem about the project.				
Documentation provided by project participant				
MR-version 02/1/ /18/ /34/ /17/				
VVB assessment				Date: 05/08/2022
The revised MR is checked, CTI 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 in each Forestry Bureau of 7 Counties from 06-June-2022 to 09-June-2022 respectively by interview with stakeholders and by filling the questionnaires prepared by auditor. By on-site checking the photo/17/, CTI confirmed by the verification team that the monitoring plan and monitoring manual were published in the notice boards for each of the 245 villages of the 7 counties before the site visit time. And by checking the letter issued by project owner to the local forest bureau/34/ and on-site observation, CTI verified that the local forest bureau received letter and considered the importance of inviting the local stakeholder comments. 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/18/. CL 08 is closed.				

CL ID	09	Section no.	2.3.6	Date : 20/06/2022
Description of CL				
The actual information of Site Visit and Opportunities to Communicate with Auditor is not clarified.				
Project participant response				Date : 26/07/2022
To make the actual information of Site Visit and Opportunities to Communicate with Auditor more detailed, it is clarified that the auditor conducted surveys on site plots and project forests from 06-June-2022 to 09-June-2022. The project proponent organized stakeholder meeting with auditors' on-site participation in Huishui County on 06-June-2022, Pintang County and Luodian County on 07-June-2022, Dushan County and Sandu County on 08-June-2022, and Guiding County and Longli County on 09-June-2022 respectively, technicians, tree planting workers, local villagers, representatives from Forestry Bureau of 7 Counties, county government, and project leader of Shanghai Libra Investment & Management Co., Ltd and Guizhou Baiheng to verify the project status. In terms of Opportunities to Communicate with Auditor, it is added that all participants expressed their feelings and experiences to the auditor about the project. Auditor also asked the villagers whether the implementation of the project had a significant impact on their lives and whether they had any complaints. This process indicates the deed of communication. After the meeting, the auditor interviewed each participant separately and asked for their opinions and suggestions. The villagers 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				
MR-version 02/1/ /18/				

/34/ /17/	
VVB assessment	Date: 05/08/2022
The revised MR is checked, CTI 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 in each Forestry Bureau of 7 Counties from 06-June-2022 to 09-June-2022 respectively by interview with stakeholders and by filling the questionnaires prepared by auditor. By on-site checking the photo/17/, CTI confirmed by the verification team that the monitoring plan and monitoring manual were published in the notice boards for each of the 245 villages of the 7 counties before the site visit time. And by checking the letter issued by project owner to the local forest bureau/34/ and on-site observation, CTI verified that the local forest bureau received letter and considered the importance of inviting the local stakeholder comments. 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/18/. CL 09 is closed.	

CL ID	10	Section no.	2.3.13	Date : 20/06/2022
Description of CL				
The information of the 105 technicians for this monitoring period is not clarified, PP mentioned the “new technicians could have the opportunity to attend the training together so that local capacity lost will not be generated because of the replacement of new and old” then PP is requested to clarify if any new technicians hired for this monitoring period, and why the numbers of technician is same to the last monitoring period.				
Project participant response				Date : 26/07/2022
Revision has been made to this aspect. It has been clarified that the principle of the “new technicians could have the opportunity to attend the training together so that local capacity lost will not be generated because of the replacement of new and old’ means with the gained skills, there is no need to worry about the loss of professional technicians and the works of technicians can be carried on in the future. Therefore, there is no addition or replacement of technicians during this monitoring period. And the reason why the number of technicians is the same as the last monitoring period is because these technicians are the same as those involved of the first and the second monitoring period.				
Documentation provided by project participant				
MR-version 02/1/ /38/				
VVB assessment				Date: 05/08/2022
The revised MR is checked, the information of 105 technicians has been clarified, CTI confirmed that the 105 long-term technicians are involved in this monitoring period is not changed by comparing with the 105 in the first monitoring period which is verified as correct by checking the labor contracts/35/ and payroll/36/. CL 10 is closed.				

CL ID	11	Section no.	2.5.1	Date : 20/06/2022
Description of CL				
1. If the actual implementation for this monitoring period impacted the recognition of property rights is not clarified. 2. If the carbon credit profits for the 2nd issuance had been paid by PP is not clarified.				
Project participant response				Date : 26/07/2022
1. In terms of the property rights, it has been made clear that 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. 2. It has been clarified that 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 Baiheng. Guizhou Baiheng 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

MR-version 02/1/
/20/

VVB assessment

Date: 05/08/2022

1. The revised MR is checked, CTI confirmed that the actual implementation for this monitoring period impacted the recognition of property rights has been clarified. And during this verification, via interview with the local farmers/13/, CTI 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.
 2. Via interview with PP representative/11/ and local villagers/13/, CTI confirmed that Guizhou Baiheng Fertiliser Co., Ltd has represented the land owners finished the VCS+CCB development and 1st, 2nd periodical issuance, 60% of profit gained from the 1st and 2nd verification issuance has been distributed to all village committees and villagers who owned the lands for afforestation by Guizhou Baiheng Fertiliser Co., Ltd. Via site interview with the representatives of local residents and checking the receipts of reception/20/, CTI verified that local residents have received the related money and they agreed with the share from the 1st and 2nd verification issuance and all agreed that Guizhou Baiheng Fertiliser Co., Ltd represent them to have the continuous right related to carbon sink project.
- CL 11 is closed.

CL ID	12	Section no.	2.5.5	Date : 20/06/2022
Description of CL				
The actual actions taken by PP to avoid ongoing disputes for this monitoring period are not clarified.				
Project participant response				Date : 26/07/2022
The actual actions taken by PP to avoid ongoing disputes for this monitoring period has been described as: 60% of profit from the previous monitoring periods have already been distributed to all village committees and villagers who owned forest land tenure of this project according to the Carbon Sink Cooperation Agreement. Besides, village committees and villagers are satisfied with the implementation of the project and agreed with the continuation of carbon asset development. So, during this monitoring period, there has no ongoing disputes.				
Documentation provided by project participant				
MR-version 02/1/ /14/				
VVB assessment				Date: 05/08/2022
The revised MR is checked, CTI confirmed that the actual information of ongoing disputes for this monitoring period has been clarified. 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/12/ and local residents/13/ and checking the land use agreement/14/. During this monitoring period, as stated by local officer/12/, CTI confirmed that the local government supervised the local villager's right to the land, and confirmed that 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, and thus no any unresolved disputes occurred for the project, which is in line with the CCB rules. Therefore, CTI 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/7/.				
CL 12 is closed.				

CL ID	13	Section no.	5.3.2	Date : 20/06/2022
Description of CL				
The actual dissemination of biodiversity monitoring plan and results for this monitoring period is not clarified clearly.				
Project participant response				Date : 26/07/2022

It has been made clear that biodiversity monitoring plan and report has been posed for public comments and the public comment period runs from 25-April-2022 to 24-May-2022. Meanwhile, the summary of biodiversity monitoring plan and monitoring results (Simplified Chinese version) has been prepared and posted on bulletin boards of 245 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. In addition, for each verification, the monitoring team would summarize all the comments received from stakeholders and corresponding responses regarding the biodiversity monitoring plan and results, which has been published on VCS and CCB website along with the monitoring report for each monitoring period.

Documentation provided by project participant

MR-version 02/1/

VVB assessment

Date: 05/08/2022

The revised MR is checked, CTI confirmed that the actual dissemination of biodiversity monitoring plan and results for this monitoring period is clarified.

Refer to section 4.6.12 of this report for detail assessment.

CL 13 is closed.

Table 2. CAR from this verification

CAR ID	01	Section no.	1.1	Date	20/06/2022
Description of CAR					
It is observed that achievements during this monitoring period are not elaborated and some information is not correct, especially for improved biodiversity.					
Project participant response					Date : 26/07/2022
The following amendments have been made for the purpose of elaboration: Under the section of first outcome, the following information has been added to make it more specific: During the monitoring period, because of the continuous and healthy growth of 46,000 hectares of trees, the air quality and soil environment gradually improved. In addition, due to the indirect and secondary effects of the project implementation, the soil quality of agricultural land has also been improved. By planting some cash crops to bring additional economic income, local villagers' living conditions have been improved. These crops are native to the ecosystem which means their presence is the result of naturally occurring acts before the project implementation and these crops does not affect and disturb the ecosystem. Under the section of improved biodiversity, the specific number of species has been made clear by adding During the monitoring period, there are 4 species of plants, and 7 species of animals were found in the area.					
Documentation provided by project participant					
MR-version 02/1/					
VVB assessment					Date: 05/08/2022
The revised MR is checked, CTI confirmed that the information has been updated accordingly, especially the improved biodiversity has been updated consistent with the biodiversity survey report for this monitoring period issued by Guizhou province academy of social sciences/25/.					
CAR 01 is closed.					

CAR ID	02	Section no.	1.2	Date	20/06/2022
Description of CAR					
- The net estimated emission removals in the project area achieved during the project lifetime is not divided by different monitoring periods. - The number of hectares of forest cover increased in the project area measured against the without-project scenario for this monitoring period is 0 Ha, but this value is not comparing with the without-project scenario, it comparing with the 1st monitoring period.					

Project participant response	Date : 26/07/2022
1. The net estimated emission removals in the project area achieved during the project lifetime has been divided by different monitoring periods as achievements during the Project Lifetime: The Emission Reductions of 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 emission reduction of the third monitoring period (01-January-2021~31-December-2021). The equation is demonstrated as $848,109 \text{ tCO}_2\text{e} + 487,647 \text{ tCO}_2\text{e} + 584,127 \text{ tCO}_2\text{e} = 1,919,883 \text{ tCO}_2\text{e}$. 2. It has been explained through footnote that compared to the first monitoring period, no newly added forest coverage is recorded during the second and third monitoring period.	
Documentation provided by project participant	
MR-version 02/1/	
VVB assessment	Date: 05/08/2022
1. The revised MR is checked, CTI confirmed that the net estimated emission removals in the project area achieved during the project lifetime is divided by different monitoring periods which verified as correct by checking the 1st verification report. 2. The revised MR is checked, CTI confirmed that the specification has been added, 0 Ha for 2nd and 3rd monitoring period is comparing with the 1st monitoring period, as no new increased forest cover occurred in this monitoring period.	
CAR 02 is closed.	

CAR ID	03	Section no.	2.1.1	Date : 20/06/2022
Description of CAR				
The annual average GHG emissions reduction value since the project start verification is not provided.				
Project participant response				Date : 26/07/2022
The annual average GHG emissions reduction value since the project start verification is calculated as 283,168 tCO ₂ e.				
Documentation provided by project participant				
MR-version 02/1/				
VVB assessment				Date: 05/08/2022
The revised MR is checked, CTI confirmed that the annual average GHG emissions reduction value since the project start verification is provided which is verified as correct by checking the GHG sinks value in the 1 st and 2 nd verification report/71/.				
CAR 03 is closed.				

CAR ID	04	Section no.	2.1.8	Date : 20/06/2022
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 : 26/07/2022
The tool of "Calculation of the number of sample plots for measurements within A/R CDM project activities" (Version 02.1.0) is made complete in section 2.1.8.				
Documentation provided by project participant				
MR-version 02/1/				
VVB assessment				Date: 05/08/2022
The revised MR is checked, CTI confirmed that the tool has been supplemented which is confirmed as in line with the PD.				
CAR 04 is closed.				

CAR ID	05	Section no.	2.4.4	Date : 20/06/2022
Description of CAR				
There is no description of the financial health of organization running/operating the project for this monitoring period in section 2.4.4.				
Project participant response				Date : 26/07/2022
It is added that during this monitoring period, according to a third-party financial audit report provided by				

Guizhou Baiheng and Shanghai Libra, there were no financial problems with Guizhou Baiheng and Shanghai Libra in the Year 2021. There is no financial problem, so they can support the finance of the project and keep the project running normally.

Documentation provided by project participant

MR-version 02/1/
/37/
/31/

VVB assessment

Date: 05/08/2022

The revised MR is checked, CTI confirmed that the information has been added. During the on-site visit and checking the business license/22/ of the participant parties, CTI confirmed that the project proponent Guizhou Baiheng Fertiliser Co., Ltd is a privacy and legally registered company. Other involved entities Shanghai Libra Investment & Management Co., Ltd and Shell Energy (China) Ltd. are 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/69/, CTI 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 Baiheng Fertiliser Co., Ltd and Shanghai Libra Investment & Management Co., Ltd/37/ and checking the public website of Shell Energy (China) Ltd/75/, CTI 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, CTI 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/31/ of Chinese company/69/, CTI confirmed that the statement in MR is actual and credible. Thus, CTI concluded that the financial health of the implementing organizations is verified and they can ensure adequate financial support over the project lifetime.

CAR 05 is closed.

CAR ID	06	Section no.	4.1.1	Date :	20/06/2022
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Description of CAR

The detail information of the local villagers is not related to this monitoring period and the change in Well-being is not elaborated based on the impacts achieved. Revision is requested.

Project participant response

Date : 26/07/2022

During this monitoring period, planting workers are no longer involved since the completion of tree plantation. In this light, revision is made accordingly to reflect the detail information—villagers are those who owned forest land tenure of this project. As for the change in well-being, it is added that the improvement of environmental is beneficial to all villagers. With the soil and water conservation, the crop harvest was greatly improved, so the income increased accordingly. Besides, the carbon profit distributed to the village committees and villagers who owned forest land tenure of this project helps increase their income.

Documentation provided by project participant

MR-version 02/1/

VVB assessment

Date: 05/08/2022

The revised MR is checked, CTI confirmed that detail information of the local villagers is related to this monitoring period and the change in Well-being is elaborated based on the impacts achieved.

Refer to section 4.5.1 and 4.5.6 of this report for detail assessment.

CAR 06 is closed.

CAR ID	07	Section no.	4.3.1	Date :	20/06/2022
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Description of CAR

1. The monitoring methods applied, the questions asked and results of monitoring for all the improvement as a perceived benefit do not reflect the actual status of this monitoring period, revision is requested.
2. The result of monitoring for Promote forest management and protection is not related to actual

situation of this monitoring period.	
3. The result of monitoring for household income is not related to actual situation of this monitoring period.	
4. Result of monitoring of variable "Achieve goals in afforestation" is not listed corresponding to this monitoring period.	
Project participant response	Date : 26/07/2022
1. Revisions have been made to reflect the actual status of this monitoring period. All the monitoring variables that were monitored via questionnaire and interview have added the corresponding questions asked. Questions can include 'what are the changes to the surrounding environment after the implementation of the project' 'does happiness increase' 'what has happened to women's social status' 'has it improved your standard of living' 'are you getting jobs and training' 'Whether the awareness of environmental protection and related laws and regulations have been raised'. In addition, the monitoring results regarding the change of living environment, the change of living level, increased collective communication of the village and promoted forest management and protection have been shown by specific proportion of participants' responses.	
2. Further detail has been added to the category of Promote forest management and protection to reflect the actual situation of this monitoring period. By setting clear and understandable questions in the questionnaire, the real feelings of the villagers involved in this survey can be collected. Questions, for example 'Whether the awareness of environmental protection and related laws and regulations have been raised' have raised. According to the questionnaire, 99% of the villagers believed that the implementation of the project has helped raise their awareness of forest protection; 100% of officials from governments and forestry bureaus believed that the awareness of forest management and protection has been greatly improved.	
3. The detailed information has been specified in the household income increment. According to the receipts from village committees and villagers who owned forest land tenure of this project, 60% of profit gained from the previous monitoring periods has been distributed to all village committees and villagers who owned forest land tenure of this project.	
4. The result for "Achieve goals in afforestation" is now listed accordingly. It is shown that during this monitoring period, the technicians completed the weeding and pest prevention work in accordance with the requirements of the forest management manual. And there were no disasters such as fires or mudslides. Due to the public awareness of environmental protection, there was no illegal logging during this monitoring period. Therefore, the forest area has not decreased, and the trees are growing well.	
Documentation provided by project participant	
MR-version 02/1/	
VVB assessment	Date: 05/08/2022
1. The revised MR is checked, CTI confirmed that monitoring methods applied, the questions asked and results of monitoring for all the improvement as a perceived benefit are elaborated.	
2. The revised MR is checked, CTI confirmed that the result of monitoring for Promote forest management and protection is related to actual situation of this monitoring period.	
3. The revised MR is checked, CTI confirmed that the result of monitoring for household income is related to actual situation of this monitoring period.	
4. Result of monitoring of variable "Achieve goals in afforestation" is updated to reflect the situation of this monitoring period which is confirmed as correct and actual by checking the biodiversity survey records for this monitoring period issued by Guizhou province academy of social sciences/25/.	
Refer to section 4.5.6 of this report for detail assessment.	
CAR 07 is closed.	

CAR ID	08	Section no.	5.1.1	Date : 20/06/2022
Description of CAR				
The changes of biodiversity for both plants and animals are not actual for this monitoring period.				
Project participant response				Date : 26/07/2022
Both plants and animals have witnessed an increase. The increased plants were achieved by the implementation of afforestation program. According to the requirements of the survey method, sample plots of three types of vegetation were collected. After collecting data, the survey report was compiled by Guizhou Academy of Social Sciences. During this monitoring period, 4 species of plants were				

discovered in 26 sample plots and the survey result is shown as follows: Xanthium sibiricum (30 plants), Urtica (44 plants), Psilotum nudum (28 plants), and Sphagnum palustre (760mm²). As for species of animals, during this monitoring period, 7 species of animals were discovered in 26 sample plots and their specific species and quantities are shown as follows: Ardea cinerea (the number is 2), Streptopelia chinensis (the number is 1), Charadriiformes (the number is 1), Upupa epops (the number is 1), Macaca mulatta (the number is 17), Lepus sinensis (the number is 16), and Toad (the number is 3).

Documentation provided by project participant

MR-version 02/1/
/25/

VVB assessment

Date: 05/08/2022

The revised MR is checked, CTI confirmed that changes of biodiversity for both plants and animals have been updated to be the actual situation for this monitoring period which is verified by checking the biodiversity survey report/25/.

CAR 08 is closed.

CAR ID	09	Section no.	5.3.1	Date : 20/06/2022
Description of CAR				
The survey method and monitoring results for both plants and animals are not actual for this monitoring period.				
Project participant response				Date : 26/07/2022
Concerning the survey method of plants and animals, information has been made complete by adding relevant information such as the selection of belt transect method, the method of data-recording, the survey area, what are sampled for molecular biological analysis and recording and investigation of animal and plant information. As for the monitoring results of animals and plants, it has made clear that there were 11 species of animals and plants (7 species of animals and 4 species of plants) and the corresponding quantity for each species has been listed. In addition, the biodiversity monitoring is performed as per the requirements stipulated in the survey methodology. In summary, the data of biodiversity survey demonstrated that since the afforestation project was implemented, the geographic characteristics of barren hills have been improved. Therefore, the project plays a positive role in the utilization of barren hills and the biodiversity within the project area has continued to increase.				
Documentation provided by project participant				
MR-version 02/1/ /25/				
VVB assessment				Date: 05/08/2022
The revised MR is checked, CTI confirmed that monitoring results for both plants and animals have been updated to be the actual situation for this monitoring period which is verified by checking the biodiversity survey report/25/.				
CAR 09 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				
VVB assessment				Date: