

VALIDATION REPORT

GUOLUO GRASSLAND SUSTAINABLE MANAGEMENT PROJECT



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 Guoluo Grassland Sustainable Management Project conducts seeding a variety of species of native grass on black soil beaches of 160,548.96 ha in Maqin County, Dari County, Gande County, Jiuzhi County, Banma County and Maduo County, Guoluo Tibetan Autonomous Prefecture, Qinghai Province, P. R. China with mix species of native grass (*Elymus dahuricus Turcz.*, *Poa annuaL.* and *Festuca sinensis Keng ex S. L. Lu*). The approved VCS methodology VM0026/Version 1.0 “Sustainable Grassland Management” is applied to quantify the GHG removals achieved in this project. The calculation of the project’s emission reductions and 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 procedure 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 4.1, 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 4.1, VCS Program Guide Version 4.0, AFOLU Non-Permanence Risk Tool Version 4.0, CCB Standards version 3.1, CCB Program Rules version 3.1 and the VCS Methodology VM0026 version 1.0 – “Sustainable Grassland Management”.

- The number of findings raised during validation.

In the course of the validation 39 Corrective Action Requests (CARs), 18 Clarification Requests (CL) were raised and successfully closed. No FAR was 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.

Climate Bridge (Shanghai) 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, Guoluo Grassland Sustainable Management Project (2458) with regard to the relevant requirements of VCS Standard Version 4.1 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 4.1 and CCB Standards version 3.1 and all associated updated as documented in this report, are complete. TÜV NORD concludes that the “Guoluo Grassland Sustainable Management Project” project description (PD) version 05.1 of 19-November-2021 meets the requirements of VCS and CCBS and all associated updated. The GHG assertion provided by PP and validated by TÜV NORD will result in the expected GHG emission reductions or removal of 17,664,275 tCO₂e (without considering the buffer) over the 40 years crediting period.

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1 INTRODUCTION

1.1 Objective

Climate Bridge (Shanghai) 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, Guoluo Grassland Sustainable Management Project in China with regard to the relevant requirements of VCS Standard Version 4.1^{/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 VCU. 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 4.1 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, v4.0^{/VCS PG/}
- VCS Standard, v4.1^{/VCS/}
- Program Definitions, v4.1^{/VCS PD/}
- AFOLU Non-Permanence Risk Tool, v4.0^{/NPRT/}
- CCB Standards, v3.1^{/CCBS/}
- CCB Program Rules, v3.1^{/CCB PR/}

The following documents are also taken into account in the VCS&CCB validation, as a CDM tools were 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 4.1.

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 Guoluo Grassland Sustainable Management Project (hereafter “the project”) is located in Maqin County, Dari County, Gande County, Jiuzhi County, Banma County and Maduo County, Guoluo Tibetan Autonomous Prefecture, Qinghai Province, China. The project is to restore the degraded grassland ecosystem by seeding a variety of species of native grass for GHG emission reduction and removal and finally contribute to local sustainable development. The project is implemented by Qinghai Guanglv Landscaping Co., Ltd.

160,548.96 ha of native grass was planted on black soil beaches. 6 Counties including Maqin County, Dari County, Gande County, Jiuzhi County, Banma County and Maduo County which belongs to Guoluo Tibetan Autonomous Prefecture, Qinghai Province are involved in the project.

All the project sites were previously black soil beach, the Black Soil Type grassland degradation occurred broadly in Three River Source Region over the past decades. Via on-site observation and checking the Project Design Report^(PDR), it is confirmed that the mainly planted grass species of *Elymus dahuricus* Turcz., *Poa annua*L. and *Festuca sinensis* Keng ex S. L. Lu¹, which are native grass species.

The implementation of the project would reduce the GHG emissions for 17,664,275 tCO₂e in 40 years, with an average annual GHG emission of 448,829 tCO₂e.

The proposed project activity will reduce GHG emission by restore the degraded grassland ecosystem on black oil beached to sustainable grassland management which will increase soil organics, mitigate the impact of climate change on the local ecological environment, slow down the melting of snow-capped mountains, enhance the capabilities of local communities and residents by providing them with relevant technical skills and training, and increase local biodiversity, that has been confirmed and verified by site visit and refer to details assessment in below sections of this report.

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

¹ *Elymus dahuricus* Turcz. (lyme grass), *Poa annua*. (bluegrass) and *Festuca sinensis* Keng ex S. L. Lu (Chinese fescue)

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 Social Carbon (SC). She has experience with more than 200 validation and verification projects including VCS forestry project and GS forestry project in China since year of 2010. She has a bachelor degree of Biological Engineering and master degree of Environmental Engineering. Based on the education background, she engaged in the sustainable development survey when worked as consultant for three years and worked with WWF, GEI (Global Environment Institute) and other NGOs for studying the social and cultural, ecological and biodiversity in China so that to achieve the sustainable development for many projects. Also based on more than 10 years site investigation and interview with local stakeholders and designers of the projects during the CDM, GS, SC, CCB and VCS validation and verification process, she knows how to conduct the community audit well and gained many of social expertise in China. Furthermore, as She has a bachelor degree of Biological Engineering and the main subject is plant pathology, hence she knows the knowledge of biodiversity and gained many biodiversity expertise during the validation and verification site inspection in China. She has conducted more than 20 CDM projects in Qinghai Province and more than 15 VCS&CCB AR project validation and/or verification², thus has the relevant social and cultural expertise in this region and also have relevant ecological and biodiversity experience due to the education background. She speaks mandarin which is the common language in China and the regional residents can speak and understand this language.

Technical Expert: Li Guifang has Bachelor degree in Agriculture Resources and Environment and Master degree in Plant Nutrition, and work experience more than 5 years in consultancy under the GHG, ecological and biodiversity to the development of forestry management and A/R projects, qualified by TÜV NORD in Scope 14. Thus she has the relevant agriculture, forestry and or other land use experience in China due to education background and working experience. She has conducted more than 15 VCS&CCB AR project validation and/or verification³, thus has the relevant social and cultural expertise and also have relevant ecological and biodiversity experience due to the education background. Furthermore, as her education background, she has engaged in the Agriculture and Environment, especially the plant research in some survey fields in China and with the consultancy work for forestry management and A/R projects, so that to develop the project well, she spent many time in site for community and biodiversity survey and research thus accumulated the related biodiversity and social expertise in China through interview with locals and conducted questionnaires survey and study the biodiversity in the sample plots etc.. She speaks mandarin which is the common language in China and the regional residents can speak and understand this language.

² VCS+CCB projects including project No. 1855, 1865, 1866, 1847, 1825, 1826, 1832, 1864, 2070, 1895, the team leader has conducted the community validation and verification activities on site for all the listed projects. And for 2301, 2305, 2310, 1896, the team leader has conducted the community validation activities on site.

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

Table 2-1 Validation team member

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

Table 2-2 Technical reviewer and approver

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

Refer to Appendix 4 for competence of team members and technical reviewer.

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, v4.0
- VCS Standard, v4.1
- Program Definitions, v4.1
- AFOLU Non-Permanence Risk Tool, v4.0
- CCB Standards, v3.1
- CCB Program Rules, v3.1
- Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities (version 3.0)
- Tool for Identification of Degraded or Degrading Lands for Consideration in Implementing CDM AR Project Activities (version 1.0)

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.

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

Target area is calculated as below,

- *Stratum 1, number of plots y is 12. $X = \sqrt{12} = 4$*
- *Stratum 2, number of plots y is 6. $X = \sqrt{6} = 3$*
- *Stratum 3, number of plots y is 6. $X = \sqrt{6} = 3$*
- *Stratum 4, number of plots y is 6. $X = \sqrt{6} = 3$*
- *Stratum 5, number of plots y is 6. $X = \sqrt{6} = 3$*
- *Stratum 6, number of plots y is 6. $X = \sqrt{6} = 3$*
- *Stratum 7, number of plots y is 6. $X = \sqrt{6} = 3$*
- *Stratum 8, number of plots y is 6. $X = \sqrt{6} = 3$*
- *Stratum 9, number of plots y is 6. $X = \sqrt{6} = 3$*
- *Stratum 10, number of plots y is 6. $X = \sqrt{6} = 3$*
- *Stratum 11, number of plots y is 6. $X = \sqrt{6} = 3$*
- *Stratum 12, number of plots y is 6. $X = \sqrt{6} = 3$*

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. Due to this is the validation, the main purpose is to check if the project design is actual. Thus the validation team visited targeted area for each project stratification, total 37 targeted areas. Targeted area can represent the characteristics of each stratification, thus used as sampling area for checking the project design, grass species and seeding approach.

2.3 Document Review

The VCS&CCB PD/^{PD/} and supporting background documents related to the project design and baseline were reviewed. Documents reviewed included data used to set baseline, carbon rights contract, additionality analysis, maps and aerial images, biomass and carbon calculation spreadsheets.

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.

The validation was performed basing on the documents check and site inspection, refer to the section 3 of this report for the validation process detail and corresponding documents review.

2.4 Interviews

The objective of the interview process was to solicit important information from personnel related to project and relevant to the validation process. Onsite interviews and information discussions were conducted with project developer^{11/}, local government officer^{12/}, local residents (including women)^{13/} and Project VCS&CCB development consultant^{14/}. The interviews were performed by the validation team on-site (within the project area, in Maqin County, Dari County, Gande County, Jiuzhi County, Banma County and Maduo County, Guoluo Tibetan Autonomous Prefecture, Qinghai 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.	Ma ^{11/}	Guangchuan	Qinghai Guanglv Landscaping Co., Ltd/ Manager	29/03/2021~02/04/2021	-Chronological description of the project activity with documents of key steps of the implementation. -Technical details of the project realization, project feasibility, designing, operational life time -Baseline and Additionality -Project Boundary -Eligibility criteria -ER calculation - Monitoring plan and arrangements -Crediting period -Project activity starting date -Ownership -local stakeholder consultation	Zhao Xuejiao, Li Guifang
2.	Yi ^{12/}	Lvbei	Qinghai Provincial	29/03/2021~02/04/2021		Zhao Xuejiao,

			Forestry and Grassland Bureau/ Senior Engineer of Carbon Sink Center		-National legislation to grassland and grazing - Provincial legislation to seeding -Local grassland development and management -local grazing status - Roles & responsibilities of the government -local communities situation -local biodiversity situation -local climate -local environment	Li Guifang
3.	Jin ^{/12/}	Yongzhong	Forestry and Grassland Bureau of Guoluo/ Bureau Chief	29/03/2021~02/04/2021		
4.	Nan ^{/12/}	Mei	Local County Forestry and Grassland Bureau/ Staff	29/03/2021		
5.	Jia ^{/12/}	Mao	Local County Forestry and Grassland Bureau/ Staff	29/03/2021		
6.	He ^{/12/}	Youlong	Guoluo Forestry and Grassland Station/ Station Chief	29/03/2021~02/04/2021		
7.	Luo ^{/12/}	Xueyun	Guoluo Forestry and Grassland Station/ Station staff/ monitoring staff	29/03/2021~02/04/2021		
8.	Xu ^{/12/}	Wei	Guoluo Forestry and Grassland Station/ Director	29/03/2021~02/04/2021		
9.	Chen ^{/12/}	Zhanmin	Guoluo Forestry and Grassland Station/ Staff	29/03/2021		
10.	Zhu ^{/12/}	Yongqing	Local County Forestry and Grassland Station/ Engineer	29/03/2021		
11.	Duo ^{/12/}	Budan	Local Resident/	29/03/2021	-job opportunities -living condition	Zhao Xuejiao,

			Secretary of village		-training -local grazing status -local stakeholder consultation -impact to local residents -impact to local environment -impact to local biodiversity	Li Guifang
12.	Duo ^{/13/}	Re	Local Resident/ Secretary of village	29/03/2021		
13.	Geng ^{/13/}	Jia	Local Resident/ Secretary of village	29/03/2021		
14.	Zhaxi ^{/13/}	Nima	Local Resident/ Work for grassland management	29/03/2021		
15.	San ^{/13/}	Zhi	Local Resident	29/03/2021		
16.	Ni ^{/13/}	Ma	Local Resident/ Secretary of village/ Monitoring Staff	29/03/2021		
17.	Duo ^{/13/}	Dan	Local Resident/ Monitoring Staff	29/03/2021		
18.	Dan ^{/13/}	Ba	Local Resident/ Vice Secretary of village	29/03/2021		
19.	Wu ^{/13/}	Mao	Local Resident/ herdsman/ Work for grassland management	29/03/2021		
20.	Geng ^{/13/}	Gaji	Local Resident/ herdsman/ Work for grassland management	29/03/2021		
21.	Lou ^{/13/}	Bao	Local Resident/ herdsman/ Work for grassland management	29/03/2021		

22.	Huang ^{/14/}	Shanfeng	Climate Bridge (Shanghai) Ltd./ Technical Director	29/03/2021~02/04/2021	- Editorial issues of the VCS&CCB PD - Calculation of Emission reductions and removals	Zhao Xuejiao, Li Guifang
23.	Lin ^{/14/}	Mao	Climate Bridge (Shanghai) Ltd./ Project Manager	29/03/2021~02/04/2021		

2.5 Site Inspections

The validation site inspection was conducted on 29-March-2021~02-April-2021. 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 grassland developer, local government officers, consultant and grassland management staffs.

Due to this is the validation, the main purpose is to check if the project design is actual. Thus the validation team visited targeted area for each project stratification, total 37 targeted areas. Targeted area can represent the characteristics of each stratification, thus used as sampling area for checking the project design and species of grass.

Hence during the site inspection, the 37 targeted areas are determined by the validation team by checking the map of the project location, details as following table,

Table 2-1 Locations for site inspection

Site Visit time	Area	Coordinates		Inspection Results
29/03/2021	strata 6, sample 1	99.1494E	34.2103N	Each area is verified as located in the project boundary by checking the geographical coordinates. Grass species and seeding approaches are consistent as per the project design for the stratifications.
	strata 5, sample 2	98.9730E	34.5828N	
	strata 6, sample 3	99.2483E	34.2078N	
	strata 5, sample 4	99.4677E	33.9417N	
	strata 5, sample 6	100.5489E	34.3435N	
	strata 6, sample 6	99.6745E	34.1559N	
30/03/2021	strata 10, sample 2	97.5709E	34.9189N	
	strata 10, sample 4	98.0372E	35.0621N	
	strata 10, sample 5	98.1511E	34.5613N	
	strata 9, sample 1	98.4577E	34.3764N	
	strata 9, sample 3	98.9847E	34.3341N	
	strata 9, sample 5	99.0137E	34.3180N	
	strata 2, sample 2	99.0418E	34.1761N	
	strata 1, sample 4	99.3684E	33.4352N	

	strata 2, sample 3	98.8242E	33.9221N	
	strata 1, sample 7	98.9701E	33.8409N	
31/03/2021	strata 2, sample 5	98.7925E	33.8719N	
	strata 1, sample 9	98.9709E	33.7280N	
	strata 1, sample 12	99.9621E	33.5319N	
	strata 11, sample 1	99.9232E	33.1040N	
	strata 12, sample 2	100.3674E	32.9578N	
	strata 12, sample 4	100.3935E	32.9512N	
	strata 11, sample 4	100.2531E	32.9749N	
	strata 12, sample 6	100.3655E	32.9607N	
	strata 11, sample 6	100.4676E	33.1379N	
01/04/2021	strata 8, sample 1	100.7900E	33.6154N	
	strata 7, sample 2	100.4902E	33.5235N	
	strata 7, sample 5	100.7444E	33.2973N	
	strata 7, sample 6	100.7900E	33.2135N	
	strata 8, sample 3	100.8137E	33.6143N	
	strata 8, sample 5	100.8921E	33.2513N	
02/04/2021	strata 4, sample 2	100.6512E	34.2455N	
	strata 3, sample 1	99.4984E	33.9865N	
	strata 3, sample 3	99.6039E	33.9449N	
	strata 3, sample 6	100.2021E	33.7188N	
	strata 4, sample 4	99.5632E	33.9912N	
	strata 4, sample 6	99.5908E	33.9589N	

There are total 12 project stratifications for carbon calculation in the 6 Counties, the validation team visited targeted area for each project stratification, total 37 targeted areas. The detail of the area and grass species are in the below table

Table 2-2 Targeted area in 12 project stratifications

Strata	County	Area (ha)	Soil texture
		160,548.96	
Strata-1 - Area 4,7,9,12	Dari	50,456.19	Loam
Strata-2 - Area 2,3,5	Dari	18,735.08	Sandy loam
Strata-3 - Area 1,3,6	Gande	28,380.06	Loam
Strata-4 - Area 2,4,6	Gande	3,778.17	Sandy loam
Strata-5 - Area 2,4,6	Maqin	13,342.96	Loam
Strata-6 - Area 1,3,6	Maqin	1,966.06	Sandy loam
Strata-7 - Area 2,5,6	Jiuzhi	8,836.47	Loam
Strata-8 - Area 1,3,5	Jiuzhi	2,885.33	Sandy loam

Strata-9 - Area 1,3,5	Maduo	1,780.21	Loam
Strata-10 - Area 2,4,5	Maduo	26,083.43	Sandy loam
Strata-11 - Area 1,4,6	Banma	3,957.27	Loam
Strata-12 - Area 2,4,6	Banma	347.73	Sandy loam

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 25-March-2021 and ended on 24-April-2021 (<https://registry.verra.org/app/projectDetail/CCB/2458>). No comments were received during this period via checking the above website.

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.

In the course of the validation 39 Corrective Action Requests (CARs), 18 Clarification Requests (CL) were raised and successfully closed. The assessment is included in the report.

2.7.1 Forward Action Requests

No FAR was raised during the validation process.

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, it is verified that this section is appropriate for estimating the benefits or outcome that created by the project.

The benefits are achieved as below:

- Climate objectives consist in the seeding of a variety of species native grass on black soil beach, which would continue to remain black soil type degraded grassland, increasing the carbon stocks in the following pools: above-ground woody 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 defined region.

Via checking the whole PD, it is confirmed that all the achievements reported are corresponding to the information provided in the relevant parts of the PD.

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 planting area are located in Maqin County, Dari County, Gande County, Jiuzhi County, Banma County and Maduo County, Guoluo Tibetan Autonomous Prefecture, Qinghai Province.

Guoluo Tibetan Autonomous Prefecture is defined as the project zone and it is located in the southeast of Qinghai Province and is a part of the Three River Source region. The location is confirmed via on-site investigation and checking the project design^{/PDR/}.

The project zone has a typical plateau continental climate^{/whr/}, with an annual average temperature of -4°C, the annual precipitation is 400-700 mm, the average altitude is over 4,200 meters^{/whr/}, population of project zone is 200,175 of which the Tibetan population was 183,901^{/CBSR/}. Via checking the project design^{/PDR/} and through on-site investigation, it is verified that project zone has diverse natural views varying from snow mountains to basins, grasslands and barrens. There are many mountains, rivers and lakes available for development and utilization in Guoluo Tibetan Autonomous Prefecture and there are some famous snow mountains located inside project zone^{/PDR/}. There are many different vegetation types in Guoluo Tibetan Autonomous Prefecture due to the different ecological regions and geographical components in this region, which has been verified through on-site investigation and checking the project design^{/PDR/}.

The PD sufficiently describes the social and physical parameters of the project area and zone. The project aims in seeding of a variety of species native grass on black soil beach, which would continue to remain degraded, planting with native grasses (*Elymus dahuricus* Turcz., *Poa annua*L. and *Festuca sinensis* Keng ex S. L. Lu)^{/PDR/}^{/GSPC/}. 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^{/11/}, the primary project proponent responsible for project develop, project design, project implementation and project management is Qinghai Guanglv Landscaping Co., Ltd

- *The contact details are:*
- *Guangchuan Ma (President)*

- Room 4053, Unit 4, Building 2, No. 50, Xichuan South Road, Chengxi District, Xining City, Qinghai 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 grassland 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^{/11/}, local officers^{/12/} and consultant^{/14/} during the on-site visit, the other entities involved is the VCS&CCB development is Guoluo Prefecture Autonomous Prefecture who are the local experts for grassland development and management and VCS&CCB development consultant who has signed the Consultant Agreement^{/CA/} with the project developer. The contact details are:

- *Guoluo Prefecture Autonomous Prefecture Forestry and Grass Bureau*
- *Xueyun Luo (Section Chief)*

- No.38 Gande Road, Maqin County, Guoluo Tibetan Autonomous Prefecture, Qinghai Province, China

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- *Climate Bridge (Shanghai) Ltd.*
- *Mao Lin (Project Manager)*

- Block B, Level 24, Jiangong Mansion, 33 Fushan Road, Pudong New Area, Shanghai, China

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Project start date

The PD states, and confirmed by the PP during the interview, that the project start date is 20-June-2016 based on the date when the seeding started, which is verified via checking the Project Starting Date evidence (Seeding Construction Contract for year 2016) issued by Haiyan Senyuan Forest and Grass Ecological Planting Co., Ltd. and local Forestry and Grass Bureau^{/PSD/}.

Agreements between the landowner and the project owner are available defining the validity and the land used^{/APDR/}. The project lifetime is 40 years^{/PL/} and the PP choose GHG accounting period of 40 years which is same to the project lifetime. The GHG accounting period was chosen by PP as started from 20-June-2016, and the project lifetime begin on the project start date. The starting date is defined on 20-June-2016 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 448,829 tCO₂ per year (average) higher 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 Guoluo Tibetan Autonomous Prefecture is located in the southeast of Qinghai Province on the Qinghai-Tibet Plateau and is a part of the Three River Source region which is confirmed via on-site investigation^{/PDR/}. The PD includes a map of the project zone as well the geographical coordinates 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 has been cross-checked through the maps^{/MAP/&/GE/}.

Location	East longitude	North latitude
Project Area	97°54'-101°50'	32°31'-35°40'

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 grassland in the project area before the project, which is also verified via checking the project baseline survey^{/BSR/}. The lands will remain black soil beaches 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 seeding of a variety of species native grass on black soil beach, which would continue to remain black soil type degraded grassland, increasing the carbon stocks in the following pools: above-ground woody biomass and soil organic carbon^{/PDR/}.

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^{/CBSR/}.

Biodiversity objectives would preserve the conservation of wildlife and of biodiversity in the Region^{/BBSR/}.

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 Maqin County, Dari County, Gande County, Jiuzhi County, Banma County and Maduo County and cross check with the supporting documents provided during the validation process^{/PDR/,/BSR/,/BBSR/,/CBSR/,/PL/,/PSD/}, is able to conclude that the description of Maqin County, Dari County, Gande County, Jiuzhi County, Banma County and Maduo County grassland sustainable management project within the PD is accurate, complete, and provides an understanding of the nature of the project.

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

3.2.2 Physical Parameters (G1.3)

The PD sufficiently describes the physical parameters of the project area and zone, the assessment and document assessed has been stated as following,

Topography

The project zone Guoluo Tibetan Autonomous Prefecture is located in Qinghai Province. The Prefecture lies on Qinghai-Tibet Plateau and is a part of the Three River Source region, Bayankala Mountain is located in the south of Guoluo, Animaqing Mountain is located in the north of Guoluo, and Nianbaoyeshize Mountain is located in the southeast of Guoluo. The Prefecture has an altitude of 4,000-5,000 meters in northwest and 3500-4000 meters in southeast which has been verified through on-site investigation and checking the project design^{/PDR/}. The topography is in great topographic relief with diverse natural views varying from snow mountains to *basins*, rivers, grasslands and barrens in the project zone is also confirmed by on-site observation and interview with local officers^{/I2/}.

Soils

The soil composition of project zone are diversified, which mainly include 11 soil types, 17 subtypes, 21 soil genera and 6 soil species mainly including alpine cold desert soil, alpine meadow soil, alpine grassland soil, gray cinnamon soil, mountain meadow soil, chestnut soil, meadow soil, saline soil, peat soil, marsh soil and aeolian sand soil, the characteristic are confirmed through on-site observation and verified by analytical results in Biodiversity baseline survey report^{/BBSR/}.

Climate

The climate in project area belongs to the typical plateau continental climate with annual average temperature of -4°C, and the annual precipitation is 400-700 mm, an average altitude of over 4,200 meters, the typical characteristic of climate is lack of oxygen, low temperature, strong light radiation and large temperature difference between day and night, rainfall is unevenly distributed in the project zone^{/BBSR/,/whr/}.

Hydrology

There are many lakes and rivers available for development and utilization in Guoluo Tibetan Autonomous Prefecture with a water surface area of more than 2,400 square kilometers. All the features are verified by checking the survey report^{/BSR/,/PDR/} and via on-site investigation.

Types of vegetation

There are many different vegetation types in Guoluo Tibetan Autonomous Prefecture due to the different ecological regions and geographical components in this region which are confirmed via on-site interview with the local officers from Forestry and Grassland Bureau and through checking the biodiversity survey report^{/BBSR/}. The main includes mountain forest, alpine shrub meadow, alpine meadow, alpine grassland and alpine desert from east to west, and swamp vegetation is mainly distributed between alpine meadow and alpine desert, which is confirmed via on-site interview with the local officers^{/I2/} from Forestry and Grassland Bureau and through checking the biodiversity baseline survey report^{/BBSR/}.

In conclusion, the PD sufficiently describes the physical parameters of the project area and zone. The site visit and the supporting documents^{/BBSR/,/BSR/,/PDR/} confirmed the description and verified the descriptions are correct and actual.

3.2.3 Social Parameters (G1.3)

The project area for grass seeding is degraded black soil beaches^{/APDR/}. The community living inside and in the vicinity of the project area is limited^{/CBSR/}. So the project zone is analyzed with the social parameters.

The project zone in 6 Counties have main ethnic groups include the Tibetan population (accounts for 91.87%) and others including Hans, Tus, Salars and other ethnic groups. At the project start, the total population was 200,175, the agricultural and livestock breeding population was 152,060, accounting for 75.96% of the total population which is confirmed by on-site interview with local officers and checking the supporting document^{/CBSR/}.

There are total 76,312 square kilometers in Guoluo Tibetan Autonomous Prefecture with available grassland area is 6.2552 million ha, and including sown area of crops is 7,886 mu, of which: 6,885 mu of grain crops, 670 mu of oil crops, total grain output 1,276 tons, and oil crop output 66 tons, which is confirmed by on-site observation, interview with local officers and checking the supporting document^{/CBSR/}.

The 6 Counties where the project located are all under jurisdiction of Guoluo Tibetan Autonomous Prefecture, which is the famous historical and cultural province which is confirmed by on-site investigation and checking the supporting document^{/CBSR/}. Guoluo Tibetan Autonomous Prefecture is famous as parts of Three River Source Region which has been confirmed by interview with local officers and checking the supporting document^{/CBSR/}.

The social-cultural information and economical parameters including population, income, land ownership, education, health and employment figures are checked have been detail listed in the PD with 6 Counties of project zone separately, which are confirmed as actual and credible and verified by on-site observation and checking the community baseline survey^{/CBSR/}.

In conclusion, it is confirmed that 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 160,548.96 ha located in Maqin County, Dari County, Gande County, Jiuzhi County, Banma County and Maduo County in Guoluo Tibetan Autonomous Prefecture, Qinghai Province. The location of the project area and zone is defined and confirmed through on-site investigation by GPS devices used by validation team and through checking the maps^{/MAP/} and the geographical coordinates^{/GE/}.

The project zone map is confirmed as clear with the relevant information on the location of stakeholders, location of communities, onsite climate impacts, other stakeholder impact, and areas where biodiversity impacts are predicted, which is confirmed as in line with the requirement of the PD template.

Furthermore, based on the carbon sink calculation, it is confirmed that there are leakages created from the project due to grazing displacement activities, the offsite climate and biodiversity impacts areas are defined as the project zone as assessed in the section 3.3.7 of this report which is outside of the project area were predicted in the Map.

The information in the map is confirmed as consistent with the project design. The impacted area and stakeholders are confirmed as defined reasonably which was verified by on-site inspection and checking the Project Design Report^{/PDR/}, Biodiversity baseline survey report^{/BBSR/} and Community Baseline Survey Report^{/CBSR/}.

Site observations confirmed the targeted areas are located within the administrative division of Maqin County, Dari County, Gande County, Jiuzhi County, Banma County and Maduo 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 stakeholders should be all the communities and parties which are relevant to the project activity or impacted by the project or have interest in the project. The PD states that the stakeholders were identified as all communities, community groups, and other stakeholders who will be directly and indirectly affected by the implementation of the project.

The stakeholders are identified as

1. *Local residents around project area* including all groups of people, including local Tibetans, local women, local herders and grassland guardians who are directly affected by the project activity, and these groups are identified separately due to different impacts which has been verified as reasonable by site interview and checking the Community Baseline Survey Report^{/CBSR/}.
2. *Village collectives* who own the grasslands are directly affected by the project activity thus reasonably to be identified as stakeholder.
3. *Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau* that involved in the approval of grassland carbon sink project, organizing and managing the grasslands and project implementation and providing the basic planting technology, implementing national forestry and grassland regulations, formulating development strategies, and managing local forest and grassland resources thus reasonably to be identified as stakeholder;
4. *County Forestry and Grassland Bureau* that involved in organizing the project implementation, supervision and management of the county's ecological construction, including rodent control, seeding grass, fire prevention, the protection and rational development of terrestrial wildlife resources, and the construction of forestry and grassland teams, etc. during the implementation phase of the project;
5. *Guoluo Tibetan Autonomous Prefecture Finance Bureau* that involved in management and disbursement of all kinds of project funds and issued initial fund of the project thus reasonably to be identified as stakeholder.
6. *Local government* that involved in approved the request of the Forestry and Grassland Bureau to carry out the grassland carbon sink project, supervises the environmental and social benefit in results of the project, such as the restoration of the grassland ecosystem and employment issues and focus on social and environmental management, employment, and welfare of counties.
7. *Other stakeholders* including scientific research institutions and tourism companies, the scientific research institutions have carried out researches on grass species, grassland degradation mechanisms, and grassland restoration which the results are key to promoting sustainable grassland development and the project will verify these results. The benefits of tourism companies are impacted by the implementation of the project due to the restored grassland is beneficial to rebuild local pleasant and beautiful ecological system which is basic of tour and sightseeing, this is confirmed by site visit and interview with local residents thus reasonably to be identified as stakeholder.

Approaches taken to validate the process of stakeholder identification and analysis as stepwisely as following,

1. Checking the relevant docs and evidence

The stakeholders identification is confirmed as complete by checking the related docs of project, Community Baseline Survey Report^{/CBSR/} and Project Design Report^{/PDR/} which define the communities, community groups in Guoluo Tibetan Autonomous Prefecture and impact to the local communities; Approval of project design report^{/APDR/} which was approved by Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau; Other government agencies of the City which are confirmed by checking the government functions; Technical Training Record^{/TTR/} which are used to prove that Planting techniques provided by the Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau and County Forestry and Grassland Bureau.

2. On-site inspection and interview

Via on-site inspection, VVB visited the project area and communities in Guoluo Tibetan Autonomous Prefecture, interviewed with the stakeholders representative from local communities, Forest and Grassland Bureau in Guoluo Tibetan Autonomous Prefecture and local counties and local county government and most of the representatives were involved in the project implementation. By seeing the project implementation and interview with stakeholders in communities and governments, it is confirmed the project is implemented in 6 Counties which impact the communities in this area, and local government is responsible to the approval and related environmental and social issues, and during the project seeding, management and maintenance, the local workers involved in the project are paid by local Forestry and Grassland Bureau and trained by the local Forestry and Grassland Bureau and PP. Therefore, it is verified that each stakeholder is identified correctly, and relevant analysis and assessment, stakeholder's relevance to project activities in the PD is sufficient.

The list of primary stakeholder is provided in the PD and seems reasonable for a project of this nature. This was confirmed during the on-site visit and the interview with the local stakeholders^{/12/,/13/}.

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

The stakeholders are identified as Local residents around project area including Local Tibetans, Local women, Local herders and Grassland guardians, Village collectives, Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau, County Forestry and Grassland Bureau, Guoluo Tibetan Autonomous Prefecture Finance Bureau and Local government that are directly affected by the project implementation or interest on project design.

See above section for the approaches taken to validate the process of stakeholder identification and analysis.

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^{/12/,/13/}.

3.2.7 Sectoral Scope and Project Type

The proposed project falls into VCS Sectoral Scope 14: Agriculture Forestry and Other Land Use (AFOLU). According the VCS requirement, the project is eligible under AFOLU project categories ALM (Agricultural Land Management).

As per the AFOLU requirements in the VCS standard, eligible ALM activities are those that reduce net GHG emissions on croplands and grasslands by increasing carbon stocks in soils and woody biomass and/or decreasing CO₂, N₂O and/or CH₄ emissions from soils. And the project belongs to below eligible ALM activities

Improved Grassland Management (IGM): This category includes practices that demonstrably reduce net GHG emissions of grassland ecosystems by increasing soil carbon stocks, reducing N₂O emissions and/or reducing CH₄ emissions.

Via site inspection and checking the Project Design Report^{/PDR/} and Approval of project design report^{/APDR/}, it is confirmed that the aim of the project is seeding of a variety of species native grass on black soil beach that will reduce net GHG emissions of grassland ecosystems by increasing soil carbon stocks, to reduce N₂O emissions and/or reduce CH₄ emissions. Hence, it is verified that the project is eligible as Improved Grassland Management (IGM) category and thus is and AFOLU project.

The project is confirmed as not a grouped project verified by Approval of project design report^{/APDR/}.

The native ecosystem in the project area was no longer present and the goal of the project is to plant grass species on degraded black soil beach^{/PDR/}. As stated in the PD during the crediting period, all project areas will be managed to be sustainable, this is verified by checking the project lifetime evidence^{/PL/} and through on-site interview with local officers^{/I2/}.

CL 02 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 –Climate^{/PDR/,BSR/}
- Improve well-being of local residents –Community^{/PDR/,CBSR/}
- Enhance social cohesion -Community^{/PDR/,CBSR/}
- Maintain and enhance the population of the endangered animals around the project site -Biodiversity^{/BBSR/}
- Increase local biodiversity -Biodiversity^{/PDR/,BBSR/}

Section 2.1.11 of the revised PD has been checked, VVB confirmed that a theory of change has been used to analyze all the focal issues in both without and with project scenario, especially for the below three points:

- (1) The fragile ecology in Qinghai-Tibet Plateau and long-term climate change and overgrazing;
- (2) The continued degradation of grassland ecosystem will deteriorate the living environment of local herders;
- (3) Threat to local climate conditions and biodiversity due to continued degradation of grassland ecosystem.

Based on checking the project design^{/PDR/} against the pre-project status using theory of change method based on the baseline survey for project^{/BSR/}, community^{/CBSR/} and biodiversity^{/BBSR/}, it is verified that PD and project design^{/PDR/} provides an understanding of the nature of the project and the project will achieve the climate, community, and biodiversity objectives as above after the operation of the project.

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

3.2.9 Sustainable Development

The project activity will generate GHG emission removals and sequester GHG and mitigating climate change by foregoing the seeing on degraded grasslands which would remain degraded which has been verified by the project design^{/PDR/} and on-site investigation; the project also generates social and environmental co-benefits as the generation of income and job opportunities for local communities which is verified by checking the labor contracts^{/LC/} and periodical payroll^{/PP/} and also confirmed by on-site interview with local villagers^{/I3/}; enhance biodiversity conservation by restoring degraded grassland ecosystems which is critical for wildlife which is verified by checking the project design^{/PDR/} against the baseline of biodiversity^{/BBSR/} and also confirmed by on-site interview with local officers^{/I3/}; improve the quality and quantity of the vegetation which is verified by site investigation and checking the project design^{/PDR/} against the baseline of biodiversity^{/BBSR/} and also confirmed by on-site interview with local officers^{/I3/}; improve soil and water conservation in project area which is verified by checking the project design^{/PDR/} against the baseline survey^{/BBSR/} and also confirmed by on-site interview with local officers^{/I3/}.

Due to the fact, that the on-site has been conducted more than 4 years after operation start of the project, the project's sustainable development contributions have been verified during on-site investigation as following:

GHG sequester and mitigating climate change have been achieved upon the grasslands establishment and management verified by on-site investigation; income and job opportunities for local communities has been generated via checking the the labor contracts^{/LC/} and periodical payroll^{/PP/}, restoring degraded grassland ecosystems have been increased with the grasses' growing and grasslands' management verified by on-site investigation; the quality and quantity of the vegetation have been planted verified by on-site investigation; soil and water conservation has been improved with the grasses' growing and grasslands' management verified by on-site investigation and interview with local officers^{/I3/}.

Thus it is verified that the project's sustainable development contributions is positive and can be achieved after project operation.

CAR 07 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 20-June-2016 based on the date when started grass seeding^{/PSD/} as described in previous section. The implementation schedule is as the following,

Date	Milestone(s) in the project's development and implementation
May-2015	The Project Design Report for this project was finished ^{/PDR/}
May-2015	Baseline Survey Report was finished ^{/BSR/}
02-November-2015	The project design report was approved by Qinghai province agriculture and animal husbandry department ^{/APDR/}
November-2015	Community baseline survey of the project was completed ^{/CBSR/}
28-November-2015	Participatory Rural Appraisal (PRA) report of the project was completed ^{/PRA/}
20-December-2015	Biodiversity baseline survey report of the project was completed ^{/BBSR/}

20-June-2016	Started grass seeding (start date of project activity and crediting period) ^{/PSD/}
September-2018	Completed planting ^{/IAR/}
May-2019	Staff training for patrolling and monitoring ^{/TTR/}
15-May-2020 to 15-June-2020	Filed monitoring and survey for the first monitoring period
25-December-2020	Draft PD and PD summary completed ^{/PD/}
08-February-2021	Draft MR and MR summary completed
25-March-2021~24-April-2021	PD and MR open for public comment
29-March-2021~02-April-2021	VVB on-site validation and verification

Via on-site interview with PP^{/11/} and local officers^{/12/} and checking all the supporting evidences listed in the table above, it is confirmed that the key dates and milestones in the project's development and implementation are actual.

CL 03 and CL 04 were 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 harvesting activity is expected in project area and the sustainable grazing will be controlled by local government during the crediting period of 40 years and the lifetime of the project is 40 years^{/PL/}. The crediting period is same to the project lifetime started from 20-June-2016 and ended on 19-June-2056 which is considered as reasonable based on the project lifetime.

3.2.12 Risks to the Project (G1.10)

The PD states the overall risks to the project are low, no major risks have arisen that may cause any loss of project benefits for the local community, climate and biodiversity, so that the long-term viability is assured.

Natural risk identified are fire, rodents and pests, overgrazing and frost risks.

Fire risk is considered low because seeding area is mostly degraded land with low coverage, with the increase of grassland coverage, the risk of fire may increase, the local government carry out the construction of grassland fire prevention facilities in the open air according to the Chinese Grassland Law^{/law/} and furthermore, the technical and awareness training have been provided to local herders/communities and grassland guardians^{/TTR/}, strengthening patrolling and monitoring according to the Grassland Management Manual^{/GMM/}. It is confirmed that no fires occurred in the project areas since project start as verified during the on-site visit and interview with local officers^{/12/} and grassland guardian^{/13/}.

The prevention and control methods by using biological control instruments such as building eagle's nest to control pests and rodents will be mainly adopted, upon routine overseeing, the rodents and pests will be treated immediately. The chemical pesticides can be appropriately used for the areas where the rodents and insect pests are particularly serious and pesticide will be strictly managed by well trained staff to minimize the potential effect according to National Pesticides Policy which has been determined in the Grassland Management Manual^{/GMM/}. As the biological measures to control pests and rodents will be mainly adopted, the pesticide application will be limited. There was no damage caused by pests and rodents and

no use of pesticide since the project operation which is confirmed during the on-site visit and interview with local officers^{/12/} and grassland guardian^{/13/}.

Overgrazing risks are considered because overgrazing is the main factor leading to grassland degradation. However, by implementation of the project, the local government guide herders to carry out sustainable grazing, grazing is forbidden in the first five years after seeding, and then controlled grazing will be allowed depending on the growth situation of the forage. Besides, as the sustainable management, local herders are employed as grassland guardians, they protect and manage the grassland under the guidance of the project proponent and local government like forestry and grassland bureaus, and also the local governments vigorously promotes grassland protection, and provides relevant training for herders so that to raises herders' awareness of grassland protection which is confirmed during the on-site visit and interview with local officers^{/12/} and grassland guardian^{/13/}, local herders^{/13/}.

PP sets the technical and awareness training^{/TTR/} for the local herders on the knowledge and skills of sustainable grazing to alleviate climate change since project start as confirmed during the on-site visit and interview with local officers^{/12/} and grassland guardian^{/13/}.

Considering the data based on weather reports collected from historic records^{/whr/}, the frost damage has little impact on grasslands in the project area by considering the species planted in the project are native species, which can adapt to the local climate. Frost risk are identified as low, and even there was a frost, the grass can still grow smoothly in the second year. There was no grass damage since the project operation which is confirmed during the on-site visit and interview with local officers^{/12/} and grassland guardians^{/13/}.

Hence, it is concluded that the risks to the expected climate, community, and biodiversity benefits during the project lifetime are assessed accurately and the mitigation measures included in the PD is deemed as actual via checking the Grassland Management Manual^{/GMM/} and on-site visit and interview with local officers^{/12/} and grassland guardian^{/13/}. As per the technical knowledge of the validation team it can be confirmed that the techniques for risk prevention are in accordance with best practice.

CL 05 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 forage species planted which assure the endurance in alpine region as confirmed in the Grass Seed Purchase Contract^{/GSPC/} which can make sure the good growing of the grasses and the lifetime of the grasses are longer than the project lifetime, the land use statements with the landowner and project proponent^{/APDR/} is verified to confirm the land using is legal and the land using period is longer than the project lifetime, overgrazing will be forbidden as defined in the Project Lifetime evidence issued by Agricultural and Animal Husbandry Engineering Project Consulting Center of Qinghai Province^{/PL/}. In addition, the Grassland management Manual^{/GMM/} was verified to concluded that the technicians from local forestry and grassland bureau will measure the grass yield regularly in the project area and guide the herders to graze reasonably and thus grasslands of the project will be carefully managed by the experienced team and 6,023 local herders were employed as grassland guardians to control all the potential risks even beyond the project lifetime.

Besides, via checking the business license of Qinghai Guanglv Landscaping Co., Ltd^{/BL/}, it is confirmed that this is a national scientific research institute who have professional knowledge and practical experience and have a good relationship with the local and city forestry and grassland bureau, that can guarantee the scientific implementation and sustainable management of the project even beyond the project lifetime, this

has been verified by interview with the representative from PP^{/11/} and local officers^{/12/}. Furthermore, with the implementation of the project, the carbon revenue generated will be used for continued maintenance and the follow-up management and after the end project lifetime, the Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau will maintain the grassland so that to protect the ecosystem and guarantee the climate, community, and biodiversity benefits beyond the project lifetime this has been verified by interview with the and local officers^{/12/}.

In addition, management norms and standards of grassland and grasses involved in this project, specifications of grassland monitoring, operations, patrolling systems and data surveys are described in detail in the Manual^{/GMM/}, and the manual has been distributed to grassland guardians to guarantee the management measure through the whole project life. This is confirmed by on site interview with officers from PP^{/11/} and local grassland guardians^{/13/}.

Furthermore, with the project implementation for the 40 years crediting period in 40 years lifetime, the consciousness of local stakeholders will be enhanced, improvement of the living standard for local herders would motivate their transition of lifestyle to a more environment friendly way, such as grassland patrol and ecological tourism industry. Thus more job opportunities will be provided through healthy grassland ecosystem, thus finally improve the well-being of local communities and the impact will be lasted beyond the project lifetime which has been confirmed by interview with officers from county Forestry and Grassland Bureau^{/12/} and local villagers^{/13/}.

Thus it is concluded that based on the measures taken, the project can maintain and enhance the climate, community, and biodiversity benefits beyond the project lifetime. This is also confirmed by the on-site visit and interview with local officers^{/12/}, grassland guardians^{/13/} and project proponent^{/11/}.

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

3.2.14 Financial Sustainability (G1.12)

As declared by the PPs during the interview, the project initial fund was secured by Guoluo Tibetan Autonomous Prefecture Finance Department raised from Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau after seriously considered the carbon revenue and thought the revenue could help to mitigate the investment barrier which has been verified by checking the project approval^{/APDR/}. However, based on this proof, the initial fund is not sufficient for the continued maintenance of the grassland which is crucial for sustainable management and restoration of the grassland ecosystem, therefore, after the implementation of the project, local Forestry and Grassland Bureau is responsible for the grassland sustainable management.

To ensure the carbon revenues from the project, Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau has authorized Qinghai Guanglv Landscaping Co., Ltd. the rights to control and operate the project as Project Proponent during the whole project crediting period by checking the Power of Attorney for Carbon Sink Project Development for this project^{/POA/}, and Qinghai Guanglv Landscaping Co., Ltd. will develop carbon credits generated from the project in the following years' operation and via checking the consulting agreement^{/CA/} signed between Qinghai Guanglv Landscaping Co., Ltd, Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau and Climate Bridge (Shanghai) Ltd., it is verified that the carbon credits generated from the project in the following years will be sold and the continuous management and maintenance of the grasslands could be covered by potential subsidy from carbon revenue. The project proponent and local Forestry and Grassland Bureau will be responsible for the continuous project implementation, management and maintenance of the grasslands with the potential subsidy from carbon revenue, by checking the consulting agreement^{/CA/} and project approval^{/APDR/}, it is

verified that the project financial mechanisms can provide an adequate funds for project implementation to achieve the project's climate, community and biodiversity benefits.

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 black soil beach (degraded grassland). There is no quality vegetations in the project area before the project. The lands will remain degraded without the project.

This is confirmed by onsite interview with local government officer^{/12/} and documents review with baseline survey^{/BSR/}, Participatory Rural Appraisal (PRA) Report^{/PRA/} and the satellite images from spring and winter times (years 2005 & 2015)^{/SI/} more than 10 years before the project start date comparing with project maps^{/MAP/}.

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

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^{/BSR/} and approval of project design report^{/APDR/}. Through on-site investigation, interview with the local officers and checking the related documents^{/PRA/BSR/APDR/SI/}, it is confirmed that the most-likely land use scenario is determined by considering the poverty assessments and farming knowledge assessments. The lands will remain degraded without the project.

Hence it is concluded that the most-likely land-use scenario is justified.

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 ownership of grassland belongs to the state and the collectives as confirmed by checking the Grassland Law of People's Republic of China^{/law/} and project approval^{/APDR/}. Local governments and collectives have the right to use the land within the project boundary, and the project owner and local county forestry and grassland bureau are responsible for the comprehensive implementation and management of the project.

China has successively issued a series of laws and administrative regulations related to grassland, such as the <Grassland Law>, <Regulations on Grassland Management of Guoluo Tibetan Autonomous Prefecture>, <Regulations on the Protection of Wild Plants and Animals, the Regulation on Nature Reserve>, <Regulation on Grassland Fire Control>, and <Regulation on Forest Diseases and Pests Control> etc. aimed at providing the guidelines in the grassland sector development process (grassland, forestry and industry) in order to maximize the economic, social and environmental benefits. The project is not required by law which is confirmed by checking the approval of project design report^{/APDR/}.

According to the land planning, the grass seeding activity location is legally defined as grassland. Grazing is forbidden in the first five years after seeding, and then controlled grazing will be allowed depending on the growth situation of the forage. Carbon revenue generated from the project will help the project proponent to reduce the funding difficulty and promote scientific and sustainable grazing for local herders, and therefore mitigate the community conflict and restore the grassland ecosystem in a long period.

The project activity would not have been implemented under the without-project scenario due to significant investment and technological barriers as listed as following,

Investment barriers:

It was confirmed that there are no credit mechanisms are in place for investors to make long term investment in plantation forestry via onsite observation and interview with representatives from PP^{/11/} and local officers^{/12/}.

It is estimated that the total investment of the project is more than 361.23 million CNY which was funded by government of Guoluo Tibetan Autonomous Prefecture Finance Bureau as confirmed in project approval^{/APDR/}. The project approval^{/APDR/} are checked to confirm that due to the project is a public Black soil beach comprehensive treatment project, there is no profit from such kind. And during the project implementation, the sustainable grassland management require continued funding support, 6,023 local herders were employed as grassland guardians^{/LC/}, with an annual salary of 21,000 RMB (3,216.56 USD)^{/PP/} per person need to be paid. By consideration of the carbon profit during the project operation as signed consultaion agreement^{/CA/}, PP decided to put carbon profit value to continuous management and maintenance of the project by paying the salaries to the guardians, which could reduce the funding difficulty. This has been verified by site interview with representatives from PP^{/11/}, grassland guardians^{/13/} and checking the consultaion agreement^{/CA/}.

Technological barriers:

Project developers and local herders confronted with diverse technological barriers. The technological barriers described are the lack of access to quality seed sourced and the lack of rational grazing skills to produce high quality seedlings and to perform successful plantings which may lead grasslad degraded continuously, these barriers were confirmed during site observation and interview with the PP and local residents^{/11/,/13/}. Furthermore the missing knowledge and experience regarding the sustainable development of the project, prevention of fires, pest and diseases are considered as stated in the Participatory Rural Appraisal Report^{/PRA/}. The technological 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 as real. The barriers were furthermore assessed against official documents and discussed during onsite visit.

Hence, based on above assessment of the project barriers, it is verified that the project activity would not occur in a business-as-usual scenario, thus the related objectives and community and biodiversity benefits as stated in the section 2.1.11 of the PD would not be achieved without the implementation of the project, therefore the community and biodiversity additionality is confirmed which is in line with the AFOLU additionality requirement.

Climate, community and biodiversity benefits is listed in the section 3.3-3.5 of this report.

No distinct community and biodiversity benefits intended to be used as offsets as confirmed by PP in PD.

In conclusion, the project benefits would not have occurred in the absence of the project, the additionality of the project activities is confirmed.

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

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^{/PDS/}. The full project documentation has been published on VCS and CCB website for public comments as per checking the VCS website. Thus the local communities and other stakeholders can easily download documents from the website. The project owner has noticed local stakeholders through the routine villager assembly regarding project listing in VCS website and has been confirmed by checking the routine villager assembly record^{/RVAR/} and interview with local residents^{/I3/}. Furthermore, the project owner will notice local stakeholders through the routine villager assembly regarding every milestones of the project development, including registered, issuance, etc..

Furthermore, a Participatory Rural Appraisal (PRA) survey was conducted in November 2015 with stakeholder meeting by the PP. Via site interview with the local stakeholders, it is confirmed that the PP publicized the meeting notice on the village collective bulletin board, and the representatives of village collectives, local Grassland Station, Guoluo Tibetan Autonomous Prefecture Finance Bureau and local government were invited to attend the meeting by telephone. In addition, the contents of the meeting were publicized on the village collective bulletin board.

In conclusion, the PP has made project documentation accessible to communities and other stakeholders. During the public consultation period, no comments were received via checking the VCS and CCB websites. CAR 11 was raised and successfully closed, Refer to Appendix 3 for details.

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

Within the project area was made a Participatory Rural Appraisal (PRA) survey in November 2015 with stakeholder meeting by the PP inviting local women, local herders, grassland guardians in the project, village collectives, local forestry and grassland bureau, Guoluo Tibetan Autonomous Prefecture Finance Bureau and local government to inform people of the possible impact in terms of economics, social and biodiversity aspects that the project might have on the community. This was confirmed by the PPs and by the Participatory Rural Appraisal (PRA) survey report^{/PRA/} provided during the site visit. Via checking the contents in the PRA, it is concluded that the project design details, relevancy and adequacy of the information has been provided to communities, and the analysis of project benefits to communities including all the potential impacts are provided to the stakeholders to let all the participants know the project's potential costs, risks and benefits. All the costs, risks and benefits are identified completely and adequately in the PRA process, stakeholder meetings, distributed questionnaires and during the site visit, by interviewed with the local stakeholders, it is verified that they understand the project's potential costs, risks and benefits to communities with the project development and process. There is no any important costs, risks and benefits missed.

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

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 and verification process through routine villager assembly and posted on local bulletin boards before the validation and verification site visit took place as confirmed by checking the routine villager assembly record^{/RVAR/} and bulletin boards photo^{/PHT/}. In addition, by interview with the local stakeholders, it is verified that the mobile phone number of a contact person of PP has been provided and they will call if they have

any issues about the project at anytime. This was also confirmed by the PPs and interview with local stakeholders during the site visit.

In the future, the PP will use same manner to inform communities and other stakeholders of the process for further VCS&CCB verification as promised by the PP.

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

During the on-site visit, the PP arranged a stakeholder meeting by inviting all the local stakeholders who were informed after the audit plan sent to PP from auditor. Thus it is verified that the communities and other stakeholders were informed of the auditor's site visit before the site visit occurred.

During the site visit from 29-March~02-April-2021, Auditor had a direct and independent communication with communities and other stakeholders representatives through on-site stakeholder meeting on 29-March-2021.

During the communications, Auditor asked stakeholders representatives several questions with a questionnaire including following,

1. General information of the interviewee
2. Do you know the project well?
3. If the project provided the employment opportunity to you? Permanent or temporary?
4. If your living or income improved by the implementation of the project?
5. If any training provided to you by the implementation of the project?
6. Have you been invited to provide the comments before the project started?
7. Have you been invited to provide the agreement or disagreement with the project start?
8. Do you think your comments have been considered?
9. Do you think the project benefits to the local biodiversity?
10. Have you known the Carbon trade after the implementation of the project?
11. Are you satisfied with the surrounding environmental quality after the implementation of the project?
12. Do you think the project impacts the grazing?
13. Do you support the project?

All the interviewees gave positive reply to all the issues, and they confirmed that many of the local stakeholders from local government and surrounding villages have participated in the stakeholder meeting which was held before the project start, all the participants agree the implementation of the project then the project can be started. Thus it is verified that stakeholders participated in Decision-Making and Implementation of the project.

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

3.2.23 Stakeholder Consultations (G3.4)

As stated before a consultation through PRA and meeting with the stakeholders, distributed questionnaires was made for introducing people about the project impacts and ask them to raise their opinions of the project design and their willingness to participate the following implementation. This has been confirmed by

checking the PRA^{/PRA/} and related meeting questionnaires^{/QUE/}. The stakeholders are invited to provide their comments regarding the project implementation and impacts to them, also PP considered their participation in decision-making by asking all the participants to fill the questionnaires.

Via checking all the questionnaires^{/QUE/} and by interview with the representatives^{/12,13/} during site visit, it is confirmed that all the participants agreed the implementation of the project, therefore, from that point, the project design was not modified and the project started with local stakeholder's agreement.

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/}. Hence, it is concluded that the project's method for conducting stakeholder consultations is effective.

CAR 14 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 in both project listing and validation process, which has been confirmed by checking the routine villager assembly record^{/RVAR/} and interview with local residents^{/13/}. Moreover, local policy makers and grass experts were also invited by phone calls during the PRA and validation process which has been confirmed by checking the PRA^{/PRA/} and interview with local officers^{/13/}. All the stakeholder have been informed directly or through their legitimate representatives.

During the meetings the main information about the climate change and the carbon market were provided^{/PRA/}, and all the stakeholders could raise questions and discuss issues they cared about with the PP during the meeting directly. This is deemed as the most direct approach for the consultation.

The PPs have gone to considerable lengths to consult with local stakeholders and engage them in the project during the project development process. This is was confirmed during the on-site visit and the interview with the local stakeholders. Hence, it is concluded that adequate levels of information sharing has occurred.

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

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

As stated before a consultation through PRA and meetings with the stakeholders was made for introducing people about the project impacts and ask them to raise their opinions of the project design and their willingness to participate the following implementation. This has been confirmed by checking the PRA^{/PRA/} and related meeting questionnaires^{/QUE/}. The stakeholders are invited to provide their comments regarding the project implementation and impacts to them, also PP considered their participation in decision-making by asking all the participants to fill the questionnaires.

Via checking all the questionnaires^{/QUE/} and by interview with the representatives^{/12,13/} during site visit, it is confirmed that all the participants agreed the implementation of the project, therefore, from that point, the project design was not modified and the project started with local stakeholder's agreement.

The following measures have been taken and will be continued to ensure participation is maintained which has been confirmed by on-site observation, interview and as promised by the PP: PRA is confirmed by checking the PRA report^{/PRA/}, local consultation meetings for each project development process, community monitoring in the verification process, dissemination of project information for project listing and validation

as confirmed by checking the routine villager assembly record^{/RVAR/}, training sessions as confirmed by checking the training record^{/TTR/}. No any gender factor is considered during these measures.

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. Hence, it is concluded that project proponent have been and will enable effective participation in culturally appropriate and gender sensitive manner with all communities.

3.2.26 Anti-Discrimination Assurance (G3.7)

As stated in the PD and confirmed by the PP during the interview^{/I1/}, the PP should obey <Labor Law of the People's Republic of China>^{/llc/} with anti-discrimination assurance and are not involved in or complicit in any form of discrimination or sexual harassment with respect to the project.

Both the project proponent and the project developer are not involved in or complicit in any form of discrimination or sexual harassment with respect to the project, due to the labor contract was signed based on the <Labor Law of the People's Republic of China>^{/llc/} with anti-discrimination assurance. <Labor Law of the People's Republic of China> is the national law to protect the legitimate rights and interests of workers, the clause 12 in this law is related to anti-discrimination assurance. Thus this law as specific policy is put in place by the project proponents to prevent discrimination, thus it is sure that the project proponent and all other entities involved in project design and implementation will not violate the standard's anti-discrimination requirement.

The stakeholder involvement was inclusive without any discrimination of gender, cultural identity and religion. The national policies^{/llc/} 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, first, stakeholders can either appeal through village representatives or directly to the local forestry and grass bureau if any conflicts and grievances, this is deemed as the most effective way to deal with the issues. Furthermore, the projects provide jobs to local community villagers who can directly seek for solutions to the conflicts and grievances in the projects. Besides, a specific staff in charge of recording and collecting conflicts and grievances of local communities and individual herders was nominated who is the first responsible for responding to requests from the community which has been confirmed during on-site interview with the project owner. Furthermore, the contact numbers of all the grassland guardians and also Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau were published through villager assembly so that the stakeholders can provide any conflicts and grievances, then the comments will be reported to specific staff, this has been confirmed by interview with local officers and grassland guardians.

PP promised that grievances will be addressed in a reasonable amount of time, usually contacted and discussed with relevant community directly and answered and proposes an acceptable 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.

In conclusion, the feedback and grievance procedure is properly addressed.

3.2.28 Worker Training (G3.9)

Via checking the training records^{/TTR/} and interview with the workers of project^{/I3/}, it is verified that technical advice and technical training are offered continuously for workers for different topics like s fire prevention and rodent control, as well as skills and knowledge include are useful for grassland management, etc.

The training are normally composed by theoretical class room and field training as confirmed by checking the training records^{/TTR/}. The trainings for employees are held mainly in the aspects of employee safety and health and technology, and is also related to the knowledge of technical skills of grass planting, how to seed grasses and conduct management, after proeject start implemented, there were two routine training courses arranged in October 2015 and May 2019 respectively by providing rodent control and seeding skills and experience for workers this is verified through checking the training records^{/TTR/}. Workers are properly trained and efforts are made to maintain a high level of skills confirmed by interview with the workers of project^{/I3/}.

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 interview with project developer and project workers^{/I3/}. Hiring criteria are based on skill sets without any discrimination as defined in the labor contract^{/LC/}.

During the project implementation, about 11,890 local herders (6,150 are women) participated in grass seeding and rodent control, of which 6,023 local herders (3,100 are women) were employed as guardians. Among the 11,890 jobs opportunities, 6,023 are temporary jobs, which lasted from 2016 to 2018 and 5,867 are permanent jobs, which lasted through the entire project crediting period by verified the labor contract^{/LC/}. The payment to temperary planting was 60 RMB (9.19 USD)/day and permanent grassland guardians were paid by 21,000 RMB (3,216.56 USD) /year. This is confirmed via checking the labor contract^{/LC/}, periodical payroll^{/PP/} and on site interview with grassland guardians^{/I3/}.

Thus it is concluded that project provides equal employment to people from communities.

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

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>^{/LC/} to which the PPs have to comply is checked by the validation team, this law is confirmed as the national law to guarantee the employment's right, health and safety. 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^{/I2/} and grassland guardian^{/I3/}.

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. Both the two regulations are confirmed as international and national rule and laws which can be used as the occupational safety regulations to obey. The activities that endanger workers are those related to workplace accidents including fire, driving, and unexpected situations in the wild 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 project activity, due to the fire risk, basic supplies and uniform for evacuation plan is available to the workers which has been confirmed during site observation and interview with the workers.

In conclusion, the measures are designed to minimize project related risk.

3.2.32 Project Governance Structures (G4.1)

The actors involved in the project are four: Qinghai Guanglv Landscaping Co., Ltd (project developer/owner), Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau (local government, provided initial fund and technical support), County Forestry and Grassland Bureau (organizing the project implementation) and Climate Bridge (Shanghai) Ltd. (technical support and VCS+CCB developer).

The Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau and Climate Bridge (Shanghai) Ltd. composed as the expert group as defined into the Grassland Management Manual^{/GMM/} and monitoring manual^{/MM/} and confirmed by on-site observation, whose responsibility is to guide and coordinate the project's overall implementation and decision-making;

Qinghai Guanglv Landscaping Co., Ltd established a project working group with County Forestry and Grassland Bureau (covering aspects of carbon sink, ecology, grassland, community, geographic information, etc.) and an expert group who provide technical support for the project development and implementation, this has been confirmed by interview with PP^{/11/}, local officers^{/12/} and onsite observation; the responsibility of county Forestry and Grassland Bureau is organizing the implementation of the project, daily supervision and grassland management, expert group provides technical advice and training to technicians during the project implementation which has been verified by onsite interview with the local officers from forestry and grassland bureau^{/12/} and grassland guardians^{/13/}.

The PD list the project actors and their responsibilities clearly, they all know their own roles and responsibilities by on-site interview.

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 four actors^{/LCI/PP/}, it is confirmed that for each individual, experience and education and other qualifications are cited. The PPs and team have the skills necessary to required to implement the project successfully, including community engagement, biodiversity assessment and carbon measurement and monitoring skills.

3.2.34 Management Team Experience (G4.2)

The project proponent Qinghai Guanglv Landscaping Co., Ltd is in rich experience in grassland management in Qinghai Province, including rodent control, grassland protection and management, technical training, carbon measurement and monitoring and biodiversity assessment, this has been confirmed by checking the business license of the company^{/BL/} and on-site interview with the local officers^{/12/} from government to confirm.

The Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau and Climate Bridge (Shanghai) Ltd. composed the expert group is defined as the management team as stated above. The experiences of two entities are assessed as below,

The responsibility of Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau is to provide initial funds to the project, this the party is confirmed as a local government agency with rich experience in project fund management.

County Forestry and Grassland Bureau is community engagement include stakeholder consultation, livelihood development and education program, set up an expert pool on the land, soil, vegetation, animals and other natural resources affected by grasslands providing technical advice and training to technicians during the project implementation using sustainable grassland management which has been verified by onsite interview with the local officers from forestry and grassland bureau^{/12/} and project technicians^{/13/}.

Climate Bridge (Shanghai) Ltd. is experienced in carbon measurement and monitoring who will cooperate with Climate Bridge (Shanghai) Ltd. to maintain the project to apply for carbon credits successfully via checking the UNFCCC^{/unfccc/}, GS^{/gs/}, VCS^{/vcs/} and other GHG schemes' website.

Hence, it is concluded that the management team have the skills necessary to successfully manage this project so that to achieve the carbon emission reduction and CCB benefits.

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

As stated above, the Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau and Climate Bridge (Shanghai) Ltd. composed the expert group is defined as the management team. Besides, County Forestry and Grassland Bureau provide instruction of sustainable grassland 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 forestry and grassland bureau^{/12/}. Thus, it is concluded that no other organizations needed to support the project through partnerships, management team have the sufficient experiences to implement the project and already filled any gaps.

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 Qinghai Guanglv Landscaping Co., Ltd. is a legally registered company. Other involved entity including County Forestry and Grassland Bureau and Guoluo Tibetan Autonomous Prefecture Finance Bureau are government agencies whose financial health over the project lifetime will be guaranteed by the local governments and Climate Bridge (Shanghai) Ltd. is also a legally registered company in China. Furthermore, through checking the company information in National Enterprise Credit Information Publicity System^{/necl/}, it is confirmed that all the companies are legally operated, the financial health is verified. And by checking the website, it is confirmed 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^{/necl/}, it is confirmed that the statement in PD is actual and credible.

Thus, it is concluded that the financial health of the implementing organizations is verified and they can ensure adequate financial support over the project lifetime.

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

As legally registered companies according to above assessment, the project proponent and other involved entity in project design and implementation have the obligation to comply with relevant regulations, including anti-corruption law. This is verified by checking the company information in National Enterprise Credit Information Publicity System^{/necl/} and on-site observation with company business license^{/BL/}.

Thus it is concluded that the project is not involved or complicit in any form of corruption.

3.2.38 Commercially Sensitive Information (Rules 3.5.13 – 3.5.14)

No commercially sensitive information in project documents.

3.2.39 Statutory and Customary Property Rights (G5.1)

Via checking the Land Management Law of China and Grassland Law of People's Republic of China^{/law/}, it is confirmed that prior to the project initiation, the ownership of all 160,548.96ha grassland of the project belongs to the state and collectives, this is also verified by checking the Participatory Rural Appraisal (PRA) Report and Proof of land qualification as defined in the project approval^{/APDR/}. The local governments and collectives have the right to the use of land, and Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau applied to Guoluo Tibetan Autonomous Prefecture government for the grassland carbon sink project and obtained approval, which is confirmed by checking the Approval of project design report^{/APDR/} and confirmed by site interview with local officers^{/12/}. And in the early phase, the Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau has organized and managed the project implementation including conducting baseline survey, signing consultant agreement for development of carbon credits.

Due to Qinghai Guanglv Landscaping Co., Ltd is in rich experience of maintenance and management of the grassland, thus Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau authorized Qinghai Guanglv Landscaping Co., Ltd as the Project Proponent of the project, the rights grassland management and Carbon credits of the project during the project crediting period from 2016 to 2076^{/POA/}, and the collective economic organizations and village collectives all agreed with this which is verified by checking the Proof of land qualification as defined in the project approval^{/APDR/}. Thus it is verified that prior and informed consent has been obtained from state and collectives whose property rights are affected by the project through a transparent and agreed process.

The project proponent and Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau are responsible for the comprehensive implementation and management of the project as defined in the land use statement and project approval^{/APDR/}. Via on-site interview with the local officers, it is verified that no entity can encroach the project area as private property and change the land usage type without all state and collectives' agreement. And by checking the project approval^{/APDR/} and stated by local officer, it is confirmed that the Guoluo Tibetan Autonomous Prefecture governments will be responsible to supervise the state and collectives's right to the lands.

Hence, based on above assessment, it is concluded that the project does not complicit of involuntary relocation as within the project area through checking the land use defined in project approval^{/APDR/} and onsite observations and interview with local residents^{/13/}. However, due to grazing was strictly forbidden in the first five years after seeding, some herders maybe affected by the project, but these heders have been provided by job opportunities^{/LC/} and payment^{/PP/}, which will increase their income in long term, thus finally herders in the project area can receive corresponding subsidies. All the impacted herders agree with the method of receiving related subsidies which has been confirmed by site interview with representatives from local herders^{/13/}.

And the project will not violate the ownership of the land by the state and collectives, and then will not encroach uninvited on private property, community property, or government property, which is in line with the CCB rules.

3.2.40 Recognition of Property Rights (G5.1)

Refer to assessment in 3.2.39 above. It is verified that all property rights are recognized, respected and supported.

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

The project is implemented in project land which is state-owned lands and village collective property as defined in the project approval^{/APDR/}. Thus the project does not encroach on any private property, community property, or government property beyond the boundaries of the project land.

Local governments and the village collective voluntarily use these lands to seeding grasses confirmed by checking the project approval^{/APDR/}, and they all agreed to authorize Qinghai Guanglv Landscaping Co., Ltd the rights of grassland management and carbon credits of the project area, the project approval^{/APDR/} is confirmed governments all the village collective consent are obtained before the project implementation.

Due to the voluntarily using lands to plant trees, thus no compensations need to be allocated to any parties whose lands have been or will be affected by the project, this is confirmed by on site interview with officers from county Forestry and Grassland Bureau^{/12/} and local residents^{/13/}. However, due to grazing was strictly forbidden in the first five years after seeding, some herders maybe affected by the project, but these heders have been provided by job opportunities^{/LC/} and payment^{/PP/}, which will increase their income in long term, thus finally herders in the project area can receive corresponding subsidies. The subsidy standards for grazing prohibition vary from county to county, ranging from 4.1 RMB/mu to 10.4 RMB/mu which is verified as in line with the local governmnet standard through interview with local officers. All the impacted herders agree with the method of receiving related subsidies which has been confirmed by site interview with representatives from local herders^{/13/}.

Furthremore, via checking the PRA report^{/PRA/} and filled questionnaires^{/QUE/}, it is confirmed that all the information of socio-economic situation on the surrounding area have been explained to the local stakeholders prior to project initiation to collect their willingness to participate and take advantage of the demands of the proposed project activity and analysis the potential socio-economic and environmental impacts of the proposed project activity, and all the representatives of local stakeholders agree with the project implementation, thus it is verified that prior and informed consent has been obtained from local stakeholders and via the PRA process, it is confirmed that all herders satisfied with this subsidy policy and agreed to the implementation of the project including the herders that were negatively impacted by the project also gave consent and approval to participate in the project.

In conclusion, the project is respecting the property rights of the communities.

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

3.2.42 Property Rights Protection (G5.3)

The project is implemented in project land which is state-owned lands and village collective property as defined in the project approval^{/APDR/}. Thus the project does not encroach on any private property, community property, or government property beyond the boundaries of the project land. Local governments and the village collective voluntarily use these lands to seeding grasses confirmed by checking the project approval^{/APDR/}, and they all agreed to authorize Qinghai Guanglv Landscaping Co., Ltd the rights of grassland management and carbon credits of the project area, the project approval^{/APDR/} is confirmed governments all the village collective consent are obtained before the project implementation.

Due to the voluntarily using mostly degraded grasslands to seeding grasses, thus no compensation need to be allocated to any parties due to there is no any result in the involuntary removal or relocation of property rights holders from their lands or territories and do not force rights holders to relocate activities important to their culture or livelihood as there were no residents located in the project area with most of degraded grassland with black soil beaches as stated in the baseline survey^{/BSR/}.

Furthermore, local governments and the village collective voluntarily use these lands to seeding grasses confirmed by checking the project approval^{/APDR/}, and it is confirmed that the project will not change the ownership of the project land. However, due to grazing was strictly forbidden in the first five years after seeding, some herders maybe affected by the project, but these heders have been provided by job opportunities^{/LC/} and payment^{/PP/}, which will increase their income in long term, thus finally herders in the project area can receive corresponding subsidies. All the impacted herders agree with the method of receiving related subsidies which has been confirmed by site interview with representatives from local herders^{/13/}.

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

3.2.43 Illegal Activity Identification (G5.4)

Via checking the Community Baseline Survey Report^{/CBSR/} and on-site observation, it is verified that there are no illegal activities inside the project area or in neighboring areas; the area is considered as being peaceful and excluded from social conflict. Furthermore, any illegal mining and construction are prohibited will be fined or sentenced to punishment according to Chinese grasslands laws^{/law/}, and the grasslands are preserved by project staff regularly as determined in the Grassland Management Manual^{/GMM/}, thus it is confirmed no illegal activities will be occurred. This is confirmed by on site interview with officers from county Forestry and Grassland 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)

Governments all the village collective voluntarily use these lands to seeding grasses confirmed by checking the project approval^{/APDR/}. Thus, there are no ongoing or unresolved conflicts or disputes over land, territories and resources rights^{/APDR/}.

Furthermore, by on site interview with officers from county Forestry and Grassland Bureau^{/12/} and local residents^{/13/} and checking the project approval^{/APDR/}, it is confirmed that no any disputes that were resolved during the last twenty years.

The project is implemented in project land which is state-owned lands and village collective property as defined in the project approval^{/APDR/}. Local governments and the village collective voluntarily use these lands to seeding grasses confirmed by checking the project approval^{/APDR/}, the land use statement is confirmed as signed before the project implementation with all the landowner's consent. During the on-site observation, the grasses have been planted for more than 4 years and by interview with the local residents, it is verified that no activity is undertaken by the project that could prejudice the outcome of an unresolved dispute relevant to the project.

In conclusion, no measures needed and designed to resolve conflicts or disputes.

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

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/, /regul/} which has been compared with the actual situation of the project by on-site observation, 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 Guoluo Tibetan Autonomous Prefecture Agriculture and Animal Husbandry Department⁴ on 02-November-2015 through checking the Approval of project design report^{/APDR/}. Based on local expertise of validation team, it is confirmed that the project is approved legally in China.

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

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^{/APDR/}, the Power of Attorney for Carbon Sink Project Development for this project^{/POA/}, it is confirmed that Guoluo Tibetan Autonomous Prefecture Government approved the request of Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau to carry out the grassland carbon sink project, and Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau authorized the project developer Qinghai Guanglv Landscaping Co., Ltd in charge of the integrated maintenance and management of the project. The area land involved in the project was state-owned lands and village collective property as defined in the project approval^{/APDR/}.

The project owner and Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau are responsible for the comprehensive implementation and management of the project and 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^{/APDR/} and Power of Attorney for Carbon Sink Project Development for this project^{/POA/}.

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

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 which has been confirmed by

⁴ Agriculture and Animal Husbandry Department has been dismissed in 2019 due to the reform of government function, and some functional departments related to grassland management have been transferred to Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau which has been confirmed by site interview with local officers and verified as actual based on local expertises of the validation team.

checking the declaration from the PP/DN/ and checking the public website of other emission trading program/unfccc/,gs/.

3.2.50 Other Forms of Environmental Credit

The project has not created another form of Environmental Credit including renewable energy certificates which has been confirmed by checking the declaration from the PP/DN/.

3.2.51 Participation under Other GHG Programs

The GHG emission reductions or removals generated by the project have not counted or used under other GHG Programs/unfccc/,gs/, and/or other forms of environmental credit. The project has no desire to or registration in any other GHG program as verified by checking other GHG Programs/unfccc/,gs/.

3.2.52 Projects Rejected by Other GHG Programs

There is no evidence of the project's rejection from any other GHG programs via checking 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 publicly, the series number of the issued credits can be tracked to avoid any potential double counting. This is promised by PP as per the declaration/DN/.

3.3 Climate

3.3.1 Title and Reference

The CDM approved baseline and monitoring methodology VM0026 "Sustainable Grassland Management", version 1.0^{VM} is correctly applied for the project activity. The application of the methodology is subject to the following methodological tools which is applicable to the project activity:

- (a) Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities, version 3.0^{TDAA};
- (b) Tool for Identification of Degraded or Degrading Lands for Consideration in Implementing CDM AR Project Activities, version 1.0^{TDDL};
- (c) VCS module of Estimation of emissions from market leakage (VMD0033, version1.0)^{MEL};
- (d) VCS module of Leakage from displacement of grazing activities (VMD0040, version 1.0)^{MLG}.

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 project area is grassland at the start of the project. The project area is land that is	According to the land cover data of Guoluo Tibetan Autonomous Prefecture in year 2010, which	Via checking the land cover data of Guoluo Tibetan Autonomous

	degraded at the start of the project and degradation will continue in the baseline scenario on the basis that degradation drivers or pressures are still present in the baseline scenario. The procedures outlined the latest version of the CDM Tool for Identification of Degraded or Degrading Lands for Consideration in Implementing CDM A/R Project Activities must be used to determine both that the land is degraded at the start of the project and that in the baseline scenario the land will continue to degrade.	released by the National Basic Geographic Information Center, combined with project area location, and the satellite image, the project area is identified as grassland at the start of the project. Besides, as the described in "Project Design Report", all the project area was black soil beach (degraded grassland) at the start of the project. And the project's aim is to increase carbon sequestration and contribute to local sustainable development by seeding grass on the black soil beach and carrying out sustainable grassland management. The procedures outlined the CDM Tool for Identification of Degraded or Degrading Lands for Consideration in Implementing CDM A/R Project Activities (Version 1.0) is described below. According to the Technical specification for artificial vegetation establishment and utilization management of "black soil type" degraded grassland (DB63/T603—2006)⁵ and Project Design Report, the project area (original vegetation coverage less than 10%, soil organic matter content less than 100g/kg and soil layer thickness greater than 20cm.) was defined as black soil beach (degraded grassland) at the start of the project, which met the requirements of item (a) of Tool for Identification of Degraded or Degrading Lands for Consideration in Implementing CDM A/R Project Activities (Version 1.0).	Prefecture in year 2010/^{LCD/}, and satellite images from google earth/^{SI/} before the project started and on-site interview with local officers/^{I2/} and herders/^{I3/}, it is verified that the project area was grassland at the start of the project. Besides, via checking the Project Design Report/^{PDR/}, it is confirmed that the project area was black soil beach (degraded grassland) at the start of the project and degradation will continue in the baseline scenario due to that degradation drivers or pressures are still present in the baseline scenario, the herders still conducted overgrazing in the project area. Furthermore, the latest version of the CDM Tool for Identification of Degraded or Degrading Lands for Consideration in Implementing CDM A/R Project Activities (version 1.0) was used to determine both that the land is degraded at the start of the project and that in the baseline scenario the land will continue to degrade, the assessment is as below, According to the tool, the PP has demonstrated the project land is "degraded" as per the clause (a) of the III procedure of the tool, the verifiable regional
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⁵ Local standards issued by Qinghai Provincial Bureau of Quality and Technical Supervision on September 7, 2006.

		According to the PRA Report, the grassland in the project area has been degraded for more than ten years due to climate change and overgrazing, under the baseline scenario, herders still graze on degraded grassland, while no restoration activities are carried out. So, according to CDM Tool for Identification of Degraded or Degrading Lands for Consideration in Implementing CDM A/R Project Activities (Version 1.0), the land in the project area is degraded at the start of the project and that in the baseline scenario the land will continue to degrade.	standard in Qinghai Province Technical specification for artificial vegetation establishment and utilization management of "black soil type" degraded grassland (DB63/T603—2006)^{TSBST/} has been checked, it is verified that the project area with original vegetation coverage less than 10%, soil organic matter content less than 100g/kg and soil layer thickness greater than 20cm was defined as black soil beach (degraded grassland) at the start of the project, which is verified as in compliance with the requirements of item (a) of Tool for Identification of Degraded or Degrading Lands for Consideration in Implementing CDM A/R Project Activities (Version 1.0). Besides, via checking the PRA Report^{/PRA/}, the grassland in the project area has been degraded for more than ten years due to climate change and overgrazing, under the baseline scenario, herders still graze on degraded grassland, while no restoration activities are carried out. Hence, this applicable condition is fulfilled.
(b)	The project area is subject to livestock grazing, burning, and/or nitrogen fertilization in the baseline scenario	According to the Baseline Survey Report, in the baseline scenario the project area was subject to livestock grazing, but no burning and nitrogen fertilization.	Via checking the Baseline Survey Report ^{/BSR/} and on-site interview with local officers ^{/12/} and herders ^{/13/} , it is verified that project area was subject to livestock grazing with no

			burning, and/or nitrogen fertilization in the baseline scenario. Hence, this applicable condition is fulfilled.
(c)	In the baseline scenario, more than 95 percent of animal dung from grazing animals deposited on grassland is allowed to lie as is, and is not managed, and in the project scenario no more than 5 percent of the animal dung from grazing animals within the project area is managed with alternative manure management systems	In the baseline scenario, there is no any restrictions or regulations for the deposition of animal dung in the project area, all animal dung from grazing animals deposited on grassland lie as is, and is not managed. Grazing is forbidden in the first five years after seeding, and then controlled grazing will be allowed depending on the growth situation of the forage. So, there is no animal dung in the first five years under the project scenario. After grazing is allowed under the project scenario, no animal dung will be managed with alternative manure management systems.	Via checking the Baseline Survey Report ^{/BSR/} and on-site interview with local officers ^{/I2/} and herders ^{/I3/} , it is verified that all animal dung from grazing animals deposited on grassland lie as is, and 100% (more than 95%) is not managed in baseline scenario. Via site inspection and interview with local officers and herders, it is confirmed that grazing is forbidden in the first five years after seeding and there is no animal dung in the first five years under the project scenario. In addition, after 5 years, controlled grazing will be allowed depending on the growth situation of the forage and no animal dung will be managed with alternative manure management systems as stated by local officers. Hence, this applicable condition is fulfilled.
(d)	The project area must not have been cleared of native ecosystems within the 10 year period prior to the project start date	According to the Project Design Report and related satellite pictures of the project area, the project area is natural grassland, which is continuously degraded due to overgrazing, and have not been cleared of native ecosystems within the 10 year period prior to the project start date	Via checking the Project Design Report ^{/PDR/} , satellite images ^{/SI/} , Baseline Survey Report ^{/BSR/} and on-site interview with local officers ^{/I2/} and herders ^{/I3/} , it is confirmed that project area have never been cleared of native ecosystems within the 10 year period prior to the project start date. Hence, this applicable condition is fulfilled.
(e)	The project area is located in	According to previous study, the	Via checking the study of

	a region where precipitation is less than evapotranspiration for most of the year and leaching is unlikely to occur	annual precipitation in the six counties of Guoluo Tibetan Autonomous Prefecture were between 325.24 to 745.29mm, the annual evapotranspiration were between 1,203.4 to 1,321.3mm, and the precipitation was less than evapotranspiration for most of the year, so leaching is unlikely to occur.	Analysis of the change trend of various meteorological elements in Guoluo area in the past 36 years^{/ACT/}, it is confirmed that the values of annual precipitation was less than values of evapotranspiration in the six counties of Guoluo Tibetan Autonomous Prefecture for most of the year and leaching is unlikely to occur in the project area. Hence, this applicable condition is fulfilled.
(f)	If a biogeochemical model is selected for estimation of change in soil carbon stocks, the following conditions must be met: The model must comply with the requirements for models as set out in the VCS rules. The model must be appropriate for the region within which the project is situated. There must be studies by appropriately qualified experts (eg, scientific journals, university theses, local research studies or work carried out by the project proponent) that demonstrate that the use of the selected biogeochemical model is appropriate for the IPCC climatic regions (see 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4, Chapter 3), or the agroecological zone (AEZ) in which the project is situated (see Section 9.3.2).	N/A. In the project the change of soil carbon stock is calculated based on the content of soil organic carbon which is directly monitored from soil samples.	Via checking the Emission reduction calculation sheet^{/XLS/}, it is confirmed that the change of soil carbon stock is calculated based on the content of soil organic carbon which is directly monitored from soil samples for this project, hence it is verified that biogeochemical model is not selected for estimation of change in soil carbon stocks. Hence, this condition is N/A.
(g)	Project activities must not include land use change. Note that seeding perennial grasses or legumes on degraded grassland is not considered a land use	The project planted grass on the degraded grassland, would not change the land use.	Via checking the Project Design Report^{/PDR/}, satellite images^{/SI/}, Baseline Survey Report^{/BSR/} and on-site interview with local

	change activity		officers ^{/12/} and herders ^{/13/} , it is confirmed that the project planted grass on the degraded grassland which is not defined as a land use change activity in line with the applied methodology. Hence, this applicable condition is fulfilled.
(h)	Project activities must not lead to an increase in the use of fossil fuels and fuel wood from non-renewable sources for cooking and heating.	Grazing is forbidden in the first five years after seeding, herders graze around the project area under the guidance of the local forestry and grassland bureau, and use cow dung as fuel, so the project activities will not lead to an increase in the use of fossil fuels and fuel wood.	Via checking the Project Design Report ^{/PDR/} and on-site interview with local officers ^{/12/} and herders ^{/13/} , it is confirmed that 5 years after seeding, herders graze around the project area under the guidance of the local forestry and grassland bureau, and they will use cow dung as fuel which is a common practice for herders during grazing period, and this will not lead to an increase in the use of fossil fuels and fuel wood. Hence, this applicable condition is fulfilled.
(i)	Project activities must not occur on wetlands or peatlands	The project activity was implemented on degraded grassland, not involving wetlands and peatlands.	Via checking the Project Design Report ^{/PDR/} , satellite images ^{/SI/} , Baseline Survey Report ^{/BSR/} and on-site interview with local officers ^{/12/} and herders ^{/13/} , it is confirmed that the project planted grass on the degraded grassland which is not involving wetlands and peatlands. Hence, this applicable condition is fulfilled.

Thus, it is verified that VM0026 (Version 1.0) 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:

Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities (Version 3.0)

No.	Applicability Criteria	PP demonstration	VVB assessment
(a)	AFOLU activities the same or similar to the proposed project activity on the land within the proposed project boundary performed with or without being registered as the VCS AFOLU project shall not lead to violation of any applicable law even if the law is not enforced	The restoration of degraded grassland is encouraged in China, and there is no legal prohibition for the project, therefore the proposed project activity on the land within the project boundary does not lead to violation of any applicable law.	The restoration of degraded grassland 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. Hence, this applicable condition is fulfilled
(b)	The use of this tool to determine additionality requires the baseline methodology to provide for a stepwise approach justifying the determination of the most plausible baseline scenario. Project proponent(s) proposing new baseline methodologies shall ensure consistency between the determination of a baseline scenario and the determination of additionality of a project activity	The baseline scenario is identified using the methodology "Sustainable Grassland Management" (Version 1.0), which provides for a stepwise approach justifying the determination of the most plausible baseline scenario no new baseline methodologies involved.	Via checking the PD, it is confirmed that the baseline scenario of the project is determined based on the stepwise approach provided by the applied methodology. And there are no new baseline methodologies involved in the project. Hence, this applicable condition is fulfilled

Tool for Identification of Degraded or Degrading Lands for Consideration in Implementing CDM AR Project Activities (Version 1.0)

No.	Applicability Criteria	PP demonstration	VVB assessment
1	This tool provides a procedure for the identification of degraded or degrading lands for the purpose of application of A/R CDM methodologies. The definitions of degraded and degrading lands are meant to be applied exclusively in the context of A/R CDM project activities, therefore, they may not necessarily be consistent with other uses of the terms in other contexts	No applicability conditions, thus is applicable to the project.	No applicability condition defined in this tool.

Validation Team hereby confirmed that the selected methodology has been approved by the VERRA, 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.

AFOLU Project Eligibility

According to Appendix of 1 Eligible AFOLU Project Categories of the VCS Standard V4.1, the validation team check the project activity eligibility as below:

As the project activity is an afforestation project, via the section A1.2 of Appendix of 1 Eligible AFOLU Project Categories of the VCS Standard V4.1,

Agricultural Land Management (ALM)

A1.2 Eligible ALM activities are those that reduce net GHG emissions on croplands and grasslands by increasing carbon stocks in soils and woody biomass and/or decreasing CO₂, N₂O and/or CH₄ emissions from soils. The project area shall not be cleared of native ecosystems within the 10-year period prior to the project start date.

Eligible ALM activities include:

1) Improved Cropland Management (ICM): This category includes practices that demonstrably reduce net GHG emissions of cropland systems by increasing soil carbon stocks, reducing soil N₂O emissions, and/or reducing CH₄ emissions.

2) Improved Grassland Management (IGM): This category includes practices that demonstrably reduce net GHG emissions of grassland ecosystems by increasing soil carbon stocks, reducing N₂O emissions and/or reducing CH₄ emissions.

3) Cropland and Grassland Land-use Conversions (CGLC): This category includes practices that convert cropland to grassland or grassland to cropland and reduce net GHG emissions by increasing carbon stocks, reducing N₂O emissions, and/or reducing CH₄ emissions.

The PD^{/PD/} states the project reduce net GHG emissions on croplands and grasslands by increasing carbon stocks in soils and woody biomass and/or decreasing CO₂, N₂O and/or CH₄ emissions from soils and the project belongs to Improved Grassland Management (IGM) category. Via site inspection and checking the Project Design Report^{/PDR/} and Approval of project design report^{/APDR/}, it is confirmed that the aim of the project is seeding of a variety of species native grass on black soil beach that will reduce net GHG emissions of grassland ecosystems by increasing soil carbon stocks, to reduce N₂O emissions and/or reduce CH₄ emissions.

Via checking the Project Design Report^{/PDR/}, satellite images^{/SI/}, Baseline Survey Report^{/BSR/} and on-site interview with local officers^{/I2/} and herders^{/I3/}, it is confirmed that project area have never been cleared of native ecosystems within the 10 year period prior to the project start date. Via checked the the satellite images^{/SI/} before the project start date, further conducted on-site interview with the local officer and herders^{/I2/,I3/}, it is verified that the project sites were previously degraded grassland for more than 10 years. There is no natural renewal or native ecosystems cleared before the project which has been confirmed by validation team via checking the project baseline survey^{/BSR/}.

The native ecosystem in the project area was no longer present and the goal of the project is to plant grass species on degraded black soil beach^{/PDR/}. As stated in the PD during the crediting period, all project areas will be managed to be sustainable, this is verified by checking the project lifetime evidence^{/PL/} and through on-site interview with local officers^{/I2/}.

Hence, it is verified that the project is eligible as Improved Grassland Management (IGM) category and thus is an AFOLU project.

CL 07, CL 08, CL 09, CAR 20, CAR 21 and CAR 22 were raised and successfully closed, Refer to Appendix 3 for details.

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 160,548.96 ha, inside the Maqin County, Dari County, Gande County, Jiuzhi County, Banma County and Maduo County of Guoluo Tibetan Autonomous Prefecture. The area and location has been confirmed via checking the project design^{/PDR/} and project approval^{/APDR/}. The boundaries include the administrative boundaries of cities, counties and grassland. The following table present the carbon pool considered within the project boundary:

Carbon pool	Whether Selected	Justification
Aboveground woody biomass	Yes	SGM may reduce aboveground woody biomass.
Aboveground non-woody biomass	No	The increase of aboveground non-woody biomass resulting from SGM is transient in nature and can be conservatively excluded.
Below-ground biomass	No	It is a conservative choice to exclude the below-ground biomass.
Dead wood	No	None of the applicable SGM practices decrease dead wood. Thus it can be conservatively excluded.
Litter	No	None of the applicable SGM practices decrease the amount of litter. Thus it can be conservatively excluded.
Soil organic carbon	Yes	Carbon stock in these pools may increase due to implementation of the project activity
Wood products	No	None of the applicable SGM practices increases or decreases wood products.

The emission sources and GHGs selected for accounting are shown below,

Source		Gas	Included?	Justification/Explanation
Baseline	Use of fertilizers	CO ₂	No	N/A
		CH ₄	No	N/A
		N ₂ O	No	No fertilizer was used in baseline scenario.
	Use of N-fixing species	CO ₂	No	N/A
		CH ₄	No	N/A
		N ₂ O	No	N ₂ O is the main gas for this source, but in the baseline N ₂ O emissions from this source are conservatively excluded.
	Burning of biomass	CO ₂	No	CO ₂ emissions from biomass burning in grassland are not reported since they are largely balanced by the CO ₂ that is reincorporated back into biomass via

Source		Gas	Included?	Justification/Explanation
				photosynthetic activity, within weeks to a few years after burning.
		CH ₄	No	No burning of biomass occurred in baseline scenario.
		N ₂ O	Yes	No burning of biomass occurred in baseline scenario.
	Manure deposition on grassland	CO ₂	No	CO ₂ emissions from biomass decomposition are not reported because net CO ₂ emissions from this source are assumed to be zero – the CO ₂ photosynthesized by plants is returned to the atmosphere as respired CO ₂ .
		CH ₄	Yes	Significant emission source.
		N ₂ O	Yes	Main gas for this source. Annual precipitation in the project area is less than annual potential evapotranspiration, so indirect N ₂ O emissions from leaching and runoff can be excluded from the project boundary.
	Farming machine	CO ₂	No	No farming machinery was used in baseline scenario.
		CH ₄	No	Not main gas for this source. Excluded for simplification.
		N ₂ O	No	Not main gas for this source. Excluded for simplification.
	Animal respiration / Enteric fermentation	CO ₂	No	CO ₂ emissions from animal respiration are not reported because net CO ₂ emissions from this source are assumed to be zero – the CO ₂ photosynthesized by plants is returned to the atmosphere as respired CO ₂ .
		CH ₄	Yes	Main gas for this source.
		N ₂ O	No	No N ₂ O emission from enteric fermentation.
Project	Use of fertilizers	CO ₂	No	N/A
		CH ₄	No	N/A
		N ₂ O	Yes	Main gas for this source.
	Use of N-fixing species	CO ₂	No	N/A
		CH ₄	No	N/A
		N ₂ O	No	No N-fixing species were planted in the project.
	Burning of biomass	CO ₂	No	CO ₂ emissions from biomass burning in grassland are not reported since they are largely balanced by the CO ₂ that is reincorporated back into biomass via photosynthetic activity, within weeks to a few years after burning.

Source		Gas	Included?	Justification/Explanation
		CH ₄	No	No burning of biomass occurred in project scenario.
		N ₂ O	No	No burning of biomass occurred in project scenario.
	Manure deposition on grassland	CO ₂	No	CO ₂ emissions from biomass decomposition are not reported since they are largely balanced by the CO ₂ that is reincorporated back into biomass via photosynthetic activity, within weeks to a few years after burning.
		CH ₄	Yes	Significant emission source.
		N ₂ O	Yes	Main gas for this source.
	Farming machine	CO ₂	Yes	CO ₂ emissions from fossil fuels used in farming machinery is the main gas for this source. Where project emissions from this source are larger than baseline emissions, project proponent must account for this source of project emissions. The use of trucks and tractors during the implementation of the project consumes diesel oil and emits CO ₂ .
		CH ₄	No	Not main gas for this source. Excluded for simplification.
		N ₂ O	No	Not main gas for this source. Excluded for simplification.
	Animal respiration / Enteric fermentation	CO ₂	No	CO ₂ emissions from enteric fermentation are not reported since they are largely balanced by the CO ₂ that is reincorporated back into biomass via photosynthetic activity, within weeks to a few years after burning.
		CH ₄	Yes	Main gas for this source.
		N ₂ O	No	No N ₂ O emission from enteric fermentation.

By checking the information and evidences/^{/PDRI,/APDRI,/BSR/} available and by the physical site, the validation team can confirm that the appropriate carbon pools, emission sources and GHGs selected for accounting have been considered and the description in the PD is accurate and complete, and also the selected carbon pools emission sources and GHGs are justified for the proposed project activity.

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

3.3.4 Baseline Scenario

The procedure for determination of the baseline scenario in the project activity was applied using the project method in applied methodology. The assessment is step-wise as below,

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

Sub-step 1a. Identify and list all credible alternative land use scenarios to the proposed SGM project:

Following the provision of the step in applied methodology, the VCS Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities (version 3.0) should be used for guidance on identification of realistic and credible alternative land uses, hence, the PP has identified plausible alternative land-use scenarios as per the tool:

- i. Continuation of pre-project land use
- ii. Project activity on the land within the project boundary performed without being registered as the VCS AFOLU project;
- iii. If applicable, activities similar to the proposed project activity on at least part of the land within the project boundary of the proposed VCS AFOLU project at a rate resulting from:
 - Legal requirements; or
 - Extrapolation of observed similar activities in the geographical area with similar socioeconomic and ecological conditions to the proposed VCS AFOLU project activity occurring in the period beginning ten years prior to the project start date.

As per the tool, all land-uses within the boundary of the proposed VCS AFOLU project that are currently existing or that existed at some time in the period beginning ten years prior to the project start date but no longer exist, may be deemed realistic and credible. Via checking the baseline survey report^{/BSR/}, PRA report^{/PRA/}, the satellite images ten years prior to the project start date^{/SI/}, it is verified that the pre-project land use scenario is degraded grassland ecosystem and it is feasible to consider that local grassland resources were severely damaged for more than ten years in project areas which has also been confirmed in the satellite images^{/SI/}.

Validation team confirms that all the feasible scenarios for the project area taking into account relevant national and/or sectoral policies and circumstances, such as historical land uses, practices and economic trends, etc. and no reasonable alternative baseline scenario was excluded in the analysis of baseline scenarios based on the local expertise and baseline survey^{/BSR/}.

Hence, it is concluded that all credible land use scenarios have been identified.

For scenario iii, via checking the baseline survey report^{/BSR/}, PRA report^{/PRA/} and project approval^{/APDR/}, it is confirmed that the lands within the project boundary of the proposed VCS AFOLU project are all with the same legal requirements, and via the baseline survey report^{/BSR/} and satellite images^{/SI/}, it is verified that the project area existed as degraded land more than ten years prior to the project start date. So (iii) is not applicable.

Outcome of Sub-step 1a: List of credible alternative land use scenarios that could have occurred on the land within the project boundary of the VCS AFOLU project.

Based on the above assessments, validation team considers that the identified credible alternative land use scenarios i and ii are reasonable.

Sub-step 1b: Check the consistency of credible alternative 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 which have been checked by the validation team^{/law/, /regul/}. The approval of project design report^{/APDR/} is checked to be confirmed that the project area is legally defined as

grassland. None of the regulations mandate the restoration of degraded grassland ecosystem. Hence, scenario i would be a plausible alternative baseline land-use and would be consistent with current laws and regulations.

Furthermore, all the mandatory applicable laws and regulations have been checked by the validation team^{/law/, /regul/}, it is confirmed that none of the regulations mandate the restoration of degraded grassland ecosystem in China and approval of project design report^{/APDR/} is checked to be confirmed that the project area are approved for the restoration of degraded grassland, thus the scenario ii would be a plausible alternative baseline land-use and would be consistent with current laws and regulations.

Therefore, both the land-use scenarios i and ii are confirmed as in compliance with mandatory legislation and regulations taking into account the enforcement in the region on national and/or sectoral policies and regulations^{/law/, /regul/, /APDR/}.

Outcome of Sub-step 1b: List of plausible alternative land use scenarios to the VCS AFOLU project activity that are in compliance with mandatory legislation and regulations taking into account their enforcement in the region or country and EB decisions on national and/or sectoral policies and regulations.

Based on the above assessments, validation team considers that the identified credible alternative land use scenarios i and ii are remain reasonable.

Step 2: Select the most plausible baseline scenario.

Sub-step 2a) Barrier analysis:

A barrier analysis has been conducted by PP to identify realistic and credible barriers that prevent implementation of these land use scenarios following the procedures described in Step 3 of the *VCS Tool for the Demonstration and Assessment of Additionality in VCS AFOLU Project Activities (version 3.0)*.

Based on the Step 3 of the tool, the below barriers are identified for the scenario ii,

Investment barriers:

It was confirmed that there are no credit mechanisms are in place for investors to make long term investment in plantation forestry via onsite observation and interview with representatives from PP^{/11/} and local officers^{/12/}.

It is estimated that the total investment of the project is more than 361.23 million CNY which was funded by government of Guoluo Tibetan Autonomous Prefecture Finance Bureau as confirmed in project approval^{/APDR/}. The project approval^{/APDR/} are checked to confirm that due to the project is a public Black soil beach comprehensive treatment project, there is no profit from such kind. And during the project implementation, the sustainable grassland management require continued funding support, 6,023 local herders were employed as grassland guardians^{/LC/}, with an annual salary of 21,000 RMB (3,216.56 USD)/PP/ per person need to be paid. By consideration of the carbon profit during the project operation as signed consultaion agreement^{/CA/}, PP decided to put carbon profit value to continuous management and maintenance of the project by paying the salaries to the guardians, which could reduce the funding difficulty. This has been verified by site interview with representatives from PP^{/11/}, grassland guardians^{/13/} and checking the consultaion agreement^{/CA/}.

Technological barriers:

Project developers and local herders confronted with diverse technological barriers. The technological barriers described are the lack of access to quality seed sourced and the lack of rational grazing skills to

produce high quality seedlings and to perform successful plantings which may lead grassland degraded continuously, these barriers were confirmed during site observation and interview with the PP and local residents^{/11/,/13/}. Furthermore the missing knowledge and experience regarding the sustainable development of the project, prevention of fires, pest and diseases are considered as stated in the Participatory Rural Appraisal Report^{/PRA/}. The technological 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/}.

Based on above assessment, it is concluded that these barriers including investment barriers (lack of access to credit) and technological barriers (lack of access to planting materials and equipment for implementing the technology) prevent the project activity from being implemented without registered as a VCS project (scenario ii). Thus upon the decision of applying for VCS and CCB project, the project owner signed consultant agreement wanting to sell credits expected to be generated, through checking the consultant agreement^{/CA/}, it is verified that VCS and CCB project developer works with the owner to work out better implementation plan for the project, and help local residents to conduct the grass seeding activity better. Thus it is verified that without applying for VCS, local residents would face the above mentioned technological barriers.

Sub-step 2b) Eliminate alternative land use scenarios that face a barrier to implementation: All land use scenarios that face a barrier to implementation must be removed from the list.

Based on above assessment, scenario ii faces barriers thus be removed from the list, but due to the scenario i is continuous land use without any extra investment or labor force, so scenario i is remained in the list.

Sub-step 2c) Select most plausible baseline scenario (if allowed by barrier analysis): Where there is only one alternative land use remaining in the list, this must be selected as the most plausible baseline scenario.

Based on above assessment, only Scenario i: continuation of pre-project use (i.e. lands remain degraded grassland ecosystem) remaining in the list, this is selected as the most plausible baseline scenario.

In conclusion, the baseline scenario is determined based on the applied methodology and tool, and is determined as realistic and reasonable.

CAR 23 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 Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities (version 3.0)^{/TDA/}.

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

Refer to above Step 1 in section 3.1.4 for detail assessment.

Step 2. Investment analysis

Sub-step 2a. Determine appropriate analysis method

The project is planting grass on the black soil beach, there is no any financial or economic benefits other than VCS related income during the project implementation through checking the project design report^{/PDR/} and approval^{/APDR/}. Then apply the simple cost analysis (Option I).

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

Via checking the project design report^{/PDR/} and approval^{/APDR/}, it is confirmed that the average cost is about 150 RMB (22.92 USD)/mu⁶ for the initial planting, and the estimated cost for subsequent management and protection would reach 126.48 million RMB (19.33 million USD) per year during the whole life time. The project is planting grass on the black soil beach, there is no any financial or economic benefits other than VCS related income during the project implementation through checking the project design report^{/PDR/} and approval^{/APDR/}.

Then as per the tool, if it is concluded that the proposed VCS AFOLU project produces no financial benefits other than VCS related income then proceed to **Step 4 (Common practice analysis)**.

STEP 4. Common practice analysis

The region for the common practice analysis was defined as the Qinghai Province where the project area is located, based on the social and ecological condition^{/BSR/ & /PRA/}. The chosen region has unique characteristics in regard to regulatory framework, investment climate, access to technology, access to financing, especially for transportation condition, population structure and ethnic minorities which has been determined in the Participatory Rural Appraisal Report^{/PRA/}. Therefore, the presented approach is considered appropriate for the common practice analysis.

Furthermore, as per the tool, for define the similar projects, considerations shall be limited to the period beginning 10 years prior to the project start date, due to the project started on 20-June-2016, hence the similar projects are defined as degraded grassland restoration project with planting scale between 86,650-259,950 ha ($\pm 50\%$ of the project planting scale) started planting after 20-June-2006 in Qinghai Province.

Via checking the public and accessible information^{/picp/}, GHG scheme website^{/vcs/, /gs/, /unfccc/} and interview with local government officer^{/12/}, it is verified that there were no other degraded grassland restoration project on a scale similar with the proposed project have been implemented since 20-June-2006 in Qinghai Province.

The audit team reviewed respective documentation and also confirmed during the onsite visit, that the proposed VCS project activity features essential distinction to other degraded grassland restoration 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 planted with grasses which otherwise would have remained degraded lands – summarized due to unavailability of funding for such grass planting 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.

CAR 24 was raised and successfully closed, Refer to Appendix 3 for details.

3.3.6 Methodology Deviations

N/A

⁶ 1ha=15mu

3.3.7 Quantification of GHG Emission Reductions and Removals

The emission reduction are calculated according the applied methodology VM0026 and VMD0040. The algorithms and formulae used are provided in this section.

Baseline Emissions

1) Baseline N₂O emissions due to fertilizer use

According the applied methodology, Baseline N₂O emissions due to fertilizer use equals baseline direct N₂O emission plus indirect N₂O emission. For this project activity, via checking the Baseline Survey Report^{/BSR/} and Participatory Rural Appraisal (PRA) Report^{/PRA/}, it is confirmed that no nitrogen fertilizer was applied in baseline scenario, hence, no Baseline N₂O emissions due to fertilizer use need to be considered. Thus BE_{N₂OSN,b} is determined as 0.

2) Baseline emissions due to the use of N-fixing species

According the applied methodology, N₂O emissions due to the use of N-fixing species in the baseline are excluded from the project boundary.

3) Baseline emissions due to burning of biomass

According the applied methodology, the baseline emissions due to burning of biomass, BE_{BB,b}, include CH₄ emissions from biomass burning plus N₂O emissions from biomass burning in baseline year b. For this project activity, via checking the Baseline Survey Report^{/BSR/} and Participatory Rural Appraisal (PRA) Report^{/PRA/}, it is confirmed that there was no biomass burning in the project area in baseline scenario, hence, no baseline emissions due to burning of biomass need to be considered. Thus BE_{BB,b} is determined as 0. For this project activity, via checking the Baseline Survey Report^{/BSR/} and Participatory Rural Appraisal (PRA) Report^{/PRA/}, it is confirmed that no nitrogen fertilizer was applied in baseline scenario, hence, no Baseline N₂O emissions due to fertilizer use need to be considered. Thus BE_{N₂OSN,b} is determined as 0.

4) Baseline CH₄ emissions due to enteric fermentation

According the applied methodology, the Baseline CH₄ emissions from enteric fermentation are calculated as following:

$$BE_{CH_4EF,t} = \frac{GWP_{CH_4} \times \sum_{l=1}^L P_{l,b} \times EF_l \times Days_{l,b}}{1000 \times 365} \quad (1)$$

Where:

GWP_{CH_4}	=	Global-warming potential for CH ₄ (t CO ₂ e/t CH ₄)
$P_{l,b}$	=	Population of grazing livestock type l, in baseline year b (head)
l	=	Index of livestock type
EF_l	=	Enteric CH ₄ emission factor per head of livestock type l per year (kg CH ₄ head*year)
$Days_{l,b}$	=	Grazing days inside the project area for each livestock type l in baseline year b (days)
1000	=	Conversion factor for t CH ₄ to kg CH ₄
365	=	Conversion factor for years to days

5) Baseline N₂O and CH₄ emissions due to manure management

According to the applied methodology, the Baseline emissions from manure management include N₂O and CH₄ emissions from manure and urine deposited on grassland soil during the grazing season are calculated as following:

$$BE_{GHG_{MD},b} = BE_{N_2O_{MD},b} + BE_{CH_4_{MD},b} \quad (2)$$

Where:

$BE_{N_2O_{MD},b}$ = Baseline N₂O emissions from manure and urine deposited on grassland soil in baseline year b (t CO₂e)

$BE_{CH_4_{MD},b}$ = Baseline CH₄ emissions from manure and urine deposited on grassland soil in baseline year b (t CO₂e)

1) Baseline N₂O emissions from manure management

Baseline N₂O emissions from manure and urine deposited on grassland soil in baseline year b are the sum of direct and indirect N₂O emissions from manure and urine deposited on grassland soil during the grazing season are calculated as below,

$$BE_{N_2O_{MD},b} = GWP_{N_2O} \times (BE_{D,N_2O_{MD},b} + BE_{ID,N_2O_{MD},b}) \quad (3)$$

Where:

GWP_{N_2O} = Global warming potential for N₂O (t CO₂e/t N₂O)

$BE_{D,N_2O_{MD},b}$ = Direct N₂O emissions from manure and urine deposited on grassland soil during the grazing season in baseline year b (t N₂O)

$BE_{ID,N_2O_{MD},b}$ = Indirect N₂O emissions from manure and urine deposited on grassland soil during the grazing season in baseline year b (t N₂O)

a. Baseline direct N₂O emissions from manure and urine deposited on grassland soil

Baseline direct N₂O emissions from manure and urine deposited on grassland soil are calculated as per the applied methodology, Equation 04 calculates direct N₂O emissions from livestock types classified as cattle (dairy, non-dairy and buffalo), poultry and pigs. Equation 05 calculates direct N₂O emissions from livestock types classified as sheep and other animals. Where both kinds of livestock are present the following equations must be summed.

$$BE_{D,N_2O_{MD},b} = \sum_{l1=1}^{L1} F_{MD,l1,b} \times EF_{3,PRP,PPP} \times 44/28 \quad (4)$$

And/or

$$BE_{D,N_2O_{MD},b} = \sum_{l2=1}^{L2} F_{MD,l2,b} \times EF_{3,PRP,SO} \times 44/28 \quad (5)$$

$F_{MD,l1,b}$ and $F_{MD,l2,b}$ must be calculated using the following equation for livestock type l.

$$F_{MD,l1,b} = \frac{P_{l,b} \times W_{l,b} \times Nex_l \times H_{l,b} \times Days_{l,b} \times (1 - Frac_{GAS,MD})}{1000_a \times 24 \times 1000_b} \quad (6)$$

Where:

$F_{MD,l1,b}$	=	Annual amount of nitrogen in cattle, poultry and pigs manure and urine deposited on grassland soil during the grazing season in baseline year b, adjusted for volatilization as NH ₃ and NO _x (t N)
$F_{MD,l2,b}$	=	Annual amount of nitrogen in sheep and other animals manure and urine deposited on grassland soil during the grazing season in baseline year b, adjusted for volatilization as NH ₃ and NO _x (t N)
$EF_{3,PRP,CPP}$	=	N ₂ O emission factor for cattle, poultry and pigs manure and urine deposited on grassland soil during the grazing season (kg N ₂ O-N/kg N input)
$EF_{3,PRP,SO}$	=	N ₂ O emission factor for sheep and other animals manure and urine deposited on grassland soil during the grazing season (kg N ₂ O-N/kg N input)
$l1$	=	Index of livestock cattle, poultry and pigs
$l2$	=	Index of livestock sheep and other animals
$P_{l,b}$	=	Population of livestock type l in baseline year b (head)
$W_{l,b}$	=	Average weight of livestock type l in baseline year b (kg livestock mass/head)
Nex_l	=	Nitrogen excretion of livestock type l (kg N deposited / (t livestock mass*day))
1000_a	=	Conversion factor for t livestock mass to kg livestock mass
$H_{l,b}$	=	Average grazing hours per day for livestock type l in baseline year b (hour)
24	=	Conversion factor for days to hours
$Days_{l,b}$	=	Grazing days for livestock type l inside the project area in baseline year b (days)
1000_b	=	Conversion factor for t N to kg N
$Frac_{GAS,MD}$	=	Fraction of volatilization from manure and urine deposited by grazing animals as NH ₃ and NO _x (kg N volatilized/kg of N deposited)
l	=	Index of grazing livestock types

b. Baseline indirect N₂O emissions from urine and manure N deposited on grassland soils

According to the methodology (VM0026/Version 1.0) and via checking the study of Analysis of the change trend of various meteorological elements in Guoluo area in the past 36 years^{/ACTI}, it is confirmed that the annual precipitation of the project area is less than annual potential evapotranspiration, so, indirect N₂O emissions from leaching and runoff can be excluded.

The indirect N₂O emissions from the atmospheric deposition of N volatilized as NH₃ and NO_x after urine and manure N is deposited on grassland soils in baseline year b, are calculated using the following equation. Indirect N₂O emissions from urine and manure N deposited on grassland soils excludes N₂O emissions from leaching and runoff in regions.

$$BE_{ID,N_2O_{MD},b} = \sum_{l=1}^L F_{MD,l,b} \times Frac_{GAS,MD} \times EF_{4,MD} \times 44/28 \quad (7)$$

Where:

$BE_{ID,N_2O,MD,b}$	=	Indirect N ₂ O emissions from manure and urine deposited on grassland soil during the grazing season in baseline year b (t N ₂ O)
$F_{MD,l,b}$	=	Annual amount of manure and urine deposited on grassland soil from livestock type l during the grazing season in baseline year b, adjusted for volatilization as NH ₃ and NO _x (t N)
$Frac_{GAS,MD}$	=	Fraction of volatilization from manure and urine deposited by grazing animals as NH ₃ and NO _x (kg N volatilized/kg of N deposited)
$EF_{4,MD}$	=	N ₂ O emission factor for atmospheric deposition of urine and manure N on soils and water surfaces, (kg N ₂ O-N/(kg NH ₃ -N + NO _x -N volatilized))
L	=	Index of grazing livestock types

2)CH₄ emissions from manure management

Baseline CH₄ emissions from manure management are calculated using the following:

$$BE_{CH_4MD,b} = \frac{GWP_{CH_4} \times \sum_{l=1}^L EF_{lM} \times P_{l,b} \times H_{l,b} \times Days_{l,b}}{1000 \times 365 \times 24} \quad (8)$$

Where:

$P_{l,b}$	=	Population of grazing livestock type l, in baseline year b, head
EF_{lM}	=	CH ₄ emission factor from manure of livestock type l (kg CH ₄ /(head*year))
$H_{l,b}$	=	Average grazing hours per day for livestock type l in baseline year b (hour)
$Days_{l,b}$	=	Grazing days for livestock type l inside the project area in baseline year b (days)
1000	=	Conversion factor for t CH ₄ to kg CH ₄
365	=	Conversion factor for years to days
24	=	Conversion factor for days to hours

6)Baseline CO₂ emissions due to the use of fossil fuels for grassland management

For this project activity, via checking the Baseline Survey Report^{/BSR/} and Participatory Rural Appraisal (PRA) Report^{/PRA/}, it is confirmed that there was no grassland management in the project area in baseline scenario, hence did not involve agricultural machinery. Thus baseline CO₂ emissions due to the use of fossil fuels for grassland management is considered to be 0 tCO₂e. BE_{FC,b} is determined as 0.

7)Baseline emission removals from existing woody perennials

For this project activity, via checking the Baseline Survey Report^{/BSR/} and Participatory Rural Appraisal (PRA) Report^{/PRA/}, it is confirmed that there were no perennial woody plants in the project area under the baseline scenario, hence BRWP_b is zero.

8)Baseline emission removals due to changes in soil organic carbon

Via checking the applied methodology, since the applicability conditions limit the project to land that is degraded and is continuing to degrade, it can be conservatively assumed that the changes in SOC in the baseline scenario is zero. Hence, BRS=0.

Baseline emissions and removals

The emissions and removals in baseline year b are given by:

$$BE_b = BE_{N_2O_{SN},b} + BE_{BB,b} + BE_{CH_4EF,b} + BE_{GHGMD,b} + BE_{FC,b} - BRWP_b \quad (9)$$

Where:

- BE_b = Baseline emissions and removals in year b (t CO₂e)
- $BE_{N_2O_{SN},b}$ = Baseline N₂O emissions due to fertilizer use in baseline year b (t CO₂e)
- $BE_{BB,b}$ = Baseline GHG emissions from biomass burning in baseline year b (t CO₂e)
- $BE_{CH_4EF,b}$ = Baseline CH₄ emissions from enteric fermentation in baseline year b (t CO₂e)
- $BE_{GHGMD,b}$ = Baseline GHG emissions from manure management in baseline year b (t CO₂e)
- $BE_{FC,b}$ = Baseline CO₂ emissions from farming machine fossil fuel consumption in baseline year b , (t CO₂)
- $BRWP_b$ = Baseline removals from existing woody perennials in baseline year b (t CO₂)

Hence, based on the above assessment for the actual situation of the project, it is confirmed that the Baseline emissions and removals in year b for this project is calculated as below

$$BE_b = BE_{CH_4EF,b} + BE_{N_2O_{MD},b} + BE_{CH_4MD,b}$$

$$= \frac{GWP_{CH_4} \times \sum_{l=1}^L P_{l,b} \times EF_l \times Days_{l,b}}{1000 \times 365} + GWP_{N_2O} \times \left(\frac{P_{l,b} \times W_{l,b} \times Nex_l \times H_{l,b} \times Days_{l,b} \times (1 - Frac_{GAS,MD})}{1000_a \times 24 \times 1000_b} \times EF_{3,PRP,CP} \times \right.$$

$$\left. \frac{44}{28} + \frac{P_{l,b} \times W_{l,b} \times Nex_l \times H_{l,b} \times Days_{l,b} \times (1 - Frac_{GAS,MD})}{1000_a \times 24 \times 1000_b} \times EF_{3,PRP,SO} \times \frac{44}{28} + \sum_{l=1}^L F_{MD,l,b} \times Frac_{GAS,MD} \times EF_{4,MD} \times \right.$$

$$\left. \frac{44}{28} \right) + \frac{GWP_{CH_4} \times \sum_{l=1}^L EF_{l,MD} \times P_{l,b} \times H_{l,b} \times Days_{l,b}}{1000 \times 365 \times 24} \quad (10)$$

For calculation of BE_b , via checking the Baseline Survey Report^{/BSR/} and Participatory Rural Appraisal (PRA) Report^{/PRA/}, it is confirmed that the information of grazing in 6 counties listed in the PD is actual and correct. Hence, it is verified that the baseline emissions and removals calculation result of 447,160 tCO₂e for the crediting period in ER spreadsheet is correct.

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

Project Emissions

1) Project N₂O emissions due to fertilizer use

According the applied methodology, Project N₂O emissions due to fertilizer use equals the sum of project direct and indirect N₂O emissions, as described using the following,

$$PE_{N_2O_{SN},t} = GWP_{N_2O} \times (PE_{D,N_2O_{SN},t} + PE_{ID,N_2O_{SN},t}) \quad (11)$$

Where:

- $PE_{N_2O_{SN},t}$ = Project N₂O emissions due to fertilizer use in year t (t CO₂e)
- $PE_{D,N_2O_{SN},t}$ = Project direct N₂O emissions from synthetic nitrogen fertilizer use in year t (t N₂O)
- $PE_{ID,N_2O_{SN},t}$ = Project indirect N₂O emissions from synthetic nitrogen fertilizer use in year t (t N₂O)
- GWP_{N_2O} = Global-warming potential of N₂O

(i) Project direct N₂O emissions from synthetic nitrogen fertilizer use

Project direct N₂O emissions from synthetic fertilizer use is calculated using IPCC methodology recommended in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, as described using the following:

$$PE_{D,N_2O_{SN},t} = F_{SN,t} \times EF_{Nfert} \times 44/28 \quad (12)$$

Where:

- $F_{SN,t}$ = Annual amount of synthetic fertilizer N applied to grassland soils in year t, adjusted for volatilization as NH₃ and NO_x (t N)
- EF_{Nfert} = N₂O emission factor for synthetic N fertilizer use (kg N₂O-N/kg N applied)
- 44/28 = Conversion of N₂O-N to N₂O

Among this equation,

$$F_{SN,t} = \sum_{i=1}^I M_{SNI,t} \times NC_{SNI,p} \times (1 - Frac_{GAS,F}) \quad (13)$$

where,

- $M_{SNI,t}$ = Mass of synthetic N fertilizer type i applied in year t (t fertilizer)
- $NC_{SNI,p}$ = Nitrogen content of synthetic N fertilizer type i applied (g-N/g fertilizer)
- $Frac_{GAS,F}$ = Fraction of synthetic N fertilizer that volatilizes as NH₃ and NO_x (kg N volatilized/kg of N applied)

(ii) Project indirect N₂O emissions from the synthetic N fertilizer use:

According to the methodology (VM0026/Version 1.0) and via checking the study of Analysis of the change trend of various meteorological elements in Guoluo area in the past 36 years^[ACT], it is confirmed that the annual precipitation of the project area is less than annual potential evapotranspiration, so, indirect N₂O emissions from leaching and runoff can be excluded. The N₂O emissions from the atmospheric deposition of N volatilized as NH₃ and NO_x after fertilizer is applied to grassland soils under the project scenario in year t, is calculated using the below equation.

Project indirect N₂O emissions from the synthetic N fertilizer use is calculated using the below equation,

$$PE_{ID,N_2O_{SN},t} = \sum_{i=1}^I (F_{SNi,t} \times \text{Frac}_{GAS,F}) \times EF_{4,SN} \times 44/28 \quad (14)$$

where,

$EF_{4,SN}$ = N₂O emission factor for atmospheric deposition of synthetic N on soils and water surfaces (kg N₂O-N/(kg NH₃-N + NO_x-N volatilized)⁻¹)

$F_{SNi,t}$ = Annual amount of synthetic fertilizer N applied to grassland soils in year t, adjusted for volatilization as NH₃ and NO_x (t N)

I = Index of synthetic N fertilizer types

2) Project emissions due to the use of N-fixing species

According to the applied methodology, via checking the Project Design Report^{/PRD/} of the project, it is confirmed that the project planted *Elymus dahuricus* Turcz., *Poa annua* L. and *Festuca sinensis* Keng ex S. L. Lu on the black beach, which did not involve N-fixing species, hence project emissions due to the use of N-fixing species is considered to be 0 tCO₂e, $PE_{N_2O_{NF},t}=0$

3) Project emissions due to burning of biomass

According to the applied methodology, the project emissions due to burning of biomass equals CH₄ emissions from biomass burning plus N₂O emissions from biomass burning under the project. For this project activity, via checking the patrol records of grassland guardian and local forestry and grass bureau^{/PR/}, it is confirmed that there is no biomass burning in the project area in project scenario, hence, no project emissions due to burning of biomass need to be considered. Thus $PE_{GHGBB,t}$ is determined as 0.

4) Project CH₄ emissions due to enteric fermentation

According to the applied methodology, the Project CH₄ emissions from enteric fermentation are calculated based on an IPCC methodology recommended in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories^{/IPCC/}, with the addition of a parameter to reflect the proportion of the year that livestock are present inside the project area, as following:

$$PE_{CH_4EF,t} = \frac{GWP_{CH_4} \times \sum_{l=1}^L P_{l,t} \times EF_l \times Days_{l,t}}{1000 \times 365} \quad (15)$$

Where:

GWP_{CH_4} = Global-warming potential for CH₄ (t CO₂e/t CH₄)

$P_{l,t}$ = Population of grazing livestock type l in year t under project (head)

l = Index of livestock type

EF_l = Enteric CH₄ emission factor per head of livestock type l per year (kg CH₄ head*year)

$Days_{l,t}$ = Grazing days inside the project area for each livestock type l in the project year t (days)

1000 = Conversion factor for t CH₄ to kg CH₄

365 = Conversion factor for years to days

5) Project N₂O and CH₄ emissions due to manure management

According the applied methodology, the project emissions from manure management including N₂O and CH₄ emissions from manure and urine deposited on grassland soil during the grazing season are calculated as following:

$$PE_{GHGMD,t} = PE_{N_2O_{MD},t} + PE_{CH_4MD,t} \quad (16)$$

Where:

$PE_{GHGMD,t}$ = Project GHG emissions from manure management in year t (t CO₂e)

$PE_{N_2O_{MD},t}$ = Project N₂O emissions from manure and urine deposited on grassland soil in year t (t CO₂e)

$PE_{CH_4MD,t}$ = Project CH₄ emissions from manure and urine deposited on grassland soil in year t (t CO₂e)

1) Project N₂O emissions from manure management

The project emissions from manure and urine deposited on grassland soil during the grazing season include direct and indirect N₂O emissions from manure and urine deposited on grassland soil during the grazing season. Project N₂O emissions from manure and urine deposited on grassland soil are calculated as described in the following,

$$PE_{N_2O_{MD},t} = GWP_{N_2O} \times (PE_{D,N_2O_{MD},t} + PE_{ID,N_2O_{MD},t}) \quad (17)$$

Where:

GWP_{N_2O} = Global warming potential for N₂O (t CO₂e/t N₂O)

$PE_{D,N_2O_{MD},t}$ = Project direct N₂O emissions from manure and urine deposited on grassland soil during the grazing season in year t (t N₂O)

$PE_{ID,N_2O_{MD},t}$ = Project indirect N₂O emissions from manure and urine deposited on grassland soil during the grazing season in year t (t N₂O)

2) Project direct N₂O emissions from manure and urine deposited on grassland soil

Project direct N₂O emissions from manure and urine deposited on grassland soil are calculated using IPCC methodology recommended by 2006 IPCC Guidelines for National Greenhouse Gas Inventories, as described using the following Equations 18 and 19. Equation 18 calculates direct N₂O emissions from livestock types classified as cattle (dairy, non-dairy and buffalo), poultry and pigs and Equation 19 calculates direct N₂O emissions from livestock types classified as sheep and other animals, where both kinds of livestock are present the following equations must be summed.

$$PE_{D,N_2O_{MD},t} = \sum_{l1=1}^{L1} F_{MD,l1,t} \times EF_{3,PRP,CPP} \times 44/28 \quad (18)$$

And/or

$$PE_{D,N_2O_{MD},t} = \sum_{l2=1}^{L2} F_{MD,l2,t} \times EF_{3,PRP,SO} \times 44/28 \quad (19)$$

$F_{MD,l1,t}$ and $F_{MD,l2,t}$ must be calculated using the following equation for livestock type I.

$$F_{MD,l1,t} = \frac{P_{l,t} \times W_{l,p} \times Nex_l \times H_{l,t} \times Days_{l,t} \times (1 - Frac_{GAS,MD})}{1000_a \times 24 \times 1000_b} \quad (20)$$

Where:

$F_{MD,l1,t}$	=	Annual amount of nitrogen in cattle, poultry and pigs manure and urine deposited on grassland soil during the grazing season in year t, adjusted for volatilization as NH ₃ and NO _x (t N)
$F_{MD,l2,t}$	=	Annual amount of nitrogen in sheep and other animals manure and urine deposited on grassland soil during the grazing season in year t, adjusted for volatilization as NH ₃ and NO _x (t N)
$EF_{3,PRP,CPP}$	=	N ₂ O emission factor for cattle, poultry and pigs manure and urine deposited on grassland soil during the grazing season (kg N ₂ O-N/kg N input)
$EF_{3,PRP,SO}$	=	N ₂ O emission factor for sheep and other animals manure and urine deposited on grassland soil during the grazing season (kg N ₂ O-N/kg N input)
$l1$	=	Index of livestock cattle, poultry and pigs
$l2$	=	Index of livestock sheep and other animals
$P_{l,t}$	=	Population of grazing livestock type I in year t (head)
$W_{l,p}$	=	Average weight of livestock I under project (kg livestock mass/head)
Nex_l	=	Nitrogen excretion of livestock type I (kg N deposited / (t livestock mass*day))
1000_a	=	Conversion factor for t livestock mass to kg livestock mass
$H_{l,t}$	=	Average grazing hours per day during grazing season in year t (hours)
24	=	Conversion factor for days to hours
$Days_{l,t}$	=	Grazing days for livestock type I inside the project area in year t (days)
1000_b	=	Conversion factor for t N to kg N
$Frac_{GAS,MD}$	=	Fraction of volatilization from manure and urine deposited by grazing animals as NH ₃ and NO _x (kg N volatilized/kg of N deposited)
I	=	Index of grazing livestock types

3) Project indirect N₂O emissions from urine and manure N deposited on grassland soils

According to the methodology (VM0026/Version 1.0) and via checking the study of Analysis of the change trend of various meteorological elements in Guoluo area in the past 36 years^[ACT], it is confirmed that the

annual precipitation of the project area is less than annual potential evapotranspiration, so, indirect N₂O emissions from leaching and runoff can be excluded.

Indirect N₂O emissions from the atmospheric deposition of N volatilized as NH₃ and NO_x after urine and manure N is deposited on grassland soils under the project, are calculated using the following,

$$PE_{ID,N_2O_{MD},t} = \sum_{l=1}^L F_{MD,l,t} \times FraC_{GAS,MD} \times EF_{4,MD} \times 44/28 \quad (21)$$

Where:

$PE_{ID,N_2O_{MD},t}$	=	Project indirect N ₂ O emissions from manure and urine deposited on grassland soil during the grazing season in year t (t N ₂ O)
$F_{MD,l,t}$	=	Annual amount of manure and urine deposited on grassland soil from livestock type l during the grazing season in year t, adjusted for volatilization as NH ₃ and NO _x (t N)
$FraC_{GAS,MD}$	=	Fraction of volatilization from manure and urine deposited by grazing animals as NH ₃ and NO _x (kg N volatilized/kg of N deposited)
$EF_{4,MD}$	=	N ₂ O emission factor for atmospheric deposition of urine and manure N on soils and water surfaces, (kg N ₂ O-N/(kg NH ₃ -N + NO _x -N volatilized))
L	=	Index of grazing livestock types

4)CH₄ emissions from manure management

Project CH₄ emissions from manure management are calculated using the following:

$$PE_{CH_4MD,t} = \frac{GWP_{CH_4} \times \sum_{l=1}^L EF_{lM} \times P_{l,t} \times H_{l,t} \times Days_{l,t}}{1000 \times 365 \times 24} \quad (22)$$

Where:

$P_{l,t}$	=	Population of livestock type l in year t (head)
EF_{lM}	=	CH ₄ emission factor from manure of livestock type l (kg CH ₄ /(head*year))
$H_{l,t}$	=	Average grazing hours per day during grazing season in year t (hours)
$Days_{l,t}$	=	Grazing days for livestock type l inside the project area in year t (days)
1000	=	Conversion factor for t CH ₄ to kg CH ₄
365	=	Conversion factor for years to days
24	=	Conversion factor for days to hours

6)Project CO₂ emissions due to the use of fossil fuels

As demonstrated above, $BE_{FC,b}$ is determined as 0. And according to the applied methodology, if project emissions from this source are larger than baseline emissions, the project proponent must account for this source of project emissions. Due to the baseline is 0, and via the PRA report^{/PRA/}, it is confirmed that project emissions from the use of fossil fuels are larger than baseline emission, hence the following equation is applied to calculate CO₂ emissions from consumption of fossil fuels for management practices implemented as part of the project.

$$PE_{FC,t} = \frac{\sum_{p=1}^P \sum_{j=1}^J \sum_{k=1}^K FC_{p,j,k,t} \times EF_{CO_2,k} \times NCV_k}{1000} \quad (23)$$

Where:

$FC_{p,j,k,t}$	=	Fuel consumption by fuel type k, by machine type j, on grassland parcel p, in year t (kg fuel/year)
$EF_{CO_2,k}$	=	CO ₂ emission factor by fuel type k (t CO ₂ /GJ).
NCV_k	=	Thermal value of fuel type k (GJ/t fuel)
1000	=	Conversion factor for tonnes fuel to kg fuel
K	=	Index of fuel type
J	=	Index of machine type
P	=	Index of grassland parcel

7) Project removals from woody perennials

For this project activity, via checking the Project Design Report^{/PDR/}, it is confirmed that project planted grass on the black soil beach, and no woody plants were planted, hence $PRWP_t$ is zero.

8) Project removals due to changes in soil organic carbon

Via checking the applied methodology, PP has chosen the method of direct measurements of SOC (Option 2). As per the requests from applied methodology, for measuring soil organic carbon stock changes, soil sampling must follow a scientifically established method (eg, methods described in Carter and Gregoroch, 2006), or a nationally-approved standard. Technical Specification for Soil Environmental Monitoring (HJ/T 166-2004)^{/TSS/} and Method for Determination of Soil Organic Matter (NY/T 1121.6-2006)^{/MDS/} are used to measure SOC of the soil samples, both the standards are verified as nationally-approved standards.

As per the requests from applied methodology, sampling procedures are designed such that the statistical significance of soil carbon stock changes between the baseline carbon stock and the carbon stock in time t can be determined with a 95 percent confidence interval. The Guidelines for sampling and surveys for CDM project activities and programmes of activities (version 04.0)^{/GSS/} should be followed to determine the sampling procedure and sample size.

The SOC stock in stratum s , sampling site i , under project in year t are calculated using the following:

$$P_{SOC_{mG,s,i,t}} = SOC_{mG,s,i,t} \times BD_{mG,s,i,t} \times Depth \times (1 - FC_{mG,s,i,t}) \times 0.1 \quad (24)$$

Where:

$P_{SOC_{mG,s,i,t}}$	=	SOC stock in the top 30 cm (or greater depth if required) of soil for management practice mG , stratum s , sampling site i under project in year t (t C/ha)
$SOC_{mG,s,i,t}$	=	SOC content in the top 30 cm of soil (or greater depth if required) for management practice mG , stratum s , sampling site i , under project in year t (g C/kg soil)
$BD_{mG,s,i,t}$	=	Soil bulk density in the top 30 cm of soil (or greater depth if required) for management practice mG , stratum s , sampling site i , under project in year t (g soil/cm ³)
$Depth$	=	Top soil depth, for calculating grassland SOC stock in the top 30 cm of soil (or greater depth if required) (cm)
$FC_{mG,s,i,t}$	=	Percentage of rocks larger than 2mm, roots, and other dead residues with a diameter in the top 30 cm of soil (or greater depth if required), for management practice mG , stratum s , sampling site i under project in year t (percent)
0.1	=	Conversion factor for SOC to t C/ha
mG	=	Index of management practice
s	=	Index of stratum
i	=	Index of sampling site

Calculate average carbon stock of all monitored sites in management practice mG , stratum s , under project using the following:

$$P_{SOC_{mG,s,t}} = \frac{\sum_{i=1}^I P_{SOC_{mG,s,i,t}}}{I} \quad (25)$$

Where:

$P_{SOC_{mG,s,t}}$	=	Average carbon stock in stratum s under project (t C/ha)
$P_{SOC_{mG,s,i,t}}$	=	SOC stock in the top 30 cm (or greater depth if required) of soil for management practice mG , stratum s , sampling site i under project in year t (t C/ha)
I	=	Monitored sites in stratum s , under project

The following is used to calculate the difference between the carbon stock for management practice mG under project in year t , and the carbon stock under the baseline scenario, for all strata.

$$P_{mG,t} = \sum_{s=1}^S (P_{SOC_{mG,s,t}} - SOC_{s,Baseline}) \times PA_{mG,s,t} \quad (26)$$

Where:

$P_{mG,t}$	=	Difference in the carbon stock between the project in year t and the baseline scenario (t C)
$PA_{mG,s,t}$	=	Project areas with management practice mG in stratum s in year t (ha)
$P_{SOC_{mG,s,t}}$	=	Average carbon stock in stratum s under project in year t (t C / ha)
$SOC_{s,Baseline}$	=	Baseline SOC stock of stratum s, in the top 30 cm soil layer (or greater depth if required) (t C / ha)
S	=	Strata under project
s	=	Index of stratum

The following is applied to calculate average carbon stock of all management practice, under project in year t.

$$P_t = \sum_{mG=1}^M P_{mG,t} \quad (27)$$

Where:

P_t	=	Carbon stock under project in year t (t C)
M	=	Number of management practice

For the first monitoring of SOC stock, the annual project removals due to changes in SOC stock in year t must be calculated using the following:

$$PR_t = \frac{(P_t)}{n} \times \frac{44}{12} \quad (28)$$

Where:

PR_t	=	Project removals due to changes in SOC in year t (t CO ₂ e)
n	=	Number of years from the project start date to year t (years)

For the second and subsequent monitoring of SOC stock, the annual project removals due to changes in SOC stock in year t must be calculated using the following:

$$PR_t = \frac{(P_t - P_{t-f})}{f} \times \frac{44}{12} \quad (29)$$

Where:

PR_t	=	Project removals due to changes in SOC in year t (t CO ₂ e)
P_t	=	Carbon stock under project in year t (t C)

P_{t-f} = Carbon stock under project in year t-f (t C)

f = SOC monitoring frequency (years)

9) Uncertainty analysis

All parameters are selected according to section 9.1 and 9.2 of the methodology (VM0026, Version 1.0), and SOC data are obtained by laboratory tests.

For estimate of baseline carbon sequestration by carbon pools, the project proponent conducted a survey of all grazing agents whose livestock grazed in the project area prior to the project start date^{/BSR/}. This survey covered a full census of project participants and project non-participants whose livestock graze in the project area during the baseline period (covering the one year prior to the project start date) covered by the survey, and collected grazing data in the project area under the baseline scenario, such as the number and days of grazing, etc.. Also, the project proponent and the county forestry and grassland bureau recorded all the diesel oil consumed by the project. So the parameters about grazing and diesel oil consumption are conservative, and the uncertainty is considered to be 0.

For estimate of project emissions by GHG sources, as mentioned before, the project use Option 2 (measurement approach) to estimate project removals due to changes in SOC, the measured SOC changes is derived from sample surveys undertaken within the project area, and the sample size is large, therefore a conservative estimate of carbon sequestration by carbon pools in the project scenario should be given by adopting a value that represents the lower bound of the 95 percent confidence interval (sample mean - 1.96 × standard error) in line with the applied methodology (VM0026, Version 1.0).

However, for the ex-ante estimation in this PD, the SOC changes in project scenario is based on the literature sources^{/ESC/}, therefore the uncertainty is considered to be zero. And the confidence interval will be adopted in the following verification.

10) Project emissions and removals

Project net GHG emissions by sources and removals by sinks are calculated by:

$$PE_t = PE_{N_2O_{SN},t} + PE_{N_2O_{NF},t} + PE_{GHG_{BB},t} + PE_{CH_4_{EF},t} + PE_{GHG_{MD},t} + PE_{FC,t} - PRWP_t - PR_t \quad (30)$$

Where:

PE_t = Project net GHG emissions by sources and removals by sinks in year t (t CO₂e)

$PE_{N_2O_{SN},t}$ = Project N₂O emissions due to fertilizer use in year t (t CO₂e)

$PE_{N_2O_{NF},t}$ = Project N₂O emissions as a result of N-fixing species within the project area in year t (t CO₂e)

$PE_{GHG_{BB},t}$ = Project GHG emissions from biomass burning in year t (t CO₂e)

$PE_{CH_4_{EF},t}$ = Project CH₄ emissions from enteric fermentation in year t (t CO₂e)

- $PE_{GHG_{MD},t}$ = Project GHG emissions from manure management in year t (t CO₂e)
 $PE_{FC,t}$ = Project CO₂ emissions from farming machine fossil fuel consumption in year t (t CO₂)
 $PRWP_t$ = Project average net change in carbon stocks of existing woody biomass in year t (t CO₂)
 PR_t = Project removals due to changes in SOC in year t (t CO₂e)

Hence, based on the above assessment for the actual situation of the project, it is confirmed that the Project net GHG emissions by sources and removals by sinks in year t for this project is calculated as below

$$\begin{aligned}
 PE_t &= PE_{N_2O_{SN},t} + PE_{CH_4EF,t} + PE_{GHG_{MD},t} + PE_{FC,t} - PR_t = \\
 &= \sum_{i=1}^I M_{SNI,t} \times NC_{SNI,p} \times (1 - Frac_{GAS,F}) \times EF_{Nfert} \times \frac{44}{28} + \sum_{i=1}^I (F_{SNI,t} \times Frac_{GAS,F}) \times EF_{4,SN} \times 44/28 \\
 &+ \frac{GWP_{CH_4} \times \sum_{l=1}^L P_{l,t} \times EF_l \times Days_{l,t}}{1000 \times 365} + \frac{P_{l,t} \times W_{l,p} \times Nex_l \times H_{l,t} \times Days_{l,t} \times (1 - Frac_{GAS,MD})}{1000_a \times 24 \times 1000_b} \\
 &\times EF_{3,PRP,CPP} \times \frac{44}{28} + \frac{P_{l,t} \times W_{l,p} \times Nex_l \times H_{l,t} \times Days_{l,t} \times (1 - Frac_{GAS,MD})}{1000_a \times 24 \times 1000_b} \times EF_{3,PRP,SO} \times \frac{44}{28} \\
 &+ \sum_{l=1}^L F_{MD,l,t} \times Frac_{GAS,MD} \times EF_{4,MD} \times \frac{44}{28} + \frac{GWP_{CH_4} \times \sum_{l=1}^L EF_{lM} \times P_{l,t} \times H_{l,t} \times Days_{l,t}}{1000 \times 365 \times 24} \\
 &+ \frac{\sum_{p=1}^P \sum_{j=1}^J \sum_{k=1}^K FC_{p,j,k,t} \times EF_{CO_2,k} \times NCV_k}{1000} + \\
 &\frac{(\sum_{mG=1}^M \sum_{s=1}^S (\frac{\sum_{i=1}^I SOC_{mG,s,i,t} \times BD_{mG,s,i,t} \times Depth \times (1 - FC_{mG,s,i,t}) \times 0.1}{I} - SOC_{s,Baseline}) \times PA_{mG,s,t})}{n} \\
 &\times \frac{44}{12}
 \end{aligned} \tag{31}$$

For calculation of PE_t , via checking the Participatory Rural Appraisal (PRA) Report^[PRA] and patrol records of grassland guardian and local forestry and grass bureau^[PR], it is confirmed that the ex-ante data for parameters used in PE_t calculation is correct and reasonable, thus the project net GHG emissions by sources and removals by sinks calculation result of -17,650,445 tCO₂e for the crediting period in ER spreadsheet is correct.

CAR 26 and CL 11 were raised and successfully closed, Refer to Appendix 3 for details.

Leakage

According to the applied methodology, the only potential sources of leakage in this methodology are the following:

- 1) Market leakage due to reduction in the production of livestock products within the project boundary;

2) Displacement of grazing beyond the project boundary.

Hence, the leakage is estimated as follows:

$$LE_t = LE_{M,t} + LE_{GD,t} \quad (32)$$

Where:

- LE_t = Leakage emissions in year t (t CO₂e)
- $LE_{M,t}$ = Leakage emissions due to market leakage in year t (t CO₂e)
- $LE_{GD,t}$ = Leakage emissions due to grazing displacement in year t (t CO₂e)

a. $LE_{M,t}$

According to the methodology, Market leakage must be assessed and quantified using VCS Module “VMD0033 Estimation of Emissions from Market Leakage”^{/MEL/}. The result of applying the module is estimation of the parameter $LE_{M,t}$.

Via checking the project design report^{/PDR/} and via on-site inspection, it is confirmed that the main production in the project area is cattle and sheep. And with the project implemented, the grazing was forbidden in the first five years after seeding and after that the controlled grazing will be allowed depending on the growth situation of the forage, and during the implementation period, the County Forestry and Grassland Bureau measures the grass yield of the surrounding grasslands in the project area and guides herders to graze in a reasonable area which has been confirmed by interview with local herders and officers. The project would not lead to a decrease in cattle and sheep, therefore, the market leakage is considered to be 0 tCO₂e, thus $LE_{M,t} = 0$.

b. $LE_{GD,t}$

According to the methodology, Leakage from displacement of grazing activities to outside the project boundary must be assessed and quantified using VCS module *VMD0040 Leakage from Displacement of Grazing Activities*. The result of applying that module is estimation of the parameter $LE_{GD,t}$.

Hence, as per the VCS module *VMD0040, version 1.0*, below steps are used for Assessment of Grazing Displacement,

Step 1. Assess whether Grazing Displacement Takes Place

Via checking the Baseline Survey Report^{/BSR/} and Project Design Report^{/PDR/} and on-site interview with the local officers^{/12/} and herders^{/13/}, it is confirmed that the local herders grazed in the project area under the baseline scenario, however with the project implemented, the grazing was forbidden in the first five years after seeding and after that the controlled grazing will be allowed depending on the growth situation of the forage. So it is verified that grazing displacement takes place in the project, then proceed to next step.

Step 2. Survey of Grazing Displacement and Relocation Plans

Via checking the Survey of Grazing Displacement and Relocation Plans^{/SGD/}, it is confirmed that the survey was conducted in line with the requirements of the module as below assessment,

- i. The survey included all grazing agents whose livestock grazed in the project area prior to the project start date,

- ii. The period covered by this survey is consistent with the baseline period used to quantify baseline emissions within the project area, i.e. covering the one year prior to the project start date
- iii. The survey covered a full census or representative sample of project participants and project non-participants whose livestock graze in the project area during the baseline period covered by the survey. Where sample surveys are used, sampling approaches must enable estimation of the sample mean within a 95 percent confidence interval to a precision of 15 percent.
- iv. The survey quantified the number and type of livestock and the duration of each year that these livestock graze in the project area for both types of grazing agent.
- v. The survey collected data on the number and type of livestock, and duration, that livestock under the control of project participants graze outside the project area during the period covered by the survey.
- vi. The survey collected information on intended location of grazing after implementation of the project for both types of grazing agent

Via checking the Survey of Grazing Displacement and Relocation Plans^{/SGD/} for this project, it is confirmed that the survey showed that the project participants stocked 267,585 cattle and 133,794 sheep in the project area, grazing for about 10 days every year and 12 hours every day. And project non-participants would not graze in the project area both under the baseline scenario and the project scenario.

Furthermore, via the Survey of Grazing Displacement and Relocation Plans^{/SGD/} for this project, it is verified that the County Forestry and Grassland Bureau has measured the grass yield of the grassland around the project area, and calculated the reasonable grazing quantity, designated a grazing area of 2,474,533.33 hectares. Via interview with local officers and grassland guardians, it is confirmed that the project participants will only graze in the designated area under the guidance of the County Forestry and Grassland Bureau and grassland guardians after first five years implementation. And during the grazing period, the specific land parcels available for use by project participants may change from year to year, based on the actual situation of grassland, such as grass yield as measured results by survey.

Step 3. Prepare a Grazing Displacement Management Plan

Via checking the Grazing Displacement Management Plan^{/GDMP/}, it is confirmed that the Grazing Displacement Management Plan was prepared in line with the requirements of the module as below assessment,

- a. The plan records planned grazing activities for all livestock that are to be relocated to lands outside the project area and that are under the control of project participants.
- b. The plan records planned grazing activities for livestock under the control of agents who are not project participants but whose livestock grazed inside the project area in the baseline and whose livestock will not graze inside the project area after project implementation begins.
- c. Where grazing plans for project non-participants are not available, the future location of grazing must be listed as unidentified.
- d. The plan has record for the more than 4 years after the project start date including the following data:
 - The identity of each grazing agent;

- The number and type of livestock to be relocated
- The number of days each year which they will graze outside the project area (measured in days, or the whole year if appropriate);
- The location and area in hectares of each land parcel to which grazing will be relocated;
- A unique identifier code (where applicable) for each land parcel to which grazing will be relocated;
- The type of land (grassland, forest land, cropland) of each parcel to which grazing will be relocated, and where appropriate note the status (eg, degradation level) of the lands to which grazing will be relocated; and
- Any planned actions to avoid loss of above- or belowground carbon pools on the land parcels to which grazing will be relocated.

Via checking the annual grass yield measurement results^{/GYMR/}, it is confirmed that County Forestry and Grassland Bureau measured the grass yield of the grassland around the project area and calculated the reasonable grazing quantity once every year. Via interview with local officers and grassland guardians, it is confirmed that the project participants will only graze in the designated area under the guidance of the County Forestry and Grassland Bureau and grassland guardians after first five years implementation. And during the grazing period, the specific land parcels available for use by project participants may change from year to year, based on the actual situation of grassland, such as grass yield as measured results by survey. And via checking the Grazing Displacement Management Plan^{/GDMP/}, it is confirmed that the plan record the number and type of livestock to be relocated and the type of land (grassland, forest land, cropland) to which grazing is planned to be displaced. In this case, the type of land to which grazing may be displaced must be categorized as unidentified grassland.

Via checking the Survey of Grazing Displacement and Relocation Plans^{/SGD/}, it is confirmed that all grazing agents were interviewed, and collected the information of the number and type of livestock to be relocated, and due to grazing was strictly forbidden in the first five years after seeding, some herders maybe affected by the project, but these heders have been provided by job opportunities^{/LC/} and payment^{/PP/}, which will increase their income in long term, thus finally herders in the project area can receive corresponding subsidies. All the impacted herders agree with the method of receiving related subsidies which has been confirmed by site interview with representatives from local herders^{/I3/}.

Step 4. Determine whether Lands to which Livestock are Displaced are Identified or Unidentified

Via checking the Grazing Displacement Management Plan^{/GDMP/}, it is confirmed that the grazing displacement management plan does not record the geographic location to which livestock under the control of project participants were relocated. Besides, the process of identifying the specific land areas to which livestock will be relocated would be not feasible at reasonable cost (because project non-participants are scattered over wide distances and not contactable at reasonable cost). So, the land to which livestock grazing activity is displaced should be categorized as unidentified.

Hence, for unidentified land, assessment procedures mandate the use of conservative assumptions that do not underestimate the effects of grazing displacement on carbon stocks in unidentified lands, and in the case of land that remains unidentified after monitoring begins, conservative assumptions that do not underestimate leakage emissions caused by grazing displacement must also be used.

Step 5. Define the Type of Land to which Grazing will be Relocated

Via checking the public information of Guoluo Tibetan Autonomous Prefecture from local government^{/lg/} comparing with the satellite images^{/SI/}, it is confirmed that Guoluo Tibetan Autonomous Prefecture covers an area of 76,000 square kilometers, and the available grassland area is 6.2552 million ha, accounting for 82.3% of the total area, and the area of forest land and cropland are confirmed as small. Furthermore, via the Survey of Grazing Displacement and Relocation Plans^{/SGD/} for this project, it is verified that the County Forestry and Grassland Bureau has measured the grass yield of the grassland around the project area, and calculated the reasonable grazing quantity, designated a grazing area of 2,474,533.33 hectares. Via interview with local officers and grassland guardians, it is confirmed that the project participants will only graze in the designated area under the guidance of the County Forestry and Grassland Bureau and grassland guardians after first five years implementation. And during the grazing period, the specific land parcels available for use by project participants may change from year to year, based on the actual situation of grassland, such as grass yield as measured results by survey

Therefore, the unidentified landse categorized as unidentified grassland is verified as correct.

Estimation of Leakage Emissions

As per the applied Module, for all land parcels that are unidentified grassland, quantification of emissions must follow the procedures outlined in below Section 1.

1. Estimation of Leakage Emissions due to Displacement of Livestock Grazing to Identified Grasslands

Estimation of leakage emissions due to grazing displacement to unidentified grasslands must be made using the procedures outlined below,

Step 1: Estimate the area of grassland needed to sustain the population of livestock relocated to unidentified grasslands

The total area of unidentified grassland required to sustain the population of livestock relocated to unidentified grassland is to be calculated as:

$$Area_{GUI,t} = \frac{DMI_{GUI,t}}{ANPP_{GUI,REF}} \quad (33)$$

$$DMI_{GUI,t} = \sum_{l=1}^L \left(\frac{DMI_{day,l} \times P_{GUI,l,t}}{1000} \right) \times Days_{GUI,l,t} \quad (34)$$

Where:

$Area_{GUI,t}$	=	Area required to sustain the population of livestock displaced to unidentified grasslands in year t (ha)
$DMI_{GUI,t}$	=	Dry matter intake required to sustain the total number of livestock of all types l relocated to unidentified grasslands in year t (t dm)
$ANPP_{GUI,REF}$	=	Aboveground net primary productivity in the reference region that is the likely location of unidentified grasslands to which livestock are relocated (t dm/ha)
$DMI_{day,l}$	=	Daily dry matter intake requirement of each type of livestock l (kg dm/(head*day))
$P_{GUI,l,t}$	=	Population of livestock of each type relocated to unidentified grasslands in year t (head)
$Days_{GUI,l,t}$	=	Days that the population of each type of relocated livestock of type l graze in unidentified grassland in year t (days)

Step 2: Assess the risk of soil carbon loss due to overgrazing in unidentified grasslands

Via checking the ER sheet^[XLS], it is confirmed that based on the above step 1, the calculated result of total area of unidentified grassland required to sustain the population of livestock relocated to unidentified grassland is 11,152 ha, while the available grassland area is 6.2552 million ha in Guoluo Tibetan Autonomous Prefecture, which is much higher than the displacement area, therefore, it is confirmed that the grazing displacement will not lead to consumption exceeding 50 percent of available biomass, thus leakage due to soil carbon loss does not need to be accounted for as per the applied Module.

Step 3: Estimate emissions from livestock displacement to unidentified grasslands

Step 3a: Estimate methane emissions from enteric fermentation by livestock displaced to unidentified grasslands

Calculate the leakage emissions due to enteric fermentation by livestock displaced to all unidentified grasslands outside the project area using:

$$LE_{GUI,CH_4EF,t} = \frac{\sum_{l=1}^L P_{GUI,l,t} \times EF_l \times Days_{GUI,l,t} \times GWP_{CH_4}}{1000 \times 365} \quad (35)$$

Where:

- $LE_{GUI,CH_4EF,t}$ = Leakage emissions in year t from enteric fermentation by livestock displaced to unidentified grasslands (t CO₂e)
- $P_{GUI,l,t}$ = Population of grazing livestock type l in year t displaced outside the project area to unidentified grasslands (head)
- $Days_{GUI,l,t}$ = Days in year t that livestock of each type l grazes on unidentified grassland (days)
- GWP_{CH_4} = Global-warming potential of CH₄ (t CO₂e/t CH₄)
- EF_l = Enteric CH₄ emission factor per head of livestock type l per year (kg CH₄/(ha*year))
- l = Index of grazing livestock types

Step 3b: Estimate GHG emissions from manure management

Calculate the N₂O and CH₄ leakage emissions due to manure deposition on grassland caused by relocating the livestock to unidentified grasslands outside the project area using:

$$LE_{GUIMD,t} = LE_{GUI,N_2O MD,t} + LE_{GUI,CH_4 MD,t} \quad (36)$$

Where:

- $LE_{GUIMD,t}$ = Leakage emissions from manure and urine deposited on unidentified grassland in year t (t CO₂e)
- $LE_{GUI,N_2O MD,t}$ = Leakage N₂O emissions from manure and urine deposited on unidentified grasslands in year t (t CO₂e)
- $LE_{GUI,CH_4 MD,t}$ = Leakage CH₄ emissions from manure and urine deposited on unidentified grasslands in year t (t CO₂e)

$LE_{GUI,N_2O MD,t}$ is calculated as the sum of direct N₂O emissions and indirect N₂O emissions using:

$$LE_{GUI,N_2O MD,t} = GWP_{N_2O} \times (LE_{GUI,D,N_2O MD,t} + LE_{GUI,ID,N_2O MD,t}) \quad (37)$$

Where:

$$\begin{aligned}
 LE_{GUI,N2O_{MD},t} &= \text{Leakage } N_2O \text{ emission from manure and urine deposited on unidentified grasslands in year } t \text{ (t CO}_2\text{e)} \\
 GWP_{N2O} &= \text{Global-warming potential of } N_2O \text{ (t CO}_2\text{e/t } N_2O) \\
 LE_{GUI_{D,N2O_{MD},t} &= \text{Leakage direct } N_2O \text{ emissions from manure and urine deposited on unidentified grasslands in year } t \text{ (t } N_2O) \\
 LE_{GUI_{ID,N2O_{MD},t} &= \text{Leakage indirect } N_2O \text{ emissions from manure and urine deposited on unidentified grasslands in year } t \text{ (t } N_2O)
 \end{aligned}$$

Leakage direct N_2O emission from manure and urine deposited on unidentified grasslands ($LE_{GUI_{D,N2O_{MD},t}$) is calculated using:

$$LE_{GUI_{D,N2O_{MD},t} = \sum_{l1=1}^{L1} F_{MD,GUI,t,l1} \times EF_{3,PRP,CPP} \times \frac{44}{28} \quad (38)$$

And/or

$$LE_{GUI_{D,N2O_{MD},t} = \sum_{l2=1}^{L2} F_{MD,GUI,t,l2} \times EF_{3,PRP,SO} \times \frac{44}{28} \quad (39)$$

Where:

$$\begin{aligned}
 LE_{GUI_{D,N2O_{MD},t} &= \text{Leakage direct } N_2O \text{ emissions from manure and urine deposited on unidentified grasslands in year } t \text{ (t } N_2O) \\
 F_{MD,GUI,t,l1} &= \text{Annual amount of nitrogen in cattle, poultry and pig manure and urine deposited on unidentified grasslands in year } t, \text{ adjusted for volatilization as } NH_3 \text{ and } NO_x \text{ (t N)} \\
 F_{MD,GUI,t,l2} &= \text{Annual amount of nitrogen in sheep and other animal manure and urine deposited on unidentified grasslands in year } t, \text{ adjusted for volatilization as } NH_3 \text{ and } NO_x \text{ (t N)} \\
 EF_{3,PRP,CPP} &= N_2O \text{ emission factor for cattle (dairy, non-dairy and buffalo), poultry and pigs manure and urine deposited on grasslands (kg } N_2O\text{-N/kg N input)} \\
 EF_{3,PRP,SO} &= N_2O \text{ emission factor for sheep and other animals manure and urine deposited on grasslands (kg } N_2O\text{-N/kg N input)}
 \end{aligned}$$

$$F_{MD,GUI,t,l} = \frac{P_{GUI,l,t} \times W_l \times Nex_l \times H_{GUI,l,t} \times Days_{GUI,l,t} \times (1 - Frac_{GAS,MD,l})}{1000_a \times 24 \times 1000_b} \quad (40)$$

Where:

$$\begin{aligned}
 F_{MD,GUI,t,l} &= \text{Annual amount of nitrogen in manure and urine deposited on unidentified grasslands by livestock type } l, \text{ adjusted for volatilization as } NH_3 \text{ and } NO_x \text{ (t N)} \\
 P_{GUI,l,t} &= \text{Population of grazing livestock type } l \text{ in year } t \text{ displaced outside the project area to unidentified grasslands (head)} \\
 W_l &= \text{Average weight of livestock } l \text{ displaced to unidentified grasslands (kg/head)} \\
 Nex_l &= \text{Nitrogen excretion from livestock type } l \text{ (kg N/(t animal mass*day))} \\
 1000_a &= \text{Conversion factor for nitrogen excretion (kg/t livestock mass) to nitrogen excretion (kg/kg livestock mass)}
 \end{aligned}$$

$H_{GUI,l,t}$	=	Average grazing hours per day during grazing season for livestock of each type l displaced to unidentified grassland in year t (hours)
24	=	Conversion day to hour
$Days_{GUI,l,t}$	=	Grazing days in year t for livestock type l displaced to unidentified grasslands (days)
1000_b	=	Conversion factor for kg to t
$Frac_{GAS,MD,l}$	=	Fraction of volatilization from manure and urine deposited by grazing animals as NH_3 and NO_x (kg N volatilized/kg of N deposited)
t	=	Year
l	=	Index of grazing livestock types

CH_4 emission from manure management due to displacement of livestock to unidentified grasslands is calculated using:

$$LE_{GUI,CH_4MD,t} = \frac{GWP_{CH_4} \times \sum_{l=1}^L EF_{l,m} \times P_{GUI,l,t} \times H_{GUI,l,t} \times Days_{GUI,l,t}}{24 \times 365 \times 1000} \quad (41)$$

Where:

$LE_{GUI,CH_4MD,t}$	=	Leakage CH_4 emissions from manure and urine deposited on unidentified grasslands in year t (t CO_2e)
GWP_{CH_4}	=	Global-warming potential of CH_4 (t CO_2e /t CH_4)
$EF_{l,m}$	=	CH_4 emission factor per head of livestock type l in manure management system m (kg CH_4 /(head*yr))
$P_{GUI,l,t}$	=	Population of livestock type l in year t displaced to unidentified grasslands (head)
$H_{GUI,l,t}$	=	Average grazing hours per day during grazing season for livestock of each type l displaced to unidentified grassland in year t (hours)
$Days_{GUI,l,t}$	=	Grazing days in year t for livestock type l displaced to unidentified grasslands (days)
1000	=	Conversion factor for kg to t

Step 4: Calculate total leakage emissions from relocation of grazing to unidentified grasslands

Total leakage emissions from relocation of grazing to unidentified grasslands must be calculated as:

$$LE_{GUI,t} = LE_{OG,GUI,t} + LE_{GUI,CH_4EF,t} + LE_{GUIMD,t} \quad (42)$$

Where:

$LE_{GUI,t}$	=	Leakage due to displacement of livestock to unidentified grasslands in year t (t CO_2e)
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- $LE_{OG,GUI,t}$ = Leakage due to soil carbon loss resulting from overgrazing due to displacement of livestock to unidentified grasslands in year t (t CO₂e)
- $LE_{GUI,CH_4EF,t}$ = Leakage due to enteric fermentation by livestock displaced to unidentified grasslands in year t (t CO₂e)
- $LE_{GUIMD,t}$ = Leakage due to N₂O and CH₄ emissions in manure and urine deposited on grasslands by livestock displaced to unidentified grasslands in year t (t CO₂e)

For this project, based on the above calculation process of the Leakage, the formular for Leakage due to displacement of livestock to unidentified grasslands in year t is

$$LE_t = LE_{GD,t} = LE_{GUI,t} = LE_{GUI,CH_4EF,t} + LE_{GUIMD,t} = \quad (43)$$

$$\frac{\sum_{l=1}^L P_{GUI,l,t} \times EF_l \times Days_{GUI,l,t} \times GWP_{CH_4}}{1000 \times 365} + GWP_{N_2O} \times$$

$$\left(\frac{P_{GUI,l,t} \times W_l \times Nex_l \times H_{GUI,l,t} \times Days_{GUI,l,t} \times (1 - Frac_{GAS,MD,l})}{1000_a \times 24 \times 1000_b} \times EF_{3,PRP,CP} \times \frac{44}{28} + \right.$$

$$\left. \frac{P_{GUI,l,t} \times W_l \times Nex_l \times H_{GUI,l,t} \times Days_{GUI,l,t} \times (1 - Frac_{GAS,MD,l})}{1000_a \times 24 \times 1000_b} EF_{3,PRP,SO} \times \frac{44}{28} \right) +$$

$$\frac{GWP_{CH_4} \times \sum_{l=1}^L EF_{l,m} \times P_{GUI,l,t} \times H_{GUI,l,t} \times Days_{GUI,l,t}}{24 \times 365 \times 1000}$$

Based on the above calculation formular of the Leakage, based on the data source of Survey of Grazing Displacement and Relocation Plans^{/SGD/}, Grazing Displacement Management Plan^{/GDMP/} and annual grass yield measurement results^{/GYMR/}, furthermore, via checking the ER spreadsheet^{/XLS/}, it is confirmed that the ex ante Leakage calculation result is correct and reasonable, thus the leakage emissions calculation result of 433,330 tCO₂e in ER spreadsheet is correct.

CAR 27, CAR 28 and CAR 29 were raised and successfully closed, Refer to Appendix 3 for details

Net GHG Emission Reduction and Removals

According the applied methodology, the amount of net emission reductions and removals achieved by the project in project year t must be calculated as follows:

$$ER_t = BE_b - PE_t - LE_t \quad (44)$$

Where:

- ER_t = Emission reductions in year t (t CO₂e)
- BE_b = Baseline emissions and removals in year b (t CO₂e)
- PE_t = Project emissions and removals in year t (t CO₂e)
- LE_t = Leakage emissions in year t (t CO₂e)

For the ex-ante determination on baseline emissions, project emissions and leakage emissions, based on the above assessment it is confirmed that the baseline emissions and project emissions, leakage emissions are all calculated based on the applied methodology and Module.

The estimates on the expected amount of emission reductions and removals which are likely to be achieved by the envisioned SGM under the project scenario are in compliance with the applied VCS methodology, VMD and with the respective VCS requirements.

Data and parameter applied for the calculation of net emission reductions and removals are listed in the PD and ER calculation sheets^{/XLS/}, the data and respective sources were reviewed by the validation team and found in compliance with requirements of the methodology. Over the crediting period of 40 years, total net emission reductions and removals of **17,664,275 tCO₂e** are expected.

All calculations are in compliance with the applied VCS methodology. The steps of the calculations are fully traceable and adequate for the project conditions. In summary, the calculations for net emission reductions and removals 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.

3.3.8 Monitoring Plan

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

The following data and parameters have been available at validation:

No.	Data/Parameter	Unit	Description	Determination method
1.	GWP _{N₂O}	t CO ₂ e/t N ₂ O	Global-warming potential for N ₂ O	Value of 265 tCO ₂ e/tN ₂ O derived from IPCC fifth assessment ^{/AR5/} is used as Global-warming potential for N ₂ O, which are confirmed as in line with the section 3.14.4 requirement in VCS standard version 4.1 ^{/VCS/} .
2.	EF _{Nfert}	kgN ₂ O-N/kg N applied	N ₂ O emission factor for synthetic N fertilizer use	IPCC default value 0.01 from 2006 IPCC Guidelines for National Greenhouse Gas Inventories ^{/IPCC/}
3.	Frac _{GAS,F}	kg N volatilized/kg N applied	Fraction of synthetic N fertilizer that volatilizes as NH ₃ and NO _x	IPCC default value 0.1 from 2006 IPCC Guidelines for National Greenhouse Gas Inventories ^{/IPCC/}

4.	EF _{4,SN}	kg N ₂ O-N/(kg NH ₃ -N + NO _x -N volatilized)	N ₂ O emission factor for atmospheric deposition of synthetic N on soils and water surfaces	IPCC default value 0.01 from 2006 IPCC Guidelines for National Greenhouse Gas Inventories ^{/IPCC/}
5.	EF _{4,MD}	kg N ₂ O-N/(kg NH ₃ -N + NO _x -N volatilized)	N ₂ O emission factor for atmospheric deposition of urine and manure N on soils and water surfaces	IPCC default value 0.01 from 2006 IPCC Guidelines for National Greenhouse Gas Inventories ^{/IPCC/}
6.	GWP _{CH₄}	t CO ₂ e/t CH ₄	Global-warming potential for CH ₄	Value of 28 tCO ₂ e/t CH ₄ derived from IPCC fifth assessment ^{/AR5/} , which are confirmed as in line with the section 3.14.4 requirement in VCS standard version 4.1 ^{/VCS/} .
7.	P _{I,b}	Dimensionless	Population of grazing livestock type I, in baseline year b	Cattle: 267,582 Sheep: 133,791 The values are derived from the PRA report ^{/PRA/} , which is in line with the requirement of the applied methodology.
8.	EF _I	kg CH ₄ /(head * year)	Enteric CH ₄ emission factor per head of livestock type I per year	Dairy cattle: 68 Cattle: 47 Sheep: 5 Default values from 2006 IPCC Guidelines for National Greenhouse Gas Inventories ^{/IPCC/}
9.	EF _{3,PRP,PPP}	kg N ₂ O-N/kg N input	N ₂ O emission factor for cattle (dairy, non-dairy and buffalo), poultry and pigs manure and urine deposited on of applied to grassland	IPCC default value 0.02 from 2006 IPCC Guidelines for National Greenhouse Gas Inventories ^{/IPCC/}
10.	EF _{3,PRP,SO}	kg N ₂ O-N/kg N input	N ₂ O emission factor for sheep and other animals manure and urine deposited on of applied to grassland	IPCC default value 0.01 from 2006 IPCC Guidelines for National Greenhouse Gas Inventories ^{/IPCC/}
11.	N _{exl}	kg N deposited/(t	Nitrogen excretion of livestock type I	Dairy Cattle: 0.47

		livestock mass * day)		Cattle: 0.34 Sheep: 1.17 Goats: 1.37 Default values from 2006 IPCC Guidelines for National Greenhouse Gas Inventories ^{//IPCC/}
12.	$W_{l,b}$	kg	Average weight of livestock l, in baseline year b	Cattle: 300 Sheep: 45 The values are derived from the Local expert judgment which is reported in PRA report ^{/PRA/} , this is in line with the requirement of the applied methodology.
13.	$W_{l,p}$	kg	Average weight of livestock under project	Cattle: 300 Sheep: 45 The values are derived from the Local expert judgment which is reported in PRA report ^{/PRA/} , this is in line with the requirement of the applied methodology.
14.	$Days_{l,b}$	Days	Grazing days for livestock type l in baseline year b	Value of 10 is derived from Survey of Grazing Displacement and Relocation Plans ^{/SGDI/} , this is in line with the requirement of the applied methodology.
15.	$H_{l,b}$	Hours	Average grazing hours for livestock type l per day during the grazing season in baseline year b	Value of 12 is derived from Survey of Grazing Displacement and Relocation Plans ^{/SGDI/} , this is in line with the requirement of the applied methodology.
16.	$Frac_{GAS,MD}$	kg N volatilized/kg of N deposited	Fraction of volatilization from manure and urine deposited by grazing animals as NH_3 and NO_x	Dairy Cow: 30% Cattle: 45% Sheep/goats: 12% Default values from 2006 IPCC Guidelines for National Greenhouse Gas Inventories ^{//IPCC/}

17.	EF _{I,M}	kg CH ₄ /(head * year)	CH ₄ emission factor from manure of livestock type I	Dairy Cows: 9 Other cattle: 1 Sheep: 0.10 Goats: 0.11 Default values from 2006 IPCC Guidelines for National Greenhouse Gas Inventories^{//IPCC/}
18.	EF _{CO₂,k}	t CO ₂ /GJ	CO ₂ emission factor by fuel type k	Gasoline: 0.0693 Diesel: 0.0741 Default values from 2006 IPCC Guidelines for National Greenhouse Gas Inventories^{//IPCC/}
19.	NCV _k	GJ/t fuel	Thermal value of fuel type k	Gasoline: 44.3 Diesel: 43.0 Default values from 2006 IPCC Guidelines for National Greenhouse Gas Inventories^{//IPCC/}
20.	SOC _{s,Baseline}	t C/ha	Baseline SOC stock in the top 30 cm of soil layer (or greater depth if required) in stratum s	Refer ER calculation sheets for values used. Option 2 was selected by PP to be applied to estimate project removals due to changes in SOC, and the procedures of Section 8.2.8 in VM0026 were followed. The values are derived from Laboratory test data report^{LTD/} and the test was conducted from September to October in 2015 which is less than two years prior to the project start time, and via checking the Laboratory test data report^{LTD/}, it is verified that the organic carbon, bulk density and sand-gravel ratio (percentage of rocks larger than 2mm, roots, and other dead residues with a diameter in the top 30 cm of soil) of 223 soil samples were measured in the Soil Science

				Laboratory of Beijing Forestry University. The nationally-approved standard Method for Determination of Soil Organic Matter (NY/T 1121.6-2006)^{/MDS/} was used to measure SOC of the soil samples, thus procedures of Section 8.2.8 in VM0026 were follow and the General Guidelines for Sampling and Surveys for Small-Scale CDM Project Activities^{/GSS/} has been followed to determine the soil sampling procedures and the sample size.
21.	DMI _{day,l}	kg dm/(head*day)	Daily dry matter intake requirement of each type of livestock l	Sheep: 1.38 Cattle: 5.52 Default values from National standards “The notice on standardizing and unifying the statistics of grassland carrying capacity data, which was issued by the Qinghai Provincial Department of Agriculture and Animal Husbandry”^{/NSU/}
22.	ANPP _{GUI,REF}	t dm/ha	Aboveground net primary productivity in the reference region that is the likely location of unidentified grasslands to which livestock are relocated	Value of 1.49 derived from Peer-reviewed studies of “Yang Y, Wang J, Liu P, et al. Climatic Changes Dominant Interannual Trend in Net Primary Productivity of Alpine Vulnerable Ecosystems[J]. Journal of Resources and Ecology, 2019, 10(4):379-387” ^{/PRS/}
23.	H _{GUI,l,t}	Hours	Average grazing hours per day during grazing season for livestock of each type l displaced to unidentified grassland in year t	Value of 12 derived from full census survey conducted by the project proponent and county forestry and grassland bureau ^{/FCS/}

CAR 30 was raised and successfully closed, Refer to Appendix 3 for details.

The following data and parameters will be monitored in accordance with the applied methodology VM0026 and VMD0040:

No.	Data/Parameter	Unit	Description	Determination method
1.	$MS_{Ni,t}$	t fertilizer	Mass of synthetic N fertilizer type i applied in year t	Monitoring value will be derived from project records. Monitoring frequency is each application of fertilizer during year t. Guidance provided in IPCC, 2003 chapter 5 or IPCC, 2000 chapter 8 is applied. Record how many bags of fertilizer are consumed, each bag of fertilizer is 50 kg. For ex ante estimation, the value is from Project Design Report^{/PDR/}.
2.	$NC_{S_{Ni,p}}$	g N/g fertilizer	Nitrogen content of synthetic N fertilizer type i applied under project	Monitoring value will be derived from manufacturer product label. Monitoring frequency is each application of fertilizer during year t. Guidance provided in IPCC, 2003 chapter 5 or IPCC, 2000 chapter 8 is applied. For ex ante estimation, the values are as below, derived from manufacturer product label^{/MPL/}. <i>Diammonium phosphate: 0.18</i> <i>Urea: 0.462</i>
3.	$P_{l,t}$	Head	Population of livestock type l under project in year t	Monitoring value will be derived from project records. Monitoring frequency is annually. Guidance provided in IPCC, 2003 chapter 5 or IPCC, 2000 chapter 8 is applied. The project proponent and the County Forestry and Grassland Bureau visit all the project

				participants every year to investigate the situation of the project. For ex ante estimation, the value is from Grazing Displacement Management Plan/^{GDMP}.
4.	$H_{i,t}$	Hours	Average grazing hours per day of livestock type I during grazing season in year t	Monitoring value will be derived from project records. Monitoring frequency is annually. Guidance provided in IPCC, 2003 chapter 5 or IPCC, 2000 chapter 8 is applied. The project proponent and the County Forestry and Grassland Bureau visit all the project participants every year to investigate the situation of the project. For ex ante estimation, the value is from Grazing Displacement Management Plan/^{GDMP}.
5.	$Days_{i,t}$	Days	Grazing days of livestock I in year t under project	Monitoring value will be derived from project records. Monitoring frequency is annually. Guidance provided in IPCC, 2003 chapter 5 or IPCC, 2000 chapter 8 is applied. The project proponent and the County Forestry and Grassland Bureau visit all the project participants every year to investigate the situation of the project. For ex ante estimation, the value is from Grazing Displacement Management Plan/^{GDMP}.
6.	$FC_{p,j,k,t}$	Kg fuel	Fuel consumption by type k , machine type j , parcel grassland p , in year t under project	Monitoring value will be derived from project records.

				Monitoring frequency is recording fuel consumption just after the application of machine Guidance provided in IPCC, 2003 chapter 5 or IPCC, 2000 chapter 8 is applied. The project proponent will record the fuel consumption values. For ex ante estimation, the value is from Project Design Report^{PDR/}.
7.	$PA_{mG,s,i,t}$	ha	Project areas of grassland with management practice mG in stratum s in year t	Monitoring value will be derived from project records. Monitoring frequency is recording the area and management practice just after the management practice has taken place and report annually. Guidance provided in IPCC, 2003 chapter 5 or IPCC, 2000 chapter 8 is applied. The project proponent will record the area and management practice just after the management practice. For ex ante estimation, the value is from Project Design Report^{PDR/}.
8.	$SOC_{mG,s,i,t}$	g C/kg soil	SOC stock in the top 30 cm of soil (or greater depth if required) for management practice mG , stratum s (or greater depth if desired), sampling site i	Monitoring value will be derived from project records. Monitoring frequency is at least once every five years, at the end of growing season in the ear measured, until the end of the project crediting period. Guidance provided in Section 8.2.8 of VM0026 is applied and the Method for determination of soil organic matter (NY/T 1121.6-2006)^{MDS/} which is used in China as National standard for measuring the soil organic matter of the soil samples and via

				checking this standard, it is confirmed that the requirement in the standard is almost same to the Section 8.2.8 of VM0026. The collection of soil samples for measuring SOC will be carried by suitably trained staff. The measurement of SOC will be carried out by a laboratory that can demonstrate adherence to the principles of good laboratory practices, outlined in OECD (1998). For ex ante estimation, the value of $SOC_{s,Baseline}$ were measured in the Soil Science Laboratory of Beijing Forestry University in Laboratory test data report^{/LTD/}. And the growth rate of SOC comes from previous study of Analysis of the change trend of various meteorological elements in Guoluo area in the past 36 years^{/ACT/}.
9.	BD _{mG,S,i,t}	g soil/cm ³	Soil bulk density in the top 30 cm of soil (or greater depth if required) for management practice mG, stratum s (or greater depth if desired), sampling site i	Monitoring value will be derived from project records. Monitoring frequency is at least once every five years, at the end of growing season in the ear measured, until the end of the project crediting period. Guidance provided in Section 8.2.8 of VM0026 is applied and the Method for determination of soil bulk density (NY/T 1121.4-2006)^{/MDSBD/} which is used in China as National standard for measuring the soil bulk density of the soil samples and via checking this standard, it is confirmed that the requirement in the standard is almost same to the Section 8.2.8 of VM0026.

				The collection of soil samples for measuring Soil bulk density will be carried by suitably trained staff. The measurement of Soil bulk density will be carried out by a laboratory that can demonstrate adherence to the principles of good laboratory practices, outlined in OECD (1998). For ex ante estimation, the value of $BD_{mG,s,i,t}$ were measured in the Soil Science Laboratory of Beijing Forestry University in Laboratory test data report^{/LTD/}. And the growth rate of SOC comes from previous study of Analysis of the change trend of various meteorological elements in Guoluo area in the past 36 years^{/ACT/}.
10.	$FC_{mG,s,i,t}$	Percent	Percentage of rocks with a diameter larger than 2mm, roots, and other dead residues in the top 30 cm of soil (or greater depth if desired), for management practice mG , stratum s , sampling site i	Monitoring value will be derived from project records. Monitoring frequency is at least once every five years, at the end of growing season in the ear measured, until the end of the project crediting period. Guidance provided in Section 8.2.8 of VM0026 is applied and due to there is no nationally recognized standard for measuring soil $FC_{mG,s,i,t}$, so previous research standard are used the Research progress on determination methods of gravel content in soil[J]. Soils, 2012,44(1):17-22^{/RPDMS/} which is used for measuring the Percentage of rocks and via checking this research, it is confirmed that the requirement in the standard is almost same to the Section 8.2.8 of VM0026.

				The collection of soil samples for measuring $FC_{mG,s,i,t}$ will be carried by suitably trained staff. The measurement of $FC_{mG,s,i,t}$ will be carried out by a laboratory that can demonstrate adherence to the principles of good laboratory practices, outlined in OECD (1998). For ex ante estimation, the value of $FC_{mG,s,i,t}$ was measured in the Soil Science Laboratory of Beijing Forestry University in Laboratory test data report^{LTD/}.
11.	Depth	cm	Total soil depth, for calculating grassland SOC stock in the top 30 cm of soil (or greater depth if required)	Monitoring value will be derived from project records. Monitoring frequency is recorded with each measurement taken. The value for soil depth must be consistent with the measurements taken. Soil properties must be measured to the full depth of affected soil layers. Where the full depth of affected soil layers is not known, a minimum depth of 30 cm must be applied. The project proponent will record with each measurement taken. For ex ante estimation, the value is 30cm which is the minimum depth as defined in the applied methodology.
12.	$P_{GUI,i,t}$	Head	Total population of livestock of each type relocated to unidentified grasslands in year t	Monitoring value will be derived from full census survey. Monitoring frequency is annually. The full census survey will be conducted by the project proponent and county forestry and grassland bureau.

				Guidance provided in IPCC, 2003 chapter 5 or IPCC, 2000 chapter 8 is applied. For ex ante estimation, the value is from full census survey^{/FCS/}.
13.	Day _{SGUI,t}	days	Days that the population of each type of relocated livestock of type I graze in unidentified grassland in year t	Monitoring value will be derived from full census survey. Monitoring frequency is annually. The full census survey will be conducted by the project proponent and county forestry and grassland bureau. Guidance provided in IPCC, 2003 chapter 5 or IPCC, 2000 chapter 8 is applied. For ex ante estimation, the value is from full census survey^{/FCS/}.

The validation team checked all parameters presented in the monitoring plan against the requirements of the methodology. For the monitoring of GHG removals by sinks the requirements and parameter list as per methodology were followed.

The monitoring plan was included to the project documentation.

The monitoring plan in section 3.3.3 is confirmed as designed according to the methodology and applicable tool, especially for the monitoring process, post-stratification and sampling approach.

In the applied methodology, the monitoring plan request to “include a statement of the purpose(s) of monitoring, and describe monitoring procedures adequate for obtaining, recording, compiling and analyzing data and information important for quantifying and reporting GHG emissions and/or removals relevant for the project (including leakage) and baseline scenario and for meeting any other stated purposes of monitoring. All data collected as part of monitoring must be archived electronically and be kept at least for two years after the end of the project crediting period”.

The PD is updated to be consistent with the requirement of the applied methodology and tool. The corresponding monitoring process has been described to monitor the boundary, check the applicability, monitor project implementation, sampling design and stratification, record the data and parameters monitored and calculate GHG removals by sinks including baseline emissions, project emissions and leakage emissions.

And the description of the boundary monitoring and sampling approach is confirmed as correct and complete via site inspection of the project against the methodology and tool of "Calculation of the number of sample plots for measurements within A/R CDM project activities (Version 02.1.0)". The procedures were reviewed by the validation team on paper and through interviews with the relevant personnel^{/11/,12/}; this

information together with a physical inspection allows the validation team to confirm that the proposed monitoring plan is feasible within the project design.

Via checking the methodology (VM0026/Version 1.0)^{VM/}, it is confirmed that four main requirements was met before the stratified sampling is chosen:

1. Population was stratified in advance of the sampling.

The project area was stratified before sampling.

2. Classes were exhaustive and mutually exclusive (ie, all elements of the population must fall into exactly one class).

For the project, classes were determined by each county within project boundary and the two different soil texture (see Table 3-4 for details), which are exhaustive and mutually exclusive and all elements of the population fell into exactly one class.

3. Classes differ in the attribute or property under study, otherwise there is no gain in precision over simple random sampling.

The grazing situation in the project area of each county is basically the same, but the climate of each county is different, which has a certain impact on the accumulation of soil carbon. Also, different soil textures have a significant impact on soil carbon accumulation, such as, sandy soil has poor water and fertility retention, clay soil has strong water and fertility retention, and loam has moderate water and fertility retention. For the project, based on the county and soil texture, the project ex ante strata are listed in the following table.

4. Selection of items to represent each class (ie, the sample drawn from each class) was random.

The location of sample sites were set by systematic sampling with a random start. For each strata, using GIS to set a random start plots, and then set the constraint boundary for the rest plots (within the range of the certain strata and the horizontal and vertical distances from the boundary should be no less than 30m).

Table 3-1 The Project ex ante Stratification for carbon calculation

Strata	County	Area (ha)	Soil texture
		160,548.96	
Strata-1	Dari	50,456.19	Loam
Strata-2	Dari	18,735.08	Sandy loam
Strata-3	Gande	28,380.06	Loam
Strata-4	Gande	3,778.17	Sandy loam
Strata-5	Maqin	13,342.96	Loam
Strata-6	Maqin	1,966.06	Sandy loam
Strata-7	Jiuzhi	8,836.47	Loam
Strata-8	Jiuzhi	2,885.33	Sandy loam
Strata-9	Maduo	1,780.21	Loam
Strata-10	Maduo	26,083.43	Sandy loam
Strata-11	Banma	3,957.27	Loam

Strata-12	Banma	347.73	Sandy loam
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Via checking the Participatory Rural Appraisal (PRA) Report^{/PRA/} and Baseline Survey Report^{/BSR/}, it is confirmed that the ex ante Stratification for carbon calculation is reasonable and acceptable.

The major parameters ex ante determined and 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 requirements in the applied methodology 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 removals by sinks, which can also be verified.

The chosen monitoring frequency for the parameters is in line with the methodology and VCS standard.

As per the technical knowledge of the validation team it can be confirmed that the monitoring plan is in accordance with best practice.

CL 12, CL 13, CL 14, CAR 31 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 joint 1st periodic verification, therefore the monitoring plan as listed in PD and PD summary and the results of the 1st monitoring have been publicly available in the VCS website after the approval of the VCS Board.

The information on dissemination of the monitoring plan regarding to how the monitoring plan and any results have been made publicly available and how summaries have been communicated to the public has been further discussed. The approaches used by PP is confirmed as effective and reasonable.

During site inspection, it is observed that each village have its own public notice boards in village committee office, many important information was disseminated by these channels, it is verified that local stakeholders can get the access to the monitoring plan, results and summaries through this. Furthermore, the technical staff from county Forestry and Grassland Bureau explain the monitoring plan and a contact person with phone number has been published through routine villager assembly so that the stakeholders can raise issues directly to PP which has been confirmed by site visit to the public notice boards and interview with PP^{/11/} and local residents^{/13/}.

Via checking the descriptions and confirmed with project management team, it is verified that the monitoring plan was listed by VERRA, the monitoring report, future verification results, the Chinese version summaries have been effectively disseminated to the local stakeholders and their comments will be collected and considered by PP.

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

3.3.10 Non-Permanence Risk Analysis

The Non-permanence 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 4.0)^{/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^{/APDR/ & /PDR/ & /GMM/},

onsite visits of the project area and interviews conducted^{/IM01/}. Details of the assessment are provided as follow.

Risk factor	Validation findings
Internal risks	
Project Management	The management team includes company who have successfully managed projects through validation of GHG credits under the CDM, GS, CCER, VCS, CCB Program^{/ccer/,/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 project design, the only cash in of the project will be the revenue from carbon credits and it will take over 30 years for the cumulative cash flow to break even based on the estimated volume of GHG emission removals generated from the project and the estimated credit price of 10 USD/t. The cash out of the project is mainly for the purchase of grass seeding and fertilizing during the first three years, which has been fully secured by Guoluo Tibetan Autonomous Prefecture Finance Bureau according to the Project Design, which has been fully secured by local government according to the Project Approval^{/APDR/}. Therefore this mitigation is scored as 3.
Opportunity Cost	Via checking the AFOLU Non-Permanence Risk Tool (Version 4.0)^{/NPRT/}, where the majority of baseline activities over the length of the project crediting period are subsistence-driven, an NPV analysis is not required, but an assessment of the net impacts of the project on the social and economic well-being of the communities who derive livelihoods from the project area shall be undertaken. Via the assessment above, it is confirmed that the baseline scenario of the project is continuation of pre-project use (i.e. lands remain degraded grassland), which is subsistence-drive and no NPV analysis is required, while the project has net positive impacts on social and economic well-being of the communities who derive livelihoods from the project area, therefore this question is scored as zero. And the Grassland management Manual^{/GMM/} was verified to concluded that the project is protected by legally binding commitment to continue management practices that protect the credited carbon stocks over the length of the project crediting period, this mitigation is scored as -2. Therefore total Opportunity Cost is scored as 6.
Project Longevity	Since 160,548.96 ha of black soil beaches in Guoluo were planted with Elymus dahuricus Turcz., Poa annual. and Festuca sinensis Keng ex S. L. Lu, and then carry out sustainable grassland management, therefore the project longevity selected 40 years^{/PL/} and the crediting period is selected to be 40 years. Via checking the Land Management Law of China and Grassland Law of People's Republic of China^{/law/}, it is confirmed that prior to the project initiation, the ownership of all 160,548.96ha grassland of the project belongs to the state and collectives, this is also verified by checking the Participatory Rural Appraisal (PRA) Report and Proof of land qualification as defined in the project approval^{/APDR/}. The local governments and collectives have the right to the use of land, and Guoluo Tibetan

	Autonomous Prefecture Forestry and Grassland Bureau applied to Guoluo Tibetan Autonomous Prefecture government for the grassland carbon sink project and obtained approval, which is confirmed by checking the Approval of project design report^{/APDR/} and confirmed by site interview with local officers^{/I2/}. And in the early phase, the Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau has organized and managed the project implementation including conducting baseline survey, signing consultant agreement for development of carbon credits. Due to Qinghai Guanglv Landscaping Co., Ltd is in rich experience of maintenance and management of the grassland, thus Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau authorized Qinghai Guanglv Landscaping Co., Ltd as the Project Proponent of the project, the rights grassland management and Carbon credits of the project during the project crediting period from 2016 to 2076^{/POA/}, and the collective economic organizations and village collectives all agreed with this which is verified by checking the Proof of land qualification as defined in the project approval^{/APDR/}. Thus it is verified that prior and informed consent has been obtained from state and collectives whose property rights are affected by the project through a transparent and agreed process. The project proponent and Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau are responsible for the comprehensive implementation and management of the project as defined in the land use statement and project approval^{/APDR/}. Via on-site interview with the local officers, it is verified that no entity can encroach the project area as private property and change the land usage type without all state and collectives' agreement. And by checking the project approval^{/APDR/} and stated by local officer, it is confirmed that the Guoluo Tibetan Autonomous Prefecture governments will be responsible to supervise the state and collectives's right to the lands. Therefore project longevity is scored as 10.
External risks	
Land Tenure and Resource Access Impacts	The ownership of all 160,548.96ha grassland of the project belongs to the state and collectives, this is also verified by checking the Participatory Rural Appraisal (PRA) Report and Proof of land qualification as defined in the project approval^{/APDR/}. The local governments and collectives have the right to the use of land, and Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau applied to Guoluo Tibetan Autonomous Prefecture government for the grassland carbon sink project and obtained approval, which is confirmed by checking the Approval of project design report^{/APDR/} and confirmed by site interview with local officers^{/I2/}. And in the early phase, the Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau has organized and managed the project implementation including conducting baseline survey, signing consultant agreement for development of carbon credits. Therefore this mitigation is scored as 0.
Community Engagement	The project lands are degraded grassland ecosystem by checking the baseline survey^{/BSR/}, no residents living within the project area^{/CBSR/}. And for the households living within 30km 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^{/PRA/}, 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	Insignificant. It is verified that there is a separation zone at a certain distance in the project area, so the fire damage won't be devastating. In addition, after the trees grow to a certain age, the risk of fire may increase, and the project proponent will adopt the necessary measures by routine overseeing for fire preventing. Thus, LS= 2 Furthermore, local government sets the construction of grassland fire prevention facilities as per the Grassland Law of China 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 Grassland Management Manual^{/GMM/}. 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 pest was treated by biological control once occurred according to local Pest Control and Prevention Policy upon routine overseeing. Hence the risk is less than every 10 years. LS=2 The grass 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 Grassland Management Manual^{/GMM/}. 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^{/GMM/}. As the project proponent is experienced in local natural risk control and has established a Grassland Management Manual for the project which includes specific instruction in pest and disease prevention and control, the pesticide application will be limited. Therefore the mitigation is scored as 0.25.
Extreme Weather	Insignificant Considering the data based on weather reports collected from historic records, the frost damage on grasses was not common in the project area^{/whr/}; LS=5. Moreover grass species planted in the project are native species, which can adapt to the local climate, after winter with frost, grass can grow smoothly in the second year which is verified as reasonable based on expertise of validation team. Therefore the mitigation is scored as 0.25.
Geological Risk	Minor The geological risk such as earthquakes around the project area are mostly low intensity, so the damage will be minor. According to historical records

	from local government^{/whr/}, there is no earthquakes or volcanoes occurred in historical 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 grassland 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 Grassland Management Manual^{/GMM/}. 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.

Hence, in conclusion, it is verified that the methodology and any referenced tools have been applied correctly to calculate baseline emissions, project emissions, leakage and net GHG emission reductions and removals.

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 the whole 6 Counties of Maqin County, Dari County, Gande County, Jiuzhi County, Banma County and Maduo County which has been confirmed by onsite observations. Via checking the Community Baseline Survey Report^{/CBSR/}, it is confirmed that the information on the community groups present in the project zone including the ethnicity makeup of the community, the economic indicators of the region, the cultural and economic history of the mentioned communities, well-being information and community characteristics, diversity within the community described in the PD is correct and actual.

The ethnicity makeup of the community, diversity within the community and the financial status of the project zone is confirmed by checking the Community Baseline Survey Report^{/CBSR/} and interview with local officers^{/12/} and residents^{/13/}. Based on the project location consideration, the proposed project aims to have long and short-term impacts on the communities include increasing the number of guardian 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 grassland guardian^{/13/} confirmed all these aspects.

CAR 32 was raised and successfully closed, Refer to Appendix 3 for details.

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 local residents lived by grazing, the community groups were barely active with low interactions between communities and community groups at the start of the project. It is verified by site visit interviews with the local officer^{/12/} and grassland guardian^{/13/}. Furthermore, the project is located in Guoluo Tibetan Autonomous Prefecture, which is a traditional Tibetan region. However, due to the low economic growth in the past years, the traditional culture is less attractive to local residents. Many of the residents seek to leave the villages for living, which caused the weak social connection and cohesion between local communities prior to the implementation of the project. This has been verified by site interviews with local stakeholders and checking the PRA report.

CAR 33 was raised and successfully closed, Refer to Appendix 3 for details.

3.4.3 High Conservation Values (CM1.2)

Two HCVs including Hydrological service and Tibetan Buddhism (Culture Values) were identified related to community well-being in the project zone. The related information has been listed in the table as per the PD template. Guoluo Tibetan Autonomous Prefecture is famous as parts of Three River (Yangtze River, Yellow River and Lancang River) Source Region which has been confirmed by interview with local officers and checking the supporting document^{/CBSR/}, hence it is confirmed that the implementation of the project will play an important role in the water safety of local residents and downstream residents thus benefit to Guoluo Tibetan Autonomous Prefecture.

Based on local expertise of the validation team, it is confirmed that Guoluo Tibetan Autonomous Prefecture is a traditional Tibetan area in Qinghai Province, where local residents believe in Buddhism. Hence, it is verified that Tibetan Buddhism is of great significance to local residents and meets the requirements of article 4 of HCV 6^{/hcv/}. via verified by the project design^{/PDR/} and on-site investigation, it is confirmed that the project generates social and environmental co-benefits as the generation of income and job opportunities for local communities with most of Tibetan population which is verified by checking the labor contracts^{/LC/} and periodical payroll^{/PP/} and also confirmed by on-site interview with local villagers^{/13/} thus benefit to the protection and dissemination of Tibetan Buddhism (Culture Values) in Guoluo Tibetan Autonomous Prefecture.

It is verified by site visit interviews with the local officer^{/12/} and grassland guardian^{/13/} and checking the Community Baseline Survey Report^{/CBSR/} and approval of project design report^{/APDR/}.

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 is located in 6 Counties, in vicinity of the project zone there were community, community groups and indigenous groups prior the project implementation.

Without the project land use scenario, by checking the Community Baseline Survey Report^{/CBSR/} and interview with local communities, it is verified that grazing are the main income sources of the communities, and the grassland will continue to degrade due to overgrazing, and the local herders cannot improve their well-being in terms of salary, welfare of workers and their families, know how about the improvement of degraded areas; this is also confirmed because the communities have no habit to make use of the selected

land for any land use as defined in the baseline survey^{/BSR/}. All these aspects were also confirmed during the site visit and interviews with the local officer^{/I2/} and grassland guardian^{/I3/}, who works in the local area for almost 15 years and knows both the baseline scenario and the project scenario.

Without the project scenario, since the grassland will continue to degrade due to overgrazing, the local communities which are located in project zone would be negatively impacted by continuous degradation, such as unstable grazing and water safety threatening, and the local communities have to face the bad environment and ecosystem which reduces their well-being. Thus it is concluded that continuing the “non-use” of the current land will have no positive effect on the livelihood and well-being conditions of the local communities and community groups.

Moreover, in without project-scenario, long time grassland 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^{/PD/} states that the project will create 11,890 job opportunities (6,023 permanent jobs and 5,867 temporary jobs) which is equally offered to local women and men, enhance capabilities of local residents and improve their household income and living level, empower women and build community capacity in gender equity, improve grazing productivity and improve the local ecological environment, so that to provide actual direct benefits to community groups as defined in the section 2.1.9 and 4.2.1 of PD. The analysis of the net benefits to the communities is conducted to each category of local community groups. Each benefit has been verified by checking the labor contracts^{/LC/}, periodical payroll^{/PP/} and on-site observation and interview with local residents.

No negative well-being impacts have been identified and verified by the validation team by checking the project design^{/PDR/} against with the Community Baseline Survey Report^{/CBSR/}, while it is expected that the grasslands growing will generate benefits on the quality of the environment and on living level of the local residents and create job opportunities and provide trainings, improve the local ecological environment as checked by labor contracts^{/LC/} and periodical payroll^{/PP/} especially to women. This is also confirmed during the on-site visit and the interview with the local residents and grassland guardians^{/I3/}.

Hence, it is concluded that all the expected impacts for each community identified in the project description has been addressed.

CAR 34 was raised and successfully closed, Refer to Appendix 3 for details.

3.4.6 Negative Community Impact Mitigation (CM2.2)

Based on above assessment in 3.4.5, it is verified that all the expected impacts for each community identified in the project description are positive, thus no negative community impacts need to be mitigated.

Furthermore, based on above assessment in 3.4.3, two HCVs including Hydrological service and Tibetan Buddhism (Culture Values) were identified related to community well-being in the project zone.

Guoluo Tibetan Autonomous Prefecture is famous as parts of Three River (Yangtze River, Yellow River and Lancang River) Source Region which has been confirmed by interview with local officers and checking the supporting document^{/CBSR/}, the project restored 160,548.96 ha of black soil beach^{/PDR/} in Three River Source Region by seeding grass, rodent controlling and prohibiting grazing which maintain water and soil, purify water sources, thus play an important role in the water safety of local residents and downstream

residents thus benefit to Guoluo Tibetan Autonomous Prefecture. Therefore, it is verified that the HCV attributes of hydrological service could be significantly improved in long term.

Also via on-site investigation, it is confirmed that the project generates social and environmental co-benefits as the generation of income and job opportunities for local communities with most of Tibetan population which is verified by checking the labor contracts^{/LC/} and periodical payroll^{/PP/} and also confirmed by on-site interview with local villagers^{/I3/} thus it is confirmed that the project provided more job opportunities for local Tibetan residents to gather them working, which give them the motivation to organize more social activities and hence increase the interaction within the community thus beneficial to the protection and dissemination of Tibetan Buddhism (Culture Values) in Guoluo Tibetan Autonomous Prefecture.

CAR 35 was raised and successfully closed, Refer to Appendix 3 for details.

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.

Without the project land use scenario, by checking the Community Baseline Survey Report^{/CBSR/} and interview with local communities, it is verified that grazing are the main income sources of the communities, and the grassland will continue to degrade due to overgrazing, and the local herders cannot improve their well-being in terms of salary, welfare of workers and their families, know how about the improvement of degraded areas; this is also confirmed because the communities have no habit to make use of the selected land for any land use as defined in the baseline survey^{/BSR/}. All these aspects were also confirmed during the site visit and interviews with the local officer^{/I2/} and grassland guardian^{/I3/}, who works in the local area for almost 15 years and knows both the baseline scenario and the project scenario.

The PD states that the project will improve grazing methods and increase household income, improve living environment and improve gender equity so that to provide actual direct benefits to community groups.

The positive impacts including change to economic indicators of the region, the cultural and economic history of the mentioned communities and the interactions between the communities, also changes on the ecosystem services, the expected changes in the well-being conditions and other characteristics of communities are stated in the PD. Descriptions in PD has been checked, it is verified that the information on the community groups in baseline scenario is correct via checking the Community Baseline Survey Report^{/CBSR/} and by site inspection and interview with local stakeholders.

How the community changed has been specified in PD section 4.2.3. Via checking the project design comparing with the Community Baseline Survey Report, it is verified that the expected changes is reasonable and can be achieved.

3.4.8 High Conservation Values Protected (CM2.4)

Two HCVs including Hydrological service and Tibetan Buddhism (Culture Values) were identified related to community well-being in the project zone. The related information has been listed in the table as per the PD template. Guoluo Tibetan Autonomous Prefecture is famous as parts of Three River (Yangtze River, Yellow River and Lancang River) Source Region which has been confirmed by interview with local officers and checking the supporting document^{/CBSR/}, via site inspection and interview with the local officers, it is confirmed that the implementation of the project can maintain water and soil, purify water sources, and play an important role in the water safety of local residents and downstream residents. This will ensure the water safety of local residents and downstream residents thus benefit to Guoluo Tibetan Autonomous Prefecture.

Also via verified by the project design^{/PDR/} and on-site investigation, it is confirmed that the project generates social and environmental co-benefits as the generation of income and job opportunities for local communities with most of Tibetan population which is verified by checking the labor contracts^{/LC/} and periodical payroll^{/PP/} and also confirmed by on-site interview with local villagers^{/13/} thus benefit to promote the spread of Tibetan Buddhism (Culture Values) in Guoluo Tibetan Autonomous Prefecture.

Hence, it is concluded that there are none of the HCVs related to community well-being will be negatively affected by the project.

3.4.9 Impacts on Other Stakeholders (CM3.1)

The PD states that no negative effects are expected to cause on the well-being of other stakeholders during the project lifetime. Oppositely, the project will provide valued experience of grassland management and carbon trading to other stakeholders as determined in the training record^{/TTR/} and consultaion agreement^{/CA/}, 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 grassland guardian^{/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 PP established a community monitoring plan in the PD.

To validate the community monitoring plan, VVB take stepwise as following,

a. Check the monitoring plan contents

The monitoring indicators are confirmed as consistent with the expected impacts which created by the project. Also a PRA process will be conducted to collect the issues and comments from communities, and to improve the implementation of the project activity periodically. PRA survey is confirmed will be conducted as per the SOPs. This is was confirmed during the on-site visit and the interview with the management team.

b. Verify the reasonability of the plan

Procedures and approaches are listed in the PD, via checking the contents, it is verified that PP will establish a series of procedures including organizing an expertise team, training, preparation and PRA survey. The sub procedures are verified as capable to do the monitoring, which is confirmed by interview with the local officer^{/12/} and based on the experience of the management team.

The PRA survey will be conducted i) by organize local communities meeting, it is confirmed that PP can share the progress and implementation status, also collect the direct information from the communities, ii) by interviews, it is confirmed that through the face-to-face channel with different household and groups will be efficient to get the comments and suggestions from stakeholders, iii) by questionnaires, it is confirmed

that this way can cover more people who are not willing to face to the PP, they can raise the comments through this.

The key variables will be monitored during each verification of the project have been identified as: Total number of community members who are expected to have improved skills and/or knowledge resulting from training provided as part of project activities, Number of female community members who are expected to have improved skills and/or knowledge resulting from training as part of project activities, Total number of people expected to be employed in project activities, expressed as number of full-time employees, Number of women expected to be employed as a result of project activities, expressed as number of full-time employees, Total number of people expected to have improved livelihoods or income generated as a result of project activities, Number of women expected to have improved livelihoods or income generated as a result of project activities, Total number of community members whose well-being is expected to improve as a result of project activities, Number of women whose well-being is expected to improve as a result of project activities, Area of grassland restored from black soil beach and Number of Tibetans benefiting from project activities. It is confirmed that all the monitored variables are clear to monitoring the real changes which are related to the community objective.

Thus it is concluded that the plan has considered all the possible methods and procedures to monitor the change to the communities and related HCVs. This is was confirmed during the on-site visit and the interview with the local officer^{/12/} and management team.

CAR 36 was raised and successfully closed, Refer to Appendix 3 for details.

3.4.13 Monitoring Plan Dissemination (CM4.3)

The proposed project activity is undergoing concurrent VCS validation joint 1st periodic verification, therefore the community monitoring plan and the results of the 1st monitoring have been publicly available in the VCS website after the approval of the VCS Board.

The information on dissemination of the community monitoring plan regarding to how the community monitoring plan and any results have been made publicly available and how summaries have been communicated to the public has been further discussed. The approaches used by PP is confirmed as effective and reasonable.

During site inspection, it is observed that each village have its own public notice boards in village committee office, many important information was disseminated by these channels, it is verified that local stakeholders can get the access to the community monitoring plan, results and summaries through this. Furthermore, the technical staff from county Forestry and Grassland Bureau explain the community monitoring plan and a contact person with phone number has been published through routine villager assembly so that the stakeholders can raise issues directly to PP which has been confirmed by site visit to the public notice boards and interview with PP^{/11/} and local residents^{/13/}.

Via checking the descriptions and confirmed with project management team, it is verified that the monitoring plan with community parts was listed by VERRA, the monitoring report, future verification results, the Chinese version summaries have been effectively disseminated to the local stakeholders and their comments will be collected and considered by PP.

CL 16 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 grazing and no other activities have been developed during the years, and ecological structure of most project sites is relatively homogenous with degradation due to traditional grazing practices which is verified by site inspection and interview with local officers and residents^{/12/,/13/}. Via checking the baseline survey report^{/BSR/} and biodiversity baseline survey report^{/BBSR/}, it is confirmed that at the project start, the project sites are mostly black soil type degraded grassland which are mainly degraded and damaged area, therefore the biodiversity was verified as very low.

And based on the biodiversity baseline survey report^{/BBSR/}, it is confirmed that there are 10 species of national level I protected animals (birds and mammals), 23 species of national level II protected animals, 12 species of key protected animals in Qinghai Province, 57 species of national “San You” protected animals have been identified in the project zone. And there are 3 species of endangered animals and 9 species of vulnerable animals in the IUCN Red List^{/IUCN/} of Endangered Species in project zone at the start of the project.

Without the project, all these species were impacted by habitat degradation and this will become a severe threat to local biodiversity, and there might be immigration into this area from other parts of China with largely populated by non-Tibetan people, would increase in hunting and wildlife trade also pose an increased threat to the wildlife.

Based on above assessment by documentation assessed and observations made during the site visit, it is concluded that the information regarding the biodiversity within the project zone at the start of the project and threats to that biodiversity is actual and reasonable.

3.5.2 High Conservation Values (B1.2)

Two HCVs have been identified related to biodiversity, which includes Protected area: Three River Source Region and Rare, threatened or endangered (RTE) species. The related information has been listed in the table as per the PD template.

For Protected area, Guoluo Tibetan Autonomous Prefecture is famous as parts of Three River (Yangtze River, Yellow River and Lancang River) Source Region which has been confirmed by interview with local officers and checking the supporting document^{/CBSR/}, based on validation team's local expertise, it is confirmed that Three River Source Region is rich in natural resources, and its biodiversity protection is an important strategic position in the world. Thus the qualifying attributes for this biodiversity-related HCV is verified.

For Threatened species, based on the biodiversity baseline survey report^{/BBSR/}, it is confirmed that there are 35 species of rare, threatened or endangered (RTE) species in project zone at the start of the project. Thus the qualifying attributes for this biodiversity-related HCV is verified.

In conclusion, the biodiversity HCVs identified in the project description has been validated by documentation assessed and observations made during the site visit thus verified as reasonable.

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

Please refer to section 3.5.1. The without project scenario would clearly have no positive effect on biodiversity of the area but some threats to local climate conditions and ecosystem, especially for the endangered birds species mentioned above.

3.5.4 Expected Biodiversity Changes (B2.1)

Via checking the biodiversity baseline survey report^{/BBSR/} and project design^{/PDR/}, it is confirmed that the local grass species plantation has different positive impact on soil, climate and biodiversity. When local grass species are planted in degraded areas, an increase of grassland coverage, flora and fauna biodiversity can be recorded which has been confirmed during on-site observations.

The study also highlights how a certain variety of plants, mammals, birds and insects can be observed in planted grasslands as determined in the biodiversity baseline survey report^{/BBSR/}. Therefore it is verified that the project's impact on biodiversity will be overwhelmingly positive when compared to "without project" scenario.

3.5.5 Mitigation Measures (B2.3)

Since no negative impacts are expected on biodiversity to the project implementation confirmed by checking the biodiversity baseline survey report^{/BBSR/} and project design^{/PDR/}, no specific mitigation measures will be taken to improve positive impacts. In addition, due to the grass planting activity has been finished during on-site observations, thus it is verified that the measures have been designed to improve positive impacts on biodiversity.

Furthermore, based on above assessment in 3.4.3, two HCVs including Protected area: Three River Source Region and Rare, threatened or endangered (RTE) species were identified related to biodiversity in the project zone.

For Protected area, Guoluo Tibetan Autonomous Prefecture is famous as parts of Three River (Yangtze River, Yellow River and Lancang River) Source Region which has been confirmed by interview with local officers and checking the supporting document^{/CBSR/}, via site inspection and interview with local officers, it is confirmed that the primary objective of the project is increase the grass coverage and restore the degraded grassland ecosystem of Three River Sources Region and adopted sustainable grassland management methods, which would prevent the continuous degradation of grasslands. The biodiversity protection of Three River Sources Region is an important strategic position in the world.

For Threatened species, via site inspection and interview with local officers, it is confirmed that the implementation of the project has improved the ecological environment of the Three River Source Region, increased the biodiversity and provided more habitats for threatened species thus beneficial to 35 species of rare, threatened or endangered (RTE) species in project zone.

Therefore, it is verified that implementation of this project will not decrease biodiversity of project sites, and the HCV attributes will not be negatively impacted either, thus no mitigation measures are required.

CAR 37 was raised and successfully closed, Refer to Appendix 3 for details.

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

The local grass species plantation has different positive impact on soil, climate and biodiversity; when local grass species are planted in degraded areas, an increase of grasslands coverage, flora and fauna biodiversity can be recorded. This planting activity is implemented with scientific and reasonable configuration method, planting with mix species of native grass. With the sustainable grassland management, including rodent control, grassland fire prevention and reasonable grazing guidance, the degraded grassland ecosystem is gradually restored, which will improve biodiversity.

Above assessment have been demonstrated in the section 3.5.4 and 3.5.5.

Furthermore, via on-site investigation and checking the map^{/MAP/}, it is verified that as the project site is located in Guoluo Tibetan Autonomous Prefecture where is famous as parts of Three River (Yangtze River, Yellow River and Lancang River) Source Region which has been confirmed by interview with local officers and checking the supporting document^{/CBSR/}, based on validation team's local expertise, it is confirmed that Three River Source Region is rich in natural resources, and its biodiversity protection is an important strategic position in the world.

Based on the situation of biodiversity within the project zone at baseline scenario, the project area would continue to be black soil beaches type land and with low biodiversity condition. The main change by the project scenario is to create grassland cover of the project area with local native grass species which has great vitality and adaptation to grass area, this has been verified by site inspection.

Based on checking the biodiversity baseline survey report^{/BBSR/}, it is confirmed that there are 10 and 23 species among class I and II nationwide key protected animal, respectively, and 12 species were enlisted as key protected birds of Qinghai Province. In addition, there are 57 species of national "San You" protected animal. Furthermore, there are 3 species of endangered animal and 9 species of vulnerable species in the IUCN Red List of Endangered Species^{/IUCN/}.

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

Furthermore, after the implementation of the project, the hydrological cycle can be adjusted, drought and flood risk will be reduced, soil nutrient and local micro-climate will be improved which has been verified in the project design and approval ^{/PDR/,/APDR/} and confirmed by site inspection.

In conclusion, the project produces net positive biodiversity impacts.

3.5.7 High Conservation Values Protected (B2.4)

Two HCVs have been identified related to biodiversity, which includes Protected area: Three River Source Region and Rare, threatened or endangered (RTE) species. The related information has been listed in the table as per the PD template.

For Protected area, Guoluo Tibetan Autonomous Prefecture is famous as parts of Three River (Yangtze River, Yellow River and Lancang River) Source Region which has been confirmed by interview with local officers and checking the supporting document^{/CBSR/}, via site inspection and interview with local officers, it is confirmed that the primary objective of the project is increase the grass coverage and restore the degraded grassland ecosystem of Three River Sources Region and adopted sustainable grassland management methods, which would prevent the continuous degradation of grasslands. The biodiversity protection of Three River Sources Region is an important strategic position in the world.

For Threatened species, via site inspection and interview with local officers, it is confirmed that the implementation of the project has improved the ecological environment of the Three River Source Region, increased the biodiversity and provided more habitats for threatened species thus beneficial to 35 species of rare, threatened or endangered (RTE) species in project zone.

Thus, it is verified that no HCVs related to biodiversity are negatively affected by the project.

CAR 38 was raised and successfully closed, Refer to Appendix 3 for details.

3.5.8 Species Used (B2.5)

The species used is native trees including *Elymus dahuricus* Turcz., *Poa annua*L. and *Festuca sinensis* Keng ex S. L. Lu which is verified by checking the Grass Seed Purchase Contract^{/GSPC/} and onsite observations. 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 which is verified by checking the Grass Seed Purchase Contract ^{/GSPC/} and onsite observations, thus there are 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 which is also verified by checking the Grass Seed Purchase Contract ^{/GSPC/} and onsite observations.

3.5.11 Inputs Justification (B2.8)

As assessment in 3.2.12 in this report, it is verified that fertilizers with 5 kg of diammonium phosphate and 6 kg of urea are applied per mu are used in the project due to the low soil fertility of black soil beach before 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^{/GMM/}.

For the fertilizers used, via interview with local officer and checking the PDR^{/PDR/}, it is confirmed that the amount of fertilization used was small thus has no potential adverse effects on surface water and groundwater by considering the local climate and weather conditions.

Therefore, no adverse effects from fertilizers and pesticides, biological control agents will be used in accordance with the National Pesticides Policy which is also confirmed by on-site observation. Hence, there is no adverse effects as the fertilizers and pesticide application will be limited.

3.5.12 Waste Products (B2.9)

As per the information available in the PD^{/PD/}, some waste would be resulting from project activities including rubbish and human waste, this is confirmed by on-site observations and interview with the grassland guardian^{/13/}. However, the frequent visit has been and will be conducted by project owner to ensure the waste and waste products are well identified and cleaned. During the on-site observation, it is confirmed that there were no waste and waste products laid on the project area. In addition, 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 grassland guardian^{/13/}.

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

The PD^{/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. Refer to 3.5.4 and 3.5.5 of this report for detail assessment.

3.5.14 Net Offsite Biodiversity Benefits (B3.3)

Refer to section 3.5.4 and 3.5.5, there are no potential negative offsite impacts on biodiversity, the net effect of the project on biodiversity is positive.

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

The PP established a biodiversity monitoring plan in the PD.

To validate the biodiversity monitoring plan, VVB take stepwise as following,

a. Check the monitoring plan contents

The monitoring indicators are confirmed as consistent with the net positive change which created by the project. Three state variables which covering Grassland coverage in the project area, Grass species in the project area and Population status of the endangered animals have been listed and will be monitored. Three pressure variables which covering Number of fires occurred, effected grassland area suffered rodents and pests, overgrazing and Fertilizer and Chemical pesticides have been listed and will be monitored. Four response variables which covering Grassland area under prevention control from fires, Grassland area under prevention control from rodents and pests, Project area of sustainable grassland management and Project area for restoration of degraded grassland have been listed and will be monitored.

For state variables, the monitoring sites for grassland coverage in the project area and Grass species in the project area will be the fixed sample plots for the carbon sink monitoring. For the Reduced threats to endangered animals and Population status of the trigger species (including the three species defined in HCV to monitoring the trigger species population trends), the 12 monitoring lines (each of 3km) have been set in each strata and the numbers occurred will be observed during a whole day around the monitoring lines to show the impacts to the animals. And the monitoring frequency is defined as before every verification is confirmed as reasonable.

Furthermore, due to the project seeks to be validated to the Gold Level for exceptional biodiversity benefits, hence the PP has choosed Population status of the trigger species (including *Aquila nipalensis*, *Falco cherrug*, and *M. chrysogaster* which are Species defined in HCV) and Protected area: Three River Source Region to be the State variables which will be monitored in the verification process.

For the Population status of the trigger species (including the three species defined in HCV to monitoring the trigger species population trends), the 12 monitoring lines (each of 3km) have been set in each strata and the numbers occurred will be observed during a whole day around the monitoring lines to show the impacts to the animals. For the variable of Protected area: Three River Source Region, the restored area of black soil beach in the project zone will be monitored.

Via checking the “Technical Regulations on Bird Biodiversity Survey and Assessment”^{/TR/} and “Technical Regulations on Mammals Biodiversity Survey and Assessment”^{/TR/} issued by the Ministry of Ecology and Environment of the People’s Republic of China, it is confirmed that the set-up of monitoring lines is in accordance with the national standard. And via checking the above demonstration, it is concluded that the project chooses to reduce threats to endangered animals and population status of trigger species as indicators to monitor the project’s impact on animals is appropriate for a sustainable grassland management project.

Both two variables are verified as represent the Gold Level for exceptional biodiversity benefits as assessed in below section 3.5.17 and 3.5.18. Hence, it is verified that biodiversity monitoring plan considered the Gold-level Exceptional Biodiversity Benefits and the plan is verified as suitable.

For pressure variables, the monitoring data will be recorded by grassland guardians and confirmed by local Forestry and Grassland Bureau once every year which is verified as applicable to the impacts of the identified pressure variables.

For response variables, the monitoring data will be recorded by grassland guardians and confirmed by local Forestry and Grassland Bureau once every year which is verified as applicable to the impacts of the identified response variables.

The monitoring variables are listed in the PD, via checking the table, it is verified that PP will set fixed sample plots and monitoring lines to monitor the biodiversity change which is confirmed by interview with the management team and the grassland guardians will conduct the monitoring and confirmed local Forestry and Grassland Bureau which is confirmed by interview with the local officers^{/12/} and grassland guardian^{/13/}.

The target monitoring indicators are listed clearly and is confirmed as accurate. Monitoring frequency is determine as before each verification or annually which is confirmed as reasonable due to the results will be used for each monitoring report for verification. This is confirmed as in line with the verification requirement.

Thus it is concluded that the plan has considered all the possible monitoring variables, methods and procedures to monitor the change to the biodiversity. This is was confirmed during the on-site visit and interview with the management team.

CAR 39 was raised and successfully closed, Refer to Appendix 3 for details.

3.5.16 Biodiversity Monitoring Plan Dissemination (B4.3)

The proposed project activity is undergoing concurrent VCS validation joint 1st periodic verification, therefore the biodiversity monitoring plan and the results of the 1st monitoring have been publicly available in the VCS website after the approval of the VCS Board, which can be easily download by stakeholders.

The information on dissemination of the biodiversity monitoring plan regarding to how the monitoring plan and any results have been made publicly available and how summaries have been communicated to the public has been further discussed. The approaches used by PP is confirmed as effective and reasonable.

During site inspection, it is observed that each village have its own public notice boards in village committee office, many important information was disseminated by these channels, it is verified that local stakeholders can get the access to the biodiversity monitoring plan, results and summaries through this. Furthermore, the technical staff from county Forestry and Grassland Bureau explain the biodiversity monitoring plan and a contact person with phone number has been published through routine villager assembly so that the stakeholders can raise issues directly to PP which has been confirmed by site visit to the public notice boards and interview with PP^{/11/} and local residents^{/13/}.

Via checking the descriptions and confirmed with project management team, it is verified that the monitoring plan with biodiversity parts was listed by VERRA, the monitoring report, future verification results, the Chinese version summaries have been effectively disseminated to the local stakeholders and their comments will be collected and considered by PP.

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

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

As addressed in the PD, the project seeks to be validated to the Gold Level for exceptional biodiversity benefits, hence, below assessment has been provided for information regarding the project's qualification for the Exceptional Biodiversity Benefits Gold Level.

Two HCVs have been identified related to biodiversity, which includes Protected area: Three River Source Region and Rare, threatened or endangered (RTE) species. The related information has been listed in the table as per the PD template.

For Protected area, Guoluo Tibetan Autonomous Prefecture is famous as parts of Three River (Yangtze River, Yellow River and Lancang River) Source Region which has been confirmed by interview with local officers and checking the supporting document^{/CBSR/}, based on validation team's local expertise, it is confirmed that Three River Source Region is identified as the sites of global significance for biodiversity conservation selected on the basis of the Key Biodiversity Area (KBA) framework of vulnerability and irreplaceability^{/ibat/}. And based on above demonstration, it is confirmed that the project will protect biodiversity at the project zone thus is verified to contribute to meeting country commitments to the Aichi Targets under the Convention on Biological Diversity and with the priorities identified in a National Biodiversity Strategy and Action Plan.

For Threatened species, based on the biodiversity baseline survey report^{/BBSR/}, it is confirmed that there are 35 species of rare, threatened or endangered (RTE) species in project zone at the start of the project. And

based on above demonstration, it is confirmed that the project will protect biodiversity at the project zone thus is verified to be beneficial to the Endangered Species in project zone.

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

For Threatened species, based on the biodiversity baseline survey report^{/BBSR/}, it is confirmed that there are 35 species of rare, threatened or endangered (RTE) species in project zone at the start of the project. And based on above demonstration, it is confirmed that the project will protect biodiversity at the project zone thus is verified to be beneficial to the Endangered Species in project zone.

The three species have been defined as Trigger Species in the PD, and population trend at start of project is defined as threatened due to the continued degradation of the grassland which has been verified by on-site inspection and checking the biodiversity baseline survey report^{/BBSR/}. Based on checking of the related researches, it is confirmed that there are threats to the population of these Trigger Species due to climate change, overgrazing, mining and animal hunting, while by site inspection and checking the Project design report^{/PDR/}, it is verified that the project aims to restore degraded grassland which could benefit the species and the population status could be maintained and enhanced.

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

4 VALIDATION CONCLUSION

Climate Bridge (Shanghai) Ltd. has commissioned the TÜV NORD JI / CDM Certification Program to carry out the validation of the “Guoluo Grassland Sustainable Management Project” in P. R. China. The validation was performed based on VCS Version 4.1 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 seeding a variety of species of native grass on black soil beaches of 160,548.96 ha in Maqin County, Dari County, Gande County, Jiuzhi County, Banma County and Maduo County, Guoluo Tibetan Autonomous Prefecture, Qinghai Province, P. R. China with mix species of native grass. The approved VCS methodology VM0026 (version 1.0) is applied to quantify the GHG removals achieved in this project.

In the course of the validation 39 Corrective Action Requests (CARs), 18 Clarification Requests (CLs) were raised and successfully closed. No Forwarded Action Requests (FARs) was raised.

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.

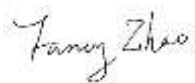
In detail the conclusions can be summarized as follows:

- 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 17,664,275 tCO₂e are most likely to be achieved within the 40 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 4.1 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 “Guoluo Grassland Sustainable Management Project” in P. R. China meets the requirements of the CCB Third edition and one Gold Level Benefit - Exceptional Biodiversity Benefits.

Beijing, 19-November-2021



Zhao Xuejiao

TÜV NORD JI/CDM Certification Program
Validation Team Leader

Essen, 19-November-2021



Christina Stöhr

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)
GL	Gold Level
GMO	Genetically modified organism
GS	Gold Standard
HCVs	High Conservation Values
IFM	Improved Grassland 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.	Qinghai Meteorology, 2016, 2: 10-15	/ACT/	Analysis of the change trend	Analysis of the change trend of various meteorological elements in Guoluo area in the past 36 years	PP
2.	Guoluo Tibetan Autonomous Prefecture Agriculture and Animal Husbandry Department	/APDR/	Approval of project design report	Approval of project design report approved by the Guoluo Tibetan Autonomous Prefecture Agriculture and Animal Husbandry Department ⁷ on 02-November-2015 which includes proof of land qualification as defined in the project approval	PP
3.	IPCC	/AR5/	IPCC fifth assessment	IPCC fifth assessment for GWP value	Public website
4.	Qinghai Agriculture and Animal Husbandry Engineering Project Consulting Center	/BBSR/	Biodiversity baseline survey report	Biodiversity baseline survey report issued by Qinghai Agriculture and Animal Husbandry Engineering Project Consulting Center on 20-December-2015	PP
5.	Local Administration for Industry and Commerce	/BL/	Business License	Business License of all the participants of the project	PP
6.	Qinghai Agriculture and Animal Husbandry Engineering Project Consulting Center	/BSR/	Baseline Survey Report	Baseline Survey Report issued by Qinghai Agriculture and Animal Husbandry Engineering Project Consulting Center in Oct. 2015	PP
7.	Qinghai Guanglv Landscaping Co., Ltd and Climate Bridge (Shanghai) Ltd.	/CA/	Consultant Agreement	Consultant Agreement signed Qinghai Guanglv Landscaping Co., Ltd and Climate Bridge (Shanghai) Ltd. dated 28-September-2020	PP
8.	Qinghai Agriculture and Animal	/CBSR/	Community Baseline Survey Report	Community Baseline Survey Report issued by Qinghai Agriculture and Animal	PP

⁷ Agriculture and Animal Husbandry Department has been dismissed in 2019 due to the reform of government function, and some functional departments related to grassland management have been transferred to Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau which has been confirmed by site interview with local officers and verified as actual based on local expertises of the validation team.

	Husbandry Engineering Project Consulting Center			Husbandry Engineering Project Consulting Center dated in Nov. 2015	
9.	CCBA	/CCBPR/	CCB Program Rules, version 3.1	https://verra.org/project/ccb-program/rules-requirements-and-guidance/	CCB website
10.	CCBA	/CCBS/	CCB Standard, version 3.1	https://verra.org/project/ccb-program/rules-requirements-and-guidance/	CCB website
11.	Qinghai Guanglv Landscaping Co., Ltd	/DN/	Declaration of non-participation	Declaration of non-participation in any emission trading or other binding limit program or mechanism and no desire to or receiving of another form of GHG-related environmental credit, including renewable energy certificates dated on 27-March-2021	PP
12.	Literature	/ESC/	Ex-ante SOC	Ex-ante estimation of SOC changes in project scenario derived from Han Fa, Li Yikang, Zhou Huakun, et al. Effect of managerial measures on changes of soil enzyme and soil fertility in "black soil bleach" degraded grassland [J]. Acta Prataculturae Sinica, 2007, 16(3):1-8.	PP
13.	County forestry and grassland bureau	/FCS/	Full census survey	Full census survey conducted every July and August by county forestry and grassland bureau	PP
14.	Project proponent and county forestry and grassland bureau	/GDMP/	Grazing Displacement Management Plan	Grazing Displacement Management Plan issued by Project proponent and county forestry and grassland bureau in June 2016	PP
15.	Google	/GE/	Google Earth	Google Earth Map	Public software
16.	Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau	/GMM/	Grassland Management Manual	Grassland Management Manual issued by Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau on 06-May-2020	PP
17.	Local Forestry and Grassland Bureau and Haiyan Senyuan	/GSPC/	Grass Seed Purchase Contract	Grass Seed Purchase Contract signed between Local Forestry and Grassland Bureau and Haiyan Senyuan Forest and Grass Ecological Planting Co., Ltd. dated in June 2016	PP

	Forest and Grass Ecological Planting Co., Ltd.				
18.	UNFCCC	/GSS/	Guidelines for sampling and surveys	Guidelines for sampling and surveys for CDM project activities and programmes of activities (version 04.0)	UNFCCC website
19.	County forestry and grassland bureau	/GYMR/	Grass yield measurement results	Annual grass yield measurement results issued by County forestry and grassland bureau	PP
20.	Guoluo Tibetan Autonomous Prefecture Agriculture and Animal Husbandry Department	/IAR/	Inspection and Acceptance Report	Carbon sink afforestation Inspection and Acceptance Report of Completed Project issued by Guoluo Tibetan Autonomous Prefecture Agriculture and Animal Husbandry Department dated on 28-October-2018	PP
21.	IPCC	/IPCC/	IPCC	2006 IPCC Guidelines for National Greenhouse Gas Inventories	IPCC website
22.	International Union for Conservation of Nature	/IUCN/	International Union for Conservation of Nature	The IUCN Red List Categories and Criteria (version 3.1)	PP
23.	Project Owner	/LC/	Labor Contract	Labor Contract of project staffs and person who conducted grass seeding and rodent control and employed as guardians	PP
24.	National Basic Geographic Information Center	/LCD/	land cover data	Land cover data of Guoluo Tibetan Autonomous Prefecture in year 2010 release by National Basic Geographic Information Center	PP
25.	Shandong Huasheng Tiantong Standard Technical Service Co., Ltd.	/LTD/	Laboratory test data	Laboratory test data report issued by Shandong Huasheng Tiantong Standard Technical Service Co., Ltd. in Oct. 2015	PP
26.	Qinghai Agriculture and Animal Husbandry Engineering Project Consulting Center and Climate Bridge	/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

	(Shanghai) Ltd.				
27.	National Ministry of Agriculture	/MDS/	NY/T 1121.6-2006	Method for Determination of Soil Organic Matter (NY/T 1121.6-2006)	Public Website
28.	National Ministry of Agriculture	/MDSBD/	NY/T 1121.4-2006	Method for determination of soil bulk density (NY/T 1121.4-2006)	Public Website
29.	VCS	/MEL/	VCS module	VCS module of Estimation of emissions from market leakage (VMD0033, version1.0)	VERRA website
30.	VCS	/MLG/	VCS module	VCS module of Leakage from displacement of grazing activities (VMD0040, version 1.0)	VERRA website
31.	Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau	/MM/	Monitoring Manual	Monitoring Manual created by Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau on 06-May-2020	PP
32.	Manufacturer of Diammonium phosphate and Urea	/MPL/	Manufacturer product label	Manufacturer product label for Diammonium phosphate and Urea	PP
33.	Climate Bridge (Shanghai) Ltd.	/NPRR/	Non-permanence risk report	Non-permanence risk report, version 01.1, dated 04-June-2021	Climate Bridge (Shanghai) Ltd.
34.	VCSA	/NPRT/	AFOLU Non-Permanence Risk Tool, Version 4.0	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website
35.	Qinghai Provincial Department of Agriculture and Animal Husbandry	/NSU/	National standards	The notice on standardizing and unifying the statistics of grassland carrying capacity data, which was issued by the Qinghai Provincial Department of Agriculture and Animal Husbandry	Public website
36.	Climate Bridge (Shanghai) Ltd.	/PD/	Project Description	Draft Project Description of "Guoluo Grassland Sustainable Management Project" (Version No. 01.1, dated 23-March-2021) Project Description of "Guoluo Grassland Sustainable Management Project" (Version No. 03, dated 11-June-2021) Project Description of "Guoluo Grassland Sustainable Management Project" (Version	Climate Bridge (Shanghai) Ltd.

				No. 04, dated 24-August-2021) after VERRA review I Project Description of “Guoluo Grassland Sustainable Management Project” (Version No. 05, dated 08-October-2021) after VERRA review II Final Project Description of “Guoluo Grassland Sustainable Management Project” (Version No. 05.1, dated 19-November-2021) after VERRA review III	
37.	Qinghai Agriculture and Animal Husbandry Engineering Project Consulting Center	/PDR/	Project Design Report	Project Design Report for project issued by Qinghai Agriculture and Animal Husbandry Engineering Project Consulting Center in October 2015	PP
38.	VCSA&CCBA	/PDP/	Project Development Process	“VCS+CCB Project Development Process” (version 3.0)	VCS website
39.	Climate Bridge (Shanghai) Ltd.	/PDS/	Project Description Summary in Chinese Version	Draft Project Description Summary in Chinese Version of “Guoluo Grassland Sustainable Management Project” (Version No. 01, dated 09-February-2021) Project Description Summary in Chinese Version of “Guoluo Grassland Sustainable Management Project” (Version No. 03, dated 11-June-2021) Final Project Description of “Guoluo Grassland Sustainable Management Project” (Version No. 04, dated 24-August-2021) after VERRA review	Climate Bridge (Shanghai) Ltd.
40.	TUV NORD	/PHT/	On-site photo taken by validation team	On-site photo taken by validation team including grasses, grasslands, project location, bulletin boards photo, etc.	TUV NORD
41.	Qinghai Agriculture and Animal Husbandry Engineering Project Consulting Center	/PL/	Project Lifetime evidence	Project Lifetime evidence issued by Qinghai Agriculture and Animal Husbandry Engineering Project Consulting Center	PP
42.	Guoluo Tibetan Autonomous	/POA/	Power Attorney of	Power of Attorney for Carbon Sink Project Development for this project issued by Guoluo	PP

	Prefecture Forestry and Grassland Bureau			Tibetan Autonomous Prefecture Forestry and Grassland Bureau date on 18-September-2020	
43.	Project Owner	/PP/	Periodical payroll	Periodical payroll to project staffs and person who planted trees and work as technicians	PP
44.	Grassland guardian and local forestry and grass bureau	/PR/	Patrol records	Patrol records of grassland guardian and local forestry and grass bureau	PP
45.	Guoluo Tibetan Autonomous Prefecture Forestry and Grassland Bureau	/PRA/	Participatory Rural Appraisal	Participatory Rural Appraisal (PRA) report of the project issued by Qinghai Agriculture and Animal Husbandry Engineering Project Consulting Center dated on 28-November-2015	PP
46.	Journal	/PRS/	Peer-reviewed studies	"Yang Y, Wang J, Liu P, et al. Climatic Changes Dominant Interannual Trend in Net Primary Productivity of Alpine Vulnerable Ecosystems[J]. Journal of Resources and Ecology, 2019, 10(4):379-387"	Public website
47.	Haiyan Senyuan Forest and Grass Ecological Planting Co., Ltd. and local Forestry and Grass Bureau	/PSD/	Project Starting Date	Project Starting Date evidence Seeding Construction Contract issued by Haiyan Senyuan Forest and Grass Ecological Planting Co., Ltd. and local Forestry and Grass Bureau dated 20-June-2016 showed that the earliest project start date is 20-June-2016 based on the date when the seeding started	PP
48.	Villagers	/QUE/	Questionnaires	PRA and CCB questionnaires filled out by villagers	PP
49.	Climate Bridge (Shanghai) Ltd.	/RCS/	Risk Calculation Sheet	Risk Calculation Sheet version 01.1, dated 04-June-2021	Climate Bridge (Shanghai) Ltd.
50.	[J]. Soils, 2012,44(1):17-22	/RPDMS/	Research progress	Research progress on determination methods of gravel content in soil	PP
51.	Local communities	/RVAR/	Routine villager assembly record	Routine villager assembly record about the project listing and VCS+CCB validation process	PP
52.	Project proponent and county forestry and	/SGD/	Survey	Grazing Displacement and Relocation Plan issued by Project proponent and county forestry and grassland bureau in June 2016	PP

	grassland bureau				
53.	Google Earth	/SI/	Satellite images	Satellite images of project area in baseline before the project start date	PP
54.	Climate Bridge (Shanghai) Ltd.	/SPCS/	Sample plots calculation sheet	Sample plots calculation sheet	Climate Bridge (Shanghai) Ltd.
55.	UNFCCC	/TDAA/	Methodological tool	Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities, version 3.0	UNFCCC website
56.	UNFCCC	/TDDL/	Methodological tool	Tool for Identification of Degraded or Degrading Lands for Consideration in Implementing CDM AR Project Activities, version 1.0	UNFCCC website
57.	Ministry of Ecology and Environment of the People's Republic of China	/TR/	Technical Regulations	"Technical Regulations on Bird Biodiversity Survey and Assessment" and "Technical Regulations on Mammals Biodiversity Survey and Assessment"	Public website
58.	Qinghai Provincial Bureau of Quality and Technical Supervision	/TSBST/	(DB63/T603—2006)	Regional standard in Qinghai Province Technical specification for artificial vegetation establishment and utilization management of "black soil type" degraded grassland (DB63/T603—2006)	Public website
59.	National Ministry of Agriculture	/TSS/	HJ/T 166-2004	Technical Specification for Soil Environmental Monitoring (HJ/T 166-2004)	Public website
60.	Project Owner	/TTR/	Technical Training Record	1. New employee training records including labor Law and worker's right training. 2. Technical Training Record dated in 2016, 2017 and 2018 and 2019 3. Training records of special trainings for the project monitoring by explaining the monitoring plan and measurement method to grassland guardians	PP
61.	VCSA	/VCSPD/	VCS Program Definitions, Version 4.1	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website
62.	VCSA	/VCSPG/	VCS Program Guide, Version 4.0	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website

63.	VCSA	/VCSS/	VCS Standard, Version 4.1	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website
64.	VCS	/VM/	Afforestation and reforestation Methodology	VM0026 “Sustainable Grassland Management”, version 1.0	VERRA website
65.	Climate Bridge (Shanghai) Ltd.	/XLS/	Net anthropogenic GHG removals by sinks calculation spreadsheets	ER Calculation spreadsheets of “Guoluo Grassland Sustainable Management Project” 1. Version No. 01, dated 23-March-2021) 2. Version No. 02, dated 02-June-2021)	Climate Bridge (Shanghai) Ltd.
66.	China Certified Emission Reduction Exchange Info-platform	/ccer/	China Certified Emission Reduction	http://cdm.ccchina.org.cn/ccer.aspx	Website
67.	Gold Standard Organization	/gs/	Gold Standard	http://www.goldstandard.org/	Website
68.	Ibat-alliance	/ibat/	Key Biodiversity Area (KBA) framework of vulnerability and irreplaceability	https://www.ibat-alliance.org/	Website
69.	IPCC	/ipcc/	IPCC publications	www.ipcc-nggip.iges.or.jp	Website
70.	PRC Government	/law/	Laws related to forestry	<Grassland Law>	Website
71.	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
72.	State market supervision and administration	/neci/	National Enterprise Credit Information Publicity System	http://www.gsxt.gov.cn/index.html	National public website
73.	Qinghai Government	/picp/	Public information	Public and accessible information for common practice http://lcj.qinghai.gov.cn/xwdt/sn_xw/content_838	Public website
74.	PRC Government	/regu/	Administrative regulations related to forestry	<Regulations on Grassland Management of Guoluo Tibetan Autonomous Prefecture>, <Regulations on the Protection of Wild Plants and Animals, the Regulation on Nature Reserve>, <Regulation on Grassland Fire Control>, and <Regulation on	National public website

				Forest Diseases and Pests Control>	
75.	UNFCCC	/unfccc/	UNFCCC	http://cdm.unfccc.int	Website
76.	VCS	/vcs/	VCS	http://www.v-c-s.org/	Website
77.	Local government	/whr/	Local Weather	http://www.guoluo.gov.cn/	Website
78.	HCV Network	/hcv/	HCV Resource	https://hcvnetwork.org/how-it-works/	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	Date : 08/04/2021
Description of CL				
1. The explanation of Three River Source Region is not provided. 2. The explanation of black soil beach is not provided.				
Project participant response				Date : 19/05/2021
1. The explanation of Three River Source Region has been provided in section 2.1 of the PD. The three River Source is the highest natural wetland in China, with an average elevation of more than 4,000 meters, and is known as the "Chinese Water Tower". And about 25% of the total water volume of the Yangtze River, 49% of the total water volume of the Yellow River and 15% of the total water volume of the Lancang River come from this area. In addition, it is the region with the richest biodiversity in high-altitude areas in the world. 2. The explanation of black soil beach has been provided in section 2.1 of the PD. According to "Technical specification for artificial vegetation establishment and utilization management of "black soil type" degraded grassland" (DB63/T603-2006), black soil beach refers to degraded grassland with original vegetation coverage less than 10%, fresh grass yield less than 300kg/hm ² , low soil water content, low bulk density, tending to alkalinity, organic matter content less than 100g/kg and soil layer thickness greater than 20cm.				
Documentation provided by project participant				
☒	Changes in the PD	Section(s): 2.1	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☒	Other:	/TSBST/		
VVB assessment				Date: 31/05/2021
1. The revised PD has been checked, it is confirmed that explanation of Three River Source Region is provided, via checking the public website and based on local expertise of validation team, it is confirmed that the description is correct and actual. 2. The revised PD has been checked, it is confirmed that explanation of black soil beach is provided, via checking the regional standard in Qinghai Province Technical specification for artificial vegetation establishment and utilization management of "black soil type" degraded grassland (DB63/T603—2006) ^{/TSBST/} and based on local expertise of validation team, it is confirmed that the description is correct and actual.				
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed		

CL ID	02	Section no.	2.1.10	Date : 08/04/2021
Description of CL				
1. Why the project is under category of ALM is not clarified? 2. Why the project belongs to which Eligible ALM activities as defined in the VCS standard is not clarified.				
Project participant response				Date : 19/05/2021
1. The reason of the project is under category of ALM have been clarified in section 2.1.10 of the PD. According to Appendix of 1 Eligible AFOLU Project Categories of the VCS Standard (version 4.1), eligible Agricultural Land Management (ALM) activities are those that reduce net GHG emissions on croplands and grasslands by increasing carbon stocks in soils and woody biomass and/or decreasing CO ₂ , N ₂ O and/or CH ₄ emissions from soils, which include Improved Cropland				

2.	Management (ICM), Improved Grassland Management (IGM) and Cropland and Grassland Land-use Conversions (CGLC). The reason of the project belongs to which Eligible ALM activities as defined in the VCS standard have been clarified in section 2.1.10 of the PD. The project restores degraded grassland by planting grass and forbidding grazing, thus increasing soil carbon stocks. So, the project is developed under VCS scope 14 "Agriculture, Forestry and Other Land Use (AFOLU)" with a project category of Agricultural Land Management (ALM), and belongs to the category of Improved Grassland Management (IGM) that demonstrably reduce net GHG emissions of grassland ecosystems by increasing soil carbon stocks.		
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:	/GCE/	
VVB assessment			Date: 31/05/2021
1.	The revised PD is checked, it is confirmed that why the project is under category of ALM is clarified.		
2.	The revised PD is checked, it is confirmed that why the project belongs to which Eligible ALM activities as defined in the VCS standard is clarified.		
The proposed project falls into VCS Sectoral Scope 14: Agriculture Forestry and Other Land Use (AFOLU). According the VCS requirement, the project is eligible under AFOLU project categories ALM (Agricultural Land Management). As per the AFOLU requirements in the VCS standard, eligible ALM activities are those that reduce net GHG emissions on croplands and grasslands by increasing carbon stocks in soils and woody biomass and/or decreasing CO₂, N₂O and/or CH₄ emissions from soils. And the project belongs to below eligible ALM activities <u>Improved Grassland Management (IGM)</u>: This category includes practices that demonstrably reduce net GHG emissions of grassland ecosystems by increasing soil carbon stocks, reducing N₂O emissions and/or reducing CH₄ emissions. Via site inspection and checking the Project Design Report^{/PDR/} and Approval of project design report^{/APDR/}, it is confirmed that the aim of the project is seeding of a variety of species native grass on black soil beach that will reduce net GHG emissions of grassland ecosystems by increasing soil carbon stocks, to reduce N₂O emissions and/or reduce CH₄ emissions. Hence, it is verified that the project is eligible as Improved Grassland Management (IGM) category and thus is and AFOLU project. The project is confirmed as not a grouped project verified by Approval of project design report^{/APDR/}. The native ecosystem in the project area was no longer present and the goal of the project is to plant grass species on degraded black soil beach^{/PDR/}. As stated in the PD during the crediting period, all project areas will be managed to be sustainable, this is verified by checking the project lifetime evidence^{/PL/} and through on-site interview with local officers^{/I2/}.			
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CL ID	03	Section no.	2.1.13	Date : 08/04/2021
Description of CL				
Some milestones are missing, including biodiversity survey, PRA, project approval, open period for comments and site visit, etc.				
Project participant response				Date : 19/05/2021
Milestones have been added in section 2.1.13 of the PD, including biodiversity survey, PRA, project approval, open period for comments and site visit.				
Documentation provided by project participant				
☒	Changes in the PD	Section(s): 2.1.13	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☒	Other:	/PDR/, /APDR/		
VVB assessment				Date: 31/05/2021

The revised PD is checked, it is confirmed that the biodiversity survey, PRA, project approval, open period for comments and site visit, etc have been added, which is verified as correct by checking the related evidence.

Refer to section 3.2.10 of this report for detail assessment.

Conclusion

Tick the appropriate checkbox

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

CL ID	04	Section no.	2.1.14	Date :	08/04/2021
Description of CL					
The description of the evidence proved the start date of the project is missing.					
Project participant response					Date :
The description of the evidence proved the start date of the project has been add in section 2.1.14 of the PD.					
The start date of project activity and crediting period (started grass seeding): 20-June-2016					
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/, /PL/, /APDR/			
VVB assessment					Date:
The revised PD is checked, it is confirmed that the description of the evidence proved the start date of the project have been added.					
The PD states, and confirmed by the PP during the interview, that the project start date is 20-June-2016 based on the date when the seeding started, which is verified via checking the Project Starting Date evidence (Seeding Construction Contract for year 2016) issued by Haiyan Senyuan Forest and Grass Ecological Planting Co., Ltd. and local Forestry and Grass Bureau ^{/PSD/} .					
Agreements between the landowner and the project owner are available defining the validity and the land used ^{/APDR/} . The project lifetime is 40 years ^{/PL/} and the PP choose GHG accounting period of 40 years which is same to the project lifetime. The GHG accounting period was chosen by PP as started from 20-June-2016, and the project lifetime begin on the project start date. The starting date is defined on 20-June-2016 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.					
Conclusion					
<i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CL ID	05	Section no.	2.1.18	Date :	08/04/2021
Description of CL					
1. The actual methods used for biological control are not clarified. 2. The mitigation measures for overgrazing is not sufficient. 3. Due to the project is located in areas with an average altitude of over 4,200 meters and the average annual temperature is -4°C, the risk of weather is not considered.					
Project participant response					Date :
1. The actual methods used for biological control have been supplemented, such as building eagle's nest to control rodent. 2. More mitigation measures for overgrazing have been supplemented. 3. The frost disaster has been considered.					
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:				
VVB assessment					Date:
					31/05/2021

1. The revised PD is checked, it is confirmed that the actual methods used for biological control are clarified. 2. The revised PD is checked, it is confirmed that the mitigation measures for overgrazing is added to be sufficient. 3. The revised PD is checked, it is confirmed that the risk of weather is considered. Refer to section 3.2.12 of this report for details assessment.	
Conclusion Tick the appropriate checkbox	☐ Additional action should be taken (finding remains open) ☒ The finding is closed

CL ID	06	Section no.	2.5.3	Date :	08/04/2021
Description of CAR					
It stated in section 2.5.3 that "land owners will be allocated with agreed restitution according to the agreement", hence, it is requested to provide related evidence and more information of the compensation need to be clarified.					
Project participant response					Date :
The detail information and related evidence of the restitution have been clarified in section 2.5.3 of the PD. According to the Implementation Plan of The Subsidy and Incentive Policy for Farmers and Herders issued by Guoluo Tibetan Autonomous Prefecture Government, due to the prohibition of grazing, herders in the project area can receive corresponding subsidies. The subsidy standards for grazing prohibition vary from county to county, ranging from 4.1 RMB/mu to 10.4 RMB/mu.					
Documentation provided by project participant					
☒	Changes in the PD	Section(s):	2.5.3	New version No.:	02
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:				
VVB assessment					Date:
The revised PD is checked, it is confirmed that the description of related evidence and more information of the compensation has been added accordingly. Refer to section 3.2.41 of this report for details assessment.					
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CL ID	07	Section no.	3.1.2	Date :	08/04/2021
Description of CAR					
1. The justification for the applicability condition (1) is not in line with the requirement of methodology. 2. The supporting evidence of "the grassland has been degraded for more than ten years" is not clarified.					
Project participant response					Date :
1. Re-demonstrated the justification of the applicability condition (1), confirmed that the project area is degraded grassland prior the start of the project. 2. The supporting evidence of "the grassland has been degraded for more than ten years" have been emphasized in section 3.1.2 of the PD.					
Documentation provided by project participant					
☒	Changes in the PD	Section(s):	3.1.2	New version No.:	02
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:				
VVB assessment					Date:
1. The revised PD is checked, it is confirmed that justification for the applicability condition (1) is in line with the requirement of methodology. 2. The revised PD is checked, it is confirmed that the supporting evidence of "the grassland has been degraded for more than ten years" is clarified. Refer to section 3.3.2 of this report for details assessment.					
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CL ID	08	Section no.	3.1.2	Date :	08/04/2021	
Description of CAR						
- The justification for the applicability condition (3) is not in line with the requirement of methodology, the exact percentage of animal dung was used as fuel for cooking and heating is not clarified. - The animal dung management under the project scenario is not clarified clear, due to the grazing was forbidden in the first five years after seeding, and then controlled grazing will be allowed.						
Project participant response					Date :	19/05/2021
- Re-demonstrated the justification of the applicability condition (3). In the baseline scenario, there is no any restrictions or regulations for the deposition of animal dung in the project area, all animal dung from grazing animals deposited on grassland lie as is, and is not managed. Grazing is forbidden in the first five years after seeding, and then controlled grazing will be allowed depending on the growth situation of the forage. So, there is no animal dung in the first five years under the project scenario. After grazing is allowed under the project scenario, no animal dung will be managed with alternative manure management systems. - The animal dung management under the project scenario has been revised.						
Documentation provided by project participant						
☒	Changes in the PD	Section(s): 3.1.2		New version No.: 02		
☐	Changes in XLS	Worksheet(s):		New version No.:		
☐	Other:					
VVB assessment					Date:	31/05/2021
- The revised PD is checked, it is confirmed that the justification for the applicability condition (3) is in line with the requirement of methodology, the exact description of animal dung was used as fuel for cooking and heating is clarified. - The revised PD is checked, it is confirmed that the animal dung management under the project scenario is clarified clear. Refer to section 3.3.2 of this report for details assessment.						
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed				

CL ID	09	Section no.	3.1.2	Date :	08/04/2021	
Description of CAR						
The animal dung management under the project scenario is not clarified clear, due to the grazing was forbidden in the first five years after seeding, and then controlled grazing will be allowed, and how this will not lead to an increase in the use of fossil fuels and fuel wood is not clarified.						
Project participant response					Date :	19/05/2021
As described in section 3.1.2, grazing is forbidden in the first five years after seeding, herders graze around the project area under the guidance of the local forestry and grassland bureau, and use cow dung as fuel, so the project activities will not lead to an increase in the use of fossil fuels and fuel wood.						
Documentation provided by project participant						
☒	Changes in the PD	Section(s): 3.1.2		New version No.: 02		
☐	Changes in XLS	Worksheet(s):		New version No.:		
☐	Other:					
VVB assessment					Date:	31/05/2021
The revised PD is checked, it is confirmed that the animal dung management under the project scenario is clarified clear. Refer to section 3.3.2 of this report for details assessment.						
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed				

CL ID	10	Section no.	3.1.3	Date :	08/04/2021
Description of CAR					
The emission sources and GHGs selected for accounting for this project in table 3-2 are not totally					

consistent with the BE and PE calculation process of the project, and actual project status need to be clarified.			
Project participant response			Date : 19/05/2021
The emission sources and GHGs selected for accounting for this project in table 3-2 have been revised, which consistent with the BE and PE calculation process of the project, and the actual project status have been clarified.			
Documentation provided by project participant			
☒	Changes in the PD	Section(s): 3.1.2	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☐	Other:		
VVB assessment			Date: 31/05/2021
The revised PD is checked, it is confirmed that emission sources and GHGs selected for accounting for this project in table 3-2 are totally consistent with the BE and PE calculation process of the project, and actual project status have been clarified. Refer to section 3.3.3 of this report for details assessment.			
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CL ID	11	Section no.	3.2.2	Date : 08/04/2021
Description of CAR				
The uncertainty analysis is not clarified based on the applied methodology.				
Project participant response				Date : 19/05/2021
The uncertainty analysis has been revised in section 3.2.2 of the PD. The parameters about grazing and diesel oil consumption comes from full census survey are conservative, and the uncertainty is considered to be 0. A conservative estimate of carbon sequestration by carbon pools in the project scenario should be given by adopting a value that represents the lower bound of the 95 percent confidence interval (sample mean - 1.96 × standard error).				
Documentation provided by project participant				
☒	Changes in the PD	Section(s): 3.2.2	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☒	Other:	/ESC/		
VVB assessment				Date: 31/05/2021
The revised PD is checked, it is confirmed that the uncertainty analysis is clarified based on the applied methodology. All parameters are selected according to section 9.1 and 9.2 of the methodology (VM0026, Version 1.0), and SOC data are obtained by laboratory tests. For estimate of baseline carbon sequestration by carbon pools, the project proponent conducted a survey of all grazing agents whose livestock grazed in the project area prior to the project start date ^{/BSR/} . This survey covered a full census of project participants and project non-participants whose livestock graze in the project area during the baseline period (covering the one year prior to the project start date) covered by the survey, and collected grazing data in the project area under the baseline scenario, such as the number and days of grazing, etc.. Also, the project proponent and the county forestry and grassland bureau recorded all the diesel oil consumed by the project. So the parameters about grazing and diesel oil consumption are conservative, and the uncertainty is considered to be 0. For estimate of project emissions by GHG sources, as mentioned before, the project use Option 2 (measurement approach) to estimate project removals due to changes in SOC, the measured SOC changes is derived from sample surveys undertaken within the project area, and the sample size is large, therefore a conservative estimate of carbon sequestration by carbon pools in the project scenario should be given by adopting a value that represents the lower bound of the 95 percent confidence interval (sample mean - 1.96 × standard error) in line with the applied methodology (VM0026, Version 1.0). However, for the ex-ante estimation in this PD, the SOC changes in project scenario is based on the literature sources ^{/ESC/} , therefore the uncertainty is considered to be zero. And the confidence interval will be adopted in the following verification.				

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

CL ID	12	Section no.	3.3.2	Date :	08/04/2021			
Description of CAR								
For all the monitored paramters, data source of the ex ante estimated value is not clarified.								
Project participant response					Date :			
					19/05/2021			
The data source of all the monitored paramters for the ex-ante estimated value have been provided in section 3.3 of the PD.								
Documentation provided by project participant								
☒	Changes in the PD	Section(s):	3.3.2	New version No.:	02			
☐	Changes in XLS	Worksheet(s):		New version No.:				
☐	Other:							
VVB assessment					Date:			
					31/05/2021			
The revised PD is checked, it is confirmed that data source of the exante estimated value for all the monitored paramters have been provided. Refer to section 3.3.8 of this report for details assessment.								
<table border="1"> <tr> <td rowspan="2"> Conclusion Tick the appropriate checkbox </td> <td>☐ Additional action should be taken (finding remains open)</td> </tr> <tr> <td>☒ The finding is closed</td> </tr> </table>						Conclusion Tick the appropriate checkbox	☐ Additional action should be taken (finding remains open)	☒ The finding is closed
Conclusion Tick the appropriate checkbox	☐ Additional action should be taken (finding remains open)							
	☒ The finding is closed							

CL ID	13	Section no.	3.3.2	Date :	08/04/2021
Description of CAR					
- For parameter $SOC_{mG,s,i,t}$, according to the applied methodology, measurement method is "Soil sampling, sampling intensity, handling and storage, processing and measurement of $SOC_{mG,s,i,t}$, and quality control must follow the guidance, methods and procedures as described in Section 8.2.8 of this methodology", while PP listed a method for determination of soil organic matter (NY/T 1121.6-2006), how this standard in compliance with the request of the methodology is not clarified. - For parameter $BD_{mG,s,i,t}$, according to the applied methodology, measurement method is "Soil sampling, sampling intensity, handling and storage, processing and measurement of $BD_{mG,s,i,t}$, and quality control must follow the guidance, methods and procedures as described in Section 8.2.8 of this methodology", while PP listed a method for determination of soil bulk density (NY/T 1121.4-2006), how this standard in compliance with the request of the methodology is not clarified. - For parameter $FC_{mG,s,i,t}$, according to the applied methodology, measurement method is "Soil sampling, sampling intensity, handling and storage, processing and measurement of $FC_{mG,s,i,t}$, and quality control must follow the guidance, methods and procedures as described in Section 8.2.8 of this methodology", while PP listed a Research, how this research in compliance with the request of the methodology is not clarified.					
Project participant response					Date :
					19/05/2021
- Soil sampling based on the nationally-approved standard Soil Quality Guidelines for Soil Sampling Techniques (GB/T 36197-2018). The SOC measurement based on the nationally-approved standard Method for Determination of Soil Organic Matter (NY/T 1121.6-2006). - The $BD_{mG,s,i,t}$ measurement based on the nationally-approved standard Method for determination of soil bulk density (NY/T 1121.4-2006). - There is no nationally recognized standard for measuring soil $FC_{mG,s,i,t}$, so previous research standard are used. Xie yingge, Li xia. Research progress on determination methods of gravel content in soil[J]. Soils, 2012,44(1):17-22.					
Documentation provided by project participant					
☒	Changes in the PD	Section(s):	3.3.2	New version No.:	02
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:				
VVB assessment					Date:
					31/05/2021

1. The revised PD is checked, it is confirmed that the national standard requirement is compliance with the request of the methodology which is verified by checking the related standard. 2. The revised PD is checked, it is confirmed that the national standard requirement is compliance with the request of the methodology which is verified by checking the related standard. 3. The revised PD is checked, it is confirmed that the national standard requirement is compliance with the request of the methodology which is verified by checking the related standard. Refer to section 3.3.8 of this report for details assessment.	
Conclusion Tick the appropriate checkbox	☐ Additional action should be taken (finding remains open) ☒ The finding is closed

CL ID	14	Section no.	3.3.2	Date :	08/04/2021
Description of CAR					
1. For parameter Depth, data source is not in line with the methodology. 2. Description of measurement methods and procedures to be applied is missing.					
Project participant response					Date :
1. The data source of parameter Depth is project records. Due to full depth of affected soil layers is not known, a minimum depth of 30 cm was applied. 2. Collect soil samples with soil drill with 30cm scale.					19/05/2021
Documentation provided by project participant					
☒	Changes in the PD	Section(s): 3.3.2		New version No.: 02	
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:				
VVB assessment					Date:
1. The revised PD is checked, it is confirmed that the data source of parameter Depth in line with the methodology. 2. The revised PD is checked, it is confirmed that description of measurement methods and procedures to be applied is added. Refer to section 3.3.8 of this report for details assessment.					31/05/2021
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CL ID	15	Section no.	3.3.4	Date :	08/04/2021
Description of CAR					
The actual status of dissemination of monitoring plan and results for the project is not clarified.					
Project participant response					Date :
The actual status of dissemination of monitoring plan and results for the project have been clarified in section 3.3.4 of the PD. The monitoring plan and results of first verification were published on VCS and CCB website which can be easily download by stakeholders. Also, the summary of project description in local language was disseminated to local communities through County Forestry and Grassland Bureau, as long as the summary of monitoring reports during this verification.					19/05/2021
Documentation provided by project participant					
☒	Changes in the PD	Section(s): 3.3.4		New version No.: 02	
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:				
VVB assessment					Date:
					31/05/2021

The revised PD is checked, it is confirmed that actual status of dissemination of monitoring plan and results for the project is clarified.

The proposed project activity is undergoing concurrent VCS validation joint 1st periodic verification, therefore the monitoring plan as listed in PD and PD summary and the results of the 1st monitoring have been publicly available in the VCS website after the approval of the VCS Board.

The information on dissemination of the monitoring plan regarding to how the monitoring plan and any results have been made publicly available and how summaries have been communicated to the public has been further discussed. The approaches used by PP is confirmed as effective and reasonable.

During site inspection, it is observed that each village have its own public notice boards in village committee office, many important information was disseminated by these channels, it is verified that local stakeholders can get the access to the monitoring plan, results and summaries through this. Furthermore, the technical staff from county Forestry and Grassland Bureau explain the monitoring plan and a contact person with phone number has been published through routine villager assembly so that the stakeholders can raise issues directly to PP which has been confirmed by site visit to the public notice boards and interview with PP^{/1/} and local residents^{/3/}.

Via checking the descriptions and confirmed with project management team, it is verified that the monitoring plan was listed by VERRA, the monitoring report, future verification results, the Chinese version summaries have been effectively disseminated to the local stakeholders and their comments will be collected and considered by PP.

Conclusion

Tick the appropriate checkbox

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

CL ID	16	Section no.	4.4.2	Date : 08/04/2021
Description of CAR				
The actual status of community monitoring plan dissemination for the project is not clarified.				
Project participant response				Date : 19/05/2021
The actual status of community monitoring plan dissemination for the project have been clarified in section 4.4.2 of the PD.				
The community monitoring plan and results of first verification were published on VCS and CCB website which could be easily download by stakeholders. Also, the summary of project description in local language was disseminated to local communities through County Forestry and Grassland Bureau, as long as the summary of monitoring reports during this verification.				
Documentation provided by project participant				
☒	Changes in the PD	Section(s): 4.4.2	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☐	Other:			
VVB assessment				Date: 31/05/2021
The revised PD is checked, it is confirmed that actual status of dissemination of community monitoring plan and results for the project is clarified.				
The proposed project activity is undergoing concurrent VCS validation joint 1 st periodic verification, therefore the community monitoring plan and the results of the 1 st monitoring have been publicly available in the VCS website after the approval of the VCS Board.				
The information on dissemination of the community monitoring plan regarding to how the community monitoring plan and any results have been made publicly available and how summaries have been communicated to the public has been further discussed. The approaches used by PP is confirmed as effective and reasonable.				

During site inspection, it is observed that each village have its own public notice boards in village committee office, many important information was disseminated by these channels, it is verified that local stakeholders can get the access to the community monitoring plan, results and summaries through this. Furthermore, the technical staff from county Forestry and Grassland Bureau explain the community monitoring plan and a contact person with phone number has been published through routine villager assembly so that the stakeholders can raise issues directly to PP which has been confirmed by site visit to the public notice boards and interview with PP^{/11/} and local residents^{/13/}.

Via checking the descriptions and confirmed with project management team, it is verified that the monitoring plan with community parts was listed by VERRA, the monitoring report, future verification results, the Chinese version summaries have been effectively disseminated to the local stakeholders and their comments will be collected and considered by PP.

Conclusion

Tick the appropriate checkbox

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

CL ID	17	Section no.	5.4.2	Date : 08/04/2021
Description of CAR				
The actual status of biodiversity monitoring plan dissemination for the project is not clarified.				
Project participant response				Date : 19/05/2021
The actual status of biodiversity monitoring plan dissemination for the project have been clarified in section 5.4.2 of the PD.				
The biodiversity monitoring plan and results of first verification were published on VCS and CCB website which could be easily download by stakeholders. Also, the summary of project description in local language was disseminated to local communities through County Forestry and Grassland Bureau, as long as the summary of monitoring reports during this verification.				
Documentation provided by project participant				
☒	Changes in the PD	Section(s): 5.4.2	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☐	Other:			
VVB assessment				Date: 31/05/2021
The revised PD is checked, it is confirmed that actual status of dissemination of biodiversity monitoring plan and results for the project is clarified.				
The proposed project activity is undergoing concurrent VCS validation joint 1 st periodic verification, therefore the biodiversity monitoring plan and the results of the 1 st monitoring have been publicly available in the VCS website after the approval of the VCS Board, which can be easily download by stakeholders. The information on dissemination of the biodiversity monitoring plan regarding to how the monitoring plan and any results have been made publicly available and how summaries have been communicated to the public has been further discussed. The approaches used by PP is confirmed as effective and reasonable. During site inspection, it is observed that each village have its own public notice boards in village committee office, many important information was disseminated by these channels, it is verified that local stakeholders can get the access to the biodiversity monitoring plan, results and summaries through this. Furthermore, the technical staff from county Forestry and Grassland Bureau explain the biodiversity monitoring plan and a contact person with phone number has been published through routine villager assembly so that the stakeholders can raise issues directly to PP which has been confirmed by site visit to the public notice boards and interview with PP ^{/11/} and local residents ^{/13/} .				
Via checking the descriptions and confirmed with project management team, it is verified that the monitoring plan with biodiversity parts was listed by VERRA, the monitoring report, future verification results, the Chinese version summaries have been effectively disseminated to the local stakeholders and their comments will be collected and considered by PP.				
Conclusion		☐ Additional action should be taken (finding remains open)		
Tick the appropriate checkbox		☒ The finding is closed		
CL ID	18	Section no.	5.5.1	Date : 08/04/2021

Description of CAR			
The description in section 5.5.1 is not in line with the request "Responses should be based on the causal model that identifies threats to trigger species and activities to address them. Be as specific as possible, providing citations for all references" of PD template.			
Project participant response			Date : 19/05/2021
Identify threats to trigger species and activities to address them through previous research, and all references have been provided.			
Documentation provided by project participant			
☒	Changes in the PD	Section(s): 5.5.1	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☒	Other:	/PDR/, /BBSR/	
VVB assessment			Date: 31/05/2021
The revised PD is checked, it is confirmed that updated description in line with PD template. For Threatened species, based on the biodiversity baseline survey report^{/BBSR/}, it is confirmed that there are 35 species of rare, threatened or endangered (RTE) species in project zone at the start of the project. And based on above demonstration, it is confirmed that the project will protect biodiversity at the project zone thus is verified to be beneficial to the Endangered Species in project zone. The three species have been defined as Trigger Species in the PD, and population trend at start of project is defined as threatened due to the continued degradation of the grassland which has been verified by on-site inspection and checking the biodiversity baseline survey report^{/BBSR/}. Based on checking of the related researches, it is confirmed that there are threats to the population of these Trigger Species due to climate change, overgrazing, mining and animal hunting, while by site inspection and checking the Project design report^{/PDR/}, it is verified that the project aims to restore degraded grassland which could benefit the species and the population status could be maintained and enhanced.			
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 : 08/04/2021
Description of CAR				
The information of validation body is missing.				
Project participant response				Date : 19/05/2021
The information of validation body have been added, such as the organization name, contact person and email address, etc..				
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:			
VVB assessment				Date: 31/05/2021
The revised PD is checked, it is confirmed that the VVB information is correct and actual.				
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 : 08/04/2021
Description of CAR				
1. Name of all species by its scientific name and local name (at least once in the PD) is missing. 2. The emission reduction principle of the project is missing.				
Project participant response				Date : 19/05/2021
1. Name of all species by its scientific name and local name have been added. The project planted Elymus dahuricus Turcz., Poa annual. and Festuca sinensis Keng ex S. L. Lu (local name: lyme grass, bluegrass Chinese fescue) on black soil beach in Guoluo. 2. The project generated GHG emission removals due to the increase of soil organic carbon.				
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:		
VVB assessment			Date: 31/05/2021
1. The revised PD is checked, it is confirmed that name of all species by its scientific name and local name (at least once in the PD) is added. 2. The emission reduction principle of the project is added. Refer to section 3.2.1 of this report for details assessment.			
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CAR ID	03	Section no.	2.1.3	Date :	08/04/2021	
Description of CAR						
The introduction of PP and all the entities involved in the project is missing.						
Project participant response					Date :	19/05/2021
The introduction of Qinghai Guanglv Landscaping Co., Ltd., Guoluo Prefecture Autonomous Prefecture Forestry and Grassland Bureau, Climate Bridge (Shanghai) Ltd. have been added in section 2.1.3 of the PD						
Documentation provided by project participant						
☒	Changes in the PD	Section(s):	2.1.3	New version No.:	02	
☐	Changes in XLS	Worksheet(s):		New version No.:		
☐	Other:					
VVB assessment					Date: 31/05/2021	
The revised PD is checked, it is confirmed that introduction of PP and all the entities involved in the project is added. Refer to the section 3.2.1 of this report for detail assessment.						
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed				

CAR ID	04	Section no.	2.1.6	Date :	08/04/2021	
Description of CAR						
1. The social parameters of main settlements are not provided in line with the PD template request. 2. The social parameters of Land use and economic activities are not provided in line with the PD template request. 3. Socio-cultural information (ethnicity, gender, age, household income, land ownership, education, health statistics, migration patterns, etc.) are not provided in line with the PD template request.						
Project participant response					Date :	19/05/2021
1. The social parameters of Main settlements have been supplemented, such as towns, villages and communities, etc.. 2. The Land use and economic activities have been supplemented, such as animal husbandry and agricultural conditions, etc.. 3. The Socio-cultural information have been supplemented, such as gender, age, household income and land ownership, etc..						
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/				
VVB assessment					Date: 31/05/2021	

1. The revised PD is checked, it is confirmed that the social parameters of main settlements are provided in line with the PD template request.
2. The revised PD is checked, it is confirmed that the social parameters of Land use and economic activities are provided in line with the PD template request.
3. The revised PD is checked, it is confirmed that the socio-cultural information (ethnicity, gender, age, household income, land ownership, education, health statistics, migration patterns, etc.) are provided in line with the PD template request.

Refer to the section 3.2.3 of this report for detail assessment.

Conclusion <i>Tick the appropriate checkbox</i>	☐ Additional action should be taken (finding remains open) ☒ The finding is closed
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CAR ID	05	Section no.	2.1.7	Date :	08/04/2021
Description of CAR					
The description of project zone map and the figures in section 2.1.7 are not provided in line with the PD template requests.					
Project participant response					Date : 19/05/2021
According to the PD template requests, the description of project zone map and the figures have been revised in section 2.1.7 of the PD. Location of communities, high conservation value (HCV) areas and areas where offsite climate impacts have been identified in the map.					
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/, /PDR/, /GE/			
VVB assessment					Date: 31/05/2021
The revised PD is checked, it is confirmed that the project zone map and the figures in section 2.1.7 are provided in line with the PD template requests. Refer to the section 3.2.4 of this report for detail assessment.					
Conclusion <i>Tick the appropriate checkbox</i>	☐ Additional action should be taken (finding remains open) ☒ The finding is closed				

CAR ID	06	Section no.	2.1.11	Date :	08/04/2021
Description of CAR					
1. Data source of description of "where the coverage of primary vegetation is below 30% and the thickness of soil layer is above 30cm" is missing. 2. In section 1.2, the table not only include emission removals but also emission reductions, the difference need to be specified, and the reduction principle need to be provided in 2.1.11.					
Project participant response					Date : 19/05/2021
1. The data source of description of "where the coverage of primary vegetation is below 30% and the thickness of soil layer is above 30cm" is the Project Design Report. 2. The table in section 1.2 have been revised, due to the project generated net GHG emission removals without emission reduction, so the reduction principle is no need to be provided in section 2.1.11.					
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:				
VVB assessment					Date: 31/05/2021
1. The revised PD is checked, it is confirmed that data source of description of "where the coverage of primary vegetation is below 30% and the thickness of soil layer is above 30cm" is added. 2. The revised PD is checked, it is confirmed that in section 1.2, the table was updated with project only generated net GHG emission removals without emission reduction. Hence, it is confirmed that no reduction principle is clarified is correct.					
Refer to the section 3.2.8 of this report for detail assessment.					

Conclusion Tick the appropriate checkbox	☐ Additional action should be taken (finding remains open) ☒ The finding is closed
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CAR ID	07	Section no.	2.1.12	Date :	08/04/2021
Description of CAR					
One of the sustainable development states that the project sequester carbon dioxide and mitigating climate change, however, the reduced GHG type is not carbon dioxide.					
Project participant response					Date :
The sustainable developments have been revised in section 2.1.12 of the PD. The implementation of the project will generate GHG emission removals by increasing soil organics.					
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:				
VVB assessment					Date:
The revised PD is checked, it is verified that the description is correct.					
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CAR ID	08	Section no.	2.1.19	Date :	08/04/2021
Description of CAR					
The description of section 2.1.19 is not in line with the PD template requirement, more information of the actual action and impacts to ensure the climate, community, and biodiversity benefits beyond the project lifetime need to be provided.					
Project participant response					Date :
More information of the actual action and impacts to ensure the climate, community, and biodiversity benefits beyond the project lifetime have been provided. The restoration and sustainable management of degraded grasslands and the promotion of local tourism by the project could guarantee the long-term climate, community, and biodiversity benefits.					
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:				
VVB assessment					Date:
The revised PD is checked, it is confirmed that description of section 2.1.19 in line with the PD template requirement. Refer to section 3.2.13 of this report for detail assessment.					
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CAR ID	09	Section no.	2.2.1	Date :	08/04/2021
Description of CAR					
1. The project area can't be seen in Figure 2-5, and all the project area was black soil beach (degraded grassland) can't be seen in 2-6 and 2-7 because there are no diagrams and icons, and no any explanation of the red parts. 2. Both images to show the baseline sceanrio in 2005 & 2015 are taken from winter month December. PP is requested to demonstrate that in spring/summer the images show the same result.					
Project participant response					Date :
1. Two more high-resolution satellite images of the project area are provided to identify the black soil beach. Also, the diagrams and icons have been added. 2. There are no satellite images of the project area taken in spring/summer of 2005&2015 available from Google Earth, the satellite images in spring/summer from other sources have been added in the updated PD show the same result.					

Documentation provided by project participant			
☒	Changes in the PD	Section(s): 2.2.1	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☒	Other:	/BSR/, /PRA/, /SI/, /MAP/	
VVB assessment			Date: 31/05/2021
1. The revised PD is checked, it is confirmed that the satellite images of the project area are provided to illustrate the baseline scenario. In the absence of the project the land would be black soil beach (degraded grassland). There is no quality vegetations in the project area before the project. The lands will remain degraded without the project. This is confirmed by onsite interview with local government officer^{/I2/} and documents review with baseline survey^{/BSR/}, Participatory Rural Appraisal (PRA) Report^{/PRA/} and the satellite images^{/SI/} more than 10 years before the project start date comparing with project maps^{/MAP/}. 2. The revised PD is checked, via checking the satellite images supplemented in the PD, it is confirmed that Satellite images of the project area in August 2015 has been added which prove that the images in spring/summer show the same result with winter.			
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CAR ID	10	Section no.	2.2.3	Date	08/04/2021	
Description of CAR						
The description in section 2.2.3 is not in line with the PD template requests.						
Project participant response					Date	19/05/2021
The description in section 2.2.3 has been revised. Demonstrate that project activities would not have been implemented under the without-project scenario due to financial and technological barriers.						
Documentation provided by project participant						
☒	Changes in the PD	Section(s): 2.3.6	New version No.: 02			
☐	Changes in XLS	Worksheet(s):	New version No.:			
☐	Other:					
VVB assessment					Date	31/05/2021
The revised PD is checked, it is confirmed that description in section 2.2.3 in line with the PD template requests. Refer to section 3.2.18 of this report for detail assessment.						
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed				

CAR ID	11	Section no.	2.3.1, 2.3.2, 2.3.3	Date	08/04/2021	
Description of CAR						
1. The actual status of stakeholder access to project documents is not provided in section 2.3.1. 2. The actual status of dissemination of summary project documents is not provided in section 2.3.2. 3. The actual status of Informational Meetings with Stakeholders, especially detail information for the PRA is not provided in section 2.3.3.						
Project participant response					Date	19/05/2021
1. The stakeholder can easily download from project documents the VCS and CCB website website, project owner would notice local stakeholders every milestone. 2. The stakeholder can access project summary documents fro, the VCS and CCB website and bulletin board. 3. The detail information Stakeholders Meeting and the PRA have been provided in section 2.3.3 and 2.3.7.						
Documentation provided by project participant						
☒	Changes in the PD	Section(s): 2.3.1&2.3.2&2.3.3	New version No.: 02			
☐	Changes in XLS	Worksheet(s):	New version No.:			
☒	Other:	/PDS/, /RVAR/				
VVB assessment					Date	31/05/2021

1. The revised PD is checked, it is confirmed that actual status of stakeholder access to project documents is provided in section 2.3.1. 2. The revised PD is checked, it is confirmed that actual status of dissemination of summary project documents is provided in section 2.3.2. 3. The revised PD is checked, it is confirmed that actual status of Informational Meetings with Stakeholders, especially for the PRA is provided in section 2.3.3. In conclusion, the PP has made project documentation accessible to communities and other stakeholders. During the public consultation period, no comments were received via checking the VCS and CCB websites. Refer to the section 3.2.19 of this report for detail assessment.	☐ Additional action should be taken (finding remains open) ☒ The finding is closed
Conclusion Tick the appropriate checkbox	

CAR ID	12	Section no.	2.3.4	Date	08/04/2021
Description of CAR					
The information of Community Costs, Risks, and Benefits in section 2.3.4 is not provided in line with the PD template requirement.					
Project participant response					Date
The information of Community Costs, Risks, and Benefits have been revised in section 2.3.4 of the PD. Local Forestry and Grassland Bureau and project proponent are responsible to explain the potential costs, risks and benefits to relevant communities and stakeholders, then asked them to give their feedback and collected their willingness to participate. Benefits: Income improvement, Increase job and training opportunities, Establish community capability; Costs and Risks: Grazing was strictly forbidden in the first five years after seeding; Mitigations: County Forestry and Grassland Bureau measures the grass yield of the surrounding grasslands in the project area, and guides herders to graze in a reasonable area. Also, the project provides job opportunities for local herders, which will increase their income in long term.					19/05/2021
Documentation provided by project participant					
☒	Changes in the PD	Section(s):	2.3.4	New version No.:	02
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:				
VVB assessment					Date:
The revised PD is checked, it is confirmed that information of Community Costs, Risks, and Benefits in section 2.3.4 is provided in line with the PD template requirement. Within the project area was made a Participatory Rural Appraisal (PRA) survey in November 2015 with stakeholder meeting by the PP inviting local women, local herders, grassland guardians in the project, village collectives, local forestry and grassland bureau, Guoluo Tibetan Autonomous Prefecture Finance Bureau and local government to inform people of the possible impact in terms of economics, social and biodiversity aspects that the project might have on the community. This was confirmed by the PPs and by the Participatory Rural Appraisal (PRA) survey report ^{PRA/} provided during the site visit. Via checking the contents in the PRA, it is concluded that the project design details, relevancy and adequacy of the information has been provided to communities, and the analysis of project benefits to communities including all the potential impacts are provided to the stakeholders to let all the participants know the project's potential costs, risks and benefits. All the costs, risks and benefits are identified completely and adequately in the PRA process, stakeholder meetings, distributed questionnaires and during the site visit, by interviewed with the local stakeholders, it is verified that they understand the project's potential costs, risks and benefits to communities with the project development and process. There is no any important costs, risks and benefits missed.					31/05/2021
Conclusion		☐ Additional action should be taken (finding remains open) ☒ The finding is closed			
Tick the appropriate checkbox					

CAR ID	13	Section no.	2.3.6	Date	08/04/2021
Description of CAR					

As the on-site validation was finished, the relevant information needed to be revised based on the actual situation.			
Project participant response			Date : 19/05/2021
The on-site information has been added in section 2.3.6 of the PD, such as detail information of the date, schedule, and stakeholder meeting.			
Documentation provided by project participant			
☒	Changes in the PD	Section(s): 2.3.6	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☐	Other:		
VVB assessment			Date: 31/05/2021
The revised PD is checked, it is confirmed that information of auditor validation is actual and correct. Refer to the section 3.2.22 of this report for detail assessment.			
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CAR ID	14	Section no.	2.3.7	Date : 08/04/2021
Description of CAR				
The PRA survey location and time period, also the time period for finish the questionnaires distributed during PRA are not provided.				
Project participant response				Date : 19/05/2021
The detail information of the PRA survey has been added in 2.3.7 of the PD, such as location and time period.				
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:	/QUE/, /PRA/		
VVB assessment				Date: 31/05/2021
The revised PD is checked, it is confirmed that the time period for finish the questionnaires distributed during PRA is added which is verified as correct by checking the questionnaires ^{/QUE/} and PRA report ^{/PRA/} .				
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed		

CAR ID	15	Section no.	2.3.9	Date : 08/04/2021
Description of CAR				
The description of section 2.3.9 is not in line with the PD template requirement,				
Project participant response				Date : 19/05/2021
According to the PD template requirement, the way of information sharing have been described. The summary of project description in local language has been distributed among local communities during the community monitoring activity in April 2020 and also in the stakeholder meeting with VVB held in March 2021 and the website address to download all the summary project documents has been provided to communities during the meeting which has also been published in the public notice boards in each village.				
Documentation provided by project participant				
☒	Changes in the PD	Section(s): 2.3.9	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☒	Other:	/PRA/, /RVAR/		
VVB assessment				Date: 31/05/2021
As stated in the PD, the documentation and information regarding the project were made available to the community through routine villager assembly in both project listing and validation process, which has been confirmed by checking the routine villager assembly record ^{/RVAR/} and interview with local residents ^{/I3/} . Moreover, local policy makers and grass experts were also invited by phone calls during the PRA and validation process which has been confirmed by checking the PRA ^{/PRA/} and interview with local officers ^{/I3/} . All the stakeholder have been informed directly or through their legitimate representatives.				

During the meetings the main information about the climate change and the carbon market were provided^{/PRA/}, and all the stakeholders could raise questions and discuss issues they cared about with the PP during the meeting directly. This is deemed as the most direct approach for the consultation. The PPs have gone to considerable lengths to consult with local stakeholders and engage them in the project during the project development process. This was confirmed during the on-site visit and the interview with the local stakeholders. Hence, it is concluded that adequate levels of information sharing has occurred.

Conclusion

Tick the appropriate checkbox

☐ Additional action should be taken (finding remains open)

☒ The finding is closed

CAR ID	16	Section no.	2.3.15	Date :	08/04/2021
Description of CAR					
The numbers of temporary and permanent community employment opportunities are not provided and women numbers are missing.					
Project participant response					Date :
During the project implementation, about 11,890 local herders (6,150 are women) participated in grass seeding and rodent control, of which 6,023 local herders (3,100 are women) were employed as guardians. Among the 11,890 jobs opportunities, 6,023 are temporary jobs, which lasted from 2016 to 2018 and 5,867 are permanent jobs, which lasted through the entire project crediting period.					
Documentation provided by project participant					
☒	Changes in the PD	Section(s): 2.3.15		New version No.: 02	
☐	Changes in XLS	Worksheet(s):		New version No.:	
☒	Other:	/TTR/, /LC/, /PP/			
VVB assessment					Date:
The revised PD is checked, it is confirmed that the numbers are listed clearly. During the project implementation, about 11,890 local herders (6,150 are women) participated in grass seeding and rodent control, of which 6,023 local herders (3,100 are women) were employed as guardians. Among the 11,890 jobs opportunities, 6,023 are temporary jobs, which lasted from 2016 to 2018 and 5,867 are permanent jobs, which lasted through the entire project crediting period by verified the labor contract ^{/LC/} . The payment to temporary planting was 60 RMB (9.19 USD)/day and permanent grassland guardians were paid by 21,000 RMB (3,216.56 USD) /year. This is confirmed via checking the labor contract ^{/LC/} , periodical payroll ^{/PP/} and on site interview with grassland guardians ^{/13/}					
Conclusion					
Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open)			
		☒ The finding is closed			

CAR ID	17	Section no.	2.5.6	Date :	08/04/2021
Description of CAR					
The description of section 2.5.6 is not in line with the PD template requirement,					
Project participant response					Date :
The ongoing or unresolved conflicts have been identified and measures to resolve conflicts have been described in section 2.5.6 of the PD.					
Documentation provided by project participant					
☒	Changes in the PD	Section(s): 2.5.6		New version No.: 02	
☐	Changes in XLS	Worksheet(s):		New version No.:	
☒	Other:	/APDR/			
VVB assessment					Date:
					31/05/2021

The revised PD is checked, it is confirmed that the description of section 2.5.6 in line with the PD template requirement.

Governments all the village collective voluntarily use these lands to seeding grasses confirmed by checking the project approval^{/APDR/}. Thus, there are no ongoing or unresolved conflicts or disputes over land, territories and resources rights^{/APDR/}.

Furthermore, by on site interview with officers from county Forestry and Grassland Bureau^{/12/} and local residents^{/13/} and checking the project approval^{/APDR/}, it is confirmed that no any disputes that were resolved during the last twenty years.

The project is implemented in project land which is state-owned lands and village collective property as defined in the project approval^{/APDR/}. Local governments and the village collective voluntarily use these lands to seeding grasses confirmed by checking the project approval^{/APDR/}, the land use statement is confirmed as signed before the project implementation with all the landowner's consent. During the on-site observation, the grasses have been planted for more than 4 years and by interview with the local residents, it is verified that no activity is undertaken by the project that could prejudice the outcome of an unresolved dispute relevant to the project.

In conclusion, no measures needed and designed to resolve conflicts or disputes.

Conclusion

Tick the appropriate checkbox

☐ Additional action should be taken (finding remains open)

☒ The finding is closed

CAR ID	18	Section no.	2.5.7	Date :	08/04/2021
Description of CAR					
The national and local laws related to grazing is not provided.					
Project participant response					Date : 19/05/2021
The PRC Grassland Law has been provided.					
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:				
VVB assessment					Date: 31/05/2021
The revised PD is checked, it is confirmed that the national and local laws related to grazing is PRC Grassland Law ^{/law/} which has been provided.					
Conclusion		☐ Additional action should be taken (finding remains open)			
<i>Tick the appropriate checkbox</i>		☒ The finding is closed			

CAR ID	19	Section no.	2.5.8	Date :	08/04/2021
Description of CAR					
The exact date for the project approval is missing.					
Project participant response					Date : 19/05/2021
The project has been approved by approved by Guoluo Tibetan Autonomous Prefecture Agriculture and Animal Husbandry Department on 02-November-2015.					
Documentation provided by project participant					
☒	Changes in the PD	Section(s):	2.5.8	New version No.:	02
☐	Changes in XLS	Worksheet(s):		New version No.:	
☒	Other:	/APDR/			
VVB assessment					Date: 31/05/2021
The revised PD is checked, it is confirmed that the exact date for the project approval is added which is verified as correct by checking the approval ^{/APDR/} .					
Conclusion		☐ Additional action should be taken (finding remains open)			
<i>Tick the appropriate checkbox</i>		☒ The finding is closed			

CAR ID	20	Section no.	3.1.2	Date :	08/04/2021
Description of CAR					

The justification for application condition of (5) is stated basing on previous study, however, the detail information of the study is missing and related evidence is missing.			
Project participant response			Date : 19/05/2021
The detail information and evidence has been provided. Han Youxiang. Analysis of the change trend of various meteorological elements in Guoluo area in the past 36 years[J]. Qinghai Meteorology, 2016, 2: 10-15.			
Documentation provided by project participant			
☒	Changes in the PD	Section(s): 3.1.2	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☒	Other:	/ACT/	
VVB assessment			Date: 31/05/2021
The revised PD is checked, it is verified that the justification for application condition of (5) is supported by evidence. Via checking the study of Analysis of the change trend of various meteorological elements in Guoluo area in the past 36 years ^{/ACT/} , it is confirmed that the values of annual precipitation was less than values of evapotranspiration in the six counties of Guoluo Tibetan Autonomous Prefecture for most of the year and leaching is unlikely to occur in the project area. Hence, this applicable condition is fulfilled.			
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CAR ID	21	Section no.	3.1.2	Date : 08/04/2021
Description of CAR				
The demonstration of application conditions of Tool for Identification of Degraded or Degrading Lands for Consideration in Implementing CDM AR Project Activities (version 1.0) is not provided.				
Project participant response				Date : 19/05/2021
The demonstration of application conditions of Tool for Identification of Degraded or Degrading Lands for Consideration in Implementing CDM AR Project Activities (version 1.0) has been clarified. Tool for Identification of Degraded or Degrading Lands for Consideration in Implementing CDM AR Project Activities (version 1.0) provides a procedure for the identification of degraded or degrading lands for the purpose of application of A/R CDM methodologies. There is no mandatory applicability requirement.				
Documentation provided by project participant				
☒	Changes in the PD	Section(s): 3.1.2	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☐	Other:			
VVB assessment				Date: 31/05/2021
The revised PD is checked, it is verified that the demonstration of application conditions of Tool for Identification of Degraded or Degrading Lands for Consideration in Implementing CDM AR Project Activities (version 1.0) is provided. Refer to section 3.3.2 of this report for detail assessment.				
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed		

CAR ID	22	Section no.	3.1.2	Date : 08/04/2021
Description of CAR				
The demonstration of applicability of Appendix of 1 Eligible AFOLU Project Categories of the VCS Standard V4.1, Eligible AFOLU Project Categories is not provided and related demonstration is missing.				
Project participant response				Date : 19/05/2021
The applicability of Appendix of 1 Eligible AFOLU Project Categories of the VCS Standard V4.1, Eligible AFOLU Project Categories has been demonstrated in section 3.1.2 of the PD. According to Appendix of 1 Eligible AFOLU Project Categories of the VCS Standard (version 4.1), eligible ALM activities are those that reduce net GHG emissions on croplands and grasslands by increasing carbon stocks in soils and woody biomass and/or decreasing CO ₂ , N ₂ O and/or CH ₄ emissions from soils.				

The project area shall not be cleared of native ecosystems within the 10-year period prior to the project start date. Eligible ALM activities include:

- 1) Improved Cropland Management (ICM): This category includes practices that demonstrably reduce net GHG emissions of cropland systems by increasing soil carbon stocks, reducing soil N₂O emissions, and/or reducing CH₄ emissions.
- 2) Improved Grassland Management (IGM): This category includes practices that demonstrably reduce net GHG emissions of grassland ecosystems by increasing soil carbon stocks, reducing N₂O emissions and/or reducing CH₄ emissions.
- 3) Cropland and Grassland Land-use Conversions (CGLC): This category includes practices that convert cropland to grassland or grassland to cropland and reduce net GHG emissions by increasing carbon stocks, reducing N₂O emissions, and/or reducing CH₄ emissions.

The project restored degraded grassland by planting grass, increases soil carbon stocks, reduce N₂O and CH₄ emissions, which met the requirements of Improved Grassland Management (IGM).

Documentation provided by project participant

☒	Changes in the PD	Section(s): 3.1.2	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☒	Other:	/SI/, /PDR/, /BSR/, /APDR/	

VVB assessment

Date: 31/05/2021

The revised PD is checked, it is verified that the demonstration of applicability of Appendix of 1 Eligible AFOLU Project Categories of the VCS Standard V4.1, Eligible AFOLU Project Categories is not provided and related demonstration is added.

According to Appendix of 1 Eligible AFOLU Project Categories of the VCS Standard V4.1, the validation team check the project activity eligibility as below:

As the project activity is an afforestation project, via the section A1.2 of Appendix of 1 Eligible AFOLU Project Categories of the VCS Standard V4.1,

Agricultural Land Management (ALM)

A1.2 Eligible ALM activities are those that reduce net GHG emissions on croplands and grasslands by increasing carbon stocks in soils and woody biomass and/or decreasing CO₂, N₂O and/or CH₄ emissions from soils. The project area shall not be cleared of native ecosystems within the 10-year period prior to the project start date.

Eligible ALM activities include:

- 1) Improved Cropland Management (ICM): This category includes practices that demonstrably reduce net GHG emissions of cropland systems by increasing soil carbon stocks, reducing soil N₂O emissions, and/or reducing CH₄ emissions.
- 2) Improved Grassland Management (IGM): This category includes practices that demonstrably reduce net GHG emissions of grassland ecosystems by increasing soil carbon stocks, reducing N₂O emissions and/or reducing CH₄ emissions.
- 3) Cropland and Grassland Land-use Conversions (CGLC): This category includes practices that convert cropland to grassland or grassland to cropland and reduce net GHG emissions by increasing carbon stocks, reducing N₂O emissions, and/or reducing CH₄ emissions.

The PD^{/PD/} states the project reduce net GHG emissions on croplands and grasslands by increasing carbon stocks in soils and woody biomass and/or decreasing CO₂, N₂O and/or CH₄ emissions from soils. And the project belongs to Improved Grassland Management (IGM) category. Via site inspection and checking the Project Design Report^{/PDR/} and Approval of project design report^{/APDR/}, it is confirmed that the aim of the project is seeding of a variety of species native grass on black soil beach that will reduce net GHG emissions of grassland ecosystems by increasing soil carbon stocks, to reduce N₂O emissions and/or reduce CH₄ emissions.

Via checking the Project Design Report^{/PDR/}, satellite images^{/SI/}, Baseline Survey Report^{/BSR/} and on-site interview with local officers^{/I2/} and herders^{/I3/}, it is confirmed that project area have never been cleared of native ecosystems within the 10 year period prior to the project start date. Via checked the the satellite images^{/SI/} before the project start date, further conducted on-site interview with the local officer and herders^{/I2/, /I3/}, it is verified that the project sites were previously degraded grassland for more than 10 years. There is no natural renewal or native ecosystems cleared before the project which has been confirmed by validation team via checking the project baseline survey^{/BSR/}.

The native ecosystem in the project area was no longer present and the goal of the project is to plant grass species on degraded black soil beach^{/PDR/}. As stated in the PD during the crediting period, all project areas will be managed to be sustainable, this is verified by checking the project lifetime evidence^{/PL/} and through on-site interview with local officers^{/I2/}.

Hence, it is verified that the project is eligible as Improved Grassland Management (IGM) category and thus is an AFOLU project.

Conclusion

Tick the appropriate checkbox

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

CAR ID	23	Section no.	3.1.4	Date : 08/04/2021
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Description of CAR

- The description of barrier analysis using the step 3 of Tool for the Demonstration and Assessment of Additionality in VCS AFOLU Project Activities is not provided.
- In Sub-step 2b) ecological barrier, PP stated that Scenario ii faces the technical, funding and ecological barriers, however, the related information of ecological barriers is not provided.

Project participant response

Date : 19/05/2021

- The description of barrier analysis using the step 3 of Tool for the Demonstration and Assessment of Additionality in VCS AFOLU Project Activities have been added. Project activity on the land within the project boundary performed without being registered as the VCS AFOLU project faces the investment and technological barriers. The implementation and sustainable management of the project require a lot of money. Since the project has no benefits, there is no institutional investment. Therefore, the investment barrier for this project is the lack of access to credit. Local residents who participated in the project lack access to high-quality grass seeds and necessary tools, such as trucks, tractors and seeders, etc.. They also lack skills in grass planting, rodent control, fire prevention, and sustainable grassland management. In addition, the lack of organizational instruments also prevents them from overcoming technological barriers. Therefore, the technological barrier for this project is the lack of access to planting materials and equipment for implementing the technology.
- There are no ecological barriers in the project, so the ecological barrier in Sub-step 2b) has been deleted.

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:		

VVB assessment

Date: 31/05/2021

- The revised PD is checked, it is confirmed that the description of barrier analysis using the step 3 of Tool for the Demonstration and Assessment of Additionality in VCS AFOLU Project Activities is provided.
- The revised PD is checked, it is confirmed that the ecological barriers has been deleted as a typo. Refer to section 3.3.4 and 3.3.5 of this report for detail assessment.

Conclusion

Tick the appropriate checkbox

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

CAR ID	24	Section no.	3.1.5	Date : 08/04/2021
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Description of CAR

For common practice analysis,

- According to the tool, the condition of "Considerations shall be limited to the period beginning 10 years prior to the project start date" is not used to define the similar projects.
- According to the tool, it stated that "other registered VCS AFOLU project activities shall not be included in this analysis", but the similar cases identified only focuses on carbon-related projects, which is not comprehensive.

Project participant response

Date : 19/05/2021

- According to the tool, similar activities are defined as that which are of similar scale, take place in a comparable environment, inter alia, with respect to the regulatory framework and are undertaken in the relevant geographical area, subject to further guidance by the underlying methodology. Other registered VCS AFOLU project activities shall not be included in this analysis. Considerations shall be limited to the period beginning 10 years prior to the project start date. - Based on the public and accessible information, and check with local authority, except for some small-scale grassland restoration project implemented since 2011, there were no other degraded grassland restoration project on a scale similar with the proposed project have been implemented previously in Qinghai Province. http://lcj.qinghai.gov.cn/xwdt/snxw/content_838			
Documentation provided by project participant			
☒	Changes in the PD	Section(s): 3.1.5	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☐	Other:		
VVB assessment			Date: 31/05/2021
- The revised PD has been checked, it is confirmed that the condition is used. - The revised PD has been checked, it is confirmed that the data source of all the similar cases has been added. Refer to section 3.3.5 of this report for detail assessment.			
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CAR ID	25	Section no.	3.2.1	Date : 08/04/2021
Description of CAR				
- The parameter $H_{l,b}$ is not listed in section 3.3.1 or 3.3.2 as the ex ante determined or monitored parameters. - The equation for calculate $BE_{ID,N_2O_{MD},b}$ is no need to be listed due to the PP has demonstrated that the indirect N_2O emissions from leaching and runoff can be excluded. - The final equation for calculating the BE_b is not provided. - The applied unit to convert from t to kg is not correct.				
Project participant response				Date : 19/05/2021
- The parameter $H_{l,b}$ has been listed in section 3.3.1 of the PD. - The equation is used for calculate indirect N_2O emissions from the atmospheric deposition of N volatilized as NH_3 and NO_x after urine and manure N is deposited on grassland soils under the project. - The final equation for calculating the BE_b has been provided. - The unit description has been corrected in the updated PD.				
Documentation provided by project participant				
☒	Changes in the PD	Section(s): 3.2.1	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☐	Other:			
VVB assessment				Date: 31/05/2021
- The revised PD is checked, it is confirmed that the parameter $H_{l,b}$ is listed in section 3.3.1 as the ex ante determined parameter which in line with the applied methodology. - The revised PD is checked, it is confirmed that the equation for calculate $BE_{ID,N_2O_{MD},b}$ is no used for calculate indirect N_2O emissions from the atmospheric deposition of N volatilized as NH_3 and NO_x after urine and manure N is deposited on grassland soils under the project thus listed as per the applied methodology. - The revised PD is checked, it is confirmed that the final equation for calculating the BE_b is provided. - The revised PD is checked, it is confirmed that the unit is corrected. Refer to section 3.3.7 of this report for detail assessment.				
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed		

CAR ID	26	Section no.	3.2.2	Date : 08/04/2021
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Description of CAR			
1. If the Indirect N₂O emissions from leaching and runoff need to be considered is not clarified. 2. The evidence of records of grassland guardian and local forestry and grass bureau is not clarified. 3. The parameter $P_{l,t}$, $Days_{l,t}$, $W_{l,p}$, $H_{l,t}$, $PA_{mG,S,t}$ are not listed in section 3.3.1 or 3.3.2 as the ex ante determined or monitored parameters. 4. The equation for calculate $PE_{ID,N_2O_{MD,t}}$ is no need to be listed due to the PP has demonstrated that the indirect N₂O emissions from leaching and runoff can be excluded. 5. The reason for considering the Project CO₂ emissions due to the use of fossil fuels is not provided according to the applied methodology. 6. The final equation for calculating the PE_t is not provided. 7. How to determine the project stratification in compliance with the section 9.3.3 of the applied methodology is not specified. 8. Data source of all the values in table 3-5 is not provided. 9. The applied unit to convert from t to kg is not correct.			
Project participant response			Date : 19/05/2021
1. According to the methodology (VM0026/Version 1.0) and previous research, the annual precipitation of the project area is less than annual potential evapotranspiration, so, indirect N₂O emissions from leaching and runoff can be excluded. 2. The evidence of records of grassland guardian and local forestry and grass bureau have been provided. 3. The parameter $P_{l,t}$, $Days_{l,t}$, $W_{l,p}$, $H_{l,t}$, $PA_{mG,S,t}$ have been listed in section 3.3.1 or 3.3.2. 4. The equation is used for calculate indirect N₂O emissions from the atmospheric deposition of N volatilized as NH₃ and NO_x after urine and manure N is deposited on grassland soils under the project. 5. According to Project Design Report and PRA Report, project emissions from the use of fossil fuels are larger than baseline emissions which is considered to be 0 t CO₂e, so the project emissions from the use of fossil fuels must be account. 6. The final equation for calculating the PE_t has been provided. 7. Due to the heterogeneity of soil carbon, stratification of the project area into relatively homogeneous units can either increase the measuring precision without increasing the cost unduly or reduce the cost without reducing measuring precision because of the lower variance within each homogeneous unit. Stratified sampling meets the requirements of methodology (VM0026/Version 1.0). 8. All data source of all the values has been provided in section 3.3 of the PD. 9. The unit description has been corrected in the updated PD.			
Documentation provided by project participant			
☒	Changes in the PD	Section(s): 3.2.2	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☐	Other:		
VVB assessment			Date: 31/05/2021

1. The revised PD is checked, it is confirmed that the reason of indirect N₂O emissions from leaching and runoff excluded is clarified. 2. The revised PD is checked, it is confirmed that the evidence of records of grassland guardian and local forestry and grass bureau is clarified. 3. The revised PD is checked, it is confirmed that the parameter $P_{l,t}$, $Days_{l,t}$, $W_{l,p}$, $H_{l,t}$, $PA_{mG,S,t}$ have been listed in section 3.3.1 or 3.3.2 as the ex ante determined or monitored parameters. 4. The revised PD is checked, it is confirmed that the equation for calculate $PE_{ID,N_2O_{MD,t}}$ is used for calculate indirect N₂O emissions from the atmospheric deposition of N volatilized as NH₃ and NO_x after urine and manure N is deposited on grassland soils under the project thus listed as per the applied methodology. 5. The revised PD is checked, it is confirmed that the reason for considering the Project CO₂ emissions due to the use of fossil fuels is provided according to the applied methodology. 6. The revised PD is checked, it is confirmed that the final equation for calculating the PE_i not provided. 7. The revised PD is checked, it is confirmed that the reason for determination of the project stratification in compliance with the section 9.3.3 of the applied methodology is specified. 8. The revised PD is checked, it is confirmed that the data source of all the values in table 3-5 is provided. 9. The revised PD is checked, it is confirmed that the unit is corrected.	
Refer to section 3.3.7 of this report for detail assessment.	
Conclusion Tick the appropriate checkbox	☐ Additional action should be taken (finding remains open) ☒ The finding is closed

CAR ID	27	Section no.	3.2.3	Date :	08/04/2021	
Description of CAR						
1. Leakage emissions due to market leakage is not considered as per the applied methodology which request "Market leakage must be assessed and quantified using VCS Module VMD0033 <i>Estimation of Emissions from Market Leakage</i>. The result of applying the module is estimation of the parameter $LE_{M,t}$." 2. The demonstration of applicability condition in VMD0040 is not provided.						
Project participant response					Date :	19/05/2021
1. According to the VMD0033, the project would not lead to a decrease in cattle and sheep, therefore, the market leakage is considered to be 0 tCO₂e. 2. According to VMD0040, the project area is subject to livestock grazing in the baseline scenario. For the project, local herders graze in the project area under the baseline scenario. Therefore, Leakage from Displacement of Grazing Activities (VMD0040, Version 1.0) is applicable for the proposed project.						
Documentation provided by project participant						
☒	Changes in the PD	Section(s):	3.2.3	New version No.:	02	
☐	Changes in XLS	Worksheet(s):		New version No.:		
☒	Other:	/PDR/				
VVB assessment					Date:	31/05/2021

1. The revised PD is checked, it is confirmed that the Market leakage has been assessed and quantified using VCS Module VMD0033 Estimation of Emissions from Market Leakage.

According to the methodology, Market leakage must be assessed and quantified using VCS Module "VMD0033 Estimation of Emissions from Market Leakage"^{/MEL/}. The result of applying the module is estimation of the parameter $LE_{M,t}$.

Via checking the project design report^{/PDR/} and via on-site inspection, it is confirmed that the main production in the project area is cattle and sheep. And with the project implemented, the grazing was forbidden in the first five years after seeding and after that the controlled grazing will be allowed depending on the growth situation of the forage, and during the implementation period, the County Forestry and Grassland Bureau measures the grass yield of the surrounding grasslands in the project area and guides herders to graze in a reasonable area which has been confirmed by interview with local herders and officers. The project would not lead to a decrease in cattle and sheep, therefore, the market leakage is considered to be 0 tCO₂e, thus $LE_{M,t}=0$.

2. Via checking the PD comparing with the VMD0040, it is confirmed that the Leakage from Displacement of Grazing Activities (VMD0040, Version 1.0) is applicable for the proposed project.

Refer to section 3.3.7 of this report for detail assessment.

Conclusion

Tick the appropriate checkbox

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

CAR ID	28	Section no.	3.2.3	Date : 08/04/2021
Description of CAR				
For 2) Survey of Grazing Displacement and Relocation Plans, 1. If the survey covered a full census or representative sample is not clarified. 2. The VMD0040 requests "Where sample surveys are used, sampling approaches must enable estimation of the sample mean within a 95 percent confidence interval to a precision of 15 percent.", however, the related clarification is missing. 3. The VMD0040 requests "The period covered by this survey must be consistent with the baseline period used to quantify baseline emissions within the project area", if the survey conducted one year prior to the project start date is in line with this request is not clarified. 4. The VMD0040 requests "For both types of grazing agent, the survey must quantify the number and type of livestock and the duration of each year that these livestock graze in the project area", while this information is not specified. 5. The VMD0040 requests "For both types of grazing agent, the survey must also collect information on intended location of grazing after implementation of the project", while this information is not specified. For 3) Prepare a Grazing Displacement Management Plan 6. The VMD0040 requests "The grazing displacement management plan must also record planned grazing activities for livestock under the control of agents who are not project participants but whose livestock grazed inside the project area in the baseline and whose livestock will not graze inside the project area after project implementation begins", while this information is not specified. 7. Due to the grazing displacement management plan has been prepared, so the actual information of the plan needs to be provided. For the calculation of total leakage emissions 8. The final equation for calculating the LE is not provided. 9. There are no any parameters listed in section 3.3.1 and 3.3.2 as ex ante determined or monitored parameters related to the calculation of total leakage emissions. 10. The net GHG emission reductions and removals values listed in table 3-6 is not same to the description of section 2.1.1 addressed that "project is estimated to generate GHG emission removals of 18,304,797 tCO₂e and GHG emission reductions of 293,668 tCO₂e in 40 years".				
Project participant response				Date : 19/05/2021

1. This survey covered a full census of project participants and project non-participants.
2. This survey covered a full census of project participants and project non-participants, and no sample surveys were used.
3. The project proponent conducted a survey of all grazing agents whose livestock grazed in the project area prior to the project start date (1-May-2015 to 19-June-2016), which met the requirements of the tool (VMD0040, Version 1.0).
4. According to the survey, under the baseline scenario, the project participants stocked 267,585 cattle and 133,794 sheep in the project area, grazing for about 10 days every year and 12 hours every day. And project non-participants would not graze in the project area both under the baseline scenario and the project scenario.
5. In 2015, the County Forestry and Grassland Bureau measured the grass yield of the grassland around the project area, and calculated the reasonable grazing quantity, designated a grazing area of 2,474,533.33 hectares. And the project participants grazed in the designated area under the guidance of the County Forestry and Grassland Bureau and grassland guardians.
6. project non-participants would not graze in the project area both under the baseline scenario and the project scenario.
7. The actual information of the plan has been provided.
8. The final equation for calculating the LE has been provided in section 3.2.3 of the PD.
9. The ex-ante determined or monitored parameters related to the calculation of total leakage emissions have been added in section 3.3 of the project.
10. The net GHG emission removals in the full text have been revised.

Documentation provided by project participant

☒	Changes in the PD	Section(s): 3.2.3	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☒	Other:	/FCS/	

VVB assessment

Date: 31/05/2021

For 2) Survey of Grazing Displacement and Relocation Plans,

1. The revised PD is checked, it is confirmed that the survey covered a full census which is confirmed by checking the full census survey^{/FCS/}.
2. The revised PD is checked, it is confirmed that the related clarification of the survey covered a full census which is confirmed by checking the full census survey^{/FCS/} is added, thus no sampling was used.
3. The revised PD is checked, it is confirmed that project proponent conducted a survey of all grazing agents whose livestock grazed in the project area prior to the project start date (01-May-2015 to 19-June-2016), which in line with the requirements of the tool (VMD0040, Version 1.0).
4. The revised PD is checked, it is confirmed that the information for both types of grazing agent, the survey must quantify the number and type of livestock and the duration of each year that these livestock graze in the project area is specified.
5. The revised PD is checked, it is confirmed that the information for both types of grazing agent, the survey must also collect information on intended location of grazing after implementation of the project is specified.

For 3) Prepare a Grazing Displacement Management Plan

6. The revised PD is checked, it is confirmed that the County Forestry and Grassland Bureau measured the grass yield of the grassland around the project area, and calculated the reasonable grazing quantity, designated a grazing area of 2,474,533.33 hectares.
 7. The revised PD is checked, it is confirmed that the actual information of the plan has been provided.
- For the calculation of total leakage emissions
8. The revised PD is checked, it is confirmed that the final equation for calculating the LE is provided.
 9. The revised PD is checked, it is confirmed that the related parameters have been listed in section 3.3.1 and 3.3.2 as ex ante determined or monitored parameters related to the calculation of total leakage emissions.
 10. The revised PD is checked, it is confirmed that the net GHG emission removals in the full text have been revised which avoid confusion.

Refer to section 3.3.7 of this report for detail assessment.

Conclusion Tick the appropriate checkbox	☐ Additional action should be taken (finding remains open) ☒ The finding is closed
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CAR ID	29	Section no.	3.2.4	Date :	08/04/2021		
Description of CAR							
In section 3.2.4, Table 3-9, The equation given in the table for D is not correct.							
Project participant response					Date :		
The equation has been corrected in the updated PD.					19/05/2021		
Documentation provided by project participant							
☒	Changes in the PD	Section(s):	3.2.4	New version No.:	02		
☐	Changes in XLS	Worksheet(s):		New version No.:			
☐	Other:						
VVB assessment					Date:		
The revised PD is checked, it is confirmed that the equation given in the table for D is correct as $D=A-B-C$.					31/05/2021		
<table border="1"> <tr> <td> Conclusion Tick the appropriate checkbox </td> <td> ☐ Additional action should be taken (finding remains open) ☒ The finding is closed </td> </tr> </table>						Conclusion Tick the appropriate checkbox	☐ Additional action should be taken (finding remains open) ☒ The finding is closed
Conclusion Tick the appropriate checkbox	☐ Additional action should be taken (finding remains open) ☒ The finding is closed						

CAR ID	30	Section no.	3.3.1	Date :	08/04/2021		
Description of CAR							
- For for value of GWP_{N_2O}, according to VCS standard 4.1, before 2021, data source is IPCC AR4 but not AR2, and here also need to specify that the value after 2021 using IPCC AR5. - For for value of GWP_{CH_4}, according to VCS standard 4.1, before 2021, data source is IPCC AR4 but not AR2, and here also need to specify that the value after 2021 using IPCC AR5. - For parameter $W_{l,b}$, evidence description is missing, the information of local expert judgement is not sufficient. - For parameter $Days_{l,b}$ and $H_{l,b}$, the detail information of sampling survey is missing. - For parameter $SOC_{s,Baseline}$, the detail information of Laboratory test data is missing.							
Project participant response					Date :		
- According to VCS standard 4.1, the value of GWP_{N_2O} is modified to 265. - According to VCS standard 4.1, the value of GWP_{CH_4} is modified to 28. - The evidence description of $W_{l,b}$ has been added. - The detail information of sampling survey of parameter $Days_{l,b}$ and $H_{l,b}$ have been added. - The detail information of Laboratory test data of parameter $SOC_{s,Baseline}$ has been added.					19/05/2021		
Documentation provided by project participant							
☒	Changes in the PD	Section(s):	3.3.1	New version No.:	02		
☐	Changes in XLS	Worksheet(s):		New version No.:			
☐	Other:						
VVB assessment					Date:		
- The revised PD is checked, it is confirmed that the value of GWP_{N_2O} has been updated by using IPCC AR5 which is verified as in line with the VCS standard, version 4.1. - The revised PD is checked, it is confirmed that the value of GWP_{CH_4} has been updated by using IPCC AR5 which is verified as in line with the VCS standard, version 4.1. - The revised PD is checked, it is confirmed that the parameter evidence description of $W_{l,b}$ is added, the information of local expert judgement is sufficient. - The revised PD is checked, it is confirmed that the detail information of sampling survey for parameter $Days_{l,b}$ and $H_{l,b}$ is added. - The revised PD is checked, it is confirmed that the detail information of Laboratory test data for parameter $SOC_{s,Baseline}$ is added.					31/05/2021		
Refer to section 3.3.8 of this report for detail assessment.							
<table border="1"> <tr> <td> Conclusion Tick the appropriate checkbox </td> <td> ☐ Additional action should be taken (finding remains open) ☒ The finding is closed </td> </tr> </table>						Conclusion Tick the appropriate checkbox	☐ Additional action should be taken (finding remains open) ☒ The finding is closed
Conclusion Tick the appropriate checkbox	☐ Additional action should be taken (finding remains open) ☒ The finding is closed						

CAR ID	31	Section no.	3.3.3	Date :	08/04/2021
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Description of CAR			
1. In monitoring process, the monitoring plan for monitoring applicability conditions listed in methodology and tools is not clarified. 2. The ex ante sampling design and stratification is not specified. 3. Sampling framework listed in the methodology is missing, how the sample size is calculated and size numbers are not provided clearly. 4. Emergency procedure is missing.			
Project participant response			Date : 19/05/2021
1. According to the analysis in Section 3.1.2 of the PD, all the conditions are applicable at the start of the project activity due to the baseline survey. 2. The ex-ante sampling design and stratification has been specified in section 3.3.3. 3. The sample size was calculated followed the Guidelines for sampling and surveys for CDM project activities and programmes of activities (version 4.0). 4. All soil samples need to be backed up. If there is a problem with the testing equipment or the data is abnormal, retest the corresponding soil sample.			
Documentation provided by project participant			
☒	Changes in the PD	Section(s): 3.3.3	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☐	Other:		
VVB assessment			Date: 31/05/2021
1. The revised PD is checked, it is confirmed that during monitoring process, the monitoring plan for monitoring applicability conditions listed in methodology and tools is clarified. 2. The revised PD is checked, it is confirmed that the ex-ante sampling design and stratification is specified. 3. The revised PD is checked, it is confirmed that the sampling framework listed in the methodology is added, sample size was calculated followed the Guidelines for sampling and surveys for CDM project activities and programmes of activities (version 4.0). 4. The revised PD is checked, it is confirmed that the emergency procedure is added. Refer to section 3.3.8 of this report for detail assessment.			
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CAR ID	32	Section no.	4.1.1	Date : 08/04/2021
Description of CAR				
1. The community groups identified in 4.1.1 is not consistent with the section 2.1.8 and 2.1.9. 2. The gender and age information is missing.				
Project participant response				Date : 19/05/2021
1. The community groups identified in 4.1.1 have been revised which consistent with the section 2.1.8 and 2.1.9. 2. The gender and age information have been added.				
Documentation provided by project participant				
☒	Changes in the PD	Section(s): 4.1.1	New version No.: 02	
☐	Changes in XLS	Worksheet(s):	New version No.:	
☒	Other:	/CBSR/		
VVB assessment				Date: 31/05/2021
1. The revised PD is checked, it is confirmed that community groups identified in 4.1.1 is consistent with the section 2.1.8 and 2.1.9. 2. The revised PD is checked, it is confirmed that the gender and age information is added. Refer to section 3.4.1 of this report for detail assessment.				
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed		

CAR ID	33	Section no.	4.1.2	Date : 08/04/2021
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Description of CAR			
The description in 4.1.2 is not clearly state the interactions between Communities and Community Groups.			
Project participant response			Date : 19/05/2021
The interactions between Communities and Community Groups have been clearly stated in section 4.1.2. The interaction between community groups was considered incipient and/or superficial due to the geographic distance and the absence of common activities to be carried out jointly by the communities.			
Documentation provided by project participant			
☒	Changes in the PD	Section(s): 4.1.2	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☐	Other:		
VVB assessment			Date: 31/05/2021
The revised PD is checked, it is confirmed that interactions between Communities and Community Groups has been clearly described in the section 4.1.2. The PD states that the local communities are mainly village collective, and due to local residents lived by grazing, the community groups were barely active with low interactions between communities and community groups at the start of the project. It is verified by site visit interviews with the local officer ^{/12/} and grassland guardian ^{/13/} .			
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CAR ID	34	Section no.	4.2.1	Date : 08/04/2021
Description of CAR				
The community groups listed in section 4.2.1 are not consistent with the groups identified in section 2.1.8 and the related impacts need to be updated.				
Project participant response				Date : 19/05/2021
The community groups listed in section 4.2.1 have been revised, and the related impacts have been updated.				
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:			
VVB assessment				Date: 31/05/2021
The revised PD is checked, it is confirmed that the community groups listed in section 4.2.1 are consistent with the groups identified in section 2.1.8 and the related impacts have been updated. Refer to section 3.4.5 of this report for detail assessment.				
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed		

CAR ID	35	Section no.	4.2.2	Date : 08/04/2021
Description of CAR				
The description in section 4.2.2 is not in line with the request of PD template, the related information for HCV is missing.				
Project participant response				Date : 19/05/2021
The description in section 4.2.2 has been revised, also the related information for HCV has been added. The project restored 160,548.96 ha of black soil beach in Three River (Yangtze River, Yellow River and Lancang River) Source Region by seeding grass, rodent controlling and prohibiting grazing, which can maintain water and soil, purify water sources, and play an important role in the water safety of local residents and downstream residents. So the HCV attributes of hydrological service could be significantly improved in long term. Also, the project provided more job opportunities for local residents, they have more opportunities to work together, which will give them the motivation to organize more social activities and hence increase the interaction within the community. This will be beneficial to the protection and dissemination of the HCV attributes of Tibetan Buddhism (Culture Values).				

Documentation provided by project participant			
☒	Changes in the PD	Section(s): 4.2.2	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☒	Other:	/PPI/, /LC/, /CBSR/	
VVB assessment			Date: 31/05/2021
The revised PD is checked, it is confirmed that description in section 4.2.2 in line with the request of PD template, the related information for HCV is added. Two HCVs including Hydrological service and Tibetan Buddhism (Culture Values) were identified related to community well-being in the project zone. Guoluo Tibetan Autonomous Prefecture is famous as parts of Three River (Yangtze River, Yellow River and Lancang River) Source Region which has been confirmed by interview with local officers and checking the supporting document^{/CBSR/}, the project restored 160,548.96 ha of black soil beach^{/PDR/} in Three River Source Region by seeding grass, rodent controlling and prohibiting grazing which maintain water and soil, purify water sources, thus play an important role in the water safety of local residents and downstream residents thus benefit to Guoluo Tibetan Autonomous Prefecture. Therefore, it is verified that the HCV attributes of hydrological service could be significantly improved in long term. Also via on-site investigation, it is confirmed that the project generates social and environmental co-benefits as the generation of income and job opportunities for local communities with most of Tibetan population which is verified by checking the labor contracts^{/LC/} and periodical payroll^{/PPI/} and also confirmed by on-site interview with local villagers^{/3/} thus it is confirmed that the project provided more job opportunities for local Tibetan residents to gather them working, which give them the motivation to organize more social activities and hence increase the interaction within the community thus beneficial to the protection and dissemination of Tibetan Buddhism (Culture Values) in Guoluo Tibetan Autonomous Prefecture.			
Conclusion <i>Tick the appropriate checkbox</i>		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CAR ID	36	Section no.	4.4.1	Date : 08/04/2021
Description of CAR				
- The description in section 4.4.1 is not in line with the request of PD template, the related information for assess the effectiveness of measures taken to maintain or enhance all identified HCVs related to community well-being is missing. - The key variables will be monitored during each verification in section 4.4.1 need to be updated based on the change of section 4.2.1. - The quantitative variables for monitoring (1) Improvement of local ecological environment, (2) Hydrological service, (3) Tibetan cultural dissemination & (4) Level of social activities are very unspecific and it is not clear how any answer can be evaluated and classified over time. (Likert scale?).				
Project participant response				Date : 19/05/2021
- The related information for assess the effectiveness of measures taken to maintain or enhance all identified HCVs related to community well-being have been add in section 4.4.1 of the PD. To in-depth track the social-economic changes resulted from the project activities in the communities and households, and understand issues raised and difficulties encountered during the project implementation, as well as their opinions and comments on the project activities, so as to adjust and improve the project activities in a timely manner, a PRA process will be conducted once before every verification. And the procedures and methods of the PRA survey have been described. - The key variables will be monitored during each verification in section 4.4.1 have been updated based on the change of section 4.2.1, such as job opportunities, training opportunities, reduce the area of black soil beach, improvement of local ecological environment, hydrological services and tibetan cultural dissemination. - The variables have been changed with more quantitative indicators and the monitoring methods have also been revised accordingly.				
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:	/CBSR/	
VVB assessment			Date: 31/05/2021
1. The revised PD is checked, it is confirmed that the description in section 4.4.1 is in line with the request of PD template. 2. The revised PD is checked, it is confirmed that the key variables will be monitored during each verification in section 4.4.1 have been updated based on the change of section 4.2.1. 3. The revised PD is checked, it is confirmed that the section 4.4.1 has been revised accordingly, variables have been changed with more quantitative indicators and the supporting evidence is confirmed as appropriate. Refer to section 3.4.12 of this report for detail assessment.			
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

CAR ID	37	Section no.	5.2.2	Date :	08/04/2021	
Description of CAR						
The description in section 5.2.2 is not in line with the request of PD template, the related information for HCV is missing.						
Project participant response					Date :	19/05/2021
The related information for HCV has been added in section 5.2.2 of the PD. The primary objective of the project increase the grass coverage and restore the degraded grassland ecosystem of Three River (Yangtze River, Yellow River and Lancang River) Source Region and adopted sustainable grassland management methods, which would prevent the continuous degradation of grasslands. Also, the implementation of the project has improved the ecological environment of the Three River Source Region, increased the biodiversity and provided more habitats for threatened species.						
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:	/CBSR/				
VVB assessment					Date: 31/05/2021	
The revised PD is checked, it is confirmed that the description in section 5.2.2 is in line with the request of PD template, the related information for HCV is added. Two HCVs including Protected area: Three River Source Region and Rare, threatened or endangered (RTE) species were identified related to biodiversity in the project zone. For Protected area, Guoluo Tibetan Autonomous Prefecture is famous as parts of Three River (Yangtze River, Yellow River and Lancang River) Source Region which has been confirmed by interview with local officers and checking the supporting document^{/CBSR/}, via site inspection and interview with local officers, it is confirmed that the primary objective of the project is increase the grass coverage and restore the degraded grassland ecosystem of Three River Sources Region and adopted sustainable grassland management methods, which would prevent the continuous degradation of grasslands. The biodiversity protection of Three River Sources Region is an important strategic position in the world. For Threatened species, via site inspection and interview with local officers, it is confirmed that the implementation of the project has improved the ecological environment of the Three River Source Region, increased the biodiversity and provided more habitats for threatened species thus beneficial to 35 species of rare, threatened or endangered (RTE) species in project zone. Therefore, it is verified that implementation of this project will not decrease biodiversity of project sites, and the HCV attributes will not be negatively impacted either, thus no mitigation measures are required.						

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

CAR ID	38	Section no.	5.2.4	Date : 08/04/2021
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Description of CAR

The description in section 5.2.4 is not consistent with section 5.2.1. HCVs have been identified for this project.

Project participant response

Date : 19/05/2021

The description in section 5.2.4 has been revised to consistent with section 5.2.1. HCVs have been identified for this project.

This project restored degraded grasslands in Three River (Yangtze River, Yellow River and Lancang River) Source Region, increased the biodiversity and provided more habitats for threatened species.

Thus no HCVs related to biodiversity are negatively affected by the project.

Documentation provided by project participant

☒	Changes in the PD	Section(s): 5.2.4	New version No.: 02
☐	Changes in XLS	Worksheet(s):	New version No.:
☒	Other:	/CBSR/	

VVB assessment

Date: 31/05/2021

The revised PD is checked, it is confirmed that the description in section 5.2.4 is consistent with section 5.2.1. HCVs have been identified for this project.

Two HCVs have been identified related to biodiversity, which includes Protected area: Three River Source Region and Rare, threatened or endangered (RTE) species. The related information has been listed in the table as per the PD template.

For Protected area, Guoluo Tibetan Autonomous Prefecture is famous as parts of Three River (Yangtze River, Yellow River and Lancang River) Source Region which has been confirmed by interview with local officers and checking the supporting document^{/CBSR/}, via site inspection and interview with local officers, it is confirmed that the primary objective of the project is increase the grass coverage and restore the degraded grassland ecosystem of Three River Sources Region and adopted sustainable grassland management methods, which would prevent the continuous degradation of grasslands. The biodiversity protection of Three River Sources Region is an important strategic position in the world.

For Threatened species, via site inspection and interview with local officers, it is confirmed that the implementation of the project has improved the ecological environment of the Three River Source Region, increased the biodiversity and provided more habitats for threatened species thus beneficial to 35 species of rare, threatened or endangered (RTE) species in project zone.

Thus, it is verified that no HCVs related to biodiversity are negatively affected by the project.

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

CAR ID	39	Section no.	5.4.1	Date : 08/04/2021
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Description of CAR

- The biodiversity monitoring plan in section 5.2.4 is not in line with the request of PD template, the related information of the areas to be monitored and identified HCVs is missing.
- Fertilizer and Chemical pesticides are missing in pressure variables.

Project participant response

Date : 19/05/2021

- The biodiversity monitoring plan in section 5.2.4 has been revised, a Monitoring Manual has been provided to each member of the monitoring team with a specific explanation to make sure they fully understand all the monitoring process and issues concerned.

The related information of the areas to be monitored and identified HCVs have been added.

The HCVs of protected Three River Source Region where the project located and the three

threatened species have been identified. The implementation of the project will restore degraded grasslands, improve the ecological environment of the project zone, and provide more habitats for wild animals. So, all the measures of the project would enhance the identified HCVs and biodiversity present in the project zone.			
2. The related information of fertilizer and Chemical pesticides have been add in pressure variables such as monitoring method and monitoring frequency.			
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:	/RVAR/	
VVB assessment			Date: 31/05/2021
1. The revised PD is checked, it is confirmed that biodiversity monitoring plan in section 5.2.4 in line with the request of PD template, the related information of the areas to be monitored and identified HCVs is adeed.			
2. The revised PD is checked, it is confirmed that Fertilizer and Chemical pesticides are added as pressure variables.			
Refer to section 3.5.15 of this report for detail assessment.			
Conclusion Tick the appropriate checkbox		☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

Table 3. FAR from this validation

FAR ID	N/A	Section No.	-	Date:	-
Description of FAR					
Project participant response					
Date:					
Documentation provided by project participant					
☐	Changes in the PD	Section(s):		New version No.:	
☐	Changes in XLS	Worksheet(s):		New version No.:	
☐	Other:				
VVB assessment					Date:
Conclusion Tick the appropriate checkbox					
☐ To be checked during the next periodic verification					

Appendix 2. Competence of team members and technical reviewers

TUV NORD
Certification

Statement of Competence
Appointment and authorization according to the procedures
of the TUV NORD-ACCUM Certification Program

Ms. Xue Jiao Fancy Zhao

SCHEME	STATUS	VALID UNTIL
CCB	Senior Assessor (Validation, Verification)	2023-11-01
VCS / ISO 14064-2	Senior Assessor	2023-11-01

Authorization status for technical areas within defined scopes

CODE	TECHNICAL AREA
1.1	Thermal energy generation
1.2	Renewables
3.1	Energy Demand
8.1	Mining and mineral production
15.1	Solid waste and wastewater
43.1	Waste

375 - Rev. 10, Date: 2023-06-28

2023-07-10-15:20:00-15:20:00

TUV NORD
Certification

Statement of Competence
Appointment and authorization according to the procedures
of the TUV NORD-ACCUM Certification Program

Ms. Guifang Li

Authorization status for technical areas within defined scopes

CODE	TECHNICAL AREA
14.1	Aluminium and Refractories

375 - Rev. 10, Date: 2023-06-28

2023-07-10-15:20:00-15:20:00

TUV NORD
Certification

Statement of Competence
Appointment and authorization according to the procedures
of the TUV NORD-ACCUM Certification Program

Ms. Alexandra Nuske

SCHEME	STATUS	VALID UNTIL
CCB	Senior Assessor (Validation, Verification) Technical Reviewer	2023-03-01
..	Senior Assessor Technical Reviewer	2023-03-01
VCS / ISO 14064-2	Senior Assessor Technical Reviewer	2023-03-01

Authorization status for technical areas within defined scopes

CODE	TECHNICAL AREA
1.2	Renewables
14.1	Aluminium and Refractories

375 - Rev. 9, Date: 2019-03-01

2023-07-10-15:20:00-15:20:00