

VALIDATION REPORT

QIANXINAN AFFORESTATION PROJECT IN GUIZHOU PROVINCE



Document Prepared By TÜV NORD CERT GmbH

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Summary:

- A brief description of the validation and the project.

The proposed VCS project activity Qianxinan Afforestation Project in Guizhou Province conducts an afforestation of 32,047 ha of forest established by direct planting on barren or degraded lands in Xingren City, Xingyi City, Ceheng County, Zhenfeng County, and Qinglong County, Guizhou Province, P. R. China with native trees (China fir and Cypresses). The approved AR-CDM methodology AR-ACM0003/Version 2.0.0 “Afforestation and reforestation of lands except wetlands” is applied to quantify the GHG removals achieved in this project. The calculation of the project emission removals is carried out in a transparent and conservative manner. This project is being developed in conjunction with the Climate, Community and Biodiversity Standard (CCBS).

- The purpose and scope of validation.

The validation objective is an independent assessment by a Third Party of a proposed project activity against all defined criteria set for the registration under the VCS/CCB. In order to confirm that the project activity, as documented, is sound reasonable and meets the identified criteria, the validation involves the assessment of: project conformance to VCS/CCB rules, project conformance to the applied methodology, including the procedure for the demonstration of additionality specified in the methodology; and likelihood that methods a procedures set out in the project description will generate verifiable GHG data and information when implemented. Validation is a requirement and is seen as necessary to provide assurance to stakeholders of the quality of project and its intended generation of VCUs. Validation is part of the VCS project cycle and will finally result in a conclusion by the executing VVB whether a project activity is valid to be submitted for registration to VCS/CCB registry. The ultimate decision on the registration of a proposed project activity rests with the VCSA/CCBA.

- The method and criteria used for validation.

Validation is conducted using TÜV NORD CERT GmbH procedures in line with the requirements specified in the latest version of the VCS Validation and Verification Manual and applying auditing techniques. The validation team assessed the proposed project activity’s compliance under the VCS Version 3.7, the CCB Standard Third Edition, the selected methodology and the project description. The project activity is found to be appropriately eligible under Project Scope 14 “Agriculture, Forestry, and other Land Use (AFOLU). The validation criteria followed the guidance documents provided by VCS and CCB included the following: VCS Standard version 3.7, VCS Program Guide version 3.7, AFOLU Requirements version 3.6, AFOLU Non-Permanence Risk Tool version 3.3, CCB Standards version 3.1, CCB Program Rules version 3.1 and the CDM Methodology AR-ACM0003 version 2.0.0 – “Afforestation and reforestation of lands except wetlands”.

- The number of findings raised during validation.

In the course of the validation 29 Corrective Action Requests (CARs), 4 Clarification Requests (CLs) were raised and successfully closed. 2 FARs were raised. The assessment is included in the report.

- Any uncertainties associated with the validation.

There are no restrictions of uncertainty.

- Summary of the validation conclusion.

Shanghai Libra Investment & Management Co., Ltd has commissioned the TÜV NORD JI/CDM Certification Program to carry out the Verified Carbon Standard (VCS) joint with Climate, Community & Biodiversity (CCB) validation of the project, Qianxinan Afforestation Project in Guizhou Province (PL1847) with regard to the relevant requirements of VCS standard version 3.7 and CCB Standards version 3.1. TÜV NORD confirms all validation activities including objectives, scope and criteria, level of assurance, monitoring and project documentation adhere to VCS version 3.7 and CCB Standards version 3.1 and all associated updated as documented in this report, are complete. TÜV NORD concludes that that the “Qianxinan Afforestation Project in Guizhou Province” project description (PD) version 03 of Feb 2019 meets the requirements of VCS and CCBS and all associated updated. The GHG assertion provided by Shanghai Libra Investment & Management Co., Ltd and validated by TÜV NORD will result in the expected GHG emission reductions or removal of 9,393,374 tCO₂e (without considering the buffer) over the 20 years crediting period.

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1 INTRODUCTION

1.1 Objective

Shanghai Libra Investment & Management Co., Ltd has commissioned the TÜV NORD JI/CDM Certification Program to carry out the Verified Carbon Standard (VCS) joint with Climate, Community & Biodiversity (CCB) validation of the project, Qianxinan Afforestation Project in Guizhou Province in China with regard to the relevant requirements of VCS standard version 3.7^{/VCS/} and CCB Standards version 3.1^{/CCBS/}.

The validation objective is an independent assessment by a Third Party of a proposed project activity against all defined criteria set for the registration under the VCS/CCB. In order to confirm that the project activity, as documented, is sound reasonable and meets the identified criteria, the validation involves the assessment of: project conformance to VCS/CCB rules, project conformance to the applied methodology, including the procedure for the demonstration of additionality specified in the methodology; and likelihood that methods and procedures set out in the project description will generate verifiable GHG data and information when implemented. Validation is a requirement and is seen as necessary to provide assurance to stakeholders of the quality of project and its intended generation of VCUs. Validation is part of the VCS project cycle and will finally result in a conclusion by the executing VVB whether a project activity is valid to be submitted for registration to VCS/CCB registry. The ultimate decision on the registration of a proposed project activity rests with the VCSA/CCBA.

1.2 Scope and Criteria

The validation scope is to review the criteria against the VCS version 3.7 and CCB Standards version 3.1 requirements, to give as a thorough independent and objective assessment of the project design including especially: the correct application of the methodology, project's physical boundaries, the project's baseline study, additionality justification, management activities and the temporal boundaries as the years when the GHG emission reductions and removals are quantified, stakeholder involvement, environmental impacts, Climate impacts, *Community* impacts, Biodiversity impacts and monitoring plan, which are included in the VCS&CCB PD / other relevant supporting documents, to ensure that the proposed VCS&CCB project activity meets all relevant and applicable criteria as follow,

- VCS Program Guide, v3.7^{/VCS/}
- VCS Standard, v3.7^{/VCS/}
- Program Definitions, v3.7^{/VCS/}
- AFOLU Requirements, v3.6^{/AFOLU/}
- AFOLU Non-Permanence Risk Tool, v3.3^{/NPRT/}
- CCB Standards, v3.1^{/CCBS/}
- CCB Program Rules, v3.1^{/CCBPR/}

The following documents are also taken into account in the VCS&CCB validation, as a CDM methodology was used:

- the Kyoto Protocol, in particular § 12 and modalities and procedures for the CDM;
- further COP/MOP decisions with reference to the CDM (e.g. decisions 4-8/CMP.1);
- decisions and specific guidance by the EB published under <http://cdm.unfccc.int>;
- approved baseline and monitoring methodologies (including GHG inventories).

Further criteria and scope for the VCS validation also include:

- Standard auditing methods for management systems;

- good practice in the respective technology and sectoral scope, including environmental and social impacts.

The information included in the PD and the supporting documents were reviewed and assessed against the requirements as set out by the VCS Version 3.7.

The validation is based on the information made available to TÜV NORD JI/CDM CP and on the contract conditions. TÜV NORD JI/CDM CP cannot be held liable by any entities for making its validation opinion based on any false or misleading information supplied to it during the course of validation.

The validation is not meant to provide any consulting to the project participants. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

1.3 Summary Description of the Project

The Qianxinan Afforestation Project in Guizhou Province (hereafter “the project”) is located in Xingren City, Xingyi City, Ceheng County, Zhenfeng County, and Qinglong County, Guizhou Province, China. The project is to establish forest by planting trees on the barren or degraded lands to generate GHG emission reductions and contribute to local sustainable development. The project is implemented by Guizhou Baiheng Fertiliser Co., Ltd.

32,047 ha of forest is established by direct planting on degraded lands. 2 Cities and 3 counties including Xingren City, Xingyi City, Ceheng County, Zhenfeng County and Qinglong County which belongs to Qianxinan, Guizhou Province are involved in the project.

All the project sites were previously degraded land and barren land. There is no natural renewal and reforestation before the project. Via on-site observation and checking the Project Design for Afforestation Operation^{/PDAO/}, it is confirmed that the mainly planted tree specie including China fir and Cypresses, which are all native species.

The implementation of the project would reduce the GHG emissions for 9,393,374 tCO₂e in 20 years, with an average annual GHG emission of 469,669 tCO₂e.

The proposed project activity will generate GHG emission reductions by changing the use of land from egraded land and barren land to sustainable forest production systems which will 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 to local communities.

The project is being developed and registered under the Verified Carbon Standard (VCS) and the Climate, Community and Biodiversity Standard (CCBS).

2 VALIDATION PROCESS

2.1 Audit Team Composition (*Rules 4.3.1*)

Lead Auditor/VCS-CCB Validator: Zhao Xuejiao (Fancy) is qualified by TÜV NORD in Validation and Verification of Clean Development Mechanism Requirements (CDM projects) and other voluntary schemes as VCS, ISO14064-2, GS, CCB and SD. She has experience with more than 150 validation and verification projects in China.

Technical Expert: Li Guifang has Bachelor degree in Agriculture Resources and Environment and Master degree in Plant Nutrition, and work experience more than 5 years in consultancy under the GHG, ecological and biodiversity to the development of forestry management and A/R projects, qualified by TÜV NORD in Scope 14.

2.2 Method and Criteria

The validation method of the project consisted of the following steps:

- Contract review
- Appointment of team members and technical reviewers
- Publication of the VCS&CCB project description (VCS&CCB PD)^{/PD/}
- A desk review of the VCS&CCB PD^{/PD/} submitted by the client and additional supporting documents with the use of customised validation protocol
- Validation planning
- On-Site assessment
- Background investigation and follow-up interviews with personnel of the project developer and its contractors
- Draft validation reporting
- Resolution of corrective actions
- Final validation reporting
- Technical review
- Final approval of the validation.

The validation criteria consisted of the following:

- VCS Program Guide, v3.7
- VCS Standard, v3.7
- Program Definitions, v3.7
- AFOLU Requirements, v3.6
- AFOLU Non-Permanence Risk Tool, v3.3
- CCB Standards, v3.1
- CCB Program Rules, v3.1
- CDM Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities
- CDM methodological tool for estimation of change in soil organic stocks due to the implementation of A/R CDM project activities

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

2.3 Document Review

The VCS&CCB PD^{/PD/} and supporting background documents related to the project design and baseline were reviewed.

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

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

2.4 Interviews

The objective of the interview process was to solicit important information from personnel related to project and relevant to the validation process. Onsite interviews and information discussions were conducted with project developer^{/11/}, local government officer^{/12/}, local residents^{/13/} and Project VCS&CCB development consultant^{/14/}. The interviews were performed by the validation team on-site (within the project area, in Xingren City, Xingyi City, Ceheng County, Zhenfeng County, and Qinglong County, 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.	Wang ^{/11/}	Xinhai	Guizhou Baiheng Fertiliser Co., Ltd/ General Manager	11/02/2019~13/02/2019	-Chronological description of the project activity with documents of key steps of the implementation.	Zhao Xuejiao, Li Guifang
2.	Yuan ^{/11/}	Sheng	Guizhou Baiheng Fertiliser Co., Ltd/ Project Manager	11/02/2019~13/02/2019	-Technical details of the project realization, project feasibility, designing, operational life time -Baseline and Additionality -Project Boundary -Eligibility criteria -ER calculation - Monitoring plan and arrangements -Crediting period -Project activity starting date -Ownership -local stakeholder consultation	Zhao Xuejiao, Li Guifang
3.	Wang ^{/12/}	Guohu	Qianxinan Forestry Bureau/ Vice Director	11/02/2019~13/02/2019	-National legislation to forest - Provincial legislation to afforestation -Local forestry development - Roles & responsibilities of the government -local communities situation -local biodiversity situation	Zhao Xuejiao, Li Guifang

					-local climate -local environment	
4.	Liu ^{/13/}	Rui	Bihen Village/ Resident/ worked as forest Technician	11/02/2019~ 13/02/2019	-job opportunities -living condition -training -local stakeholder consultation -impact to local residents	Zhao Xuejiao, Li Guifang
5.	Huang ^{/13/}	Lianghu	Xingren City/ Resident/ workers to plant trees	11/02/2019	-impact to local environment -impact to local biodiversity	Zhao Xuejiao, Li Guifang
6.	Yao ^{/13/}	Shiheng	Xingren City/ Resident/ workers to plant trees	11/02/2019		Zhao Xuejiao, Li Guifang
7.	Liu ^{/13/}	Mei	Xingyi City/ Resident/ workers to plant trees	11/02/2019		Zhao Xuejiao, Li Guifang
8.	Lu ^{/13/}	Junxiang	Xingyi City/ Resident/ workers to plant trees	11/02/2019		Zhao Xuejiao, Li Guifang
9.	Cao ^{/13/}	Xia	Zhenfeng County/ Resident/ workers to plant trees	12/02/2019		Zhao Xuejiao, Li Guifang
10.	Wu ^{/13/}	Qing	Zhenfeng County/ Resident/ workers to plant trees	12/02/2019		Zhao Xuejiao, Li Guifang
11.	Chen ^{/13/}	Yan	Ceheng County/ Resident/ workers to plant trees	12/02/2019		Zhao Xuejiao, Li Guifang
12.	Lu ^{/13/}	Hui	Ceheng County/ Resident/ workers to plant trees	12/02/2019		Zhao Xuejiao, Li Guifang
13.	He ^{/13/}	Yifeng	Qinglong County/ Resident/ workers to plant trees	13/02/2019		Zhao Xuejiao, Li Guifang
14.	Liang ^{/13/}	Min	Qinglong County/ Resident/ workers to plant trees	13/02/2019		Zhao Xuejiao, Li Guifang

15.	Zhong ^{14/}	Shaohui	Shanghai Libra Investment & Managemen t Co., Ltd/ General Manager	11/02/2019~ 13/02/2019	-Financial aspects -Deviations -Crediting period -Project activity starting date -Baseline study assumptions -Additionality	Zhao Xuejiao, Li Guifang
16.	Shen ^{14/}	Keye	Shanghai Libra Investment & Managemen t Co., Ltd/ Project Manager	11/02/2019~ 13/02/2019	-Monitoring - Editorial issues of the VCS&CCB PD	Zhao Xuejiao, Li Guifang

2.5 Site Inspections

The validation site inspection was conducted on 11/02/2019~13/02/2019. A ground inspection of the project area was conducted during the site visit and members of the validation team visited several targeted areas within the project area. During the site inspection the validation team was accompanied by the forest developer, local government officers, consultant and forest technician.

There are total 4 project stratifications for carbon calculation in the 2 cities and 3 counties, the validation team visited two targeted area for each project stratification, total 8 targeted areas. The detail of the area and tree species are in the below table

Table 2-1 Targeted area in 4 project stratifications

Targeted Area	Dimension for each stratification (ha)	Tree species	Plant Year
1,2	2,538	<i>Cypresses</i>	2014
3,4	667	<i>Cypresses</i>	2015
5,6	22,842	<i>China fir</i>	2014
7,8	6,000	<i>China fir</i>	2015

Sampling was designed taking into account the accessibility and similitude of the areas, and it has ensured a representative cross-section of the properties in the areas.

2.6 Public Comments

According CCBS requirements the Project Description was submitted for public comment period. The public comment period started on 02/01/2019 and ended on 02/02/2019 (https://www.vcsprojectdatabase.org/#!/pipeline_details/PL1847). No comments were received during this period.

2.7 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:

- mistakes have been made in assumptions, application of the methodology or the project documentation which will have a direct influence the project results,
- the requirements deemed relevant for validation of the project with certain characteristics have not been met or
- there is a risk that the project would not be registered or that emission reductions would not be able to be verified and certified.

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.

2.7.1 Forward Action Requests

2 FAR were raised during the validation process. Refer to Appendix 3 for details.

3 VALIDATION FINDINGS

3.1 Summary of Project Benefits

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

3.2 General

3.2.1 Summary Description of the Project (G1.2)

- *Technologies/measures to be implemented by the project and eligibility of the project.*

The project zone Xingren City, Xingyi City, Ceheng County, Zhenfeng County and Qinglong County are located in the Qianxinan Buyi and Miao autonomous prefecture, which is the typical low-latitude and high-altitude mountain area^{/PDAO/}, belonging to the south-north pan river basin of the pearl river system. The whole terrain is high in the west and low in the east, high in the north and low in the south^{/BLS/}. The highest point is the peak of Qishe and Liangzhaogao plateau in Xingyi city, which is 2,207.2 meters above sea level. The lowest point is the Daliu estuary along the Hongshui river in Wangmo County, which is 275 meters above sea level with a height difference of 1,932.2 meters, and most of them are between 1,000 and 2,000 meters above sea level^{/PDAO/}. The altitude involved in this project is 1,026 to 1,996 meters. The vegetation within the project zone are subtropical and temperate plants, main food crops: rice, corn, potatoes etc.^{/BDS/}. The project zone covers 2 cities and 3 counties in Qianxinan Buyi and Miao autonomous prefecture. The population of Qinglong County is about 281,100, with 14 ethnic groups. The Han population accounts for 44.76%, and the minority population accounts for 55.24%. Xingren City has a population of about 528,000 and 17 ethnic groups, the Han nationality accounts for 78% of the city's population and ethnic minorities account for 22% of the city's total population. Xingyi City has a population of about 900,000 people and 26 ethnic groups, the Han nationality accounts for 79.14% of the city's population and ethnic minorities account for 20.86% of the city's total population. Ceheng County has a population of about 230,000 and 26 ethnic groups, the Han nationality accounts for 79.81% of the city's population and ethnic minorities account for 20.19% of the city's total population. Zhenfeng County has a population of about 410,000 and has 25 ethnic groups, the Han nationality accounts for 51% of the city's population and ethnic minorities account for 49% of the city's total population^{/CBSR/}. The PD sufficiently describes the social and physical parameters of the project area and zone. The project aim in afforestation of degraded land, which would continue to remain degraded, planting with native trees (China fir and Cypresses)^{/PDAO/&SPC/}. The documented evidences and the site visit confirmed the description.

- *Project proponent and other entities involved in the project.*

As per the information available in the PD and confirmed by the PP during the on-site visit^{/I1/}, the primary project proponent responsible for project develop, project design, project implementation and project management is Guizhou Baiheng Fertiliser Co., Ltd

The contact details are:

Sheng Yuan (Project Manager)

- MAX-B, Fincancial city, Changling Road, Guanshanhu District, Guiyang City, Guizhou Province, China.

Based upon professional judgement, it is reasonable to assume that the project proponent is capable effectively to conduct the project activities and oversee the project activity implementation due to relevant experience and skills in forest development and management.

The project area is under the control of PP at the beginning of the project validation identifying the responsibilities with respect to the project implementation, management and monitoring^{/BL/}.

As per the information available in the PD and confirmed by the PP during the on-site visit^{/11/}, the other entities involved is the VCU's Buyer Shanghai Libra Investment & Management Co., Ltd who has signed the ERPA^{/ERPA/} with the project developer. The contact details are:

Shaohui Zhong (General Manager)

- Room H, Floor 20, Aibang Mansion, No.585 Lingling Road, Xuhui District, Shanghai, China Project start date.

The PD states, and confirmed by the PP during the interview, that the project start date is 15/04/2014 based on the date when the planting started^{/PSD/}.

Agreements between the landowner and the project owner are available defining the validity and the land rented^{/LUA/}. The project lifetime is 30 years and the GHG accounting period is 20 years. It is assumed that both the accounting period and the project lifetime begin on the project start date. The starting date is defined on 15/04/2014 when the planting started as described above and it represents the date on which the project began generating GHG emission reductions or removals as defined by the VCS AFOLU requirements.

- *Project scale and estimated GHG emission reductions or removals.*

Project scale is selected as "Large Project" at estimated average annual emission reductions of 469,669 tCO₂ per year (average) greater than the 300,000 tons of CO₂ per year, which indicates a "Large Project" per VCS Standard section 3.9.1.

- *Project location.*

The project zone Xingren City, Xingyi City, Ceheng County, Zhenfeng County and Qinglong County are located in the Qianxinan Buyi and Miao autonomous prefecture, which is the typical low-latitude and high-altitude mountain area^{/PDAO/}, belonging to the south-north pan river basin of the pearl river system. The whole terrain is high in the west and low in the east, high in the north and low in the south. The PD includes a map of the project zone as well the geographical coordinates of Xingren City, Xingyi City, Ceheng County, Zhenfeng County and Qinglong County and a map of the project areas (planted areas).

The PD lists the local name and the geodetic coordinates (the geographical coordinates of the project are listed as below table). All the information have been cross-checked through the maps^{/MAP/&/GE/}.

Location	East longitude	North latitude
Xingren City	104°54'-105°34'	25°18'-25°47'
Xingyi City	104°51'-104°55'	24°38'-25°23'
Ceheng County	105°27'-106°12'	24°38'-25°19'
Zhengfeng County	105°25'-105°56'	25°07'-25°44'
Qinglong County	105°01'-105°25'	25°33'-26°11'

- *The scenario existing prior to the implementation of the project.*

As per the PD and confirmed during the on-site interview, it is confirmed that in the absence of the project, there is no forestry land in the project area before the project. The lands will remain barren without the project. The baseline scenario is the same as the conditions existing prior to the project initiation.

- *The project's climate, community and biodiversity objectives.*

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, below-ground biomass and soil organic carbon. Community objectives would ensure the creation of employment and provide relevant training (skilled labour force), which would positively influence the livelihoods and well-being of the population. Biodiversity objectives would preserve the conservation of wildlife and of biodiversity in the Region. The project's objectives are defined and are reasonable for the project's location and the actual situation.

The validation team by the mean of on-site inspection at Xingren City, Xingyi City, Ceheng County, Zhenfeng County and Qinglong County and cross check with the supporting documents provided during the validation process, is able to conclude that the description of Xingren City, Xingyi City, Ceheng County, Zhenfeng County and Qinglong County afforestation project within the PD is accurate, complete, and provides an understanding of the nature of the project.

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

3.2.2 Physical Parameters (G1.3)

Describe the steps taken to validate the summary description of basic physical parameters of the project. Include details of documentation assessed and observations made during the site visit for each parameter included in the summary.

The project area Xingren City, Xingyi City, Ceheng County, Zhenfeng County and Qinglong County are located in the Qianxinan Buyi and Miao autonomous prefecture, which is the typical low-latitude and high-altitude mountain area^{/PDAOI/}, belonging to the south-north pan river basin of the pearl river system. In the territory of the state, the topography is undulating and complex, which can be divided into five different landform areas, namely, low mountain erosion mountain canyon area, trough dam area of karst plateau; Karst erosion area; Karst erosion mountain area; erosion of the mountain valley^{/BLS/}.

There are totally 8 soil types in the project area Xingyi City, including 27 subcategories, 79 soil genera and 161 soil species; The soil in the project area Xingren City is mainly yellow brown soil and yellow soil; There are totally 10 soil types in the project area Ceheng County, including 27 subsoil classes, 59 soil genera, 94 soil species; The soil types in project area Zhenfeng county mainly include red soil, yellow soil, lime soil and rice soil; There are 52 families and 116 species of tree species (including bamboos) in project area Qinglong county. The vertical distribution of the soil species is obvious^{/BDS/}. The whole terrain is high in the west and low in the east, high in the north and low in the south^{/BDS/}.

In Xingyi City, the average annual temperatures range from 7.1~22.2°C and the rainfall in the Region is about 1,300 mm~1,600 mm^{/BDS/};

In Xingren City, the average annual temperatures range from 6.1~22.1°C and the rainfall in the Region is about 1,300 mm^{/BDS/};

In Ceheng County, the average annual temperatures range from -4~36.5°C and the annual average rainfall in the Region is about 1340.7mm^{/BDS/};

In Zhenfeng County, the average annual temperature is 16.6°C and the rainfall in the Region is about 1,000 mm~1,400 mm^{/BDS/};

In Qinglong County, the average annual temperature is 14°C and the rainfall in the Region is about 1,500 mm~1,650 mm^{/BDS/};

The PD sufficiently describes the physical parameters of the project area and zone. The site visit and the supporting documents confirmed the description.

CAR 03 was raised and successfully closed, Refer to Appendix 3 for details.

3.2.3 Social Parameters (G1.3)

The community living inside and in the vicinity of the project zone is limited. In the Xingren City, Xingyi City, Ceheng County, Zhenfeng County and Qinglong County, the population is concentrated mostly in the urban area, thus only workers of the rural properties live in camps located inside the farms. More over there are indigenous groups and minority population located in the counties and in the vicinity of the project zone^{/CBSR/}. The dominated land use and economic activity is agriculture, including irrigation farming and cattle and sheep herding and most of the residents are farmers^{/CBSR/}.

The PD sufficiently describes the social parameters of the project area and zone. The site visit and the supporting documents confirmed the description.

CAR 04 was raised and successfully closed, Refer to Appendix 3 for details.

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

The project zone covers a total area of approximately 32,047 ha located in Xingren City, Xingyi City, Ceheng County, Zhenfeng County and Qinglong County of Guizhou Province. The location of the project area and zone is defined and confirmed through the maps^{/MAP/} and the geographical coordinates^{/GE/}.

As stated in §3.2.3 of this report the community living inside and near the project area and zone is limited being a rural area. The map included in the PD identifying the boundaries of the project area and zone demonstrates that the area/zone is degraded land.

Site observations confirmed the targeted areas are located within the administrative division of Xingren City, Xingyi City, Ceheng County, Zhenfeng County and Qinglong County and the geographical coordinates of the project as described by the PD and by the supporting documents^{/MAP/,/GE/}.

CAR 05 was raised and successfully closed, Refer to Appendix 3 for details.

3.2.5 Stakeholder Identification (G1.5)

The PD states that the stakeholders were identified as all local villagers in the all of towns of the 2 cities and 3 counties who are affected by the project activities, the local Forest Bureau that involved in providing the basic planting technology, local government of the 2 cities and 3 counties, entities and organizations that could have interest in the project activity. The list of primary stakeholder is provided in the PD and seems reasonable for a project of this nature. This is was confirmed during the on-site visit and the interview with the local stakeholders^{/I2/,/I3/}.

CAR 06 was raised and successfully closed, Refer to Appendix 3 for details.

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

A list of stakeholders close enough to the project is included in the PD: villagers in communities, Forest Bureau of Xingren City, Xingyi City, Ceheng County, Zhenfeng County and Qinglong County, Government of Xingren City, Xingyi City, Ceheng County, Zhenfeng County and Qinglong County, entities and organizations that could have interest in the project activity. The identified stakeholders seems to be the ones with influence or interest on project design and seems reasonable. This is was confirmed during the on-site visit and the interview with the local stakeholders^{/I2/,/I3/}.

CAR 06 was raised and successfully closed, Refer to Appendix 3 for details.

3.2.7 Sectoral Scope and Project Type

The proposed project falls into VCS Sectoral Scope 14: Agriculture Forestry and Other Land Use (AFOLU), and the aim of the project is the afforestation of any land that does not fall into the category of wetland. According to the VCS requirement the project is eligible under AFOLU project categories ARR (Afforestation, Reforestation and Revegetation). As per the AFOLU requirements, eligible ARR activities are those that increase sequestration and/or reduce GHG emissions by establishing, increasing or restoring vegetative cover. The project is confirmed as not a grouped project^{/AAPPI/}.

The native ecosystem in the project area was no longer present and the goal of the project is to plant species in a degraded area^{/PDAOI/}. As stated in the PD during the crediting period, all project areas will be not subjected to cut activity.

CL 01 was raised and successfully closed, Refer to Appendix 3 for details.

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

The PD discusses the expected outputs, outcomes and impacts due to the project implementation. The activities are identified in afforestation, monitoring and training. For each of the above activities are identified the expected outcomes on climate, community and biodiversity:

- Generate GHG emission removals
- Offer permanent and temporary job opportunities
- Provide technical skills and training
- Conduct continuous management and protection of the forest
- Improve soil and water conservation in the Karst region

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

3.2.9 Sustainable Development

The project activity will generate GHG emission reductions and sequester carbon dioxide and mitigating climate change by foregoing the afforestation of degraded lands which would remain degraded. The project also generates social and environmental co-benefits as the generate in the local workforce employed in the project zone/area, Enhance biodiversity conservation by increasing the connectivity of forests which is critical for wildlife, Improve the quality and quantity of the vegetation, Improve soil and water conservation in the Karst region and Generate income and job opportunities for local communities.

CAR 08 was raised and successfully closed, Refer to Appendix 3 for details.

3.2.10 Implementation Schedule (G1.9)

The PD states, and confirmed by the PP during the interview, that the project start date is 15/04/2014 based on the date when started planting^{/PSD/} as described in previous section. The implementation schedule is as the following,

Date	Milestone(s) in the project's development and implementation
------	--

30-10-2013	Started the baseline survey ^{/BLS/}
20-01-2014	The Project Design for Afforestation Operation was finished ^{/PDAO/}
26-02-2014	The afforestation project plan was approved by Qianxinan Forest Bureau ^{/AAPP/}
19-03-2014	Biodiversity survey report of the project was completed ^{/BDS/}
31-03-2014	Participatory Rural Appraisal (PRA) report of the project was completed ^{/PRA/}
15-04-2014	Started planting (start date of crediting period) ^{/PSD/}
15-10-2015	Completed planting ^{/CAR/}

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

3.2.11 Benefits Assessment and Crediting Period (G1.9)

During the crediting period and project lifetime quantitative and qualifying studied on biodiversity, climate and community will be done periodically; no cut activity is expected in project area during the crediting period and the lifetime of the project is 30 years^{/PL/}. The crediting period is considered reasonable based on the project lifetime.

3.2.12 Risks to the Project (G1.10)

Describe the steps taken to assess the accuracy of the likely natural and human-induced risks to the expected climate, community, and biodiversity benefits during the project lifetime identified by the project. Identify, discuss, and justify conclusions regarding the measures included in the project description to mitigate these risks.

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, fertilization risks.

Fire risk is considered low because planting area is mostly barren land, local government sets the fireproofing period when using fire is forbidden in the open air and no fires occurred in the project areas as confirmed during the on-site visit.

The planted trees may would be damaged by insects and disease, but the risk is considered low because it can be prevented by routine overseeing and the PP have in place a full Integrated Forest Management Manual^{/IFMM/}. The project construction unit and the county forest station have signed the pest control responsibility document^{/PCR/}.

The prevention and control methods by using instruments such as ground arrow and arch clip to control pests and diseases will be mainly adopted, and chemical agents can be appropriately used for the areas where the rodents and diseases and insect pests are particularly serious.

The pesticide are allowed to be used only if there is a serious pest problem erupted in the project area, while improper pesticide application would be harmful to natural environment, but the risk is considered low because pesticide will be strictly managed by well trained staff to minimize the potential effect^{/IFMM/}. As the biological measures to control pests and diseases will be mainly adopted, the pesticide application will be limited.

CAR 09 was raised and successfully closed, Refer to Appendix 3 for details.

3.2.13 Benefit Permanence (G1.11)

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

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

3.2.14 Financial Sustainability (G1.12)

Identify, discuss, and justify the financial mechanisms adopted to provide an adequate actual and projected flow of funds for project implementation and to achieve the project's climate, community and biodiversity benefits. Identify whether evidence of actual and/or projected revenues from GHG emissions reductions and/or removals and/or other sources is provided.

As declared by the PPs during the interview, the preliminary project funding came from local government resources and for the future in addition to that, from selling the potential VCUs to Shanghai Libra Investment & Management Co., Ltd. Moreover the PPs have sufficient funds to maintain the implementation of the project before of VCUs can take place.

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

3.2.15 Grouped Projects

N/A

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

In the absence of the project the land would be degraded grassland and barren land. There is no forestry land in the project area before the project. The lands will remain barren without the project.

This is confirmed by onsite interview with local government officer^{/I2/} and documents review^{/BLS/}.

3.2.17 Most-Likely Scenario Justification (G2.1)

The most likely land use scenario would be the same as baseline scenario via checking the baseline survey^{/BLS/} and approval of the afforestation project plan^{/AAPP/}.

3.2.18 Community and Biodiversity Additionality (G2.2)

As stated in the PD, there are not ongoing or unresolved disputes or conflicts regarding land, prior to the project initiation, the project land are are collective-owned by local villages^{/LUA/}. The local villagers have the right to the use of land.

China has successively issued a series of laws and administrative regulations related to forestry, such as the <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> etc. aimed at providing the guidelines in the forest sector development process (forestry and industry) in order

maximize the economic, social and environmental benefits. The project is not required by law which is confirmed by checking the approval of the afforestation project plan^{/AAPP/}.

According to the land planning, the afforestation activity location is legally defined as forestry land. Farming and grazing is not allowed in these plots.

Demonstration of project activity would not have been implemented under the without-project scenario due to significant financial, technological, institutional or capacity barriers is listed in the section 3.3.5 of this report.

In conclusion, the project benefits would not have occurred in the absence of the project.

3.2.19 Stakeholder Access to Project Documents (G3.1)

The PD is available in English and a summary document of the PD is Chinese version. The full project documentation will be published on VCS and CCB website for public comments. As stated in the PD the documentation and information regarding the project were made available to the local stakeholders through summary document of the project. During the public consultation period, no comments were received via checking the VCS and CCB websites.

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

Within the project area was made a Participatory Rural Appraisal (PRA) survey with stakeholder meeting by the PP inviting local villagers, permanent workers in the project, forestry experts and government officers to inform people of the possible impact in terms of economics, social and biodiversity aspects that the project might have on the community. This was confirmed by the PPs and by the Participatory Rural Appraisal (PRA) survey report^{/PRA/} provided during the site visit.

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

As stated before a consultation through PRA with the stakeholders was made for informing people about the project impacts. In particular the project owner informed and explained about the means of the validation process through a training before the validation site visit took place^{/TTR/}. This was confirmed by the PPs and interview with local stakeholders during the site visit.

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

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

During the on-site visit, the project owner arranged a stakeholder meeting by inviting all the local stakeholders who were informed after the audit plan sent to PP from auditor. Auditor had a direct and independent communication with communities and other stakeholders representatives.

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

3.2.23 Stakeholder Consultations (G3.4)

Describe the steps taken to validate the project's method(s) for conducting effective consultation to fulfil the requirements of G3.4. Provide and justify an overall conclusion regarding the project's method(s) for conducting effective stakeholder consultations.

As stated before a consultation through PRA and meetings with the stakeholders was made for informing people about the project impacts and ask them to raise their opinions of the project design and their

willingness to participate the following implementation. From that point, the project design was not modified and the PPs further declares that they will continue the communication with stakeholders and monitor the community impacts. This is was confirmed during the on-site visit and the interview with the project developer^{/11/} and local stakeholders^{/12/,/13/}.

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

3.2.24 Stakeholder Consultation Channels (G3.5)

As stated in the PD, the documentation and information regarding the project were made available to the community through routine villager assembly and posted on local bulletin boards. Moreover, some local policy makers and forest experts have been met through phone calls invitation. During the meetings the main information about the climate change and the carbon market were provided.

The PPs have gone to considerable lengths to consult with local stakeholders and engage them in the project. This is was confirmed during the on-site visit and the interview with the local stakeholders.

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

The following measures have been taken and will be continued to ensure participation is maintained: PRA, local consultation meetings, community monitoring, dissemination of project information, training sessions. Due to the nature of stakeholders, the communication and participation can be considered adequate to the project, and the decision should be revised according to further discussion in case there is any feedback from stakeholders. This is was confirmed during the on-site visit and the interview with the local stakeholders.

3.2.26 Anti-Discrimination Assurance (G3.7)

As stated in the PD and confirmed by the PP during the interview^{/11/}, the PP should obey <Labor Law of the People's Republic of China>^{/11c/} with anti-discrimination assurance and are not involved in or complicit in any form of discrimination or sexual harassment with respect to the project. 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 development.

3.2.27 Feedback and Grievance Redress Procedure (G3.8)

The PD describes a grievance redress process; a specific staff in charge of recording and collecting conflicts and grievances of local communities and individual farmers 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. Grievances will be addressed in a reasonable amount of time, usually contacted and discussed with relevant community within 3 days, answered and proposes a solution within 1 week in case of claims or complaints and dealt within 30 working days in case of suggestions. The PP declares to be available to adjust the grievance mechanism according the recorded dynamics and evaluation of effectiveness of the process in place. The grievance procedure is properly addressed.

3.2.28 Worker Training (G3.9)

Technical advice and technical training are offered continuously for workers for different topics like producing high quality seedlings and for successful tree planting, as well as for preventing planted trees from being subject to fire, pest and disease attack, etc. The training are normally composed by theoretical

class room and field training. The training for employees is held once a year, starting from every October from 2013, mainly in the aspects of employee safety and health and technology, and is also related to the knowledge of forest land clearing, how to plant trees, afforestation and management, carbon sink afforestation and carbon emission, this is verified through checking the training records^{/TTR/}. Workers are properly trained and efforts are made to maintain a high level of skills.

3.2.29 Community Employment Opportunities (G3.10)

The PP stated that the hiring profile is established according with the vacant position given an equal opportunity without any discrimination of age, sex, marital status, ethnicity, social status or religious convictions, political ideas or sexual orientation, and in compliance with the local law. The project makes an effort to hire locally as evidenced by the onsite project developer. Hiring criteria are based on skill sets without any discrimination.

During the project implementation, the total number of the local villagers who participated in planting are about 24,035, and 70% of them are women. Besides, about 120 local people are employed as project management. This is confirmed via checking the labor contract^{/LC/}, periodical payroll^{/PP/} and on site interview with forest technician^{/13/}.

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

The PD states that the project shall meet or exceed all applicable laws and regulations regarding workers' rights. Relevant law < Labor Law of the People's Republic of China> to which the PPs have to comply is provided in the PD. 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 contract^{/LC/} and on site interview with local government officer^{/12/} and forest technician^{/13/}.

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

3.2.31 Occupational Safety Assessment (G3.12)

The PD states that the project owner shall meet <Safety and Healthy in Forestry Work> published by ILO and <Labor Law of the People's Republic of China> regarding workers' health and safety. 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. For the fire, basic supplies and uniform for evacuation plan is also available.

The PD presents reasonable remedies or mitigation for the problem.

3.2.32 Project Governance Structures (G4.1)

The actors involved in the project are three: Guizhou Baiheng Fertiliser Co., Ltd (project developer/owner), local forestry bureau (local government) and Shanghai Libra Investment & Management Co., Ltd (VCS&CCB developer). The local forestry bureau and Shanghai Libra Investment & Management Co., Ltd composed as the expert group, whose responsibility is to guide and coordinate the project's overall implementation and decision-making; Guizhou Baiheng Fertiliser Co., Ltd established a project working group (covering aspects of carbon sink, ecology, forestry, community, geographic information, etc.) who provide technical support for the project development and implementation; the responsibility of local forestry station is daily supervision and data management during the project implementation. The PD list the project actors and their responsibilities clearly, they all know their own roles and responsibilities by on-site interview.

CL 03 was raised and successfully closed, Refer to Appendix 3 for details.

3.2.33 Required Technical Skills (G4.2)

The PD lists the key technical skills required to implement the project. Via checking the staff list of above three actors, it is confirmed that for each individual, experience and education and other qualifications are cited. The PPs and team have the skills necessary to successfully carry out this project.

3.2.34 Management Team Experience (G4.2)

The local forestry bureau and Shanghai Libra Investment & Management Co., Ltd composed the expert group is defined as the management team.

The project proponent Guizhou Baiheng Fertiliser Co., Ltd. is an affiliated company who is in rich experience in forest management in Guizhou Province, including artificial afforestation, forest protection and management, forest damage control and technical training.

The local Forestry bureau will provide technical advice and training to technicians and project entity staff to measure and monitor actual greenhouse gas removals and leakages from proposed project activities.

Shanghai Libra Investment & Management Co., Ltd is experienced in carbon measurement and monitoring via checking the UNFCCC^{/unfccc/}, GS^{/gs/}, VCS^{/vcs/} and other GHG schemes' website.

The management team have the skills necessary to successfully manage this project.

CAR 15 was raised and successfully closed, Refer to Appendix 3 for details.

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

As stated above, the local forestry bureau and Shanghai Libra Investment & Management Co., Ltd composed the expert group is defined as the management team. Besides, local Forestry Bureau provide instruction of afforestation and forest management, conduct the specific supervision of the implementation, and collect specific activity data at routine basis. This is confirmed by on site interview with officers from local Forestry Bureau^{/12/}.

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

During the on-site visit and checking the business license^{/BL/} of the participant parties, it is confirmed that the project proponent Guizhou Baiheng Fertiliser Co., Ltd is a privacy and legally registered company. Other involved entity Shanghai Libra Investment & Management Co., Ltd is also a legally registered company in China. The PD states that neither the project owner and nor the other parties have been suspected of charged with or found guilty of corruption, bribery, embezzlement, fraud, favoritism, cronyism, nepotism or collusion. Via checking the public website of credit information system of Chinese company, it is confirmed that the statement in PD is actual and credible.

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

As legally registered *companies* according to above assessment, the project proponent and other involved entity have the obligation to comply with relevant regulations, including anti-corruption law.

3.2.38 Commercially Sensitive Information (Rules 3.5.13 – 3.5.14)

N/A

3.2.39 Statutory and Customary Property Rights (G5.1)

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

CAR 16 was raised and successfully closed, Refer to Appendix 3 for details.

3.2.40 Recognition of Property Rights (G5.1)

Refer to assessment in 3.2.39 above.

CAR 17 was raised and successfully closed, Refer to Appendix 3 for details.

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

The project is implemented in project land are collective-owned by local villages^{/LUA/}. The project does not encroach on any property beyond the boundaries of the project land.

CAR 17 was raised and successfully closed, Refer to Appendix 3 for details.

3.2.42 Property Rights Protection (G5.3)

The PD states the project does not result in the involuntary removal or relocation of anyone as there were no residents located in the project area with most of degraded and barren land. The VCS project is implemented by a private company^{/BL/, /AAPP/}. This is confirmed by on site interview with officers from local Forestry Bureau^{/12/} and local residents^{/13/}.

3.2.43 Illegal Activity Identification (G5.4)

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, and the forests are preserved by project staff regularly, thus no illegal deforestation will be occurred. This is confirmed by on site interview with officers from local Forestry Bureau^{/12/} and local villagers^{/13/}

In conclusion, the project's climate, community and biodiversity impacts will not be affected by the illegal activities.

3.2.44 Ongoing Disputes (G5.5)

There are no ongoing unresolved conflicts over land rights^{/CLR/}. This is confirmed by on site interview with officers from local Forestry Bureau^{/12/} and local residents^{/13/} and checking the land use agreement^{/LUA/}.

3.2.45 National and Local Laws (G5.6)

The PD provides an extensive list of national and local laws and regulations, and explains their applicability to the project and the way compliance with the law is achieved by the project where applicable. The laws and regulations are confirmed through checking the public website^{/law/, /regu/} which has been compared with the actual situation of the project, it is verified that the project is complying with relevant national and local laws and regulations.

CAR 18 was raised and successfully closed, Refer to Appendix 3 for details.

3.2.46 Approvals (G5.7)

The project is approved by the local government authority Qianxinan Forest Bureau on 26/02/2014^{/AAPP/}.

3.2.47 Project Ownership (G5.8)

During the on-site visit and checking the business license^{/BL/} of the participant parties, the government approval of the project^{/AAPP/}, the land use agreement of the project area^{/LUA/}, it is confirmed that the project developer Guizhou Baiheng Fertiliser Co., Ltd is a privacy company, who is in charge of the integrated implementation and management of the project. The area land involved in the project was collectively owned by the village.

The project developer have the right to conduct the project and have the right to the environmental credits (VCUs) derived from it which is confirmed by checking the government approval of the project^{/AAPP/} and ERPA^{/ERPA/}.

3.2.48 Management of Double Counting Risk (G5.9)

This project will not seeks to generate or has received any form of environmental or social credit which is verified by checking the public website of other environmental or social credit scheme. The project is being simultaneously validated through VCS. The issuance of VCUs will ensure the avoidance of double counting.

3.2.49 Emissions Trading Programs and Other Binding Limits

Net GHG emission reductions or removals generated by the project will not be used for compliance with an emission trading program or for meeting binding limits on GHG emissions.

3.2.50 Other Forms of Environmental Credit

The project has not created another form of Environmental Credit.

3.2.51 Participation under Other GHG Programs

The GHG emission reductions or removals generated by the project have not counted or used under emission trading programs, and or other GHG Programs^{/unfccc/,gs/,}, and/or other forms of environmental credit.

3.2.52 Projects Rejected by Other GHG Programs

There is no evidence of the project's rejection from any other GHG programs as per the GS, VCS and CDM project data base^{/unfccc/,gs/,vcs/}.

3.2.53 Double Counting (G5.9)

The project is being simultaneously validated through VCS. The issuance of VCUs will ensure the avoidance of double counting as the credits generated from the project will be sold as offsets on VCS registry, the series number of the issued credits can be tracked to avoid any potential double counting.

3.3 Climate

3.3.1 Title and Reference

The CDM approved baseline and monitoring methodology AR-ACM0003 "Afforestation and reforestation of lands except wetlands", version 2.0.0^{/ARM/} is correctly applied for the project activity. The application of the methodology is subject to the following A/R methodological tools which is applicable to the project activity:

(a) Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities, version 01^{/TBA/};

(b) Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities, version 04.2^{/TEC/};

CAR 19 was raised and successfully closed, Refer to Appendix 3 for details.

3.3.2 Applicability

The proposed project activity meets the criteria defined in the applied methodology as described below:

No.	Applicability Criteria	PP demonstration	VVB assessment
(a)	The land subject to the project activity does not fall in wetland category;	The satellite images show that the land subject to the project activity does not fall in wetland category.	Via checking the satellite images from google earth ^{/GE/} and on-site investigation, it is verified that the project area is not involved in wetland.
(b)	Soil disturbance attributable to the project activity does not cover more than 10 per cent of area in each of the following types of land, when these lands are included within the project boundary: (i) Land containing organic soils;	The disturbance is cave-shaped, rather than banding. All the project land contain organic soils, but the disturbance on the soil triggered by the project activity is no more than 4.96%.	The soil analysis in Project Design for Afforestation Operation ^{/PDAO/} is checked, it is verified that project land contain organic soils within the project boundary, project land contain organic soils, and the disturbance on the soil triggered by the project activity is no more than 4.96%.
	(ii) Land which, in the baseline, is subjected to land-use and management practices and receives inputs listed in appendices 1 and 2 to this methodology.	Appendix 1 lists cropland in which soil disturbance is restricted. Appendix 2 lists grassland in which soil disturbance is restricted. According to Participatory Rural Appraisal Report of the project, the land does not contain the listed type of cropland and grassland.	As per the Project Design for Afforestation Operation ^{/PDAO/} and Participatory Rural Appraisal Report ^{/PRA/} , the land within the project boundary before the implementation of the project activity was a degraded grasslands and barren land without receiving inputs listed in the applied methodology.

Thus, it is verified that AR-ACM0003 (Version 2.0.0) is applicable for the proposed project.

A project activity applying this methodology shall also comply with the applicability conditions of the tools contained within the methodology and applied by the project activity as following:

Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities (Version 01)			
No.	Applicability Criteria	PP demonstration	VVB assessment
(a)	Forestation of the land within the proposed project boundary performed with or without being registered as the VCS project activity shall not lead to violation of any applicable law even if the law is not enforced	Forestation of the land within the project boundary does not lead to violation of any applicable law	The afforestation activity within the project boundary does not lead to violation of any applicable law as demonstrated in the Additionality section 3.3.5 of this report.
(b)	The tool is not applicable to small-scale afforestation and	The proposed project is large-scale reforestation project.	The project is verified as a large-scale project in section

	reforestation project activities	3.2.1 of this report.
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Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities (Version 04.2)			
No.	Applicability Criteria	PP demonstration	VVB assessment
1	No internal applicability conditions.	No applicability conditions, thus is applicable to the project.	N/A

Validation Team hereby confirmed that the selected baseline and monitoring methodology has been approved by the CDM Executive Board, and is applicable to the project, which complies with all the applicability conditions therein, and the selected version is valid at the time of the validation commencement. It is also confirmed that the methodology and the methodological tools are correctly applied by comparing it with the actual text of the applicable versions.

Eligibility

According to AFOLU Requirements V3.6^{/AFOLU/} section 4.2, Eligible AFOLU Project Categories, the validation team check the project activity eligibility as below:

As the project activity is an afforestation project, via the section 4.2.1 of AFOLU Requirements V3.6.

“Afforestation, Reforestation and Revegetation (ARR)

4.2.1 Eligible ARR activities are those that increase carbon sequestration and/or reduce GHG emissions by establishing, increasing or restoring vegetative cover (forest or non forest) through the planting, sowing or human-assisted natural regeneration of woody vegetation. Eligible ARR projects may include timber harvesting in their management plan. The project area shall not be cleared of native ecosystems within the 10 year period prior to the project start date, as set out in Section 3.1.6.”

The validation team checked the Biodiversity Survey Report^{/BDS/} and conducted on-site interview with the local officer and residents^{/I2/,I3/}, it is verified that the project sites were previously degraded grassland and barren land, not deforested. Since 1970s till now, all of the project area were barren wasteland with no agricultural and deforestation activities.

3.3.3 Project Boundary

The VCS Standard requires that the project describe the project boundary, identify, and select appropriate carbon pools. The PD defines the project area, which has an extension of 32,047 ha, inside the Xingren City, Xingyi City, Ceheng County, Zhenfeng County and Qinglong County. The boundaries include the administrative boundaries of cities, counties and forest farm. The following table present the carbon pool considered within the project boundary:

Baseline

Source		Gas	Included?	Justification/Explanation
Baseline	Above-ground biomass	CO ₂	Yes	This is the major carbon pool subjected to project activity
		CH ₄	No	Not included in carbon pool
		N ₂ O	No	Not included in carbon pool
	Below-ground biomass	CO ₂	Yes	Carbon stock in this pool is expected to increase due to the implementation of the project activity
		CH ₄	No	Not included in carbon pool
		N ₂ O	No	Not included in carbon pool

Source	Gas	Included?	Justification/Explanation
Dead wood Litter and Soil organic carbon	CO ₂	No	Insignificant and exclusion is conservative.
	CH ₄	No	Not included in carbon pool
	N ₂ O	No	Not included in carbon pool

Project

Source		Gas	Included?	Justification/Explanation
Project	Above-ground biomass	CO ₂	Yes	This is the major carbon pool subjected to project activity
		CH ₄	No	Not included in carbon pool
		N ₂ O	No	Not included in carbon pool
	Below-ground biomass	CO ₂	Yes	Carbon stock in this pool is expected to increase due to the implementation of the project activity
		CH ₄	No	Not included in carbon pool
		N ₂ O	No	Not included in carbon pool
	Burning of woody biomass	CO ₂	No	CO ₂ emissions due to burning of biomass are accounted as a change in carbon stock
		CH ₄	Yes	Burning of woody biomass for the purpose of site preparation, or as part of forest management, is allowed under this methodology
		N ₂ O	Yes	Burning of woody biomass for the purpose of site preparation, or as part of forest management, is allowed under this methodology

By checking the information and evidences available and by the physical site, the validation team can confirm that the appropriate carbon pools have been considered and the description in the PD is accurate and complete, and also the selected carbon pools are justified for the proposed project activity.

3.3.4 Baseline Scenario

The procedure for determination of the baseline scenario in the project activity was applied using the methodological tool Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities (version 01)^{TBA/}.

Step 0 - preliminary screening based on the starting date of the A/R project activity: following the provision of the combined tool, as the proposed project activity has a starting date after 31/12/1999 but before the date of registration, PP showed that: (a) the project started order was signed on 15/04/2014^{/PSD/}, thus after 31/12/1999; (b) the incentive from the planned sale of the carbon credit was seriously considered in the decision to proceed with the project activity as demonstrated by the project approval^{/AAPP/}. The compliance of these two conditions is confirmed.

Step 1 – identification of alternative land use scenarios to the proposed VCS project activity

Sub-step 1a. Identify credible alternative land use scenarios to the proposed project activity: following the provision of the combined tool, the PP has identified plausible alternative land-use scenarios:

- (1) Continuation of the pre-project scenario, which means lands remain barren.
- (2) Agricultural use of the land

(3) Forestation of the land within the project boundary without being registered as the VCS project, Validation team confirms that no reasonable alternative baseline scenario was excluded in the analysis of baseline scenarios. Based on the validated assumptions, validation team considers that the identified credible alternative land use scenarios are reasonable.

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

All the above identified alternatives are consistent with enforced mandatory applicable laws and regulations as discussed in the PD and confirmed by the PPs during the interview and site visit. The PD lists all the mandatory applicable laws and regulations. The approval of the afforestation project plan^{/AAPP/} confirmed that the project area is legally defined as forestry land. Farming and grazing is not allowed in these plots. Therefore, scenario 2 is not a plausible alternative baseline land-use scenario.

Hence, alternative 1 would be a plausible alternative baseline land-use and would be consistent with current laws and regulations.

Therefore, both the land-use scenarios 1 and 3 are in compliance with mandatory legislation and regulations taking into account the enforcement in the region on national and/or sectoral policies and regulations.

CAR 20 was raised and successfully closed, Refer to Appendix 3 for details.

3.3.5 Additionality

The project additionality has been demonstrated following the provision of the combined tool^{/TBA/}.

Step 2 – Barrier analysis

Sub-step 2a. Identification of barriers that would prevent the implementation of at least one alternative land use scenarios

The project participants used the barrier analysis in order to demonstrate the additionality of the project. The presented barriers are

- **Investment barriers**
- **Technological barriers**

The assessment team checked first if any barrier has a clear direct impact on the financial returns of the project activity which can be expressed with reasonable certainty in monetary terms. The final PD does include only barriers without such impact on the financial returns.

The barriers were furthermore assessed against official documents and discussed during onsite visit.

Investment barriers:

It was confirmed that there are no credit mechanisms are in place for famers to make long term investment in plantation forestry. The project land are collective-owned by local villages and local villagers have the right to the use of land which is confirmed during the on-site interview^{/12/,13/} and checking the certification of land right^{/CLR/} and lands use agreement^{/LUA/}. However, the income of farmers in the project area is lower than the general level of local townships and counties^{/ifpa/}. As beekeeping, migrant working and subsidy from Grain for Green Program are the main income sources for local communities in the project^{/GGP/}. The results of the Participatory Rural Appraisal Report^{/PRA/} and Community Baseline Survey Report^{/CBSR/} confirmed that the average annual income per capita in the project zone is 2,720-3,100 CNY/year and therefore lies under the defined average income in Qianxinan Buyi and Miao Autonomous Prefecture of more than 5,360 CNY/year^{/aiq/}. Furthermore, since the forest planting was established in degraded or barren land, and the trees planted will not be sold as timber or lumber, it is a common sense that the project is

unattractive for banks to provide the commercial loan for the purpose of afforestation only. The barriers described in the PDD were furthermore cross-checked during the onsite visit through interviews with local people^{/12,13/}. It is concluded that due to the low income level of the region, local farmers are not able to afford the high plantation establishment investment in the early stage.

Technical barriers:

Project developers are confronted with diverse technical barriers. The technical barriers described are the lack of access to quality seed sourced and the lack of necessary skills to produce high quality seedlings and to perform successful plantings. Furthermore the missing knowledge and experience regarding the prevention of forest fires, pest and diseases are considered. The technical barriers are based on the results of the Participatory Rural Appraisal Report^{/PRA/} and were cross-checked during the onsite visits through interviews with local people^{/12,13/}.

The result of this assessment shows clearly that the barriers presented in the PD can be considered real. These barriers prevent the project activity from being implemented without registered as a VCS project (scenario 3), thus upon the decision of applying for VCS and CCB project, the project owner signed a ERPA with VCU buyer wanting to sell credits expected to be generated, and buyer works with the owner to work out better implementation plan for the project, and help local farmers to conduct the planting activity better. Thus it is verified that without applying for VCS, local farmers would face the above mentioned technical barriers.

Sub-step 2b: Elimination of land use scenarios that are prevented by the identified barriers.

These identified barriers would prevent the project activity from being implemented without registered as a VCS project (scenario 3) while it would not prevent at least the baseline of the project. This was confirmed based on the documentation review, interviews and local and sectoral expertise of the validation team.

Thus Scenario 1, continuation of pre-project use (i.e. lands remain barren), remains the possible baseline scenario.

STEP 3. Investment analysis

Not applicable as only scenario 1 is the plausible baseline scenario.

STEP 4. Common practice analysis

The region for the common practice analysis was defined as the Guizhou Province where the project area is located, based on the social and ecological condition^{/BLS/&/PRA/}. Firstly, the forest in Guizhou Province is mainly public welfare forest and stone desertification control forest land and different from other provinces due to the poor resource, vulnerable ecology, multiple disasters and low economic benefits^{/fqp/}. Secondly, the chosen region has unique characteristics in regard to forest structure, transportation condition, population structure and ethnic minorities^{/PRA/}. Therefore, the presented approach is considered appropriate for the common practice analysis.

Evidences for reforestation statistics in the region have been reviewed. Most of the reforested area is covered under the “Grain for Green Program” which is subsidized by the government^{/potf/&/GGP/}. In addition according to the “Grain for Green Program”^{/potf/&/GGP/}, only conversion of farmland to forest is eligible for the subsidy while tree planting on other types of lands (e.g. barren land) is not eligible. The project area is not classified as farmland.

Furthermore, by means of checking the document^{/PRA/} and on-site interview with the project participant^{/11/}, it is confirmed that the proposed project does not get direct financial support from NGOs.

Finally, via checking the GHG scheme website^{/vcs/,/gs/,/unfccc/} and interview with local government officer^{/12/}, it is verified that there is no other similar A/R projects in defined region.

The audit team reviewed respective documentation and also confirmed during the onsite visit, that the proposed AR-CDM project activity features essential distinction to other afforestation activities in the region, as described above.

Therefore, it is confirmed that the proposed project activity is not a common practice in the defined region.

In essence, the project is considered additional as degraded lands are afforested which otherwise would have remained degraded lands – summarized due to unavailability of funding for such afforestation activities and technological barriers, it is sufficiently demonstrated that the project is not a likely baseline scenario and that the emission reductions resulting from the project are additional.

3.3.6 Methodology Deviations

N/A

3.3.7 Quantification of GHG Emission Reductions and Removals

The emission reduction are calculated according the applied methodology AR-ACM0003. The algorithms and formulae used are provided in this section.

Baseline net GHG removals by sinks

According the applied methodology, the Baseline net GHG removals by sinks consist of the following components and determined as:

$$\Delta C_{BSL,t} = \Delta C_{TREE\_BSL,t} + \Delta C_{SHRUB\_BSL,t} + \Delta C_{DW\_BSL,t} + \Delta C_{LI\_BSL,t} \quad (1)$$

Where:

- $\Delta C_{BSL,t}$ = Baseline net GHG removals by sinks in year t; t CO₂-e
- $\Delta C_{TREE\_BSL,t}$ = Change in carbon stock in baseline tree biomass within the project boundary in year t, as estimated in the tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities”; t CO₂-e
- $\Delta C_{SHRUB\_BSL,t}$ = Change in carbon stock in baseline shrub biomass within the project boundary, in year t, as estimated in the tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities”; t CO₂-e
- $\Delta C_{DW\_BSL,t}$ = Change in carbon stock in baseline dead wood biomass within the project boundary, in year t, as estimated in the tool “Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities”; t CO₂-e
- $\Delta C_{LI\_BSL,t}$ = Change in carbon stock in baseline litter biomass within the project boundary, in year t, as estimated in the tool “Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities”; t CO₂-e

One baseline scenario was identified, which is degraded area without any trees, and the dead wood biomass and litter biomass would not be changed by local farmers. Hence, the change in carbon stock in baseline dead wood biomass $\Delta C_{DW\_BSL,t}$ and litter biomass $\Delta C_{LI\_BSL,t}$ within the project boundary is verified as negligible.

To be conservative, most of the project area are bare land with very little grasses, therefore changes in carbon stocks in trees and shrubs in the baseline can be accounted as zero based on the tool “Estimation

of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities". The audit team confirmed this via checking the baseline survey^{/BLS/} and Participatory Rural Appraisal Report^{/PRA/}. In summary the calculation of the baseline stocks and GHG removals are in compliance with the applied methodology and carried out correctly.

It is confirmed that for simplicity, the baseline net GHG removal by sinks is considered to be 0 tCO₂e.

Actual net GHG removals by sinks

The actual net GHG removals by sinks shall be calculated as the sum of the changes in carbon stocks in the project minus the increase in non-CO₂ GHG emissions within the project boundary, which is shown as follows:

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

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

Via checking the "Estimation of non-CO₂ GHG emissions resulting from burning of biomass attributable to an A/R CDM project activity", it is confirmed that 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 $GHG_{E,t} = 0$.

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

$$\Delta C_{P,t} = \Delta C_{TREE\_PROJ,t} + \Delta C_{SHRUB\_PROJ,t} + \Delta C_{DW\_PROJ,t} + \Delta C_{LI\_PROJ,t} + \Delta SOC_{AL,t} \quad (3)$$

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

As defined in the Project boundary, the changes in carbon stock above and below the ground are the only changes in carbon stocks to be considered in the project. And only the planted trees change above the ground is considered. Hence,

$$\Delta C_{P,T} = \Delta C_{TREE\_PROJ,t} \quad (4)$$

The calculation of $\Delta C_{TREE\_PROJ,t}$ is confirmed as conducted in line with the methodology tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities” (version 04.2).

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) is efficient when there is a significant correlation between the plot biomass values on the two occasions (e.g. when there has been no harvest or disturbance in a stratum and therefore no significant spatial re-distribution of biomass has occurred in the stratum after the first estimation) For the project, there will be no harvest or disturbance during the project period, thus Method (b) should be selected to be selected, but this method is applicable only in ex-post estimation of change in carbon stock in trees for monitoring of project activities. Therefore, Method (a) is used for the ex-ante estimation during validation, and method (b) will be used in the monitoring of the following verification.

Under Method (a), the change in carbon stock in trees and the associated uncertainty are estimated as follows:

$$\Delta C_{TREE} = C_{TREE,t1} - C_{TREE,t2} \quad (5)$$

$$u_{\Delta C} = \frac{\sqrt{(u_1 \times C_{TREE,t1})^2 + (u_2 \times C_{TREE,t2})^2}}{|\Delta C_{TREE}|} \quad (6)$$

Where:

$$\Delta C_{TREE} = \text{Change in the carbon stocks in trees during the period between two points of time } t1 \text{ and } t2; \text{ t CO}_2\text{-e}$$

$C_{TREE,t1}$ = 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, u_2 = Uncertainties in $C_{TREE,t1}$ and $C_{TREE,t2}$ respectively

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 the project, Method (b) is used for the *ex-ante* estimation during validation.

According to the Tool, under Method (b), existing data are used in combination with tree growth models to predict the growth of trees and the development of the tree stand over time, and *ex-ante* estimation (projection) of carbon stock in tree biomass is not subjected to uncertainty control.

Stand parameters such as stocking (e.g. number of stems per hectare or basal area per hectare), age-class structure, and species composition at different points of time are simulated from assumed (planned) tree planting and management practices (e.g. planting density, survival rate, thinning and pruning operations and their timing).

Tree growth (e.g. diameter or height increment) is simulated by taking into account local tree-growth data from past experience (e.g. age-diameter curves, yield tables, yield curves) while also considering relevant site factors (e.g. soil, terrain, slope, aspect, precipitation) and stand parameters.

For the project, the growth curve equations are used to estimate the average volume of one tree, and the carbon stock in trees in the tree biomass estimation strata is estimated as follows:

$$C_{TREE,i,j} = \sum_{i,j} A_i \times N_{i,j} \times \frac{44}{12} \times CF_{TREE,j} \times B_{TREE,j} \quad (7)$$

$$B_{TREE,j} = V_{TREE,j} \times D_j \times BEF_j \times (1 + R_j) \quad (8)$$

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

The tree species adopted in the project are all native trees, including China fir and Cypresses.

The values of D_j , BEF_j and R_j are verified as correct through checking The People's Republic of China Second National Communication on Climate Change, issued by NDRC, 2013^{/CC/}.

Via checking the Project Design for Afforestation Operation^{/PDAO/}, it is verified that the Project Stratification for carbon calculation are determined correctly on different planting pattern and tree species.

For the *ex ante* estimation of the carbon change from the project, it is confirmed that the growth curve (age-volume) equations are used to estimate the stem volume of one tree ($V_{TREE,j}$).

For simplification, the following equations are applied:

$$\text{China fir: } V_{TREE,j}=0.1962(1-e^{-0.08A})^{3.9012} \quad (9)$$

$$\text{Cypresses: } V_{TREE,j}=0.20420(1-e^{-0.05A})^{4.66995} \quad (10)$$

Where,

$V_{TREE,j}$ = average merchantable volume of one tree in category i , at time t ; m³/tree

A = stand age, year

It should be noticed that due to lack of reliable data source for all the tree species, for ex-ante estimation, the growth curve equation of *China fir* is based on the growth model of Chinese fir derived from Research Progress of Production Equations of Masson Pine, Chinese Fir and Slash Pine in Northwest A&F University^{/CFG/} and the growth curve equation of Cypresses is verified as acceptable which has been checked with the Study on biomass growth rule and forest biomass change of main vegetation types in Banqiao river small watershed at the early stage of governance [Guizhou forestry science and technology, 1991, vol. 19, no. 4] page 24^{/CYG/}.

Corresponding *ex ante* calculations were carried out based on calculation spreadsheets^{/XLS/}. Correctness of calculations can be confirmed as they were reproduced by the audit team using the information provided. The values and estimates presented in the PD are considered reasonable based on the documentation reviewed^{/PDAO/}, further references and the result of the interviews during the onsite visit.

While, for the ex-post estimation during the following verification, the allometric equations or growth models of each tree species will be used to calculate the stem volume, 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" in project monitoring report.

Leakage

The leakage is estimated as follows:

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

Where:

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

$$LK_{AGRIC,t} = \text{Leakage due to the displacement of agricultural activities in year } t, \text{ as estimated in the tool "Estimation of the increase in GHG emissions attributable to displacement of pre-project agricultural activities in A/R CDM project activity"; tCO}_2\text{-e}$$

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

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

Where:

$$LK_{AGRIC,t} = \text{Leakage due to the displacement of agricultural activities in year } t; \text{ tCO}_2\text{-e}$$

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

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

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

Net anthropogenic GHG removals by sinks

According the applied methodology, the net anthropogenic GHG removals by sinks are calculated as follow:

$$\Delta C_{AR,t} = \Delta C_{ACTUAL,t} - \Delta C_{BSL,t} - LK_t \quad (13)$$

Where:

$$\Delta C_{AR,t} = \text{Net anthropogenic GHG removals by sinks, in year } t; \text{ t CO}_2\text{-e}$$

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

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

$$LK_t = \text{GHG emissions due to leakage, in year } t; \text{ t CO}_2\text{-e}$$

For the *ex-ante* determination on baseline emissions and leakage emissions, based on the above assessment it is confirmed that the estimated baseline emissions and leakage emissions are both 0 tCO₂e for the project. Hence, the net anthropogenic GHG removals by sinks is equal to actual net GHG removals by sinks.

The estimates on the expected anthropogenic GHG removals by sinks which are likely to be achieved by the envisioned reforestation under the project scenario are in compliance with the applied AR-CDM methodology and with the respective VCS requirements.

Data and parameter applied for the calculation of biomass are listed in the PD and net anthropogenic GHG removals by sinks calculation sheets^{XLS/}, the data and respective sources were reviewed by the validation team and found in compliance with requirements of the methodology. Changes in carbon stocks of soil organic carbon, litter and dead wood are conservatively neglected. For tree biomass the allometric

equations method was applied and the stepwise approach was followed. Over the crediting period of 20 years, total net anthropogenic removals by sinks of **9,393,374 tCO₂e** are expected.

All calculations are in compliance with the applied AR-CDM methodology. The steps of the calculations are fully traceable and adequate for the project conditions. In summary, the calculations for net anthropogenic GHG removals by sinks are fully traceable, adequate for the project conditions and considered as correct:

- All assumptions and data used by the project participants are listed in the PD, the references and sources have been confirmed as correctly quoted;
- All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PD;
- All values used in the PD are considered reasonable in the context of the proposed VCS project activity;
- The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;
- All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PD.

CAR 21 was raised and successfully closed, Refer to Appendix 3 for details.

3.3.8 Monitoring Plan

The monitoring plan presented in the PD complies with the requirement of the methodology.

The following data and parameters has been available at validation:

No.	Data/Parameter	Unit	Description	Determination method
1	A _i	ha	Area of strata i	Through field measurement
2	BEF _{2,j}	Dimensionless	Biomass expansion factor for conversion of stem biomass to above-ground biomass	The People's Republic of China Second National Communication on Climate Change, issued by NDRC, 2013 ^{/CC/}
3	CF _{TREE}	t C t ⁻¹ d.m.	Carbon fraction of tree biomass for species or group of species j	The People's Republic of China Second National Communication on Climate Change, issued by NDRC, 2013 ^{/CC/}
4	D _j	t d.m.m ⁻³	Basic wood density	The People's Republic of China Second National Communication on Climate Change, issued by NDRC, 2013 ^{/CC/}
5	R _j	Dimensionless	Root-shoot ratio	The People's Republic of China Second National Communication on Climate Change, issued by NDRC, 2013 ^{/CC/}

The following data and parameters will be monitored in accordance with the applied methodology AR-ACM0003:

No.	Data/Parameter	Unit	Description	Determination method
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1	$V_{TREE,j}$, $V_{TREE,l,p,j,i}$	m^3	Stem volume of tree species j ; Stem volume of tree l of species j in sample plot p of stratum i	Calculated. For ex ante estimation, the growth curve (age-volume) equations as stated in above section are used to estimate the stem volume. For the ex-post estimation during the following verification will use allometric equations of each tree species to calculate the stem volume.
2	$H_{l,p,j,i}$, $DBH_{l,p,j,i}$	m, cm	Height of trees, Diameter at breast height of tree	Every verification through Field measurements in sample plots
3	A_i , $A_{PLOT,i}$	ha	Area of stratum i , Size of sample plot in stratum i	Field measurement. Standard operating procedures (SOPs) prescribed under national forest inventory are applied.
4	$N_{i,j}$	tree/ha	Number of the tree species j of strata i	Field measurement. Standard operating procedures (SOPs) prescribed under national forest inventory are applied.

The validation team checked all parameters presented in the monitoring plan against the requirements of the methodology. For the monitoring of carbon stock changes the requirements and parameter list as per methodology were followed.

The monitoring plan was included to the project documentation. The boundary and forest management monitoring was defined specifically for the project context. The sampling design was reviewed and found to be in compliance with methodological requirements and the applied tool “Calculation of the number of sample plots for measurements within A/R CDM project activities”.

The procedures were reviewed by the assessment team on paper and through interviews with the relevant personnel^{/11,12/}; this information together with a physical inspection allows the assessment team to confirm that the proposed monitoring plan is feasible within the project design.

The major parameters to be monitored were discussed with the PPs, as well as the inventory processes, data management, quality assurance and quality control procedures that will be implemented in the context of the project. The PPs follows defined Standard Operating Procedures (SOP) towards carbon monitoring in order to ensure the collection of reliable field data.

The validation team concludes that the PP will be able to implement the monitoring plan to report ex-post GHG net anthropogenic removals, which can also be verified.

The chosen monitoring frequency for the parameters is in line with the methodology and VCS standard. It is considered that there is no systematic coincidence of verifications with peaks in carbon stocks since no harvesting operations are foreseen within the crediting period.

CAR 22 was raised and successfully closed, Refer to Appendix 3 for details.

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

The proposed project activity is undergoing concurrent VCS validation, therefore the monitoring plan and the results of the future monitoring will be publicly available in the VCS website after the approval of the VCS Board.

3.3.10 Non-Permanence Risk Analysis

The non-performance risk report^{/NPRR/} and Risk Calculation Sheet^{/RCS/} are provided by PP, the risk assessment was conducted according to the VCS Procedural Document “AFOLU Non-Permanence Risk Tool” (version 3.3)^{/NPRT/}. PP adopted the Risk Report Short template and combining with the Risk-Report-Calculation-Tool excel sheet.

Each risk category was calculated based on the VCS guidance and the input provided by the PPs. The information was validated and cross-checked through document and literature review^{/AAP/} & ^{/PDAO/} & ^{/IFMM/}, onsite visits of the project area and interviews conducted^{/IMO1/}. Details of the assessment are provided as follow.

Risk factor	Validation findings
Internal risks	
Project management	The management team includes individuals who have successfully managed projects through validation of GHG credits under the CDM, CCER, VCS Program ^{/VCS/} , ^{/CCER/} , ^{/unfccc/} , therefore this mitigation is scored as -2. There is a specific mitigation plan made by project proponent for potential risks to the project, which includes a process for monitoring progress and documenting lessons learned or corrections that may be needed, and incorporating them into project decision-making in future monitoring periods, which has been verified in the Monitoring Manual ^{/MM/} , therefore this mitigation is scored as -2.
Financial viability	According to the reported barren hills and wasteland data in the project design ^{/PDAO/} , the forestry departments at all levels counted and approved the afforestation area, and allocated the funds and provincial-level funds and local funds issued by the state to the counties. So project cash flow breakeven point is greater than 10 years from the current risk assessment. The cash out of the project is mainly for implementation of the project during the first three years, which has been fully secured by the project owner and buyer. Therefore this mitigation is scored as 6.
Opportunity cost	The NPV from the project is negative while the NPV from the most reasonable alternative land use activity (the land continued to be barren 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 and Cypresses which all have Suitable for the growth of Karst landforms, therefore the project longevity selected 30 years ^{/PL/} and the crediting period is selected to be 20 years. Therefore this mitigation is scored as 0.
External risks	
Land tenure and resource access/impact	Project Approval ^{/AAP/} is checked, it is verified that the land of the project is all collective-owned, and the project proponent holds a concession for operating and management of the forest on the land. Therefore this mitigation is scored as 0.
Community Engagement	The project land are mostly barren land by checking the baseline survey ^{/BLS/} , no residents living within the project area ^{/CBSR/} . And for the households living within 20km of the project boundary outside the project area, nearly all of them have been consulted during the Participatory Rural

	Appraisal^{/PRA/} of the project. According to the PRA report, the project generates net positive impacts on the social and economic well-being of the local communities who derive livelihoods from the project area. 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 -0.30, 0.30, -0.47, -0.25, -0.39 and -1.59, averaged over the most recent five years, so the mean score is -0.45. Governance Score is -0.45 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, 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 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^{/IFMM/}. Therefore the mitigation is scored as 0.25.
Pest and disease outbreaks	Insignificant. According to historical records, the pest and disease risk are not common, and the mixed plantation will prevent the trees from pest and disease outbreaks in a certain way based on technical experience. Hence the risk is less than every 10 years. LS=2 The planted trees may would be damaged by insects and disease, but the risk is considered low because it can be prevented by routine overseeing and the PP have in place a full Integrated Forest Management Manual^{/IFMM/}. The biological measures to control pests and diseases will be mainly adopted. The chemical pesticides are allowed to be used only if there is a serious pest problem erupted in the project area, while improper pesticide application would be harmful to natural environment, but the risk is considered low because pesticide will be strictly managed by well trained staff to minimize the potential effect^{/IFMM/}. As the biological measures to control pests and diseases will be mainly adopted, the pesticide application will be limited. 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^{/whrf/}; 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^{/whrf/}, 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. 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^{/IFMM/}. Therefore the mitigation is scored as 0.25.
Other risks	None is observed.

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 risk rating should not be used for any other purpose than retiring VCUs according to the VCS permanence rules. The risk will be reassessed at time of the first verification and with that prior to any issuance of VCUs. The current buffer is subject to change at verification also in line with further guidance from the VCS on this matter.

3.3.11 Optional Gold Level: Regional Climate Change Scenarios (GL1.1)

N/A

3.3.12 Optional Gold Level: Climate Change Impacts (GL1.2)

N/A

3.3.13 Optional Gold Level: Measures Needed and Designed for Adaptation (GL1.3)

N/A

3.4 Community

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

The PD states that project zone covers 2 cities and 3 counties in Qianxinan Buyi and Miao autonomous prefecture. The population of Qianxinan Buyi and Miao autonomous prefecture is about 2,838,200 with a distribution of 82 townships (towns) and 35 Nationalities and rural population in project zone accounts for 59.54%^{/BLS/}. Thanks to the implementation of the project activity the workers hired by the project owner and living in the same property have the opportunity to improve their well-being because of good salary, moreover they can improve their know-how about the forest area due to workshops and training organized by the project owner.

The project zone close to the center of politics, economy, culture and transportation of Guizhou Province and it is also a zone where the main economic activity in agro-forestry business can be developed. Based on this consideration the proposed project aims to have long and short-term impacts on the communities include increasing the number of forest workers and promoting professional expertise, increasing their incomes and promote improvements in professional career. Reference documents mentioned and site visit interviews with the local officer^{/12/} and forest technician^{/13/} confirmed all these aspects.

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

The PD states that the local communities are mainly village collective, and due to low economic level, the community groups were barely active at the start of the project. It is verified by site visit interviews with the local officer^{/12/} and forest technician^{/13/}.

3.4.3 High Conservation Values (CM1.2)

No HCVs was identified related to community well-being in the project zone. It is verified by site visit interviews with the local officer^{/12/} and forest technician^{/13/} and checking the land use agreement^{/LUA/} and approval of the afforestation project plan^{/AAPP/}.

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

During the on-site visit and the interview with the project owner^{/11/} and local officer^{/12/}, it is verified that in the project are located in 2 cities and 3 counties, in vicinity of the project area there were community, community groups and indigenous groups prior the project implementation.

Without the project scenario, agriculture and grazing are the main income sources of the communities, and the farmers cannot improve their well-being in terms of salary, welfare of workers and their families, know how about the forest area; this is also confirmed because the communities have no habit to make use of the selected land for any land use. All these aspects were also confirmed during the site visit and interviews with the local officer^{/12/} and forest technician^{/13/}, who works in the local area for almost 20 years and knows both the baseline scenario and the project scenario. Without the project scenario, since the area consists in degraded and barren lands, continuing the “non-use” of the current land will have no effect on the livelihood and well-being conditions of the local communities and community groups.

Moreover, the development of the forest project help to maintain the ecosystem, which contributes to the economic growth and regional development, too. Without project-scenario long time land degradation would negatively affected the ecosystem and the biodiversity conservation.

The description of the consequences to community provided in the PD are likely accurate and are confirmed based on the assessment of evidences mentioned above.

3.4.5 Expected Community Impacts (CM2.1)

The PD states that the project will generate positive community impacts through increasing local job opportunities, household income and living level so that to provide actual direct benefits to community group-local villages. The analysis of the net benefits to the communities is conducted to each category of local residents. 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 level of the local residents and increasing local job opportunities, improve the household income by getting job positions and training opportunities from the project, and improve local women’s capability. This is was confirmed during the on-site visit and the interview with the local residents and forest technicians^{/13/}.

CAR 23 was raised and successfully closed, Refer to Appendix 3 for details.

3.4.6 Negative Community Impact Mitigation (CM2.2)

No HCVs has been identified based on above assessment, hence there is no negative well-being impacts on community groups.

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

The PD states that the project is designed and implemented to produce net positive well-being impacts on local communities. This will be demonstrated over time. This is confirmed during the on-site visit and the interview with the local officer^{/12/} and forest technician^{/13/}. Please refer to section 3.4.4 of the report.

3.4.8 High Conservation Values Protected (CM2.4)

Identify, discuss and justify conclusions regarding the protection of HCVs related to community well-being. CAR 24 was raised and successfully closed, Refer to Appendix 3 for details.

3.4.9 Impacts on Other Stakeholders (CM3.1)

The PD states that no negative offsite effects are expected during the project lifetime. Oppositely, the project will provide 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. This will be demonstrated over the time. The local officer^{/12/} and forest technician^{/13/}, during the on-site visit and the interview, confirmed that the project will not result in net negative impact on other stakeholders.

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

N/A

Please refer to section 3.4.9.

3.4.11 Net Impacts on Other Stakeholders (CM3.3)

Please refer to section 3.4.9.

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

The project proponent will submit the community monitoring plan within one year of validation which is in line with the "VCS+CCB Project Development Process" (version 3.0)^{/PDP/}.

FAR 1 was raised.

3.4.13 Monitoring Plan Dissemination (CM4.3)

The PD states that the monitoring plan and results of every verification will be published on VCS and CCB website which can be easily download by stakeholders and the local stakeholders will be noticed through the routine villager assembly. Stakeholders can directly contact the person whose phone number is published to raise their opinions. This is confirmed during the on-site visit and the interview with the project owner^{/11/} and local officer^{/12/} and residents^{/13/}.

CL 04 was raised and successfully closed, Refer to Appendix 3 for details.

3.4.14 Optional Gold Level: Exceptional Community Criteria (GL2.1)

N/A

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

N/A

3.4.16 Optional Gold Level: Community Participation Risks (GL2.3)

N/A

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

N/A

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

N/A

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

N/A

3.4.20 Optional Gold Level: Benefits, Costs, and Risks Communication (GL2.7)

N/A

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

N/A

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

N/A

3.5 Biodiversity**3.5.1 Existing Conditions (B1.1)**

The project zone is characterized by extensive and long-term farming and no other activities have been developed during the years, and ecological structure of most project sites is relatively homogenous due to traditional farming practices which is verified by on-site observation and interview with local officers and residents^{12,13/}. The project site are mostly wasteland, mainly covered with grass and scattered shrubs, therefore the biodiversity was low.

CAR 25 was raised and successfully closed, Refer to Appendix 3 for details.

3.5.2 High Conservation Values (B1.2)

No HCVs has been identified related to biodiversity based on above assessment.

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

Please refer to section 3.5.1. The without project scenario would clearly have no effect on biodiversity of the area.

3.5.4 Expected Biodiversity Changes (B2.1)

As per biodiversity survey report^{BDS/} 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. The study also highlight how a certain variety of mammals, birds and insects can be observed in planted forests. Therefore the project's impact on biodiversity will be overwhelmingly positive when compared to "without project" scenario.

CAR 26 was raised and successfully closed, Refer to Appendix 3 for details.

3.5.5 Mitigation Measures (B2.3)

Since no negative impacts are expected on biodiversity to the project implementation, no specific mitigation measures will be taken to improve positive impacts. Afforestation in this project uses local species, implement afforestation activity through scientific and reasonable method with no burning and slash, and protect the existing vegetation as much as possible.

CAR 27 was raised and successfully closed, Refer to Appendix 3 for details.

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

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. With the planted trees gradually grow up to forest, project sites will become ecological community with the domain species of tall trees, which will improve biodiversity.

Furthermore, via on-site investigation and checking the map^{/MAP/}, it is verified that as the project site is located in Qianxinan Buyi and Miao Autonomous Prefecture in Guizhou Province, the surrounding area is concentrated of wildlife. Therefore revegetation of project sites will facilitate biodiversity protection of the whole project zone. Two of 12 national protected species in the project zone and two of them are confirmed as globally endangered species according to IUCN^{/IUCN/}, and will be protected by the improvement on ecological environment of the surrounding area through the project activity implementation.

CAR 28 was raised and successfully closed, Refer to Appendix 3 for details.

3.5.7 High Conservation Values Protected (B2.4)

No HCVs has been identified related to biodiversity based on above assessment.

3.5.8 Species Used (B2.5)

The species used is native trees including China fir and Cypresses developed in China^{/SPC/}. These are not considered as invasive species.

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

Only native species are used in the project activities planned so far, thus there no adverse effects from non-native species.

3.5.10 GMO Exclusion (B2.7)

The PPs declared and assured that no GMOs will be used in the project to generate GHG emissions reductions or removals.

3.5.11 Inputs Justification (B2.8)

As per the information available in the PD no fertilizers are used in the project, chemical pesticides are allowed to be used only if there is a serious disease problem erupted in the project area, biological control agents are used in the project according to local Pest Control and Prevention Policy^{/IFMM/}. Therefore no adverse effects from fertilizers and pesticides will be used in accordance with the National Pesticides Policy, there is no adverse effects as the pesticide application will be limited.

CAR 29 was raised and successfully closed, Refer to Appendix 3 for details.

3.5.12 Waste Products (B2.9)

As per the information available in the PD some waste would be resulting from project activities including rubbish and human waste, however, the frequent visit conducted by project owner will ensure the waste and waste products are well identified and cleaned. And the amount of human waste will be quite small and can be degraded naturally. This is confirmed by on-site observation and interview with project owner^{/11/} and forest technician^{/13/}.

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

The PD states that no potential negative impacts on biodiversity outside of the project zone would resulting from project activities; the project contributes to the conservation of the biodiversity and ecosystem.

3.5.14 Net Offsite Biodiversity Benefits (B3.3)

Refer to section 3.5.13.

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

The project proponent will submit the community monitoring plan within one year of validation which is in line with the “VCS+CCB Project Development Process” (version 3.0)^{/PDP/}.

FAR 2 was raised.

3.5.16 Biodiversity Monitoring Plan Dissemination (B4.3)

The PD states that the monitoring plan and results of every verification will be published on VCS and CCB website which can be easily download by stakeholders. Stakeholders can directly contact the person whose phone number is published to raise their opinions. This is was confirmed during the on-site visit and the interview with the project owner^{/11/} and local officer^{/12/} and residents^{/13/}.

CL 04 was raised and successfully closed, Refer to Appendix 3 for details.

3.5.17 Optional Gold Level: High Biodiversity Conservation Priority Status (GL3.1)

N/A

3.5.18 Optional Gold Level: Trigger Species Population Trends (GL3.2, GL3.3)

N/A

4 VALIDATION CONCLUSION

Shanghai Libra Investment & Management Co., Ltd has commissioned the TÜV NORD JI / CDM Certification Program to carry out the validation of the “Qianxinan Afforestation Project in Guizhou Province” in P. R. China. The validation was performed based on VCS Version 3 requirements as well as criteria given to provide for consistent project operations, monitoring and reporting.

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

The proposed VCS&CCB project activity conducts an afforestation of 32,047 ha of forest established by direct planting on degraded lands in Xingren City, Xingyi City, Ceheng County, Zhenfeng County and Qinglong County in Qianxinan Buyi and Miao autonomous prefecture, Guizhou Province, P. R. China with local tree species. The approved AR-CDM methodology AR-ACM0003 (version 2.0.0) is applied to quantify the GHG removals achieved in this project.

In the course of the validation 29 Corrective Action Requests (CARs), 4 Clarification Requests (CLs) were raised and successfully closed. And 2 Forwarded Action Requests (FARs) are raised and will be checked in the verification process.

The review of the project design documentation and additional documents related to baseline and monitoring methodology and subsequent background investigation have provided the TÜV NORD JI/CDM CP with sufficient evidence to validate the fulfilment of the stated criteria.

In detail the conclusions can be summarised as follows:

- A reasonable level of assurance has been applied.
- All data and information used for ex-ante calculation of emission reductions is of projected and/or hypothetical nature.
- The project is in line with all relevant host country legislation incl. its GHG assertions, where applicable.
- The project additionality is sufficiently justified in the VCS-PD.
- The monitoring plan is transparent and adequate.
- The calculation of the project emission removals is carried out in a transparent and conservative manner, so that the calculated emission removals of 9,393,374 tCO₂e are most likely to be achieved within the 20 years crediting period.

The conclusions of this report show, that the project, as it was described in the project description, is in line with all criteria applicable for the validation against the VCS standard Version 3.7 without any qualifications or limitations.

Also TÜV NORD confirms all validation activities, including objectives, scope and criteria, level of assurance and the PD adherence to the CCB Standards Third Edition, as documented in this report are complete. It concludes without any qualifications or limiting conditions that the project “Qianxinan Afforestation Project in Guizhou Province” in P. R. China meets the requirements of the CCB Third edition and all the three Gold Level Benefits, including Climate Change Adaption, Exceptional Community and Exceptional Biodiversity Benefits.

Shanghai, 2019-03-21



Zhao Xuejiao

TÜV NORD JI/CDM Certification Program

Validation Team Leader

Essen, 2019-03-21



Alexandra Nuske

TÜV NORD JI/CDM Certification Program

Final Approval

Appendix 1. Abbreviations

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

Appendix 2. Documents reviewed or referenced

No	Author	Reference	Title	References to the document	Provider
1	Qianxinan Forest Bureau	/AAPP/	Approval of afforestation project plan	Approval of afforestation project plan approved by Guizhou Forest Bureau dated 26/02/2014	PP
2	Guizhou Baiheng Fertiliser Co., Ltd. and land owner	/ACDA/	Carbon sink 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	PP
3	VCSA	/AFOLUR/	AFOLU Requirements, version 3.6	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website
4	UNFCCC	/ARM/	Afforestation and reforestation Methodology	AR-ACM0003 "Afforestation and reforestation of lands except wetlands", version 2.0.0	UNFCCC website
5	Guizhou Provincial Academy of Social Sciences	/BDS/	Biodiversity Survey Report	Biodiversity Survey Report issued by Guizhou Provincial Academy of Social Sciences on 19/03/2014	PP
6	Local Administration for Industry and Commerce	/BL/	Business License	Business License of all the participants of the project	PP
7	Guizhou Provincial Academy of Social Sciences	/BLS/	Baseline Survey Report	Baseline Survey Report issued by Guizhou Provincial Academy of Social Sciences in Oct. 2013	PP
8	Guizhou Baiheng Fertiliser Co., Ltd and Shanghai Libra Investment & Management Co., Ltd	/CA/	Consultant Agreement	Consultant Agreement signed Guizhou Baiheng Fertiliser Co., Ltd and Shanghai Libra Investment & Management Co., Ltd dated on 23/09/2013	PP
9	Guizhou Yide Forest Industry Development Co., Ltd.	/CAR/	Completion acceptance report	Carbon sink afforestation completion acceptance report of Xingyi City 2014. Carbon sink afforestation completion acceptance report of Xzhengfeng County 2014. Carbon sink afforestation completion acceptance report of Xingren County 2014.	PP

				Carbon sink afforestation completion acceptance report of Ceheng County 2014. Carbon sink afforestation completion acceptance report of Xingren County 2015. Carbon sink afforestation completion acceptance report of Qinglong County 2014. Carbon sink afforestation completion acceptance report of Xingren County 2015. Carbon sink afforestation completion acceptance report of Zhengfeng County 2015.	
10	Guizhou Provincial Academy of Social Sciences	/CBSR/	Community Baseline Survey Report	Community Baseline Survey Report issued by Guizhou Provincial Academy of Social Sciences dated in Mar. 2014	PP
11	NDRC	/CC/	Climate Change Index	The People's Republic of China Second National Communication on Climate Change, issued by NDRC, 2013	NDRC website
12	CCBA	/CCBPR/	CCB Program Rules, version 3.1	https://verra.org/project/ccb-program/rules-requirements-and-guidance/	CCB website
13	CCBA	/CCBS/	CCB Standard, version 3.1	https://verra.org/project/ccb-program/rules-requirements-and-guidance/	CCB website
14	Guizhou forestry research institute	/CFG/	China fir growth curve	Growth model of Chinese fir derived from Research Progress of Production Equations of Masson Pine, Chinese Fir and Slash Pine in Northwest A&F University	PP
15	Local village committee in project area	/CLR/	Certification of land rights	Certification of land rights issued by local village committee dated in Feb. 2014.	PP
16	Guizhou forestry science and technology	/CYG/	Cypresses growth curve	Study on biomass growth rule and forest biomass change of main vegetation types in Banqiao river small watershed at the early stage of governance [Guizhou forestry science and technology, 1991, vol. 19, no. 4] page 24	PP
17	Guizhou Baiheng Fertiliser Co., Ltd and Shanghai Libra Investment & Management Co., Ltd	/ERPA/	Emission Reduction Purchase Agreement	Emission Reduction Purchase Agreement signed Guizhou Baiheng Fertiliser Co., Ltd and Shanghai Libra Investment & Management Co., Ltd dated on 20/09/2017	PP

18	Google	/GE/	Google Earth	Google Earth Map	Public software
19	The State Council of China	/GGP/	Grain for Green Program	Grain for Green Program issued by the State Council of China	Public Website
20	Guizhou Baiheng Fertiliser Co., Ltd.	/IFMM/	Integrated Forest Management Manual	Integrated Forest Management Manual issued by Guizhou Baiheng Fertiliser Co., Ltd.	PP
21	International Union for Conservation of Nature	/IUCN/	International Union for Conservation of Nature	The IUCN Red List Categories and Criteria (version 3.1)	PP
22	Project Owner	/LC/	Labor Contract	Labor Contract of project staffs and person who planted trees	PP
23	Local village committee in project area and Project Owner	/LUA/	Land Use Agreement	Land Use Agreement signed by Local village committee in project area and Project Owner in Feb. 2014.	PP
24	Guizhou Forestry Investigation and Design Co., Ltd.	/MAP/	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
25	PP	/MM/	Monitoring Manual	Monitoring Manual created by PP in Jan. 2019	PP
26	Shanghai Libra Investment & Management Co., Ltd	/NPRR/	Non-performance risk report	Non-performance risk report	Shanghai Libra Investment & Management Co., Ltd
27	VCSA	/NPRT/	AFOLU Non-Permanence Risk Tool, version 3.3	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website
28	County forest station	/PCR/	Pest control responsibility document	Pest control responsibility document signed by project construction unit and the county forest station	PP
29	Shanghai Libra Investment & Management Co., Ltd	/PD/	Project Description	Draft Project Description of "Qianxinan Afforestation Project in Guizhou Province" (Version No. 01, dated 05/12/2018) Project Description of "Qianxinan Afforestation Project in Guizhou Province" (Version No. 02, dated 25/02/2019) Final Project Description of "Qianxinan Afforestation Project in Guizhou Province" (Version No. 03, dated 12/03/2019)	Shanghai Libra Investment & Management Co., Ltd

30	Guizhou Forestry Investigation and Design Co., Ltd.	/PDAO/	Project Design for Afforestation Operation	Project Design for Afforestation Operation issued by Guizhou Forestry Investigation and Design Co., Ltd. on 20/01/2014	PP
31	VCSA&CCBA	/PDP/	Project Development Process	"VCS+CCB Project Development Process" (version 3.0)	VCS website
32	Shanghai Libra Investment & Management Co., Ltd	/PDS/	Project Description Summary in Chinese Version	Draft Project Description Summary in Chinese Version of "Qianxinan Afforestation Project in Guizhou Province" (Version No. 01, dated 05/12/2018) Final Project Description Summary in Chinese Version of "Qianxinan Afforestation Project in Guizhou Province" (Version No. 02, dated 12/03/2019)	Shanghai Libra Investment & Management Co., Ltd
33	Guizhou Forestry Investigation and Design Co., Ltd.	/PL/	Project Lifetime evidence	Project Lifetime evidence issued by Guizhou Forestry Investigation and Design Co., Ltd.	PP
34	Project Owner	/PP/	Periodical payroll	Periodical payroll to project staffs and person who planted trees	PP
35	Guizhou Provincial Academy of Social Sciences	/PRA/	Participatory Rural Appraisal	Participatory Rural Appraisal (PRA) report of the project issued by Guizhou Provincial Academy of Social Sciences on 31/03/2014	PP
36	Local Forest Bureau and local Agricultural and forestry development company	/PSD/	Project Starting Date	Project Starting Date evidence (Planting Construction Contracts) issued by Local Forest Bureau and local Agricultural and forestry development company showed that the earliest project start date is 15/04/2014 based on the date when the planting started	PP
37	Shanghai Libra Investment & Management Co., Ltd	/RCS/	Risk Calculation Sheet	Risk Calculation Sheet	Shanghai Libra Investment & Management Co., Ltd
38	Local Forest Bureau and local Garden nursery company	/SPC/	Seedling Purchase Contract	Seedling Purchase Contract signed between Local Forest Bureau and local Garden nursery company dated in 2014 and 2015	PP
39	UNFCCC	/TBA/	Methodological tool	Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities, version 01	UNFCCC website
40	UNFCCC	/TEC/	Methodological tool	Estimation of carbon stocks and change in carbon stocks of trees	UNFCCC website

				and shrubs in A/R CDM project activities, version 04.2	
41	UNFCCC	/TEI/	Methodological tool	Estimation of the increase in GHG emissions attributable to displacement of pre-project agricultural activities in A/R CDM project activity, version 02.0	UNFCCC website
42	Project Owner	/TTR/	Technical Training Record	Technical Training Record and safety, carbon sink training record on the planting tree held by PP and local Forestry Bureau, and Local village committee in project area in year 2013~2018	PP
43	VCSA	/VCSPD/	VCS Program Definitions, version 3.7	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website
44	VCSA	/VCSPG/	VCS Program Guide, version 3.7	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website
45	VCSA	/VCSS/	VCS Standard, version 3.7	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website
46	Shanghai Libra Investment & Management Co., Ltd	/XLS/	Net anthropogenic GHG removals by sinks calculation spreadsheets	Draft calculation spreadsheets of "Qianxinan Afforestation Project in Guizhou Province" (Version No. 01, dated 05/12/2018) Calculation spreadsheets of "Qianxinan Afforestation Project in Guizhou Province" (Version No. 02, dated 25/02/2019) Final calculation spreadsheets of "Qianxinan Afforestation Project in Guizhou Province" (Version No. 03, dated 12/03/2019)	Shanghai Libra Investment & Management Co., Ltd
47	Qianxinan Buyi and Miao Autonomous Prefecture government	/aiq/	Average income in Qianxinan Buyi and Miao Autonomous Prefecture	http://www.qxn.gov.cn/View/tjsj.2/86744.html	Website
48	China Certified Emission Reduction Exchange Info-platform	/ccer/	China Certified Emission Reduction	http://cdm.ccchina.org.cn/ccer.aspx	Website
49	Gold Standard Organization	/gs/	Gold Standard	http://www.goldstandard.org/	Website
50	Local government	/ifpa/	income of farmers in the project area	http://www.qxn.gov.cn/OrgArtList/QxnGov.TJJ/tjsj.5/1.html	Website
51	IPCC	/ipcc/	IPCC publications	www.ipcc-nggip.iges.or.jp	Website
52	PRC Government	/law/	Laws related to forestry	<PRC Forest Law>, <PRC Forest Law Implementing Regulations>,	Website

				<PRC Wildlife Protection Law>, <Forest Fire Prevention Regulations>, <Insect Control Regulation>, <PRC Production Safety Law>	
53	Standing Committee of the National People's Congress of China	/llc/	Labor Law	Labor Law of the People's Republic of China	National public website
54	PRC Government	/pof/	Programs on Forestry In China	Natural Forest Conservation Program (launched in 1998), the Nature Reserve Development and Wild Conservation Program (started in 2000), Intensively Managed Commercial Timber Plantation Base Program (started in 2000), Poverty Alleviation Program	National public website
55	PRC Government	/regu/	Administrative regulations related to forestry	<Regulations for Implementing the Forest Law>, the <Regulations for Grain for Green>, the <Regulations for the Protection of Wild Plants and Animals>, the <Regulation for Nature Reserve>, the <Regulation for Forest Fire Control>, and the <Regulation for Forest Diseases and Pests Control>	National public website
56	UNFCCC	/unfccc/	UNFCCC	http://cdm.unfccc.int	Website
57	VCS	/vcs/	VCS	http://www.v-c-s.org/	Website
58	Local government	/whr/	Local Weather	http://www.qxn.gov.cn/	Website

Appendix 3. Clarification requests, corrective action requests and forward action requests

Table 1. CL from this validation

CL ID	01	Section no.	2.1.10	Date :	14/02/2019	
Description of CL						
The description of whether the project is a grouped project is not clarified.						
Project participant response					Date :	25/02/2019
PD is revised. The project will be developed under VCS scope 14 "Agriculture, Forestry and Other Land Use (AFOLU)" with a project category of Afforestation, Reforestation and Revegetation (ARR). The project is not a grouped project.						
Documentation provided by project participant						
☒	Changes in the PD	Section(s): 2.1.10		New version No.: 02		
☐	Changes in XLS	Worksheet(s):		New version No.:		
☐	Other:					
DOE assessment					Date:	28/02/2019
The revised PD is checked, the project is a grouped project is stated.						
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed				

CL ID	02	Section no.	2.1.14	Date :	14/02/2019	
Description of CL						
The project start date is defined as the date when the planting started, clarification is requested to explain that this date is as per the VCS definition of the project start date, i.e. the date on which activities that lead to the generation of GHG emission reductions or removals are implemented.						
Project participant response					Date :	25/02/2019
According to VCS standard, the project start date is the date on which activities that lead to the generation of GHG emission reductions or removals are implemented, for this project, the project start date is 15-04-2014 when the planting started.						
Documentation provided by project participant						
☒	Changes in the PD	Section(s): 2.1.14		New version No.: 02		
☐	Changes in XLS	Worksheet(s):		New version No.:		
☒	Other:	/PSD/				
DOE assessment					Date:	28/02/2019
The revised PD is checked, the definition of project start date is confirmed as in accordance with VCS definition, the date when planting started is the correct date on which activities that lead to the generation of GHG emission reductions or removals are implemented. Hence, it is verified that the project start date is correctly determined.						
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed				

CL ID	03	Section no.	2.4.1	Date :	14/02/2019	
Description of CL						
The description of section 2.4.1 is not in line with the PD template's requirement: Describe the project's governance structures, and roles and responsibilities of all entities involved in project design and implementation.						
Project participant response					Date :	25/02/2019
The Project Management Offices (PMOs) that have been established by the project owner will be responsible for coordinating the project participants and providing technical services.						

The Forestry bureau will provide technical advice and training to technicians and project entity staff to measure and monitor actual greenhouse gas removals and leakages from proposed project activities.			
Documentation provided by project participant			
☒	Changes in the PD	Section(s): 2.4.1	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☐	Other:		
DOE assessment			Date: 28/02/2019
The revised PD is checked, it is confirmed that the description in section 2.4.1 is in line with the PD template's requirement, the project's governance structures, and roles and responsibilities of all entities involved in project design and implementation has been demonstrated.			
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CL ID	04	Section no.	4.4.2&5.4.2	Date : 14/02/2019
Description of CL				
The way how to inform the local stakeholders especially the villagers that the monitoring plan and results of every verification published on VCS and CCB website is not clarified.				
Project participant response				Date : 25/02/2019
The monitoring plan and results of every verification will be published on VCS and CCB website which can be easily download by stakeholders. Also, if any stakeholder wishes to contact the project owner directly and provide comments, the relevant contact information will be notified in the village committee bulletin board.				
Documentation provided by project participant				
☒	Changes in the PD	Section(s): 4.4.2&5.4.2	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☐	Other:			
DOE assessment				Date: 28/02/2019
The revised PD is checked, it is confirmed that the PD states that the monitoring plan and results of every verification will be published on VCS and CCB website which can be easily download by stakeholders and the local stakeholders will be noticed through the routine villager assembly. Stakeholders can directly contact the person whose phone number is published to raise their opinions. This is was confirmed during the on-site visit and the interview with the project owner ^{/11/} and local officer ^{/12/} and residents ^{/13/} .				
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed		

Table 2. CAR from this validation

CAR ID	01	Section no.	Cover page	Date : 14/02/2019
Description of CAR				
The expected verification schedule in cover page is missing.				
Project participant response				Date : 25/02/2019
The expected verification is in April 2019.				
Documentation provided by project participant				
☒	Changes in the PD	Section(s): cover page	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☐	Other:			
DOE assessment				Date: 28/02/2019
The PD is checked as revised, the expected verification schedule has been listed in cover page.				
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed		

CAR ID	02	Section no.	2.1.1	Date : 14/02/2019
Description of CAR				
1. The project's name in section 2.1.1 is not same to the cover page.				

2. The project area is 2 cities and 3 counties, while PD stated five counties, which is not correct.			
Project participant response			Date : 25/02/2019
1. The project's name has been corrected consistently.			
2. The project area is 2 cities and 3 counties, and has been corrected.			
Documentation provided by project participant			
☒	Changes in the PD	Section(s): 2.1.1	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☐	Other:		
DOE assessment			Date: 28/02/2019
1. The PD is checked as revised, the project's name in section 2.1.1 is same to the cover page and consistent in the whole PD.			
2. The PD is checked as revised, the definition of 2 cities and 3 counties has been clearly stated.			
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CAR ID	03	Section no.	2.1.5	Date : 14/02/2019
Description of CAR				
1. The description of the section 2.1.5 is not in line with the CCB&VCS Project Description Template.				
2. The project lifetime is not correct as per the provided evidence.				
Project participant response				Date : 25/02/2019
1. This part of information has been corrected according to the CCB&VCS Project Description Template.				
2. The project lifetime is revised to 30 years.				
Documentation provided by project participant				
☒	Changes in the PD	Section(s): 2.1.5	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☐	Other:			
DOE assessment				Date: 28/02/2019
1. The PD is checked as revised, the description of the section 2.1.5 is in line with the CCB&VCS Project Description Template, the physical parameters of project have been clearly stated in project zone.				
2. The PD is checked as revised, the project lifetime is confirmed as in line with the Project Lifetime evidence issued by Guizhou Forestry Investigation and Design Co., Ltd. Thus it is confirmed that the lifetime is correctly defined.				
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed		

CAR ID	04	Section no.	2.1.6	Date : 14/02/2019
Description of CAR				
The description of the section 2.1.6 is not in line with the CCB&VCS Project Description Template.				
Project participant response				Date : 25/02/2019
This part of information has been corrected according to the CCB&VCS Project Description Template.				
Documentation provided by project participant				
☒	Changes in the PD	Section(s): 2.1.6	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☒	Other:	/CBSR/, /PRA/		
DOE assessment				Date: 28/02/2019
The revised PD is checked, the definition of project zone and project area has been clearly determined, which is verified in line with the CCB standard. It is confirmed that the revised description of the basic social parameters of the project provided the information of project zone, which has been verified through checking the Community Baseline Survey Report ^{/CBSR/} and Participatory Rural Appraisal (PRA) report ^{/PRA/} .				
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed		

CAR ID	05	Section no.	2.1.7	Date	14/02/2019
Description of CAR					
1. The boundaries of the project zone is not clear, the Location of communities, areas were other stakeholders will be impacted, areas where offsite biodiversity impacts are predicted are all not shown in the figures as per the PD template. 2. Separate KML file shows the correct project boundaries need to be provided.					
Project participant response					Date
1. The corresponding icon table has been corrected. 2. Separate KML file has been provided.					25/02/2019
Documentation provided by project participant					
☒	Changes in the PD	Section(s): 2.1.7		New version No.: 02	
☐	Changes in XLS	Worksheet(s):		New version No.:	
☒	Other:	/MAP/, /PDAO/			
DOE assessment					Date:
1. The revised figures have been checked, it is verified that the boundaries of the project zone and project area have been clearly shown in the figures. Via checking the Project Design for Afforestation Operation^{/PDAO/} and on-site investigation, it is confirmed that the boundaries are consistent with the project design. 2. KML file is checked as provided, and is verified as consistent with the Project Design for Afforestation Operation^{/PDAO/} and on-site investigation.					28/02/2019
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CAR ID	06	Section no.	2.1.8&2.1.9	Date	14/02/2019
Description of CAR					
1. Stakeholders are not identified completely, entities and organizations that could have interest in the project activity is missing. 2. The table in Appendix 1 in PD template is not used in section 2.1.9.					
Project participant response					Date
1. All of the towns in two cities and three counties are affected by project activities, so all local villagers in these towns are identified as stakeholders. Forest planting needs to be approved by the local government and the local forestry bureau should be identified as a stakeholder. Planting techniques are provided by the Forestry Bureau, which is also identified as a stakeholder. In order to assess the environmental and social benefits of project outcomes, local governments in five counties were identified as stakeholders. In addition, VCSA and CCBA were identified as stakeholders. 2. The table in Appendix 1 in PD template has been used in section 2.1.9.					25/02/2019
Documentation provided by project participant					
☒	Changes in the PD	Section(s): 2.1.8&2.1.9		New version No.: 02	
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:				
DOE assessment					Date:
1. The PD states that the stakeholders were identified as all local residents in the 24 towns of the two counties who are affected by the project activities, the local Forest Bureau who involved in providing the basic planting technology, local government of the two cities and three counties, entities and organizations such as NGOs, VCSA and CCBA that could have interest in the project activity. Among the local residents in project zone, some community groups are identified separately, including migrant rural workers, local rural workers, surplus rural labor, rural cooperatives, and female rural workers. The list of primary stakeholder is provided in the PD and seems reasonable for a project of this nature. This is confirmed during the on-site visit and the interview with the local stakeholders^{/12/, /13/}. 2. The revised PD is checked, it is confirmed that table in Appendix 1 in PD template has been used in section 2.1.9, in the table, the stakeholder descriptions are verified as clear and correct.					28/02/2019
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CAR ID	07	Section no.	2.1.11	Date	14/02/2019
Description of CAR					
1. The target species in section 2.1.11 are not consistent with other parts of the PD. 2. The description of expected output and outcomes is missing.					
Project participant response					Date
1. The target species has been corrected. 2. The description of expected output and outcomes has been added. According to the completion acceptance report of the project, all the trees planted have met the requirements of the project design and have good quality evaluation. The project is estimated to generate GHG emission removals of 9,393,374tCO ₂ e in 20 years, with an average annual GHG emission removal of 469,669tCO ₂ e.					
Documentation provided by project participant					
☒	Changes in the PD	Section(s):	2.1.11	New version No.:	02
☐	Changes in XLS	Worksheet(s):		New version No.:	
☒	Other:	/SPC/, /CAR/			
DOE assessment					Date:
1. The revised PD is checked, it is verified that the target species in section 2.1.11 are revised to be consistent with other parts of the PD and related evidence Seedling Purchase Contract ^{/SPC/} and Completion acceptance report ^{/CAR/} . 2. The revised PD is checked, it is verified that the description of expected output and outcomes is added, and the relevant description is confirmed as consistent with the other parts of the PD.					
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CAR ID	08	Section no.	2.1.12	Date	14/02/2019
Description of CAR					
The description in section 2.1.12 is not in line with the requirement of PD template.					
Project participant response					Date
The description in section 2.1.12 has been corrected to the description of Sustainable Development by implementing the project activity.					
Documentation provided by project participant					
☒	Changes in the PD	Section(s):	2.1.12	New version No.:	02
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:				
DOE assessment					Date:
The revised PD is checked, it is confirmed that the revised description in section 2.1.12 is in line with the requirement of PD template. The description of Sustainable Development is confirmed as actual and reasonable.					
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CAR ID	09	Section no.	2.1.18	Date	14/02/2019
Description of CAR					
The description of actions needed and designed to mitigate the risk for the fertilization application is not clear, revision is needed.					
Project participant response					Date
This part of the description has been corrected. Fertilization application and frost is not applicable to the project, and the related risk of using pesticide is revised to be clear and actual.					
Documentation provided by project participant					
☒	Changes in the PD	Section(s):	2.1.18	New version No.:	02
☐	Changes in XLS	Worksheet(s):		New version No.:	
☒	Other:	/IFMM/			
DOE assessment					Date:
					28/02/2019

The description of actions needed and designed to mitigate the risk for the fertilization application and frost is confirmed as deleted, which is in line with the actual situation of the project and project location features which has been verified during onsite investigation. And the revised part of pesticide is confirmed as in line with the Integrated Forest Management Manual ^{/IFMM/} .	
Conclusion Tick the appropriate checkbox	☐ Additional action should be taken (finding remains open) ☒ The finding is closed

CAR ID	10	Section no.	2.1.19	Date	14/02/2019	
Description of CAR						
As per the template, section 2.1.19 need to describe the measures needed and designed to maintain and enhance the climate, community, and biodiversity benefits beyond the project lifetime. The description in the PD is not correct.						
Project participant response				Date		25/02/2019
The description of section 2.1.19 has been revised in the updated PD.						
Documentation provided by project participant						
☒	Changes in the PD		Section(s): 2.1.19	New version No.: 02		
☐	Changes in XLS		Worksheet(s):	New version No.:		
☒	Other:		/SPC/, /LUA/, /PL/			
DOE assessment				Date: 28/02/2019		
The measures needed and taken to extend project benefits beyond the project lifetime include the selection of the species planted which assure the endurance ^{/SPC/} , the land use agreements with the land owner and project owner ^{/LUA/} , commercial logging will be forbidden ^{/PL/} . The measures taken will extend many of the project benefits in the project lifetime. This is confirmed by the on-site visit and interview.						
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed				

CAR ID	11	Section no.	2.1.20	Date	14/02/2019	
Description of CAR						
1. The first para. in section 2.1.20 is not related to project financial, clarification is requested.						
2. The source of initial fund is not provided.						
2. As the VCU issuance date is later than the project finish planting date, how to keep continuous management and maintenance of the forest between the two dates is not provided.						
Project participant response				Date		25/02/2019
1. According to the reported barren hills and wasteland data, 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.						
2. According to the reported barren hills and wasteland data, 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.						
3. The full financial plan regarding initial funding and the continuous maintenance of the project has been provided in the updated PD.						
Documentation provided by project participant						
☒	Changes in the PD		Section(s): 2.1.20		New version No.: 02	
☐	Changes in XLS		Worksheet(s):		New version No.:	
☒	Other:		/ERPA/			
DOE assessment				Date		28/02/2019
1. The first para. in section 2.1.20 is confirmed as revise to be related to project financial.						
2. As declared by the PPs during the interview, the preliminary project funding came from local government resources and for the future in addition to that, from selling the potential VCUs.						
3. The PPs have potential subsidy from carbon revenue to maintain the implementation of the project before of VCUs can take place.						
These two findings are verified by onsite interview with local government officer ^{/12/} and documents review ^{/ERPA/} .						

Conclusion <i>Tick the appropriate checkbox</i>	☐ Additional action should be taken (finding remains open)
	☒ The finding is closed

CAR ID	12	Section no.	2.3.5&2.3.6	Date :	14/02/2019
Description of CAR					
As the on-site validation was finished, the relevant information need to be revised based on the actual situation.					
Project participant response					Date :
The actual situation has been modified in the relevant 2.3.5&2.3.6					
Documentation provided by project participant					
☒	Changes in the PD	Section(s): 2.3.5&2.3.6		New version No.: 02	
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:				
DOE assessment					Date:
During the on-site visit, the project owner arranged a stakeholder meeting by inviting all the local stakeholders who were informed after the audit plan sent to PP from auditor. Auditor had a direct and independent communication with communities and other stakeholders' representatives. The relevant information has been confirmed as stated in the revised PD.					
Conclusion <i>Tick the appropriate checkbox</i>	☐ Additional action should be taken (finding remains open)				
	☒ The finding is closed				

CAR ID	13	Section no.	2.3.7	Date :	14/02/2019
Description of CAR					
As per the PD template, description of indicate if and how project design has been affected by stakeholder input is missing.					
Project participant response					Date :
The description of indicating if and how project design has been affected by stakeholder input has been added in the updated PD. All the stakeholders agreed with the project design and the project was not affected by the opinions of stakeholders.					
Documentation provided by project participant					
☒	Changes in the PD	Section(s): 2.3.7		New version No.: 02	
☐	Changes in XLS	Worksheet(s):		New version No.:	
☒	Other:	/PRA/			
DOE assessment					Date:
As stated before a consultation through PRA ^{/PRA/} and meetings with the stakeholders was made for informing people about the project impacts and ask them to raise their opinions of the project design and their willingness to participate the following implementation. From that point, the project design was not modified and the PPs further declares that they will continue the communication with stakeholders and monitor the community impacts. This is was confirmed during the on-site visit and the interview with the project developer ^{/11/} and local stakeholders ^{/12/,/13/} .					
Conclusion <i>Tick the appropriate checkbox</i>	☐ Additional action should be taken (finding remains open)				
	☒ The finding is closed				

CAR ID	14	Section no.	2.3.16	Date :	14/02/2019
Description of CAR					
As per the PD template, description of measures needed and designed to inform workers about their rights is missing.					
Project participant response					Date :
Relevant descriptions have been added, by posting the labor law propaganda materials in the village, the farmers are aware of their right to participate in labor.					
Documentation provided by project participant					
☒	Changes in the PD	Section(s): 2.3.16		New version No.: 02	
☐	Changes in XLS	Worksheet(s):		New version No.:	
☒	Other:	/TTR/, /LC/			

DOE assessment		Date: 28/02/2019
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. And also the regular training provided to workers before they start the job have provided the related knowledge, this is confirmed via checking the training record^{/TTR/}, labor contract^{/LC/} and on site interview with local government officer^{/I2/} and forest technicians^{/I3/}.		
Conclusion <i>Tick the appropriate checkbox</i>	☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CAR ID	15	Section no.	2.4.3	Date : 14/02/2019
Description of CAR				
As per the PD template, document the management team's expertise and prior experience implementing land management and carbon projects at the scale of this project is missing.				
Project participant response				Date : 25/02/2019
The project owner has many years in management of projects of conservation of natural resources, with which it has developed capacities to interact with different types of actors, as a result of which it has established cooperation agreements with local governments, private companies, producer organizations and native communities. It has also developed a system applicable to environmental projects, which has effective tools and methodologies to have effective control over the interventions carried out.				
Documentation provided by project participant				
☒	Changes in the PD	Section(s):	2.4.3	New version No.: 02
☐	Changes in XLS	Worksheet(s):		New version No.:
☒	Other:	/IFMM/		
DOE assessment				Date: 28/02/2019
The revised PD is checked, it is confirmed that the description of prior experience implementing land management of each entity is explicit. Local Forestry bureau and Shanghai Libra Investment & Management Co., Ltd. will play as the expert group (Management team) who is in charge of guiding and coordinating the project's overall implementation and decision-making. The project proponent Guizhou Baiheng Fertiliser Co., Ltd. is an affiliated company who is in rich experience in forest management in Guizhou Province, including artificial afforestation, forest protection and management, forest damage control and technical training. Shanghai Libra Investment & Management Co., Ltd. is experienced in carbon measurement and monitoring. In the past, Shanghai Libra Investment & Management Co., Ltd. has successfully developed many different carbon projects in China, including validation and verification under GS, VCS and CDM standard. These experience will help project proponent to ramp up the capability of project implementing and management. This is confirmed via checking the Integrated Forest Management Manual^{/IFMM/} and on site interview with local government officer^{/I2/} and forest technician^{/I3/}.				
Conclusion <i>Tick the appropriate checkbox</i>	☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CAR ID	16	Section no.	2.5.1	Date : 14/02/2019
Description of CAR				
The description in section 2.5.1 of PD is not as per the template requirement: describe and map tenure, use, access and management rights to lands, territories and resources in the project zone.				
Project participant response				Date : 25/02/2019
The description in section 2.5.1 of PD has been corrected. According to the "Constitution of the People's Republic of China" and the "Forest Law of the People's Republic of China", China's land is state property, that is, collectively owned by the whole people except the law. Prior to the start of the project, the land involved in the project was collectively owned by the village. Local villagers have the right to use the land within the project boundary, and the project owner and forestry department are responsible for the comprehensive implementation and management of the project.				
Documentation provided by project participant				

☒	Changes in the PD	Section(s): 2.5.1	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☒	Other:	/LUA/	
DOE assessment			Date: 28/02/2019
Prior to the project initiation, the project land are collective-owned by local villages. The local villagers have the right to the use of land^{/LUA/}. Local villages who owned the project land all agreed to authorize project owner the right of forest management within the project boundary during the project crediting period, thus the land is used by project owner who was authorized the right over the land and over the carbon credit generated by the project taking place on this property^{/LUA/}. 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 farms. The project proponents have proven ownership to land within the property boundaries that are occupied. This is was confirmed during the on-site visit and the interview with the project developer^{/11/} and local stakeholders^{/12/, /13/}.			
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CAR ID	17	Section no.	2.5.2 & 2.5.3	Date : 14/02/2019
Description of CAR				
As per the PD description, the below questions are issued 1. How the local villages agreed with the Guizhou Baiheng Fertiliser Co., Ltd using the land? 2. It stated only some of the project land is belonging to local villages, which is not consistent with other parts. 3. The land use manner is not specified.				
Project participant response				Date : 25/02/2019
1. The ownership of the forest land of the afforestation project belongs to the village collective, and the right to use the forest land belongs to the farmers. The land is a barren hill suitable for planting trees. Since these lands are all legal forestry land, the ownership is clear, and there is no dispute over land ownership in the project site. 2. Prior to the project initiation, all of the project land are collective-owned by local villages. PD is revised to be consistent. 3. To make sure the successful development of the project, Guizhou Baiheng Fertiliser Co., Ltd. and the village collective which had the ownership of forest land had signed a carbon sink afforestation cooperation and development agreement, which clarifies the forest land rights by all parties during the project crediting period. So the project will not encroach uninvited on private property, community property or government property				
Documentation provided by project participant				
☒	Changes in the PD	Section(s): 2.5.2 & 2.5.3	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☒	Other:	/ACDA/, /LUA/		
DOE assessment				Date: 28/02/2019
1. Prior to the project initiation, the project land are collective-owned by local villages. The local villagers have the right to the use of land^{/LUA/}. Local villages who owned the project land all agreed to authorize project owner the right of forest management within the project boundary during the project crediting period, thus the land is used by project owner who was authorized the right over the land and over the carbon credit generated by the project taking place on this property^{/LUA/}. Thus the land is used by project owner who was authorized the right over the land and over the carbon credit generated by the project taking place on this property^{/LUA/}. 2. It is a typo. All the project land are verified as collective-owned by local villages through on-site interview and checking the land use agreement^{/LUA/} and carbon sink afforestation cooperation and development agreement^{/ACDA/}. 2. The land use manner has been confirmed as specified in the updated PD. The property rights of the project including rights to lands and forest, which has been confirmed by local government and villagers. This was confirmed during the on-site visit and the interview with the project developer^{/11/} and local stakeholders^{/12/, /13/}.				

Conclusion <i>Tick the appropriate checkbox</i>	☐ Additional action should be taken (finding remains open)
	☒ The finding is closed

CAR ID	18	Section no.	2.5.7	Date :	14/02/2019
Description of CAR					
As per the PD template, in section 2.5.7, description of assurance that the project is complying with these and, where relevant, demonstrate how compliance is achieved is missing.					
Project participant response					Date :
Section 2.5.7 of PD is revised according to the requirement of PD template.					
Documentation provided by project participant					
☒	Changes in the PD	Section(s): 2.5.7		New version No.: 02	
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:				
DOE assessment					Date:
The PD provides an extensive list of national and local laws and regulations, and explains their applicability to the project and the way compliance with the law is achieved by the project where applicable. The laws and regulations are confirmed through checking the public website ^{/law/,regul/} which has been compared with the actual situation of the project, it is verified that the project is complying with relevant national and local laws and regulations.					
Conclusion <i>Tick the appropriate checkbox</i>	☐ Additional action should be taken (finding remains open)				
	☒ The finding is closed				

CAR ID	19	Section no.	3.1.1	Date :	14/02/2019
Description of CAR					
The version of Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities used by PD 04.1 is not the latest and valid version via checking the UNFCCC website.					
Project participant response					Date :
It is a typo. The version of Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities has been corrected.					
Documentation provided by project participant					
☒	Changes in the PD	Section(s): 3.1.1		New version No.: 02	
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:				
DOE assessment					Date:
The revised PD is checked, it is confirmed that all the version number has been updated to latest and valid version via checking the UNFCCC website.					
Conclusion <i>Tick the appropriate checkbox</i>	☐ Additional action should be taken (finding remains open)				
	☒ The finding is closed				

CAR ID	20	Section no.	3.1.4	Date :	14/02/2019
Description of CAR					
1. Description in Step 0 stated that "Before the project implementation, the project owners conduct thorough evaluation on the project activity including the incentive from carbon trading", however, the method and evidence is missing. 2. Title of step 1 is not consistent with the tool. 3. The accurate figures of the description in investment barrier is not provided. 4. Word "Reforestation" appeared many times in some para., however the project is not a reforestation project, revision is needed. 5. The common practice analysis is not reasonably demonstrated, as the boundary is not clearly defined.					
Project participant response					Date :
1. According to the Project Design for Afforestation Operation, before the project implementation, the local Forest Bureau has seriously considered the incentive from carbon trading, which also has been confirmed by the Project Approval. 2. The title has been corrected.					

3. Based on 10/03/2014 in Guizhou province academy of social sciences published the "Qianxinan carbon sink forestation project socio-economic baseline survey shows that the project area farmers average annual income of 2720-3100 yuan/year, and according to the statistics Qianxinan Buyi and Miao Autonomous Prefecture, the 2013 statistics bulletin of the national economy and social developments of Qianxinan, rural residents per capita income is 5360 yuan/year, the income of farmers in the project area is lower than the general level of local townships and counties. Therefore, there would be no direct revenue from the implementation of the afforestation project expect for environmental and ecological benefits, the project definitely has the financial barrier.
4. Word "Reforestation" has been changed to "Afforestation".
5. The common practice analysis and boundary has been corrected.

Documentation provided by project participant

☒	Changes in the PD	Section(s): 3.1.4	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☒	Other:	/AAPP/, /LUA/	

DOE assessment

Date: 28/02/2019

1. The revised PD is checked, it is confirmed that description in Step 0 is revised, the relevant information is checked as added into this section. The incentive from the planned sale of the carbon credit was seriously considered in the decision to proceed with the project activity as demonstrated by the project approval^{/AAPP/}.

2. The revised title is confirmed as consistent with the tool.

3. It was confirmed that there are no credit mechanisms are in place for famers to make long term investment in plantation forestry. The project land are collective-owned by local villages and local villagers have the right to the use of land which is confirmed during the on-site interview^{/I2/, /I3/} and checking the lands use agreement^{/LUA/}.

For the project location, commercial loan from banks for the purpose of afforestation is very unlikely due to the high risk and the economical unattractiveness in the context of remote lands.

In addition, no credit mechanisms are in place for famers to make long term investment in plantation forestry, which has been confirmed during the on-site interview^{/I2/, /I3/}.

Moreover, due to the widely dispersed distribution of the project area, it is hard for the local villagers to raise enough fund and effectively maintain the implementation of the project as the average income of the local villagers are relatively low to afford such large scale project.

The barriers described in the PD were furthermore cross-checked during the onsite visit through interviews with local people^{/I2/, /I3/}. It is concluded that local villagers are not able to afford the high plantation establishment investment in the early stage.

4. The typo mistakes are confirmed as all revised to be correct.

5. The region for the common practice analysis was defined as the Guizhou Province where the project area is located, based on the social and ecological condition^{/BLS/&/PRA/}. Firstly, the forest in Guizhou Province is mainly public welfare forest and stone desertification control forest land and different from other provinces due to the poor resource, vulnerable ecology, multiple disasters and low economic benefits^{/IAP/}. Secondly, the chosen region has unique characteristics in regard to forest structure, transportation condition, population structure and ethnic minorities^{/PRA/}. Therefore, the presented approach is considered appropriate for the common practice analysis.

Evidences for reforestation statistics in the region have been reviewed. Most of the reforested area is covered under the "Grain for Green Program" which is subsidized by the government^{/pof/&/GGP/}. In addition according to the "Grain for Green Program"^{/pof/&/GGP/}, only conversion of farmland to forest is eligible for the subsidy while tree planting on other types of lands (e.g. barren land) is not eligible. The project area is not classified as farmland.

Furthermore, by means of checking the document^{/PRA/} and on-site interview with the project participant^{/I1/}, it is confirmed that the proposed project does not get direct financial support from NGOs.

Finally, via checking the GHG scheme website^{/vcs/, /gs/, /unfccc/} and interview with local government officer^{/I2/}, it is verified that there is no other similar A/R projects in defined region.

The audit team reviewed respective documentation and also confirmed during the onsite visit, that the proposed AR-CDM project activity features essential distinction to other afforestation activities in the region, as described above.

Therefore, it is confirmed that the proposed project activity is not a common practice in the defined region.

Conclusion Tick the appropriate checkbox	☐ Additional action should be taken (finding remains open) ☒ The finding is closed
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CAR ID	21	Section no.	3.2	Date :	14/02/2019
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Description of CAR

1. Explanation of tree and shrub biomass in baseline scenario is not provided in section 3.2.1.
2. The calculation process of actual net GHG removals by sinks is not completely in line with the tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activity", the parameters' name and description are not consistent with the tool, clarification and revision is requested.
3. The source of growth curve equations used in this section is not provided.
4. Title of 3.2.2 and 3.2.4 is not consistent with the methodology.
5. The Project Stratification is not correctly determined according to the methodology.

Project participant response

Date : 25/02/2019

1. Tree and shrub biomass in baseline scenario has been explained.
2. The calculation process has been corrected in accordance with "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activity",
3. The source of growth curve equations used in this section has been provided.
4. Title of 3.2.2 and 3.2.4 has been corrected.
5. The Project Stratification has been corrected.

Documentation provided by project participant

☒	Changes in the PD	Section(s): 3.2	New version No.: 02
☒	Changes in XLS	Worksheet(s): all	New version No.: 02
☒	Other:	/PDAO/, /AAPP/, /BLS/	

DOE assessment

Date: 28/02/2019

1. To be conservative, most of the project area are bare land with very little grasses, therefore changes in carbon stocks in trees and shrubs in the baseline can be accounted as zero based on the tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities". The audit team confirmed this via checking the baseline survey^{/BLS/} and Participatory Rural Appraisal Report^{/PRA/}. In summary the calculation of the baseline stocks and GHG removals are in compliance with the applied methodology and carried out correctly.
2. The revised calculation process of actual net GHG removals by sinks is checked as completely in line with the tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activity", the parameters' name and description are consistent with the tool. Refer to section 3.3.7 of this report for details of assessment of the calculation process.
3. The source of growth curve equations used in this section is provided. Refer to section 3.3.7 of this report for details of assessment of the source of growth curve equations.
4. Title of 3.2.2 and 3.2.4 is checked as revised in PD and is consistent with the methodology.
5. The project area value is revised to be correct and each area of Project Stratification for carbon calculation is accurate, which is verified via checking the Project Design for Afforestation Operation^{/PDAO/} and baseline survey^{/BLS/} and approval of the afforestation project plan^{/AAPP/}.

However, the growth curve equations of China fir used is not correct, the growth curve is related to Pinus massoniana, not China fir. Revision is requested.

Project participant response

Date : 12/03/2019

The PD and ER sheet have been revised accordingly. The growth curve equations of China fir is derived from Research Progress of Production Equations of Masson Pine, Chinese Fir and Slash Pine in Northwest A&F University.

Documentation provided by project participant

☒	Changes in the PD	Section(s): 3.2	New version No.: 03
☒	Changes in XLS	Worksheet(s): all	New version No.: 03
☒	Other:	/CFG/	

DOE assessment

Date: 13/03/2019

For ex-ante estimation, the growth curve equation of China fir is based on the growth model of Chinese fir derived from Research Progress of Production Equations of Masson Pine, Chinese Fir and Slash Pine in Northwest A&F University^{CFGI}. The evidence is checked as credible and reasonable, and the revised PD and ER sheet have been checked and confirmed as correct. It is concluded that the ex-ante ER calculation is correctly estimated.

Conclusion

Tick the appropriate checkbox

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

CAR ID	22	Section no.	3.3	Date : 14/02/2019
Description of CAR				
1. The parameters' name and description are not consistent with the tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activity", the parameters'. Revision is requested. 2. The China fir is missing in A_i, and the value applied need to be adjusted based on the re-determination of Project Stratification. 3. The value of V_{it} applied ex-ante is not provided. 4. The monitoring frequency of T is not provided. 5. The parameter table of N_{it} is not in line with the PD template. 6. Table 4-2 in PD states the emission from transportation included, however in section 3.2.2, it stated that transportation attributable to the project activity shall be considered insignificant and therefore accounted as zero, inconsistency is observed. 7. PD stated 37 samples defined based on IPCC 2004, how to define this sample should be demonstrated and IPCC 2004 should be provided. 8. Step-wise procedures (BEF method) is not included in the approved baseline and monitoring methodology AR- ACM0003/Version 02.0, revision is requested.				
Project participant response				Date : 25/02/2019
1. The parameters' name and description has been corrected consistent with the tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activity", the parameters'. 2. The China fir in A_i and the value applied has been added. 3. The parameter V_{it} has been deleted as per the tool. 4. The parameter T has been deleted as per the tool. 5. The parameter N_{it} has been deleted as per the tool. 6. Table 4-2 GHG Emissions by Sources other than Those Resulting from Changes in Carbon Pools in PD has been deleted, and in accordance with section 3.2.2. 7. 37 is deleted and this part is revised to be more actual. Monitoring agency needs to set fixed sample plots due to measuring requirements at regular intervals. Plot size is set to be a circular area with a diameter of 30m. 8. The BEF values of tree species involved in the proposed project can be obtained by using the values in the "list of land use change and forest greenhouse gases" in the second national bulletin of the People's Republic of China on climate change.				
Documentation provided by project participant				
☒	Changes in the PD	Section(s): 3.3	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☒	Other:	/MM/		
DOE assessment				Date: 28/02/2019

1. The revised parameters' name and description in PD are checked as consistent with the tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activity".
2. The China fir is added in A_i , and the value applied has been adjusted based on the re-determination of Project Stratification.
3. As per the tool, it is confirmed that the parameter V_{it} has been deleted is in line with the tool.
4. As per the tool, it is confirmed that the parameter T has been deleted is in line with the tool.
5. As per the tool, it is confirmed that the parameter N_{it} has been deleted is in line with the tool.
6. It is a typo mistake and the inconsistency has been checked as deleted.
7. Original description is confirmed as deleted, and the sample land size is confirmed as correct and in line with the methodology requirement and has been defined in the Monitoring Manual^{/MM/}.
8. The method for estimation of the change in carbon stock is checked as in line with the tool. Refer to section 3.3.8 of this report for assessment details.

Conclusion

Tick the appropriate checkbox

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

CAR ID	23	Section no.	4.2.1	Date :	14/02/2019
Description of CAR					
The table in 4.2.1 is not filled as per the PD template requirement: "Explain and justify key assumptions, rationale and methodological choices. Explain how the affected groups have participated in the evaluation of impacts. Provide all relevant references."					
Project participant response					Date :
					25/02/2019
The table in 4.2.1 has been revised in the updated PD and relevant references have been provided as well.					
Documentation provided by project participant					
☒	Changes in the PD	Section(s):	4.2.1	New version No.:	02
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:				
DOE assessment					Date:
					28/02/2019
The revised table in 4.2.1 is confirmed as filled as per the PD template requirement. The PD states that the project will generate positive community impacts through increasing local job opportunities, household income and living level so that to provide actual direct benefits to community group-local villages. The analysis of the net benefits to the communities is conducted to each category of local residents. 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 level of the local residents and increasing local job opportunities, improve the household income by getting job positions and training opportunities from the project, and improve local women's capability. This is was confirmed during the on-site visit and the interview with the local residents and forest technicians ^{/13/} .					
Conclusion					
<i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CAR ID	24	Section no.	4.2.4	Date :	14/02/2019
Description of CAR					
The description in section 4.2.4 is not consistent with 4.2.2, clarification is requested.					
Project participant response					Date :
					25/02/2019
No HCVs was identified related to community well-being in the project zone thus none of the HCVs related to community well-being will be negatively affected by the project.					
Documentation provided by project participant					
☒	Changes in the PD	Section(s):	4.2.4	New version No.:	02
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:		/CBSR/		
DOE assessment					Date:
					28/02/2019

The revised PD is checked, it is confirmed that the description in section 4.2.4 is consistent with 4.2.2. No HCVs was identified related to community well-being in the project zone thus none of the HCVs related to community well-being will be negatively affected by the project, which has been verified through checking the Community Baseline Survey Report^{/CBSR/}.

Conclusion

Tick the appropriate checkbox

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

CAR ID	25	Section no.	5.1.1	Date :	14/02/2019
Description of CAR					
The description in 5.1.1 is not as per the PD template requirement: "Describe the biodiversity within the project zone at the start of the project and threats to that biodiversity. Explain and justify key assumptions, rationale and methodological choices. Provide all references."					
Project participant response					Date :
The description in 5.1.1 has been corrected. The 2 cities and 3 counties where the project located due to long-term farming, ecological structure of most project sites is relatively homogenous, with low biodiversity in recent years. Most of the project site are wasteland, mainly covered with grass and scattered shrubs.					25/02/2019
Documentation provided by project participant					
☒	Changes in the PD	Section(s):	5.1.1	New version No.:	02
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:	/CBSR/			
DOE assessment					Date:
The revised PD is checked, it is confirmed that the project zone is characterized by extensive and long-term farming and no other activities have been developed during the years, and ecological structure of most project sites is relatively homogenous due to traditional farming practices which is verified by on-site observation and interview with local officers and residents ^{/12,13/} . The project site are mostly wasteland, mainly covered with grass and scattered shrubs, therefore the biodiversity was low, which has been verified through checking the Community Baseline Survey Report ^{/CBSR/} .					28/02/2019
Conclusion					
<i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CAR ID	26	Section no.	5.2.1	Date :	14/02/2019
Description of CAR					
No table in 5.2.1 is not filled as per the PD template requirement: "Explain and justify key assumptions, rationale and methodological choices. Provide all relevant references."					
Project participant response					Date :
The table in 5.2.1 has been revised in the updated PD and relevant references have been provided as well.					25/02/2019
Documentation provided by project participant					
☒	Changes in the PD	Section(s):	5.2.1	New version No.:	02
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:	/BDS/			
DOE assessment					Date:
As per biodiversity survey report ^{/BDS/} 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. The study also highlight how a certain variety of mammals, birds and insects can be observed in planted forests. Therefore the project's impact on biodiversity will be overwhelmingly positive when compared to "without project" scenario.					28/02/2019
Conclusion					
<i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CAR ID	27	Section no.	5.2.2	Date :	14/02/2019
Description of CAR					
The description in 5.2.2 is not as per the PD template requirement: "Describe measures needed and					

designed to mitigate negative impacts on biodiversity”, measurements is missing.			
Project participant response			Date : 25/02/2019
Afforestation in this project will use local species, implement afforestation activity through scientific and reasonable method with no burning and slash, and protect the existing vegetation as much as possible. Therefore, implementation of this project will not decrease biodiversity of project sites.			
Documentation provided by project participant			
☒	Changes in the PD	Section(s): 5.2.2	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☐	Other:	/PDAO/, /SPC/, /CAR/	
DOE assessment			Date: 28/02/2019
Since no negative impacts are expected on biodiversity to the project implementation, no specific mitigation measures will be taken to improve positive impacts. Afforestation in this project uses local species, implement afforestation activity through scientific and reasonable method with no burning and slash, and protect the existing vegetation as much as possible. This is verified through checking the Project Design for Afforestation Operation ^{/PDAO/} , Seedling Purchase Contract ^{/SPC/} and Completion acceptance report ^{/CAR/} and on-site investigation.			
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CAR ID	28	Section no.	5.2.3	Date : 14/02/2019
Description of CAR				
The description in 5.2.3 is not clear about the impact by the project directly.				
Project participant response				Date : 25/02/2019
The description in 5.2.3 has been corrected.				
Documentation provided by project participant				
☒	Changes in the PD	Section(s): 5.2.3	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☐	Other:	/MAP/		
DOE assessment				Date: 28/02/2019
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. With the planted trees gradually grow up to forest, project sites will become ecological community with the domain species of tall trees, which will improve biodiversity. Furthermore, via on-site investigation and checking the map^{/MAP/}, it is verified that as the project site is located in Qianxinan Buyi and Miao Autonomous Prefecture in Guizhou Province, the surrounding area is concentrated of wildlife. Therefore revegetation of project sites will facilitate biodiversity protection of the whole project zone. Two of 12 national protected species in the project zone and two of them are confirmed as globally endangered species according to IUCN^{/IUCN/}, and will be protected by the improvement on ecological environment of the surrounding area through the project activity implementation.				
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed		

CAR ID	29	Section no.	5.2.9	Date : 14/02/2019
Description of CAR				
No table in 5.2.9 is not filled as per the PD template requirement: “Complete the table below to describe the use of any fertilizers, chemical pesticides, biological control agents and other inputs used for the project.”				
Project participant response				Date : 25/02/2019
The table in 5.2.9 has been added as per the PD template requirement.				
Documentation provided by project participant				
☒	Changes in the PD	Section(s): 5.2.9	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	

☐	Other:	/IFMM/
DOE assessment		Date: 28/02/2019
As per the information available in the PD no fertilizers are used in the project, chemical pesticides are allowed to be used only if there is a serious disease problem erupted in the project area, biological control agents are used in the project according to local Pest Control and Prevention Policy ^{/IFMM/} . Therefore no adverse effects from fertilizers and pesticides will be used in accordance with the National Pesticides Policy, there is no adverse effects as the pesticide application will be limited.		
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed

Table 3. FAR from this validation

FAR ID	1	Section No.	4.4.1	Date: 14/02/2019
Description of FAR				
Community monitoring plan is not provided.				
Project participant response				Date: 25/02/2019
The community monitoring plan will be submitted after validation.				
Documentation provided by project participant				
☐	Changes in the PD	Section(s): 4.4.1	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☐	Other:			
DOE assessment				Date: 28/02/2019
The project proponent will submit the community monitoring plan within one year of validation which is in line with the "VCS+CCB Project Development Process" (version 3.0) ^{/PDP/} .				
Conclusion <i>Tick the appropriate checkbox</i>		☒ To be checked during the next periodic verification		

FAR ID	2	Section No.	5.4.1	Date: 14/02/2019
Description of FAR				
Biodiversity monitoring plan is not provided.				
Project participant response				Date: 25/02/2019
The biodiversity monitoring plan will be submitted after validation.				
Documentation provided by project participant				
☒	Changes in the PD	Section(s): 5.4.1	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☐	Other:			
DOE assessment				Date: 28/02/2019
The project proponent will submit the biodiversity monitoring plan within one year of validation which is in line with the "VCS+CCB Project Development Process" (version 3.0) ^{/PDP/} .				
Conclusion <i>Tick the appropriate checkbox</i>		☒ To be checked during the next periodic verification		