



Gold Standard[®]
for the Global Goals

TEMPLATE

KEY PROJECT INFORMATION & PROJECT DESIGN DOCUMENT (PDD)

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VERSION **v.1.5**

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[- TEMPLATE GUIDE Key Project Information & Project Design Document](#)

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KEY PROJECT INFORMATION

GS ID of Project	3031
Title of Project	Afforestation Project in Tongliao, Inner Mongolia
Time of First Submission Date	08/08/2014
Date of Design Certification	23/11/2015
Version number of the PDD	02
Completion date of version	23/09/2024
Project Developer	Climate Bridge (shanghai) Ltd.
Project Representative	Climate Bridge (shanghai) Ltd.
Project Participants and any communities involved	Village collectives, Jane Goodall Institute – Shanghai Roots & Shoots
Host Country (ies)	China
Activity Requirements applied	<input type="checkbox"/> Community Service Activity <input type="checkbox"/> Renewable Energy <input checked="" type="checkbox"/> Land-Use and Forests Activity Requirements/Risks & Capacities <input type="checkbox"/> N/A
Scale of the project activity	<input type="checkbox"/> Micro scale <input type="checkbox"/> Small Scale <input checked="" type="checkbox"/> Large Scale
Other Requirements applied	Land use & Forests Activity Requirements (version 1.2.1)
Methodology (ies) applied and version number	Gold Standard Afforestation/Reforestation GHG Emissions Reduction & Sequestration Methodology (version 2.1)
Product Requirements applied	<input checked="" type="checkbox"/> GHG Emissions Reduction & Sequestration <input type="checkbox"/> Renewable Energy Label <input type="checkbox"/> N/A
Project Cycle:	<input checked="" type="checkbox"/> Regular <input type="checkbox"/> Retroactive

Land-use & Forest Key Project Information¹

Scope:	<input checked="" type="checkbox"/> Forestry <input type="checkbox"/> Agriculture
Silvicultural system:	<input checked="" type="checkbox"/> Conservation (no use of timber) <input type="checkbox"/> Selective Harvesting <input type="checkbox"/> Rotation Forestry
Project Area (ha):	1370.96
Eligible Area (ha):	1370.96
10% Set Aside Conservation area (ha):	1370.96
Evidence that Project Area Boundary is clearly distinguishable in the field:	The project area is quite the same as the planting areas. There are fences built around the planting areas to protect the trees as shown in the following pictures.
Planting Area	1370.96
How many Modelling Units (MUs) are included in the eligible area:	3
Summary of New Areas added (copy and insert as needed):	
Size (ha):	1180.96
Date Added	2016

¹ Please refer to Appendix 3 for detailed information on LUF projects

Table 1 – Estimated Sustainable Development Contributions

SUSTAINABLE DEVELOPMENT GOALS TARGETED	SDG IMPACT (DEFINED IN B.6)	ESTIMATED ANNUAL AVERAGE	UNITS OR PRODUCTS
13 Climate Action (mandatory)	Amount of GHGs emissions avoided or sequestered	14,990	VERs
8 Decent Work and Economic Growth	Total number of jobs	10	number
15 Life on land	Trends in species diversity	Increased	/

SECTION A. DESCRIPTION OF PROJECT

A.1 Purpose and general description of project

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Afforestation Project in Tongliao, Inner Mongolia (hereafter as “The Project”) is developed by Shanghai Roots & Shoots (hereafter as “ Roots & Shoots”) and Climate Bridge (Shanghai) Ltd. (hereafter as “ Climate Bridge”) which aim to fight against desertification and climate change in Tongliao region of Inner Mongolia with the support from global carbon market.

The location of the project activity

The project is located in the south of Zhaogensumogacha and in the north of Nugusitaigacha Horqin Left Rear Banner. The geographical coordinates of the initial project area planted in 2014 (Zhaogensumogacha) are between 122°7.78’ and 122°11.64’ east longitude and between 43°11.80’ and 43°12.75’ north latitude. The geographical coordinates of the project area planted in 2016 (Nugusitaigacha) are between 122°20.51’ and 122°24.75’ east longitude and between 43°23.46’ and 43°27.70’ north latitude.

The technologies/measures to be employed and/or implemented by the project activity

In April of 2014, 190 hectares of *Populus simonii* Carrière (hereafter “poplars”) were planted in Zhaogensumogacha, Horqin Left Rear Banner of Tongliao City², and the project has been successfully registered as Gold Standard Project (GS ID: GS3031) in November 2015. In hilly and sandy areas, bushes and other vegetations were also planted, such as grass sand blocks.

According to Land Use & Forests Activity Requirements (Version 1.2.1), new areas can be added to an existing project area after its initial certification. After the successful registration of the initial project, local community in Horqin showed more interesting in the involvement of the carbon market and wish to have more afforestation area to be included, therefore, as per consultation with local community and local Forestry Bureau, the afforestation activity in village of Nugusitaigacha which is nearby the initial project area was planned to be included in the the project. In 2016, 1,180.96 hectares of native tree species (*Pinus sylvestris* L. var. *mongholica* Litv. and *Populus simonii* Carrière, hereafter “*pinus sylvestris*” and “poplar”) were planted in Nugusitaigacha, Horqin Left Rear Banner of Tongliao City³. The planted poplar seedlings are mainly purchased from local private nurseries, while the seedlings of *Pinus sylvestris* mainly come from nurseries preserved by the local government themselves. The local Forestry Bureau provided the initial funding for planting and maintenance cost for the first five years, and the cost for the remaining lifetime of the project will be covered by carbon revenue. The local villagers, owner of the project land and planted forest, have authorized Climate Bridge to apply the project for GS certification and sell the carbon credits on behalf of them. Therefore, the project area by adding the new area in Nugusitaigacha will reach 1,370.96 hectares so far.

The project boundary

The boundaries of the initial project area in Zhaogensumogacha reach (East) the borders of Xiba Village and Zhaogensumogacha, (West) borders of Zhaogensumogacha and Bianjie Village, (South) herding land owned collectively by village residents, and

² The initial 190 hectares of area in 2014 was based on the project names “Million Tree Project of Shanghai’s Roots & Shoots.”

³ The added 1180.96 hectares of new areas in 2016 was based on the project names “Double Then Million Mu Comprehensive Treatment Project of Keerqin (Horqin) Sandy Land”

(North) 30-year contracted farm land of village residents. The following map shows the Zhaogensumogacha project area which includes two separate areas (part 1 and part 2), the total area is 1370.96 hectares.

The baseline scenario

The most likely scenario without the project (baseline scenario) is the existing scenario: the area is the degraded grassland and the situation of degradation will be continued for years.

The actual status of the project during monitoring period

During the first monitoring period from 11/04/2014 to 31/12/2020, the 190 hectares of the initial forest area have been implemented as planned and there is no change compared with the initial design and the new area of 1180.96 hectares has been added. During this monitoring period, the forest coverage, carbon sink and biodiversity in the project area increased significantly, and the sand dunes around the project area were stabilized.

During the second monitoring period from 01/01/2021 to 31/12/2023, there is no change compared with the initial design. The project slowed down desertification and increased carbon sequestration by planting trees on the sandy land in this monitoring period. The planting and maintenance work were implemented by the local villagers under the supervision of Roots & Shoots and Climate Bridge. During this monitoring period, the forest coverage, carbon sink and biodiversity in the project area increased significantly, and the sand dunes around the project area were stabilized. Meanwhile, this project generated extra income for local stakeholders, brought advanced afforestation/ reforestation practices to the community and developed sustainable land management education there.

A.1.1. Eligibility of the project under Gold Standard

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The project activity meets the eligibility criteria of section 2 and 3 of GS4GG Land Use & Forests Activity Requirements (Version 1.2.1) as described below:

Section 2 General Eligibility Criteria

In addition to the requirements stipulated in the Principles & Requirements, A/R and AGR projects shall comply with the following principles and criteria:

(a) Eligible project types are Afforestation & Reforestation Projects (A/R) and Agriculture Projects (AGR).

The main project activity of the project is plant trees and it belong to the Afforestation & Reforestation Projects according to the section 2.1.2 of the Requirements.

Eligible planting area:

The eligible planting area is the same as the planting areas, with a size of 1,370.96 hectares.



Figure A.1 Eligible planting area

According to the methodology, the eligible planting area is the land that does not meet the definition of a forest at planting start. As per the definition of FAO, Forest is defined as land with tree crown cover (or equivalent stocking level) of more than 10 percent and area of more than 0.5 ha., and the trees should be able to reach a minimum height of 5 m at maturity in situ. The spatial forest/non-forest assessment was conducted

based on Annex C of LUF Activity Requirements, and the definition of “forest” by FAO was used as minimum mapping unit (MPU).

i) Remote sensing data

Type of sensor used: Satellite Landsat-7-ETM+

Spatial resolution: 30m

Path/row: path 125, row 35

Date of the scenes:

Scene 1: 25/09/2003 (at least 10 years before the start date of the project for MU 1);

Scene 2: 20/09/2013 (at project start date for MU 1);

Scene 3: 14/09/2005 (at least 10 years before the start date of the project for MU2 and MU 3);

Scene 4: 26/09/2015 (at project start date for MU 2 and MU 3)

Sources: <http://www.gscloud.cn/search>

ii) Method and software used in pre-processing and classification process

Software:

QGIS Desktop 3.10.2

ENVI version 5.1

Pre-processing method:

The product processing level is L1TP (Landsat level-1 terrain Precision Correction), and radiation and orthodontic correction is performed using ground control point (GCPs) and digital elevation model (DEM) data to correct terrain displacement before user download the dataset.

Classification method:

Maximum Likelihood Classification

Accuracy assessment method:

Confusion Matrix Using Ground Truth ROIs

Overall accuracy: (Original shapefiles have been attached)

Scene	Image date	Accuracy
Scene 1	25/09/2003	93.1973%
Scene 2	20/09/2013	94.5000%
Scene 3	14/09/2005	91.5205%
Scene 4	26/09/2015	90.3904%

Resampling method:

Sieve Classes (Croup Min Threshold:2 Number of Neighbors:8)

Clump Classes (Operator size 3X3)

Ground truth selection resource:

Google Earth: overlapping history image / Google Earth Engine: Sentinel-2 image (resolution:10m) tongliao (earthengine.app)

iii) **Area under clouds/shadows**

Images with low cloud coverage have been selected and the project area cover no area under clouds/shadows.

iv) **Map of classified scenes**









Class	From Google Earth	From Google Earth Engine
Forest		
Crop/grass		
Water body		
Other non-forest		



Figure A.2 Original Scene 1: initial project area on 25/09/2003

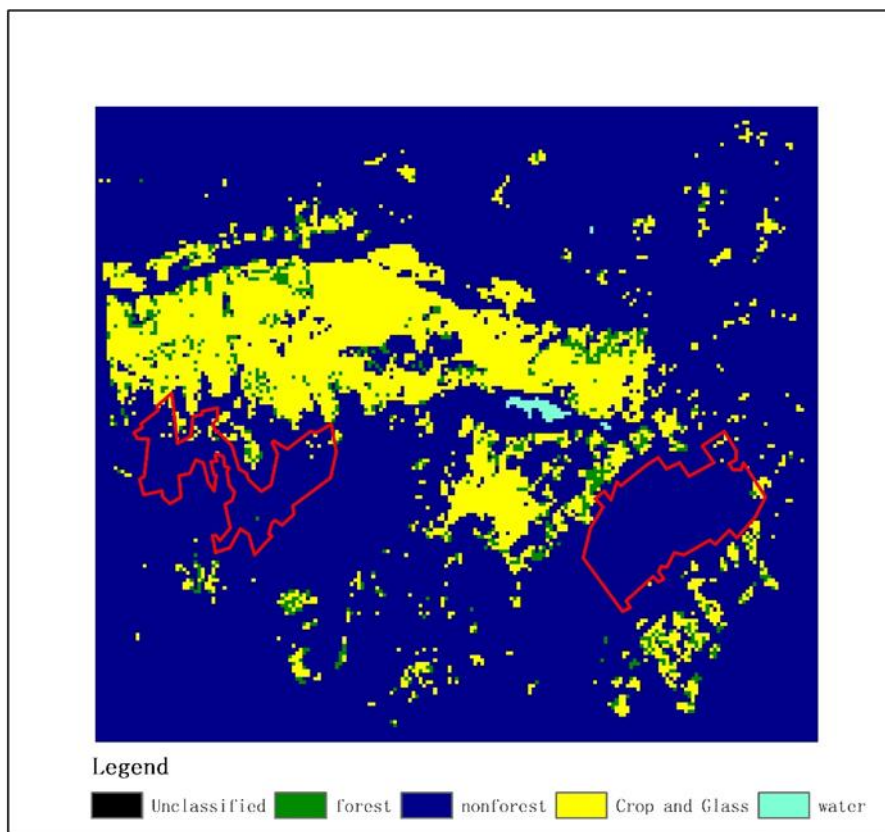


Figure A.3 Classified Scene 1 (original spatial resolution): initial project area on 25/09/2003

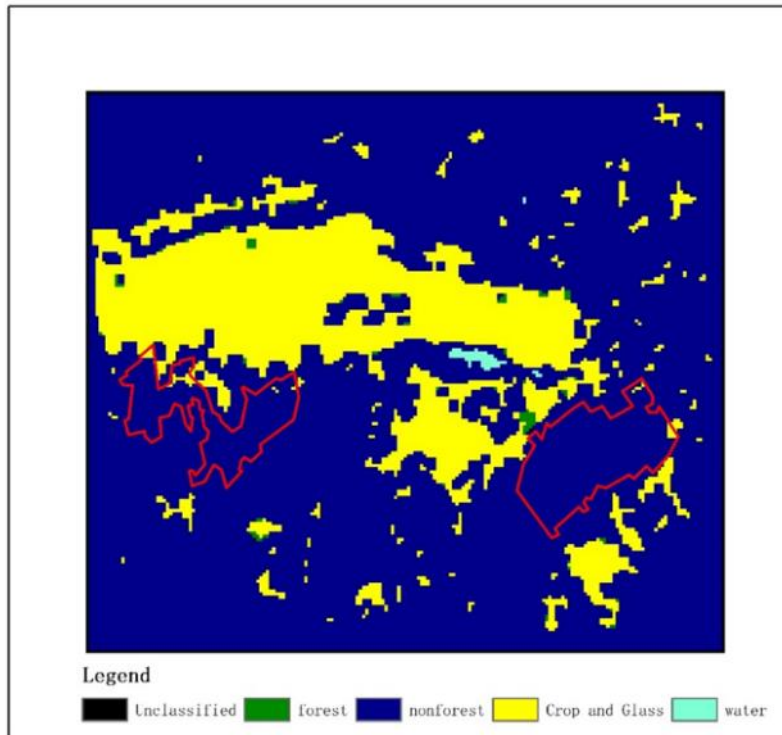


Figure A.4 Classified Scene 1 (resampled): initial project area on 25/09/2003



Figure A.5 Original Scene 2: initial project area on 20/09/2013

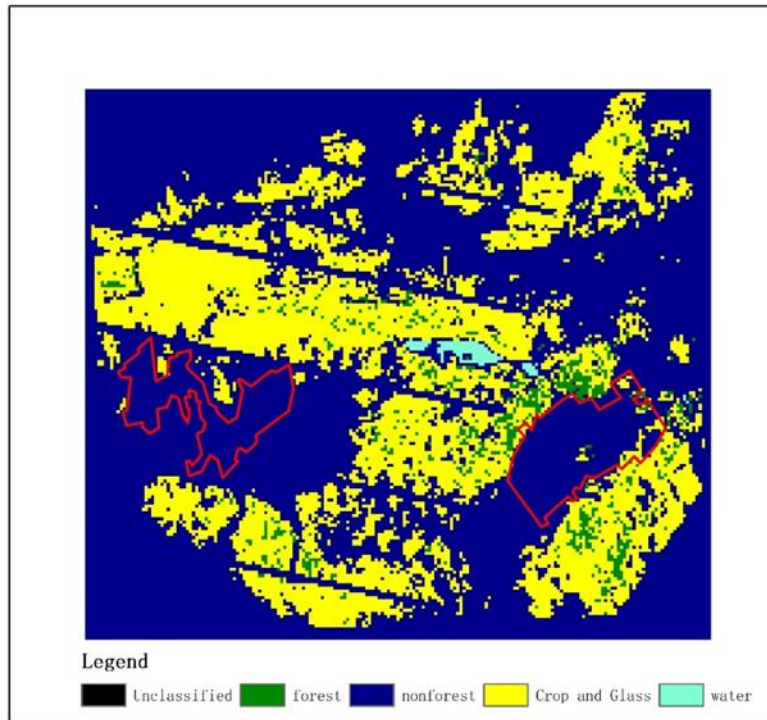


Figure A.6 Classified Scene 2 (original spatial resolution): initial project area on 20/09/2013

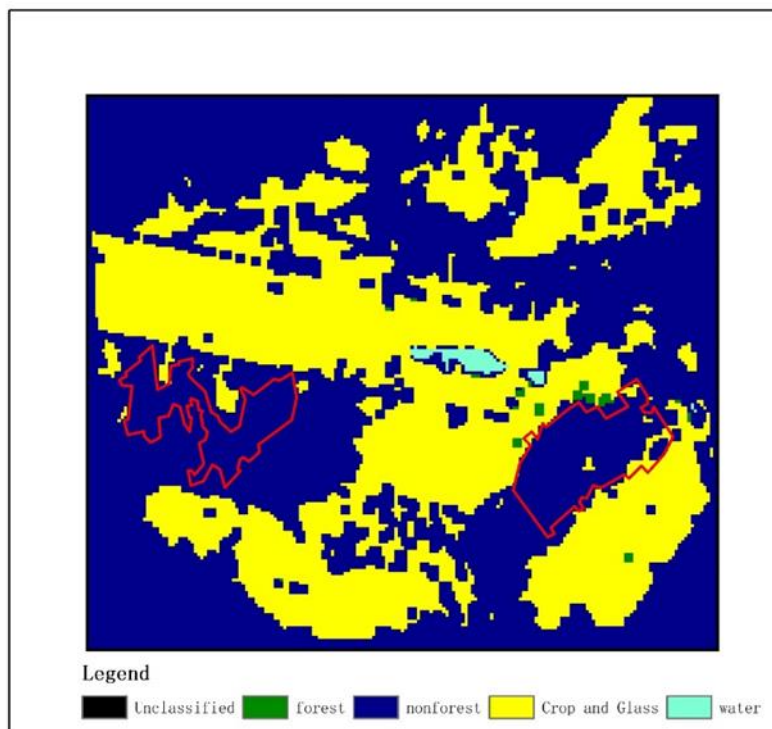
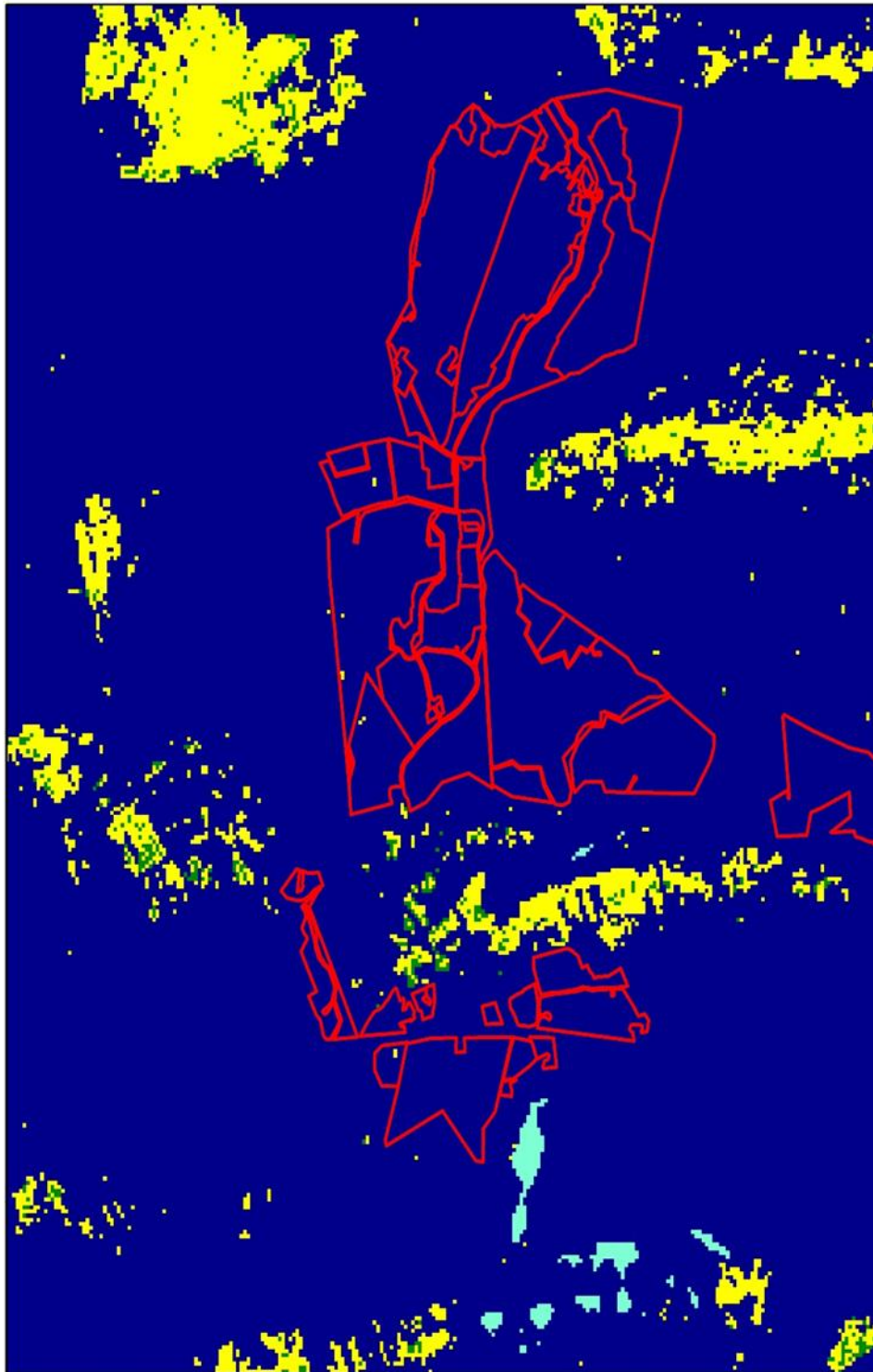


Figure A.7 Classified Scene 2 (resampled): initial project area on 20/09/2013



Figure A.8 Original Scene 3: new added area on 14/09/2005



Legend

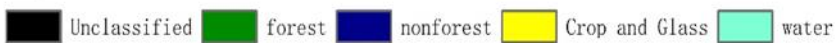
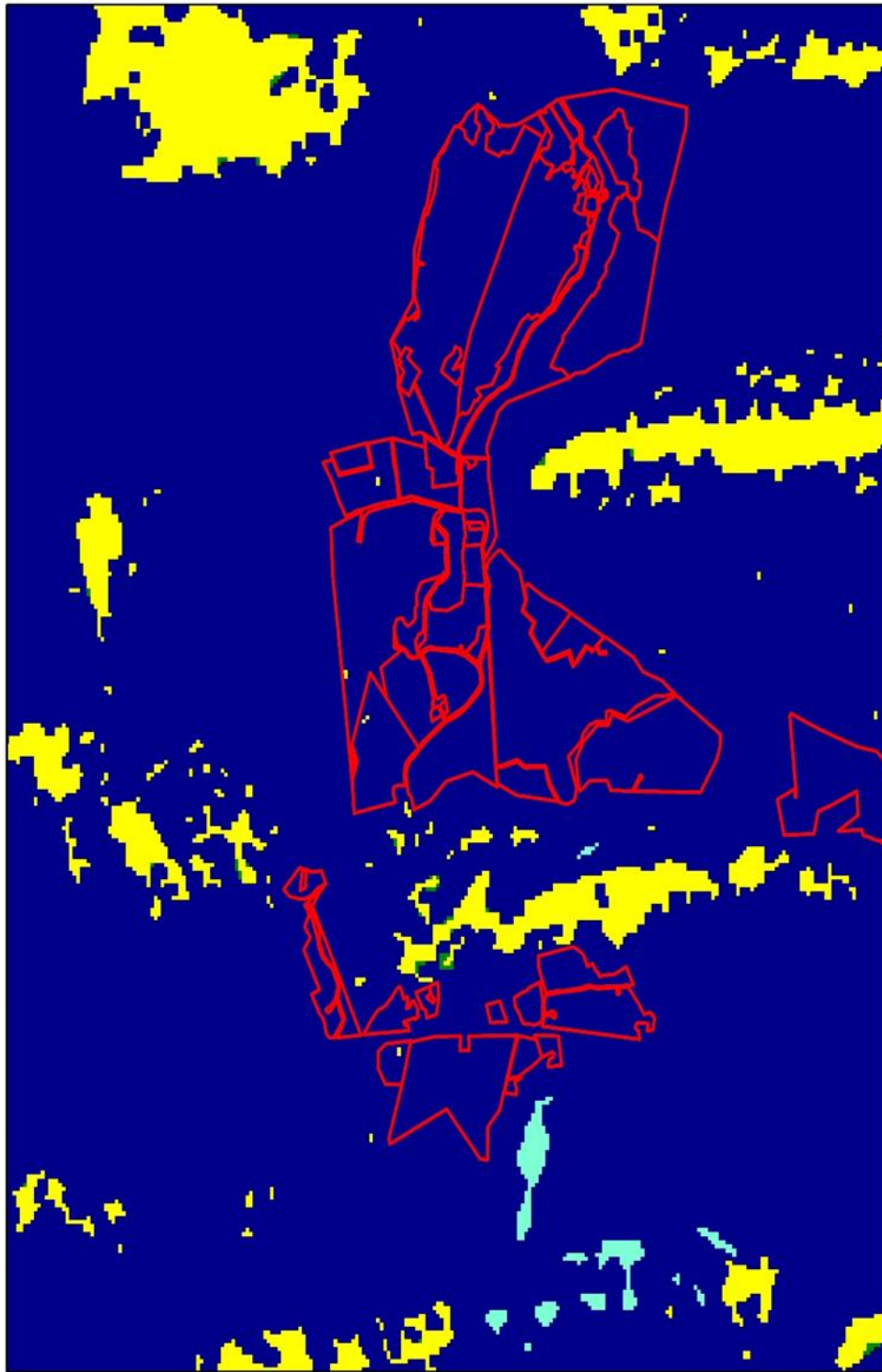


Figure A.9 Classified Scene 3 (original spatial resolution): new added area on 14/09/2005



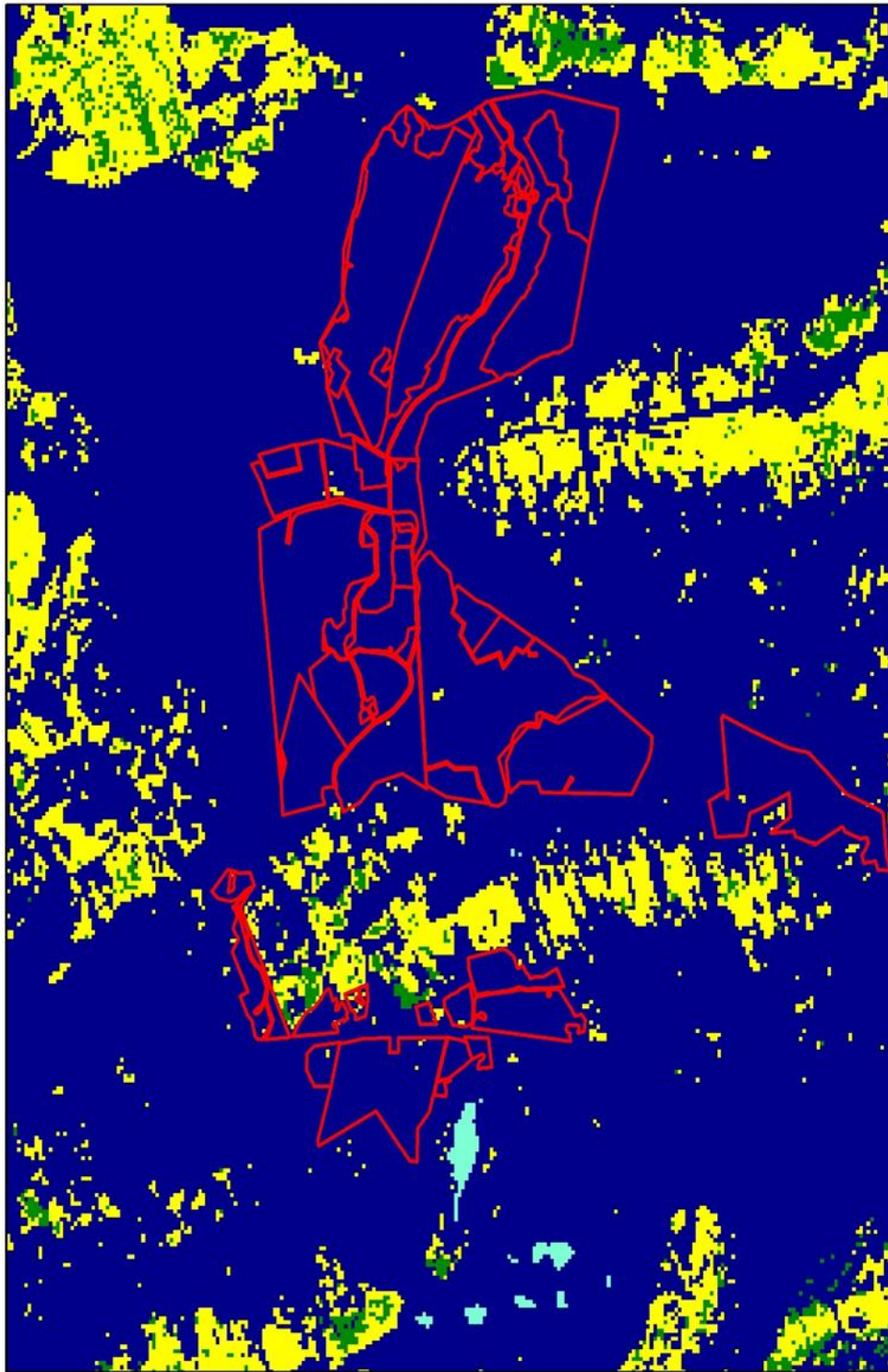
Legend

Unclassified forest nonforest Crop and Glass water

Figure A.10 Classified Scene 3 (resampled): new added area on 14/09/2005



Figure A.11 Original Scene 4: new added area on 26/09/2015



Legend

Unclassified forest nonforest Crop and Glass water

Figure A.12 Classified Scene 4 (original spatial resolution): new added area on 26/09/2015

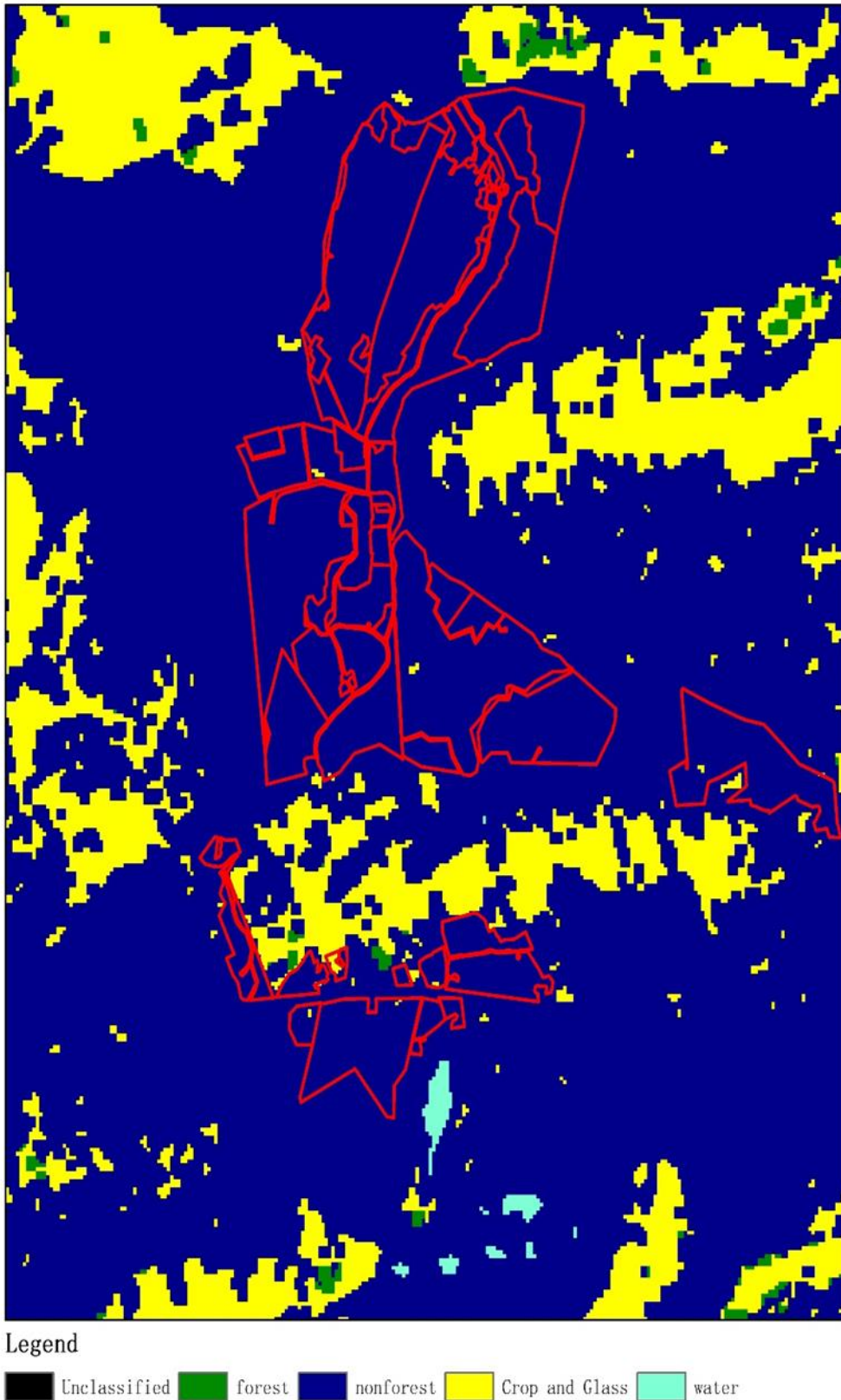


Figure A.13 Classified Scene 4 (resampled): new added area on 26/09/2015

i) Conclusion

Based on the above assessment, all the project area are eligible planting area and the total area is summarized as below:

Total project area (hectare)	Modelling units (hectare)			Conservation area (hectare)
	MU 1	MU 2	MU 3	
1,370.96	190.00	708.44	472.52	1,370.96 (according to HCV assessment, 100% of the planting area has been managed to enhance the biodiversity of the native ecosystems)



(b) No Deforestation: The eligible area shall not meet the definition of forest 10 years before project start date and at project start date.

Please see the section B 3.4 of the PD for the detail, 10 years before the project start date and at project start date, there are only sparse bushes and grasses on the land and the vegetation is distributed in a mosaic fashion across the entire project area.

(c) In the case when the eligible area has been deforested during the last 10 years prior to project start date, the eligibility of the project shall be determined by Gold Standard as part of the Preliminary Review. The Project Developer shall provide evidence that the deforestation activity has not taken place with an intention to implement project activities that generate Gold Standard Certified SDG Impact Statements and/or Products, such as GSVERs.

As described above, there are no deforestation in the project area.

(d) Projects can be implemented in any country. If projects are located in a country or state that has an operational mandatory national or pan-national cap-and-trade scheme to reduce greenhouse-gas (GHG) emissions, and hereby accounts for its own land-based activities under its national or subnational accounting, then projects seeking GSVERs shall conform to the GHG Emissions Reduction and Sequestration Product Requirements - Annex A Double Counting Requirements.

China has a national emissions trading scheme only cover the high-emission industries, such as thermal power generation, petrochemical, chemical, building

materials, iron and steel, non-ferrous, paper, aviation and other key emission industries that emitted at least 26,000 tons of CO₂e/yr, not including A/R project⁴. And the project activity is not included the mandatory emission control scheme and there is no emission cap enforced for the project owner⁵ according to the enforced company list in public information.

Also, the project has not been registered as a CCER (Chinese Certified Emission Reductions) project in China, thus it is not eligible for emission reductions transaction under the China's ETS. Therefore, the project does not reduce GHG emissions from activities that are included in an emissions trading program or any other mechanism that includes GHG allowance trading. Furthermore, as a voluntary emission reduction project, the GHG emission reductions and removals generated by the project will not be enforced to be used for compliance in China.

In case of any such risk of double counting exists, the project developer committed to retiring eligible units equal to the quantity of Gold Standard VERs. It is promised that the project is not registered with any other voluntary or compliance schemes, including clean development mechanism and so on.

⁴ https://www.mee.gov.cn/gzk/gz/202112/t20211213_963865.shtml

⁵ <https://mee.gov.cn/xxgk/xxgk03/202012/W020201230736907682380.pdf>

Section 3 Eligibility Principles & Requirements

The Project Developer has conducted the Safeguarding Principles assessment following Safeguarding Principles & Requirements and Risks & Capacities Guideline assessed for the Project Area. Please see the Appendix 1 of the document.

Modelling Units

There are three modelling units. The red area (MU1) represents the Zhaogensumogacha project area, where 190 hectares of poplars were planted in 2014. The yellow area (MU2) represents the Nugusitaigacha project area, where 708.44 hectares of pinus sylvestris were planted in 2016. The green area (MU3) represents the Nugusitaigacha project area (the area planted in 2016), where 472.52 hectares of poplars were planted in 2016.



Figure A.14 Project are of MU1

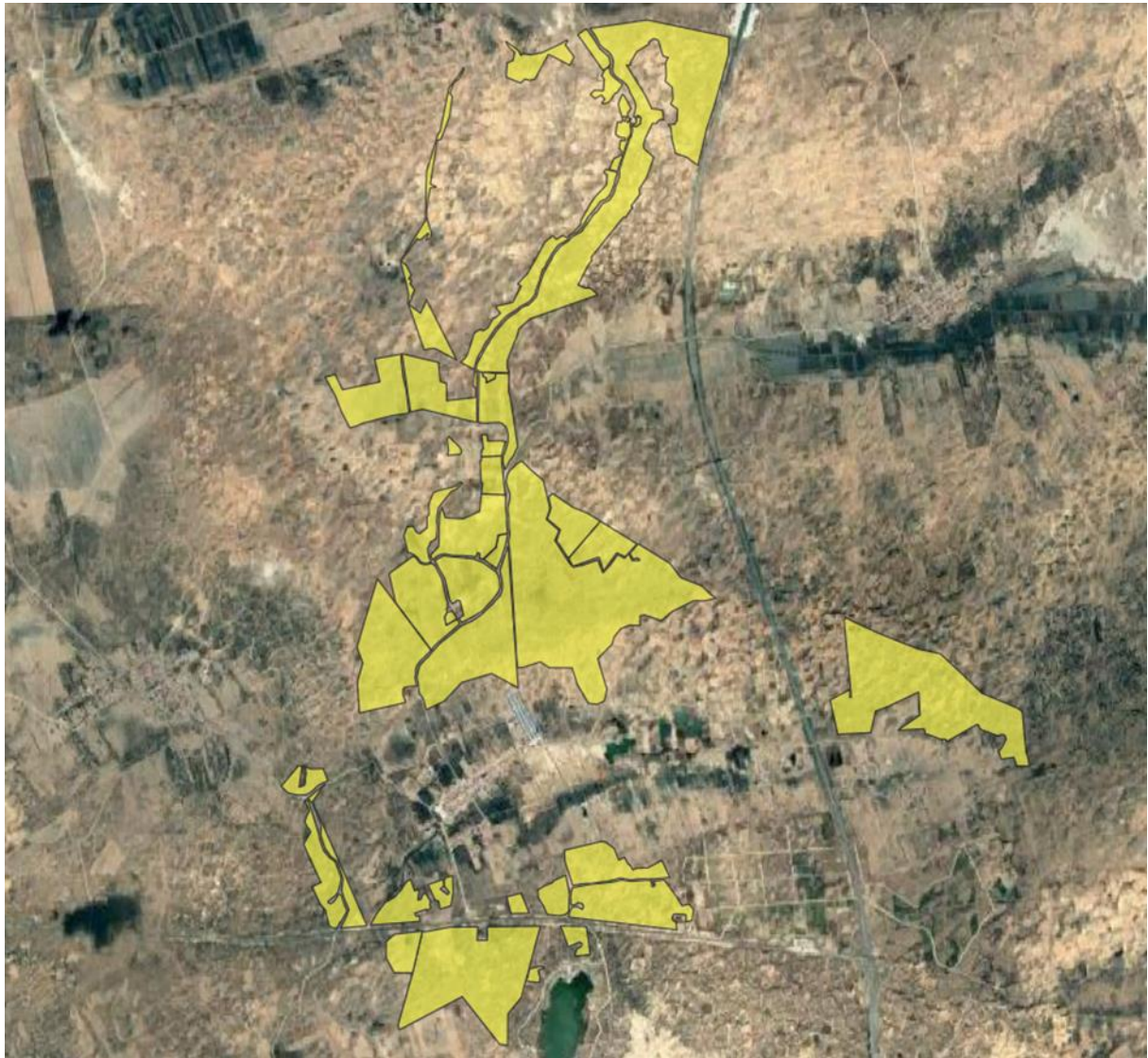


Figure A.15 Project are of MU2

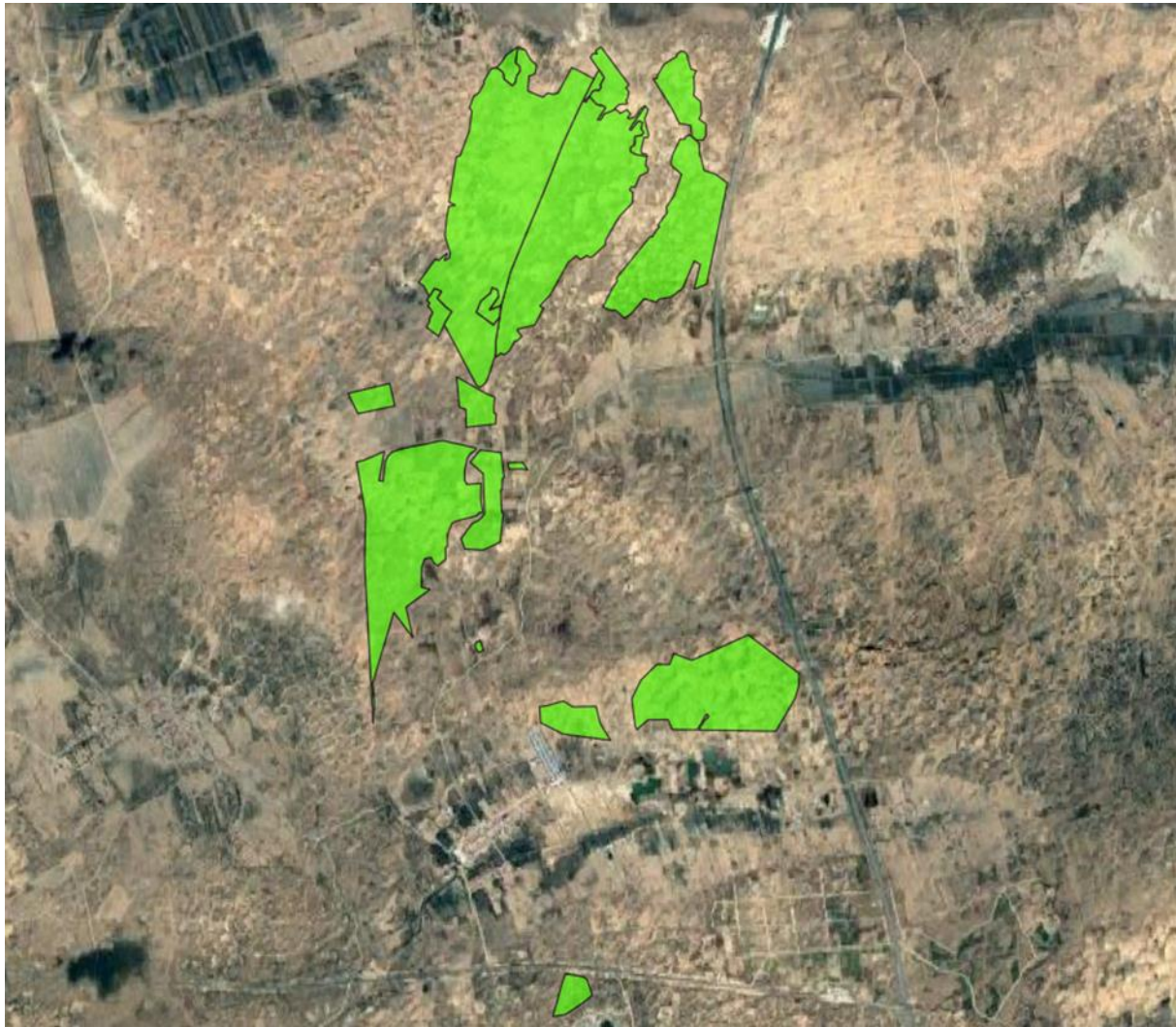


Figure A.16 Project are of MU3

A.1.2. Legal ownership of products generated by the project and legal rights to alter use of resources required to service the project

>>

All the project land belongs to the local communities, while the initial project area in Zhaogensumogacha belongs to Zhaogensumogacha Collective and the new area in Nugusitaigacha belongs to Nugusitaigacha Collective. All villagers support the implementation of the project, and some villagers have participated in the land preparation, planting and forest management.

On 10/04/2014, Zhaogensumogacha Collective authorized Roots & Shoots the right to deal with anything regarding carbon credit rights of this project. And Roots & and Shoots has signed the carbon credit purchase agreement with Climate Bridge to authorize whom the user rights of the carbon credits generated from the initial afforestation project in Zhaogensumogacha during the crediting period.

For the newly planted project area in Nugusitaigacha, Nugusitaigacha collective have signed an agreement on 26/03/2021 to authorize Climate Bridge as the Project Developer to deal with anything regarding carbon credit rights of this project.

Therefore, Jane Goodall Institute – Shanghai Roots & Shoots, Zhaogensumogacha Collective and Nugusitaigacha collective have full and uncontested legal ownership of the emission reductions that are generated under this Gold Standard project and has legal rights concerning changes in use of resources required to service the project.

A.2 Location of project

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The project is located in the south of Zhaogensumogacha and in the north of Nugusitaigacha Horqin Left Rear Banner. The geographical coordinates of the initial project area (Zhaogensumogacha) are between 122°7.78' and 122°11.64' east longitude and between 43°11.80' and 43°12.75' north latitude. The geographical coordinates of the new project area (Nugusitaigacha) are between 122°20.51' and 122°24.75' east longitude and between 43°23.46' and 43°27.70' north latitude.

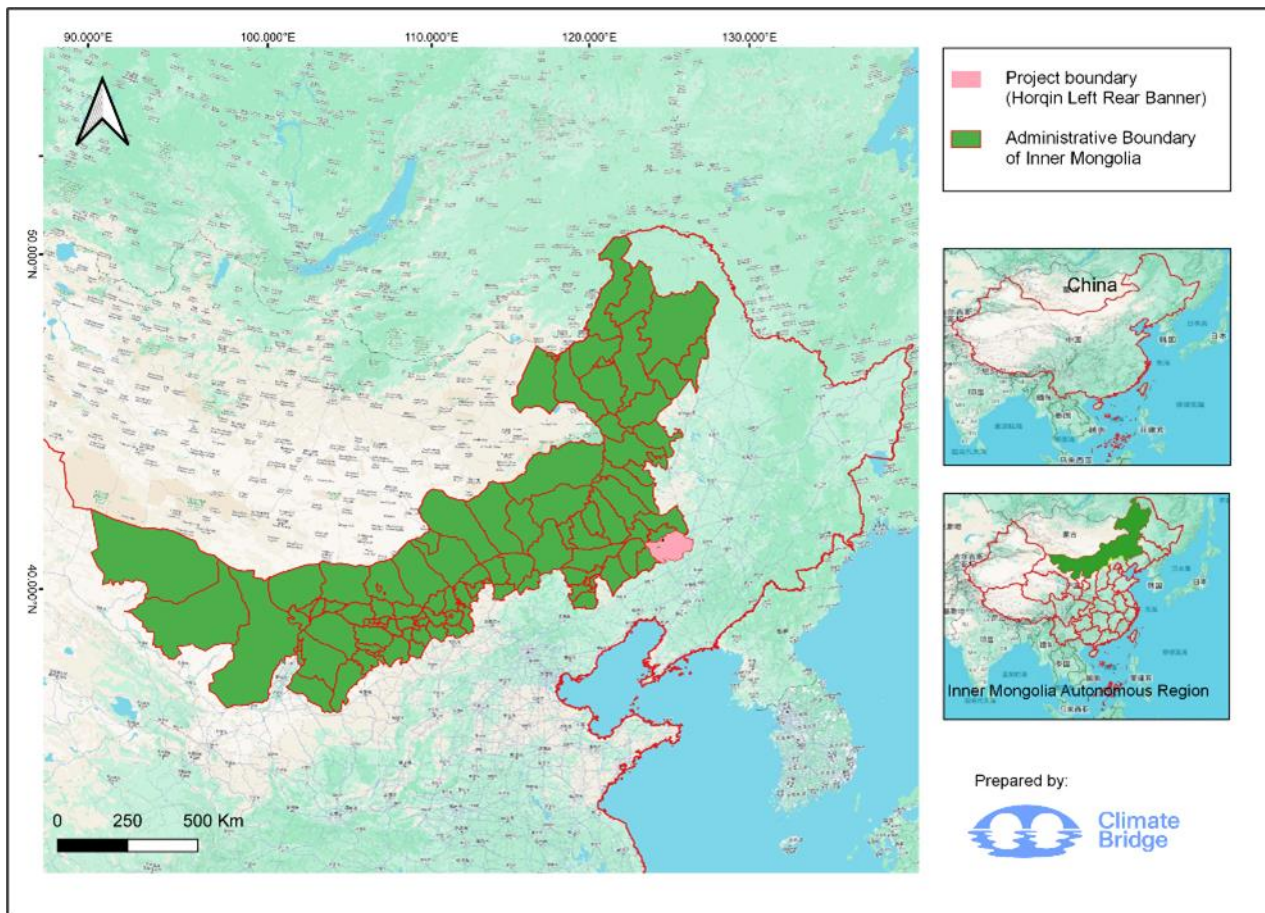


Figure A.17 Location of Horqin Left Rear Banner, Tongliao city.

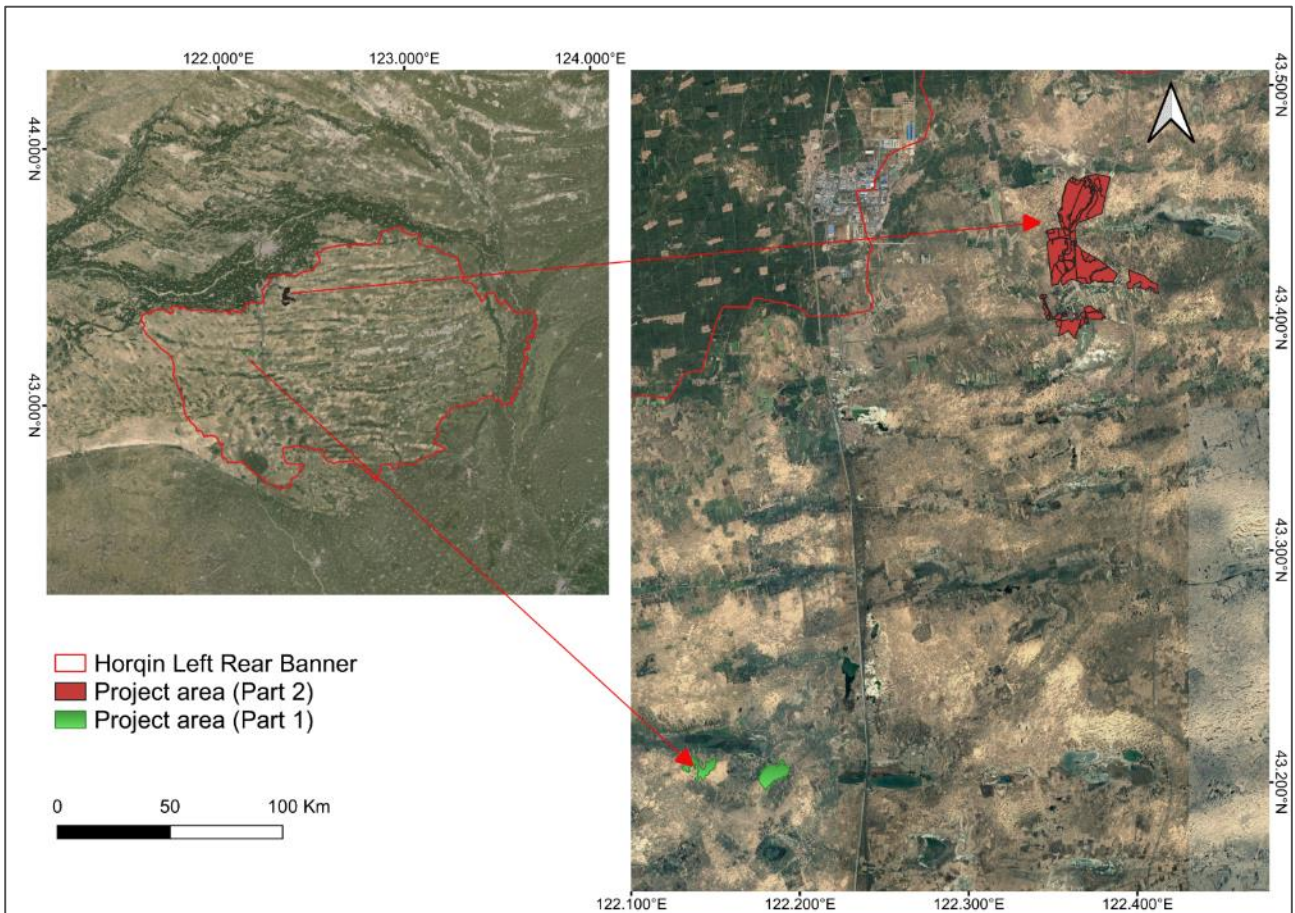


Figure A.18 Location of Project area.

A.3 Technologies and/or measures

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To ensure the quality of afforestation achievements in the project, a local technical for afforestation guidance manual in Inner Mongolia region “Afforestation technical regulations of Inner Mongolia Autonomous Region (DB15/T 389-2003)” was used to design the planting plan, mainly referring to its afforestation techniques, including tree species selection, density selection, and management and protection systems.

In April of 2014, 190 hectares of *Populus simonii* Carrière (hereafter “poplars”) were planted in Zhaogensumogacha, Horqin Left Rear Banner of Tongliao City, and the project has been successfully registered as Gold Standard Project (GS ID: GS3031) in November 2015. In hilly and sandy areas, bushes and other vegetations were also planted, such as grass sand blocks.

In 2016, 1,180.96 hectares of native tree species (*Pinus sylvestris* L. var. *mongholica* Litv. and *Populus simonii* Carrière, hereafter “pinus sylvestris” and “poplar”) were

planted in Nugusitaigacha, Horqin Left Rear Banner of Tongliao City, the local Forestry Bureau provided the initial funding for planting and maintenance cost for the first five years, and the cost for the remaining lifetime of the project will be covered by carbon revenue. The local villagers, owner of the project land and planted forest, have authorized Climate Bridge to apply the project for GS certification and sell the carbon credits on behalf of them. Therefore, the project area by adding the new area in Nugusitaigacha will reach 1,370.96 hectares so far.

A.4 Scale of the project

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According to the definition in section 9.1.1 of Project scale in GHG EMISSIONS REDUCTION & SEQUESTRATION PRODUCT REQUIREMENTS, GSVER Projects may be registered as 'large scale', 'small scale' (for the applicability of methodologies and tools only) or 'microscale'. Scale is defined in the relevant Activity Requirements. For the GS document LAND USE & FORESTS ACTIVITY REQUIREMENTS (Version 1.2.1), the project scale is defined in ANNEXB- REQUIREMENTS FOR LUF SMALLHOLDER & MICROSCALE PROJECTS.

According to the section 1.1.5 of the ANNEXB: Microscale projects are defined as projects with a project area of maximum 500ha.

The project area is greater than 500 ha (1,370.96 ha). So the project is not belong to microscale.

According to the definition of the "Smallholder" in TERMS AND DEFINITIONS of the LAND USE & FORESTS ACTIVITY REQUIREMENTS.

Smallholders are farmers that have more than 50% of farm work done by family members, cooperative members or neighbours. Smallholder projects include project areas that are managed by individual participant of smallholder. The Project Participants are Village collectives and Shanghai Roots & Shoots. They are all organizations. The project is not a smallholder project.

Meanwhile, the Gold Standard approved methodology "Afforestation/Reforestation GHG Emissions Reduction & Sequestration Methodology (version 2.1)" used in the project is not a methodology only for the small-scale. Therefore, the small scale is not applicable and the project is defined as large scale.

A.5 Funding sources of project

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Year 1 – Year 5, ~6.6-7.3 million RMB, to plant the trees and maintain them, set up fences and the irrigation system, deliver education and instructions to local people, encourage agro-forestry practice and carry-out regular monitoring and investigation.

Year 5 – Year 10, ~1.5-2.2 million RMB, to maintain the forest, carry-out regular monitoring and investigation, deliver education and instructions to local people.

Year 10- Year 30, ~3.6-5.8 million RMB, to maintain the forest, carry-out regular monitoring and investigation, deliver education and instructions to local residents.

For the initial project area in Zhaogensumogacha, Roots & Shoots has provided the fund for planting and forest maintenance, the potential carbon revenue could increase the income of local communities and will also be significant supplement for funding of the long-term forest management, including biodiversity protection and enhancement.

For the area planted in Nugusitaigacha, local Forestry Bureau has provided the fund for planting and forest maintenance for the first five years of the project lifetime, the potential carbon revenue could cover the cost of the continuous forest maintenance and benefit the local communities by increase their household income as well.

SECTION B. APPLICATION OF APPROVED GOLD STANDARD METHODOLOGY (IES) AND/OR DEMONSTRATION OF SDG CONTRIBUTIONS

B.1. Reference of approved methodology (ies)

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Title of the approved baseline and monitoring methodology:

Gold Standard Afforestation/Reforestation GHG Emissions Reduction & Sequestration Methodology (version 2.1)

Title of Methodological Tool:

Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities,v 01

Guidelines for sampling and surveys for CDM project activities and programmes of activities, v 4.0

Stakeholder Consultation and Engagement Guidelines (Ver 2.0)

Gender Equality Requirements & Guidelines (Ver 2.0)

Risks & Capacities Guideline for Land Use & Forest project(Ver 1.0)


B.2. Applicability of methodology (ies)

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Gold Standard Afforestation/Reforestation GHG Emissions Reduction & Sequestration Methodology (version 2.1) are applicable under the following conditions:

Applicability conditions	Justification / Explanation
a. Projects can apply all silvicultural systems: <ul style="list-style-type: none"> i. Conservation forests (no use of timber) ii. Forests with selective harvesting 	The main project activity of the project is plant trees and it will be used as public welfare forest and it not used for timber production for commercial benefits. Thus, the silvicultural method of the project applied/envisoned is conservation forests.

<p>iii. Rotation forestry</p>	
<p>b. All projects can include agriculture (agroforestry) or pasture (silvopasture) activities.</p>	<p>The project is public welfare project and doesn't include agriculture (agroforestry) or pasture (silvopasture) activities.</p>
<p>c. Project Areas shall not be on wetlands.</p>	<p>The project areas are not on wetlands. The initial project area in 2014 is located in Zhaogensumogacha and is not on wetlands. The area in 2016 is located in Nugusitaigacha which is not on wetlands either.</p>
<p>d. Project Areas with organic soils shall not be drained or irrigated (except for irrigation for planting).</p>	<p>The planting area in Zhaogensumogacha is mostly sandy land, and no organic soils are involved in the project boundary. The planting area in Nugusitaigacha (the new area) is similar with the initial area which is also mostly sandy land, and no organic soils are involved in the project boundary. Planting area in Zhaogensumogacha before start of the project</p>  <p>Planting area in Nugusitaigacha (the new area) before start of the project.</p>

	
<p>e. Soil disturbance (through ploughing, digging of pits, stump removals, infrastructure, etc.) on organic soils shall be in less than 10% of the area that is submitted to certification (not 10% of the entire project area).</p>	<p>The planting area in Zhaogensumogacha and Nugusitaigacha are mostly sandy land in Horqin. According to the definition of “Organic Soil” in Section 1.1.1 (d) of GS A/R Methodology v2.1, the soil contains at least 12% (by weight) organic carbon. However, According to the local study⁶, the highest soil in Horqin sandy land contains 0.84% organic carbon (8.42g/kg), which is far below the organic carbon content standard of Organic Soil. So, no organic soils are involved in the project boundary.</p>
<p>f. The most likely scenario without the project (baseline scenario) shall be defined for the project area. This scenario shall not show any significant increase of the</p>	<p>For the planting area in Zhaogensumogacha, the most likely scenario without the project (baseline scenario) is the existing scenario: the area is the degraded grassland and the situation of degradation will be continued for years.</p> <p>For the planting area in Nugusitaigacha (the new area), the most likely scenario without the project (baseline scenario) is the same: the area is the degraded grassland</p>

⁶ Yan Meng, Wang Xuyang, Zhou Liye&Li Yuqiang (2022). Variation characteristics and influencing factors of soil organic carbon content during desertification in Horqin Sandy Land Chinese Desert. (05), 221-231.

Baseline biomass ('tree' and 'non-tree').	and the situation of degradation will be continued for years.
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B.3. Project boundary

>>

Source	GHGs	Included ?	Justification/Explanation	
Baseline scenario	Aboveground tree biomass	CO ₂	Yes	According to the methodological requirements, it is the main carbon pool
	Belowground tree biomass	CO ₂	Yes	According to the methodological requirements, it is the main carbon pool
	Aboveground non-tree biomass	CO ₂	Yes	According to the methodological requirements, it is the main carbon pool
	Belowground non-tree biomass	CO ₂	Yes	According to the methodological requirements, it is the main carbon pool
	Soil	CO ₂	No	Soil carbon pool is not calculated in this project
	Harvested wood (timber & energy wood)	CO ₂	No	According to the methodological requirements, this source is not included in the project
	Litter & Lying dead wood	CO ₂	No	According to the methodological requirements, this source is not included in the project
Project	Aboveground tree biomass	CO ₂	Yes	According to the methodological requirements, it is the main carbon pool

Belowground tree biomass	CO ₂	Yes	According to the methodological requirements, it is the main carbon pool
Aboveground non-tree biomass	CO ₂	No	According to the methodological requirements, this source is not included in the project
Belowground non-tree biomass	CO ₂	No	According to the methodological requirements, this source is not included in the project
Soil	CO ₂	No	Soil carbon pool is not calculated in this project
Harvested wood (timber & energy wood)	CO ₂	No	According to the methodological requirements, this source is not included in the project
Litter & Lying dead wood	CO ₂	No	According to the methodological requirements, this source is not included in the project

B.4. Establishment and description of baseline scenario

>>

According to Section 3.5.2 of the methodology, to determine the Baseline of the eligible planting area the land shall be:

- a. stratified according to its vegetation types (grassland, bushland, etc.), AND**

The following map shows the eligible planting area in Zhaogensumogacha, in a baseline scenario, there are only sparse bushes and grasses on the land and the vegetation is distributed in a mosaic fashion across the entire project area. Therefore, a single stratum combining the stocks for both vegetation types is used as “sparse shrub and grassland” whose size is equal to the eligible planting area which is 190 ha.



Figure B.1 Initial project area in 2004



Figure B.2 Initial project area in 2014

In 2016, 1,180.96 hectares of native tree species (pinus sylvestris and poplar) were planted in Nugusitaigacha, Tongliao City, which expected to add in the project (GS3031).

The following map shows the eligible planting area in Nugusitaigacha (the new area), in a baseline scenario, there are only sparse bushes and grasses on the land and the vegetation is distributed in a mosaic fashion across the entire project area. Therefore, a single stratum combining the stocks for both vegetation types is used as “sparse shrub and grassland” whose size is equal to the eligible planting area which is 1,180.96 ha.

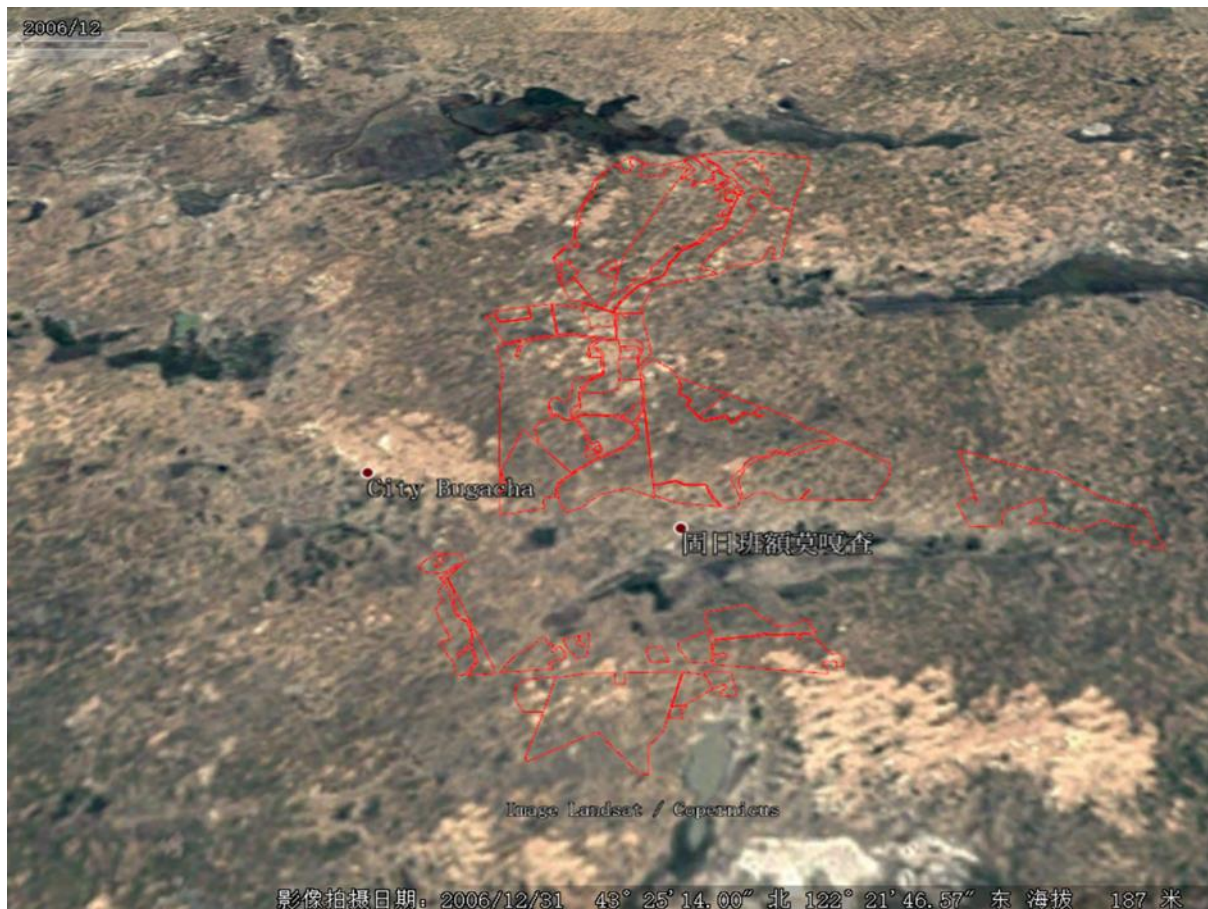


Figure B.3 New project area in 2006



Figure B.3 New project area in 2016

- b. for each of these strata scientifically based project-specific⁷, regional or national default values shall be found which state 'tree' and 'non-tree' biomass of these vegetation types.

Overview of the different baseline strata and the results of the baseline determination. The individual calculation of each stratum is in the boxes below.

	Stratum ID	Baseline tree biomass	Baseline non-tree biomass
Stratum	Sparse shrub and grassland	477.77 tCO ₂	8.97 tCO ₂
Stratum	Sparse shrub and grassland (the new area)	2,969.64 tCO ₂	55.77 tCO ₂
Total		3,447.42 tCO₂	64.75 tCO₂
	Eligible planting area	1,370.96 ha	
	Baseline	2.56 tCO₂/ha	

⁷ Project-specific default values are generated through a 'tree' and 'non-tree' inventory on the project area.

c. default values⁸ from the IPCC shall only be used if no other values are available

The project use the values from the local literature.

B.5. Demonstration of additionality

Specify the methodology, activity requirement or product requirement that establishes deemed additionality for the proposed project (including the version number and the specific paragraph, if applicable).	According to the section 3.1.16 of Land Use & Forests Activity Requirements (version 1.2.1), the deemed additionality for the proposed project was established
Describe how the proposed project meets the criteria for deemed additionality.	This section has been assessed and validated in registered PDD during the first crediting period as followed.

Additionality:

Option 2 was used to demanstrate the additionality, the requirements shall be filled in using the format provided by this template.

The project shall meet all of the requirements (a), (b) and (c) in the list below and at least one of the requirements from (d) to (g) in order to be considered as additional under Option 2.

- (a) The project is located in a Less Developed Country (LDCs) or in a region with a recent UNDP Human Development Indicator⁹ below 0.8.
- (b) The project shall have no intention of creating a forest for the commercial use of the timber or non-timber forest products.
- (c)The project activities shall not be mandatory by any law or regulation, OR if it is mandatory, it shall demonstrate that these laws or regulations are systematically not enforced.

⁸ Default values are found e.g. in the IPCC Guidelines for National GHG Inventories https://www.ipcc-nggip.iges.or.jp/public/2019rf/pdf/4_Volume4/19R_V4_Ch04_Forest%20Land.pdf

⁹ UNDP Human Development Indicator <http://hdr.undp.org/en/data/profiles/>

(a)	The project is located in China whose recent UNDP Human Development Indicator is 0.761 which is below 0.8.
(b)	The project has no intention of creating a forest for the commercial use of the timber or non-timber forest products.
(c)	The project activities were voluntary cooperative afforestation project of local villagers, which were not mandatory by any law or regulation.

<p>The project shall meet all of the requirements (a), (b) and (c) in the list above and at least one of the requirements from (d) to (g) in order to be considered as additional under Option 2.</p> <p>(d) The project area is located in a region with a mean annual precipitation of less than 600 mm.</p> <p>(e) The soil pH of the planting area is less than 4.0.</p> <p>(f) The planting area is planted with minimum 5 different native tree species in mixed stands, covering at minimum 50% of the planting area.</p> <p>(g) The project area is located:</p> <ul style="list-style-type: none"> • In a country or region with a recent UNDP Human Development Indicator¹ below 0.5, OR • In a Small Island Developing State (SIDS)¹⁰ 	
(d)	The new area in Nugusitaigacha is located in Tongliao city of China, whose mean annual precipitation ¹¹ is 373.6 mm, less than 600mm.
(e)	N/A
(f)	N/A
(g)	N/A

B.5.1 Prior Consideration

>>

N/A

¹⁰ Small Island Developing States (SIDS) www.un.org/special-rep/ohrls/sid/list.htm

¹¹ Han Yongzeng, Gao Yamin. Analysis on the Causes of Forest Dryness in Tongliao City[J]. Inner Mongolia Forestry, 2015, No.481(10):24-25.

B.5.2 Ongoing Financial Need

>>

Three-North Shelterbelt Program Project, an important public welfare afforestation project in north of the China, are all facing serious degradation problems according to the study¹². These projects are public welfare forest, which has no high economic returns and lacks investment enthusiasm. Management and conservation measures for the public welfare forest are absent for a long-time due to the shortage of funds, leading to forest degradation.

Like the project of Three-North Shelterbelt Program Project, the project of Tong Liao also is public welfare forest afforestation. The funds are government subsidies and public welfare organizations, which often only cover the initial afforestation costs and has no high economic returns and lacks investment enthusiasm. Natural environment like the project of Tong Liao requires continuous management and protection for new afforestation to survive well, otherwise it will face the problem of afforestation failure due to the lack of subsequent management and protection, just like the Three North Project. The maintenance of afforestation results requires continuous financial investment, and the government's initial financial investment is not enough. As a public welfare forest, it lacks investment attractiveness and can only seek support from carbon revenue.

As per the Principle 5 (b) Ongoing Financial Need in Principles & Requirements (version 1.2), ongoing financial need was demonstrated as following.

(a) Information highlighting the key categories and amounts or relative proportions (%) of project income and outgoings, including the relative proportion of certification related cost and revenue.

Compared with the revenue realised from Gold Standard certification, the cost of validation, verification and certification are relatively fixed and limited. The project can achieve sustainable management. Up to now, the project has been verified first in the first crediting period, and a total of 9,269 tons of GS VERs with a 20% buffer deduction

¹² Han Xiaohong (2016). Several Issues to Build Shelterbelt Forest Restoration System. *Forestry Economics*, 38 (8), 63-65

have been issued for the period from 11/04/2014 to 31/12/2020. The emission reduction during the period from 01/01/2021 to 31/12/2023 is seeking GS VERs issuance under GS program.

Taking the expected price of 40 RMB/tons of GS VERs, the revenue of the project from GS certification is about 370,760 RMB. The revenue is mainly used in the following aspects: 13.67% for GS Review fee, 29.34% for the third party validation and verification fee, 4.75% for the issuance fee, 17.53% for the samplings monitoring fee. The rest of the revenue will used for project management fee of PD and the 80% of the rest of the revenue will used as employee salary or subsidies of the forest rangers to maintain the forest.

Thus, the carbon revenues derived from Gold Standard certification have been playing a very important role in helping project owner to contribute to SDGs.

(b) Description on how finance derived Gold Standard Certification contributes to or is being used to sustain or enhance the project.

Carbon revenues derived from Gold Standard certification have been playing a very important role in helping project owner to contribute to SDGs. By checking the Monitoring Plan during the period from 11/04/2014 to 31/12/2020, in order to acquire annual carbon revenues, the project has achieved sustainable monitoring management, contributing to SDG 13, SDG 8 and SDG 15. In the 2nd crediting period, the project will provide job opportunities for local residents to play roles of forest rangers. Totally provide 10 jobs position for local residents. The other part of the fund will be used for the current management of the project, including the training and publicity of forest fire prevention and pest control.

Moreover, stable carbon revenues are conducive to maintain the forest and further encourage project owner to operate the project in line with monitoring plan, ensuring the continuous supply of GHG emissions sequestration generated by the project.

(c) Where no revenue is realised from Gold Standard certification during a given period, this would be considered a FAR for the next Issuance

GS VERs during the period from 11/04/2014 to 31/12/2020 has been issued and the emission reduction during the period from 01/01/2021 to 31/12/2023 is seeking GS VERs issuance under GS program. Thus, the project does not involve the situation that no revenue is realised from Gold Standard certification during a given period.

B.6. Sustainable Development Goals (SDG) outcomes

Relevant Target/Indicator for each of the three SDGs:

SUSTAINABLE DEVELOPMENT GOALS TARGETED	MOST RELEVANT SDG TARGET	SDG IMPACT
		INDICATOR (PROPOSED OR SDG INDICATOR)
13 Climate Action (mandatory)	13.2 Integrate climate change measures into national policies, strategies and planning	Amount of GHGs emissions avoided or sequestered
8 Decent work and economic growth	8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value	Total number of jobs
15 Life on land	15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species	Trends in species diversity

B.6.1 Explanation of methodological choices/approaches for estimating the SDG Impact

>>

According to Section 4.1.16 in Principles & Requirements, option 1 was used to demonstrate SDG impacts of the project. The project follows a Gold Standard Approved SDG Tool for the demonstration of SDG Impacts.

The final Net benefit SDG of the project are calculated as follows:

$$\text{Net benefit of SDG} = \text{Project outcome of SDG} - \text{Baseline outcome of SDG} \quad (1)$$

And the baseline and project outcomes are calculated in the following two parts:

I. Calculate baseline outcomes

SDG 13 Baseline outcome:

Before the start of the project, the planting area were mostly sandy with sparse shrub and grassland. According to Gold Standard Afforestation/Reforestation (A/R) GHG Emissions Reduction & Sequestration Methodology (Version 2.1) (hereinafter referred to as "Methodology A/R V2.1"), the Baseline shall be determined by estimating the 'tree' and 'non-tree' biomass that is present in the eligible planting area just prior to the planting start. The baseline net GHG removals by sinks shall be calculated as follows:

$$\Delta C_{BSL,t} = \Delta C_{tree_BSL,t} + \Delta C_{non-tree_BSL,t} \quad (1)$$

$$\Delta C_{tree_BSL,t} = \sum_{i=1} \Delta C_{tree_BSL,i,t} = \sum_{i=1} \left(\frac{C_{tree_BSL,i,t_2} - C_{tree_BSL,i,t_1}}{t_2 - t_1} \right) \quad (2)$$

$$\Delta C_{non-tree_BSL,t} = \sum_{i=1} \Delta C_{non-tree_BSL,i,t} = \sum_{i=1} \left(\frac{C_{non-tree_BSL,i,t_2} - C_{non-tree_BSL,i,t_1}}{t_2 - t_1} \right) \quad (3)$$

$$C_{tree_BSL,t} = B_{tree_BSL,t} * CF_{tree} * (1 + R_{tree_BSL}) * A_{BSL,t} * 44/12 \quad (4)$$

$$C_{non-tree_BSL,t} = B_{non-tree_BSL,t} * CF_{non-tree} * (1 + R_{non-tree_BSL}) * A_{BSL,t} * 44/12 \quad (5)$$

Where:

$\Delta C_{BSL,t}$	=	Baseline net GHG removals by sinks in year t; t CO ₂ -e
$\Delta C_{tree_BSL,t}$	=	Change in carbon stock in trees biomass as estimated in baseline in year t; t CO ₂ e
$\Delta C_{non-tree_BSL,t}$	=	Change in carbon stock in non-trees biomass as estimated in baseline in year t; t CO ₂ e
$\Delta C_{tree_BSL,i,t}$	=	Change in carbon stock in trees biomass of stratum i as estimated in baseline in year t; t CO ₂ e
$\Delta C_{non-tree_BSL,i,t}$	=	Change in carbon stock in non-trees biomass of stratum i as estimated in baseline in year t; t CO ₂ e
C_{tree_BSL,i,t_2}	=	Carbon stock in baseline trees biomass of stratum i as estimated at time t; t CO ₂ e
$C_{non-tree_BSL,i,t_2}$	=	Carbon stock in baseline non-trees biomass of stratum i as estimated at time t; t CO ₂ e
$B_{tree_BSL,t}$	=	Aboveground tree biomass per hectare in baseline within the project boundary at time t; t (d.m.)/ha
CF_{tree}	=	Carbon fraction of baseline tree biomass; t C/t(d.m.)
R_{tree_BSL}	=	Root-shoot ratio for tree in baseline;

$B_{non-tree_BSL,t}$	=	Aboveground non-tree biomass per hectare within the project boundary at time t; t (d.m.)/ha
$CF_{non-tree}$	=	Carbon fraction of baseline non-tree biomass; t C/t(d.m.)
$R_{non-tree_BSL}$	=	Root-to-Shoot ratio for non-tree biomass in baseline;
$A_{BSL,t}$	=	Sum of project area; ha

SDG 8 Baseline outcome:

In baseline situation, the planting area are mostly sandy land with very few species and no plants. There is no forest to manage and protect, so there is no employment for forest rangers. The SDG 8 cannot be achieved in baseline situation.

SDG 15 Baseline outcome:

In baseline situation, the planting area are mostly sandy land with very few species and no plants. The SDG 15 cannot be achieved in baseline situation. Therefore, SDG 15 baseline outcome is sandy land with low biodiversity.

II. Calculate project outcomes

SDG 13 Project outcome:

According to Methodology A/R V2, the project net GHG removals by sinks shall be calculated as follows:

Calculation of project net GHG removals by sinks:

$$\Delta C_{tree_PROJ,t} = \sum_{i=1} \Delta C_{tree_PROJ,i,t} = \sum_{i=1} \left(\frac{C_{tree_PROJ,i,t_2} - C_{tree_PROJ,i,t_1}}{t_2 - t_1} \right) \quad (6)$$

$$C_{tree_PROJ,t} = 44/12 * B_{tree_PROJ,i,j,t} * CF_{tree,j} \quad (7)$$

$$B_{tree_PROJ,i,j,t} = V_{tree_PROJ,i,j,t} * D_{tree,j} * BEF_{tree,j} * (1 + R_{tree,j}) * N_{tree_PROJ,i,j,t} * A_{PROJ,i,t} \quad (8)$$

Where:

$\Delta C_{tree_PROJ,t}$	=	Change in carbon stock in tree biomass in project in year t; t CO ₂ e
---------------------------	---	--

$\Delta C_{tree_PROJ,i,t}$	=	Change in carbon stock in tree biomass of stratum i in project in year t; t CO ₂ e
$C_{tree_PROJ,i,t}$	=	Carbon stock in tree biomass of stratum i in project at time t; t CO ₂ e
$B_{tree_PROJ,i,j,t}$	=	Aboveground biomass of tree j of stratum i in project at time t; t d.m.
$CF_{tree,j}$	=	Carbon fraction of tree j biomass; t C/t(d.m.)
$V_{tree_PROJ,i,j,t}$	=	Stem volume of tree j of stratum i in project at time t; m ³ /ha
$D_{tree,j}$	=	Density of tree species j; t (d.m.)/m ³
$BEF_{tree,j}$	=	Biomass expansion factor for conversion of tree stem biomass to above-ground tree biomass, for tree species j; dimensionless
$R_{tree,j}$	=	Root-shoot ratio for tree species j; dimensionless
$N_{tree_PROJ,i,j,t}$	=	Number of tree j of stratum i in project at time t; plant/ha
$A_{PROJ,i,t}$	=	Area of stratum i in project at time t; ha

Calculation of other emissions

According to Methodology A/R V2, no other emissions are considered.

Calculation of leakage emissions

According to Methodology A/R V2, no leakage emissions are considered.

Calculation of CO₂-certificates

$$\Delta C_{AR,t} = \Delta C_{tree_PROJ,t} - \Delta C_{BSL,t} \quad (9)$$

SDG 8 Project outcome:

The project planted 1,370.96 hectares of native tree species on the sandy land, including pinus sylvestris and poplar. In order to maintain the normal growth of these seedlings, the project owner hired forest rangers to manage. Each forest ranger is expected to manage and protect 2000 Mu, and a total of 10 forest rangers will be employed. Therefore, the estimated SDG 8 project outcome is significantly increased.

SDG 15 Project outcome:

The project planted 1,370.96 hectares of native tree species on the sandy land, including pinus sylvestris and poplar. In hilly and sandy areas, bushes and other vegetations were planted, such as grass sand blocks. Therefore, the desertified land in the project area has been restored, which is more suitable for the survival of animals and plants. Due to afforestation in the project area changing the soil structure of the sandy land and increasing vegetation coverage to provide habitats for animals and plants, it is expected that the number of wild animals and plants will increase in the future. Therefore, the estimated SDG 15 project outcome is significantly increase in biodiversity.

B.6.2 Data and parameters fixed ex ante

SDG13

Data/parameter	$B_{tree_BSL,t}$ $B_{non-tree_BSL,t}$
Unit	t (d.m.)/ha
Description	Aboveground tree/non-tree biomass per hectare in baseline within the project boundary at time t
Source of data	LI Yu-qiang, etc. Study on the Dynamics of Biomass, Calorific Value and Energy of the Psamophyte Communities during Desertification. Arid Zone Research, 2005, 22 (3). https://www.cnki.com.cn/Article/CJFDTotale-GHQJ200503002.htm As described Root to Shoor ratio, the aboveground shrub biomass is the sum of aboveground shrub biomass and

	standing dead wood, which is $0.7025+0.0963=0.7988$ tdm/ha
Value(s) applied	$B_{tree_BSL,t} = 0.7988$ $B_{non-tree_BSL,t} = 0.0322$
Choice of data or Measurement methods and procedures	N/A
Purpose of data	Calculation of baseline net GHG removals by sinks
Additional comment	N/A

Data/parameter	R_{tree_BSL}
Unit	Dimensionless
Description	Root-shoot ratio for tree/non-tree in baseline.
Source of data	<p>LI Yu-qiang, etc. Study on the Dynamics of Biomass, Calorific Value and Energy of the Psamophyte Communities during Desertification. Arid Zone Research, 2005, 22 (3). https://www.cnki.com.cn/Article/CJFDTot-GHQJ200503002.htm</p> <p>According to the table 1 of this paper, aboveground shrub biomass is the sum of aboveground shrub biomass and standing dead wood, while underground biomass is the sum of dead and alive roots. Thus the root to shoot ratio is $(0.5175+0.0553)/(0.7025+0.0903)=0.72$.</p>
Value(s) applied	$R_{tree_BSL} = 0.72$
Choice of data or Measurement methods and procedures	N/A
Purpose of data	Calculation of baseline net GHG removals by sinks
Additional comment	N/A

Data/parameter	$A_{BSL,t}$
Unit	ha
Description	Sum of project area.
Source of data	Remote Sensing data, field measurement.
Value(s) applied	1,370.96
Choice of data or Measurement methods and procedures	Standard operating procedures (SOPs) prescribed under national forest inventory are applied. In absence of these, SOPs from published handbooks, or from the IPCC GPG LULUCF 2003, may be applied.
Purpose of data	Calculation of baseline net GHG removals by sinks
Additional comment	N/A

Data/parameter	CF_{tree} $CF_{non-tree}$
Unit	t C/t(d.m.)
Description	Carbon fraction of baseline tree/non-tree biomass.
Source of data	Methodology A/R V2.1
Value(s) applied	$CF_{tree}=0.5$ $CF_{non-tree} =0.4$
Choice of data or Measurement methods and procedures	N/A
Purpose of data	Calculation of baseline net GHG removals by sinks
Additional comment	N/A

Data/parameter	$V_{tree_PROJ,t}$
Unit	m^3

Description	Stem volume of tree in project within the project boundary in year t
Source of data	Lv Wen. Populus Simonii in North China, 2002
Value(s) applied	See the emission reduction calculation table for details
Choice of data or Measurement methods and procedures	N/A
Purpose of data	Calculation of baseline net GHG removals by sinks
Additional comment	N/A

Data/parameter	<i>Wood Density</i>
Unit	t d.m /m ³
Description	Density of tree in project; t d.m.
Source of data	Methodology A/R V2.1
Value(s) applied	0.3
Choice of data or Measurement methods and procedures	N/A
Purpose of data	Calculation of project net GHG removals by sinks
Additional comment	N/A

Data/parameter	BEF_{tree}
Unit	Dimensionless
Description	Biomass expansion factor for conversion of tree stem biomass to above-ground tree biomass, for tree in project
Source of data	Methodology A/R V2.1
Value(s) applied	1.1

Choice of data or Measurement methods and procedures	N/A
Purpose of data	Calculation of project net GHG removals by sinks
Additional comment	N/A

Data/parameter	CF_{tree}
Unit	t C/t (.d.m.)
Description	Carbon fraction of project tree biomass
Source of data	Methodology A/R V2.1
Value(s) applied	0.5
Choice of data or Measurement methods and procedures	N/A
Purpose of data	Calculation of project net GHG removals by sinks
Additional comment	N/A

B.6.3 Ex ante estimation of SDG Impact

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According to the section B.6.1 and B.6.2, the ex-ante estimation of SDG Impact is listed as following table.

SDG Targeted	Ex-ante estimation of SDG Impact
SDG 8 Decent Work and Economic Growth	<p>Baseline outcome: 0</p> <p>Project outcome:10</p> <p>The project planted 1,370.96 hectares of native tree species on the sandy land, including pinus sylvestris and poplar. In order to maintain the normal growth of these seedlings, the project owner hired forest rangers to manage. Each forest ranger is expected to manage and protect 2000 Mu. It is expected that a total of 10 forest rangers will be employed.</p>

	<p>There will be carried out at least once basic training per year for all staff to help them upgrade their skills and knowledge. Therefore, the estimated SDG 8 project outcome for number of jobs in the bundled project is 10.</p>
<p>SDG 13 Climate Action</p>	<p>Baseline outcome: 3,512 tCO₂e Project outcome: 453,218 tCO₂e</p> <p>The project will achieve 14,990 tCO₂e/yr in the crediting period. Therefore, the estimated SDG 13 project outcome for emission reduction is 14,990 tCO₂e/yr in the third crediting period. The annual emission reduction is calculated as below.</p>
<p>SDG 15 Life on land</p>	<p>Baseline outcome: low Project outcome: Increased</p> <p>The project planted 1,370.96 hectares of native tree species on the sandy land, including pinus sylvestris and poplar. In hilly and sandy areas, bushes and other vegetations were planted, such as grass sand blocks. Therefore, the desertified land in the project area has been restored, which is more suitable for the survival of animals and plants. Therefore, the estimated SDG 15 project outcome is significantly increase in biodiversity.</p>

Baseline Emissions

According to Methodology A/R V2, the Baseline shall be determined by estimating the 'tree' and 'non-tree' biomass that is present in the eligible planting area just prior to the planting start. And the Baseline is deducted in the first year (t=1).

According to the local literature¹³, the aboveground biomass of Sparse bushes is 0.7988 tdm/ha and the aboveground biomass of Sparse grasses is 0.0322 tdm/ha.

The based on the approach of the section B 6.1, the total baseline is 3,512 tCO₂.

Project Emissions

The CO₂ removal unit is determined for every year (t) of the crediting period using a growth-model and conversion factors every MU (see the CO₂ fixation calculation table). Total CO₂-Certificates of MUs are expected to reach 449,706 CO₂.

Leakage emissions

Leakage are emissions that occur due to a shift of activities from the inside of a project area to the outside of a project area. These shifts of activities can cause four different categories of Leakage by:

- a. collection of wood (for firewood, charcoal, etc.)
- b. timber harvesting
- c. agriculture (crop cultivation, shrimp cultivation, etc.)
- d. livestock.

The baseline of project is not involved in four categories used in the formulas above. Therefore, there are no leakage emissions in this project.

Other emissions

There no existing 'tree' or 'non-tree' biomass of the Baseline was burned in Zhaogensumogacha project area and Nugustaigacha project area (the new area) for the purpose of land preparation. Also there is no fertilizer used in the project area. Therefore, there are no other emissions.

B.6.4 Summary of ex ante estimates of each SDG Impact

¹³ LI Yu-qiang, etc. Study on the Dynamics of Biomass, Calorific Value and Energy of the Psamophyte Communities during Desertification. Arid Zone Research, 2005, 22(3).

SDG 13 Amount of GHGs emissions avoided or sequestered

YEAR		BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
2014/4/11	2015/4/10	3,512	206	-3,306
2015/4/11	2016/4/10	0	289	289
2016/4/11	2017/4/10	0	794	794
2017/4/11	2018/4/10	0	885	885
2018/4/11	2019/4/10	0	1,014	1,014
2019/4/11	2020/4/10	0	3,482	3,482
2020/4/11	2021/4/10	0	4,319	4,319
2021/4/11	2022/4/10	0	9,616	9,616
2022/4/11	2023/4/10	0	9,878	9,878
2023/4/11	2024/4/10	0	10,178	10,178
2024/4/11	2025/4/10	0	11,258	11,258
2025/4/11	2026/4/10	0	11,799	11,799
2026/4/11	2027/4/10	0	13,875	13,875
2027/4/11	2028/4/10	0	14,246	14,246
2028/4/11	2029/4/10	0	14,559	14,559
2029/4/11	2030/4/10	0	15,608	15,608
2030/4/11	2031/4/10	0	16,149	16,149
2031/4/11	2032/4/10	0	18,075	18,075
2032/4/11	2033/4/10	0	18,371	18,371
2033/4/11	2034/4/10	0	18,698	18,698
2034/4/11	2035/4/10	0	19,668	19,668
2035/4/11	2036/4/10	0	20,197	20,197
2036/4/11	2037/4/10	0	21,897	21,897
2037/4/11	2038/4/10	0	22,177	22,177
2038/4/11	2039/4/10	0	22,442	22,442
2039/4/11	2040/4/10	0	26,563	26,563
2040/4/11	2041/4/10	0	27,725	27,725
2041/4/11	2042/4/10	0	35,705	35,705
2042/4/11	2043/4/10	0	35,908	35,908
2043/4/11	2044/4/10	0	27,636	27,636
Total		3,512	453,218	449,706

Total number of

30

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
crediting years			
Annual average over the crediting period			14,990

SDG 8 Total number of jobs

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
11/04/2014-10/04/2044	0	10	10
Total	0	10	10
Total number of crediting years			30
Annual average over the crediting period			Increased

SDG 15 Trends in species diversity

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
11/04/2014-10/04/2044	0	Increased	Increased
Total			Increased
Total number of crediting years			30
Annual average over the crediting period			Increased

B.7. Monitoring plan

B.7.1 Data and parameters to be monitored

SDG 13

Data / Parameter	$A_i; A_{PLOT,i}$
Unit	ha

Description	Area of stratum i; Size of sample plot in stratum i
Source of data	Field measurement
Value(s) applied	N/A
Measurement methods and procedures	Standard operating procedures (SOPs) prescribed under national forest inventory are applied. In absence of these, SOPs from published handbooks, or from the IPCC GPG LULUCF 2003, may be applied.
Monitoring frequency	Every monitoring period
QA/QC procedures	Section 7 of "GB/T 38590-2020 Technical regulations for continuous forest inventory" are applied.
Purpose of data	Assessment of SDG target
Additional comment	/

Data / Parameter	$H_{l,p,j,i}$; $DBH_{l,p,j,i}$
Unit	m; cm
Description	Height of tree l of species j in sample plot p of stratum i; Diameter at breast height of tree l of species j in sample plot p of stratum i
Source of data	Field measurements in sample plots
Value(s) applied	N/A
Measurement methods and procedures	Standard operating procedures (SOPs) prescribed under national forest inventory are applied. In absence of these, SOPs from published handbooks, or from the IPCC GPG LULUCF 2003, may be applied.
Monitoring frequency	Every monitoring period
QA/QC procedures	Section 7 of "GB/T 38590-2020 Technical regulations for continuous forest inventory" are applied.
Purpose of data	Assessment of SDG target
Additional comment	N/A

Data / Parameter	$N_{i,j}$
-------------------------	-----------

Unit	Trees/ha
Description	Number of the tree species j of strata i
Source of data	Field measurement
Value(s) applied	N/A
Measurement methods and procedures	Standard operating procedures (SOPs) prescribed under national forest inventory are applied. In absence of these, SOPs from published handbooks, or from the IPCC GPG LULUCF 2003, may be applied.
Monitoring frequency	Every monitoring period
QA/QC procedures	Section 7 of "GB/T 38590-2020 Technical regulations for continuous forest inventory" are applied.
Purpose of data	Assessment of SDG target
Additional comment	N/A

SDG 8

Data / Parameter	Total number of jobs
Unit	number
Description	By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value
Source of data	Forest Ranger Management Agreement Or Salary payment record
Value(s) applied	10
Measurement methods and procedures	Data collection and statistics
Monitoring frequency	Every monitoring period
QA/QC procedures	N/A
Purpose of data	Assessment of SDG target
Additional comment	N/A

SDG 15

Data / Parameter	Trends in species diversity
Unit	Numbers of flora and fauna
Description	By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally
Source of data	Questionnaires
Value(s) applied	According to the Annual Report from 2016 to 2020 of the projects, there are 22 species of plants in the project. According to the biodiversity monitoring data in this monitoring period, there are 38 species of plants in the project area. Through the infrared cameras in the project area, some animals such as Phasianus colchicus, Capreolus pygargus, Vulpes vulpes and Nyctereutes procyonoides were found in project area.
Measurement methods and procedures	The monitoring team monitored biodiversity in the project area every year, also questionnaires were provided for local stakeholders to collect their comments on the local ecosystem and biodiversity. See the questionnaire for details. In addition, cameras were installed in the project area to monitor the types and numbers of animals.
Monitoring frequency	Every monitoring period
QA/QC procedures	N/A
Purpose of data	Assessment of SDG target
Additional comment	N/A

Safeguarding Principles 9.2 Vulnerability to natural disaster

Data / Parameter	Area of fire, diseases and pests
Unit	ha
Description	Area of fire in the project area after the Project
Source of data	Interview with local forestry bureau; Forest ranger patrol records.
Value(s) applied	/

Measurement methods and procedures	The monitoring team monitored area of fire, diseases and pests in the project area every year by interview.
Monitoring frequency	Every monitoring period
QA/QC procedures	N/A
Purpose of data	Assessment of Safeguarding Principles 9.2
Additional comment	N/A

Safeguarding Principles 9.6 Pesticides & Fertilisers

Data / Parameter	Pesticide and Fertilizer consumption
Unit	tonne
Description	Pesticide and Fertilizer consumption in the project area after the Project
Source of data	Interview with local forestry bureau; Forest ranger patrol records.
Value(s) applied	/
Measurement methods and procedures	The monitoring team monitored pesticide and fertilizer consumption in the project area every year by interview.
Monitoring frequency	Every monitoring period
QA/QC procedures	N/A
Purpose of data	Assessment of Safeguarding Principles 9.6
Additional comment	N/A

B.7.2 Sampling plan

>>

According to the tool "Calculation of the number of sample plots for measurements within A/R CDM project activities", for a small sampling fraction (that is, when area sampled is less than 5% of the project area), the following simplified equation can be used for estimating the number of sample plots:

$$n = \left(\frac{t_{VAL}}{E}\right)^2 \times (\sum_i w_i \times s_i)^2 \tag{9}$$

Where:

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

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

$$n_i = n \times \frac{w_i \times s_i}{\sum_i w_i \times s_i} \quad (10)$$

Where:

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

During this second monitoring period (from 01/01/2021 to 31/12/2023), there is no change in the stratification, so the strata during this monitoring period and sampling plots is as same as which in the first monitoring period. The summary information on project stratification is listed on section A.1 (Eligible planting area).

Total project area (ha)	Modelling units (ha)			Conservation area (ha)
	MU 1	MU 2	MU 3	
1,370.96	190.00	708.44	472.52	1,370.96 (according to HCV assessment, 100% of the planting area has been managed to enhance the biodiversity of the native ecosystems)
Total sampling polts	MU 1	MU 2	MU 3	
13	4	4	5	

The sampling quadrat is square, with an area of 400 square meters. The number of sample plots of the forest inventory all are sufficient to meet a MU precision with a maximum error of ±20% at a 90% confidence interval, please see the CO2 fixation calculation table for the detail.

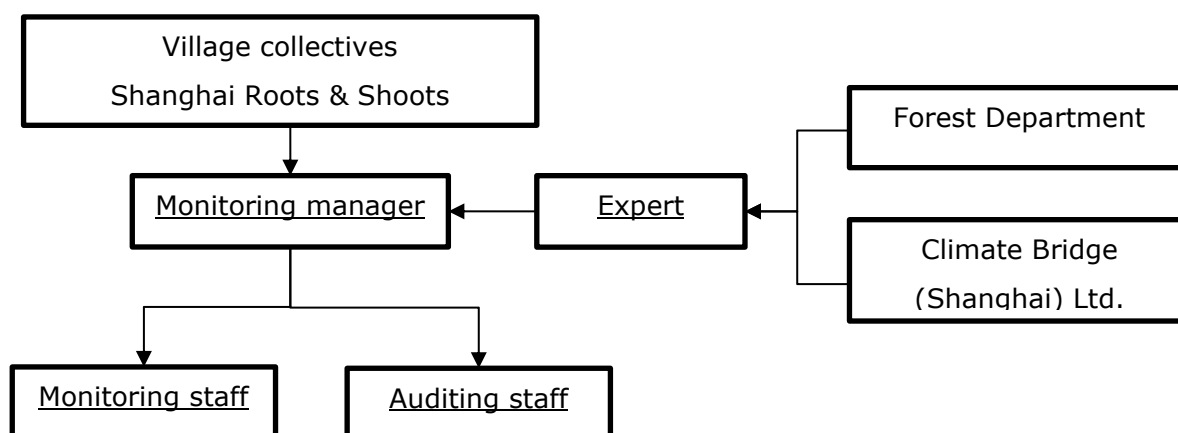
B.7.3 Other elements of monitoring plan

>>

Operational and management structure

The forest rangers are responsible for daily supervision and data management during the project implementation while the project proponent oversees the whole working group. A monitoring team has been established by project proponent to carry out the monitoring work before each certification.

The structure of the monitoring team is as follows:



The responsibilities of each role in the team structure are:

- Monitoring manager has the overall management responsibility, especially supervising the implementation of the monitoring plan, and assigning each member of the monitoring team their individual responsibility during the monitoring.
- Monitoring staff conducts the following monitoring process, measures the required parameters of the project as listed in the above Section B.7, particularly, and collects all the original evidence and data and make relevant records.
- Auditing staff performs internal verification of the measurement, he reviews all the monitoring records and documents, crosschecks the evidence and calculates the emission removals during each verification period.
- Expert group provide advises to monitoring manager to make sure the monitoring activities are in line with relevant requirement, and the expert group also review the monitoring results before each certification, in case any non-conformances founded, expert group will ask the monitoring team to take necessary compensation measures (redo some of the monitoring activities or calculation) until all the non-conformances has been corrected.

Uncertainty Assessment

Based on the Annex A of the LUF Requirements, due to the pre-project and project activity data were directly documented on-site measurements, Approach 1 was used to estimate the uncertainty.

Under Approach 1 data is measured within each stratum and followed the tool "Calculation of the number of sample plots for measurements within A/R CDM project activities". Data is measured within each stratum and followed accepted sampling and analysis protocols.

(a) If the uncertainty of estimated value is less than or equal to 20% of the mean change value then the project owner may use the estimated value without any deduction for uncertainty, i.e. UD = 0.

(b) If the uncertainty is greater than 20% of the mean value, then the project owner shall either increase the sampling effort to achieve this target or the project owner shall use the estimated value subject to an Uncertainty Deduction (UD) in table 1 below (see approach 3).

Calculate Uncertainty $U = E(\text{error}) / \text{Estimated mean}$

Approach 3

(a) Project owners may use published default factors such as IPCCs. However, as IPCC default factors are often available on tier 1 level only and are thus too generic for project level with high resulting errors for an individual site (or product), Gold Standard provides a discounting approach for those default factors which do not meet the Gold Standard uncertainty threshold of $\pm 20\%$ at a 90% confidence interval.

(b) If the uncertainty is less than or equal to 20% of the mean change value then the project owner may use the estimated value without any deduction for uncertainty, i.e. $UD = 0$. If the uncertainty is greater than 20% of the mean value, then the project owner shall use the estimated value subject to an Uncertainty Deduction (UD) in Table as followed:

Uncertainty [U]	Uncertainty Deduction [UD] (% of U)
$20 < U \leq 30\%$	50%
$30 < U \leq 40\%$	75%
$40 < U \leq 50\%$	100%

Data management

All data collected as part of monitoring is archived electronically. All information should be stored by the technology department of the project proponent and all the material has a physical copy for backup. And all data collected shall be archived for a period of at least two years after the end of the last crediting period of the project activity.

Responsibilities and institutional arrangements

Responsibilities

Implementation and Supervision of the Project: Oversee the implementation of the afforestation plan by Supervision organization, including seedling planting, watering, and maintenance activities. Regularly monitor and evaluate the progress of the project to ensure it meets established targets.

Community Engagement and Education: Engage local communities in the afforestation process, promoting awareness and understanding of the importance of environmental

protection and sustainable forestry practices. Provide training and education to enhance their capacity in forest management and conservation.

Monitoring and Evaluation: Establish systems to monitor the growth and health of the planted trees, as well as the overall impact of the afforestation project on the environment. Conduct regular evaluations to assess the effectiveness of the project and identify areas for improvement.

Institutional Arrangements:

Project Management Teams: Formulate project management teams responsible for overseeing the implementation of afforestation projects as described above. These teams should include experts in forestry, ecology, and related fields to ensure technical expertise and guidance.

Collaborative Arrangements: Foster collaboration between local forestry department, Shanghai Roots & Shoots, local communities, and private sector entities to share resources, expertise, and responsibilities in afforestation projects.

Funding Mechanisms: Establish funding mechanisms to support the project, including grants, loans, and public-private partnerships. Ensure transparent and accountable use of funds to build trust and sustainability.

Monitoring and Evaluation Mechanisms: Develop systems to monitor and evaluate the progress and outcomes of the projects. This includes collecting data, analyzing results, and reporting on the performance of the project to stakeholders.

In conclusion, afforestation projects involve a range of responsibilities and institutional arrangements that require coordination and collaboration among different stakeholders. By establishing clear responsibilities, policies, and frameworks, and fostering effective collaboration, it is possible to achieve successful and sustainable afforestation outcomes.

SECTION C. DURATION AND CREDITING PERIOD

C.1. Duration of project

C.1.1 Start date of project

>>

11/04/2014 (planting start date)

According to the cooperative afforestation agreement provided, the project will start afforestation in 11/04/2014.

C.1.2 Expected operational lifetime of project

>>

30 years.

C.2. Crediting period of project

C.2.1 Start date of crediting period

>>

11/04/2014

C.2.2 Total length of crediting period

>>

30 years.

SECTION D. SUMMARY OF SAFEGUARDING PRINCIPLES AND GENDER SENSITIVE ASSESSMENT

D.1 Safeguarding Principles that will be monitored

A completed Safeguarding Principles Assessment is in [Appendix 1](#), ongoing monitoring is summarised below.

Principles	Mitigation Measures added to the Monitoring Plan
Principle 7.1	Refer to B.7.1 SDG13
Principle 9.2	<p>Refer to Area of fire, diseases and pests in section B.7.1 of Safeguarding Principles 9.2</p> <p>The emergency preparedness and response planning would be made as followed:</p> <p>Technical and awareness training would be implemented to local farmers/communities, and strengthening patrolling and monitoring.</p> <p>According to the Forest Conservation Act of China, local government has set the fireproofing period when using fire is forbidden in the open air; and once a fire disaster occurs, the local government should be responsible for relevant rescuing immediately.</p>

After implementation of the project, forest rangers have been hired from local residents who were responsible for daily patrolling and monitoring.

Principle 9.6

Refer to Pesticide and Fertilizer consumption in section B.7.1 of **Safeguarding Principles 9.6**

Unless there is a serious pest problem, the farmers are not allowed to apply pesticides. Shanghai Roots & Shoots and Climate Bridge (Shanghai) Ltd. provides guidelines for pesticide use. During this monitoring period, no chemical pesticides and fertilizer were used.

Principle 9.10

Refer to B.7.1 SDG 15 Trends in species diversity
Mr. Zhang Tonghui, deputy chief of Naiman Research Station of Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences was consulted as the Expert Stakeholder, who is experienced in High Conservation Value Areas and Critical Habitats of the project.

Before the implementation of the project, the project area was sandy land with almost no animals and plants, belonging to endangered ecosystems (HCV 3) as per HCV approach. All the project area was planted with poplar and pinus sylvestris and 100% of the planting area has been managed to enhance the bio-diversity of the native eco-systems. Except for planting trees, bushes and other vegetation are also introduced to reclaim the desertified land. In addition, fences were built around the project area to keep out grazing animals, and special villagers were assigned to manage forests and prevent logging.

D.2. Assessment that project complies with GS4GG Gender Sensitive requirements

Question 1 - Explain how the project reflects the key issues and requirements of Gender Sensitive design and implementation as outlined in the Gender Policy?

The project is a afforestation project, and it does not discriminate among gender. First, the project design ensures that women are actively involved in all stages of the project, from planning to implementation and evaluation. This includes establishing mechanisms for women's participation in decision-making processes and ensuring their voices are heard and considered.

Second, the project provides equal employment opportunities for local women. It provides targeted support and resources to women, such as training and capacity-building opportunities, to enhance their skills and knowledge. Third, for the stakeholder interviews in previous monitoring periods and verifications, both men and women were involved as well.

Question 2 - Explain how the project aligns with existing country policies, strategies and best practices

The project is aligned with the labor policies which does not discriminate on gender. The project also abides the rules of gender equality accordingly and does not involve any form of discrimination. Regarding the gender equality, detailed enforcement rules are regulated in 'Law of the People's Republic of China on the Protection of Women's Rights' and in case of lawsuit occurrence, legal aid could be provided as per this law.

Question 3 - Is an Expert required for the Gender Safeguarding Principles & Requirements? No. The project is a afforestation project, and it does not discriminate among gender.

Question 4 - Is an Expert required to assist with Gender issues at the Stakeholder Consultation? No. According to the Artical 12 and 13 of Labor Law of the People's Republic of China, it is required to ensure the equal employment rights of women with the non-discrimination. Therefore, it does not discriminate among gender.

SECTION E. SUMMARY OF LOCAL STAKEHOLDER CONSULTATION

The below is a summary of the 2 step GS4GG Consultation for monitoring purposes. Please refer to the separate Stakeholder Consultation Report for a complete report on the initial consultation and stakeholder feedback round.

E.1 Summary of stakeholder mitigation measures

>>

Local villagers directly impacted by the project were invited through their most convenient way: the routine villager assembly. All of the villagers were invited to attend the physical LSC meeting in the assembly. Local policy makers and forest experts from local Forestry Bureau were also invited by phone calls.

Since no significant issue had been identified during the local stakeholder consultation meeting on 12th December, 2015 with 7 of them were females. The stakeholders were more concerned about the environmental impact than social and economic impact, and they thought the project could benefit the local environment by improving the soil condition, air quality and ecosystem, and they were willing to participate in monitoring of the SD indicators.

E.2 Final continuous input / grievance mechanism

Horqin Left Rear Banner and Climate Bridge held a physical meeting in Nugusitaigacha on December 12, 2015, to publicize the new project design and solicit the opinions of the stakeholders. All the stakeholders agreed to implement the project, and hope to

join the Afforestation Project in Tongliao, Inner Mongolia (GS3031) as a new area. And they hope to obtain carbon revenue for the management and protection of the project area.

From 2016 to 2019, the staff from Shanghai Roots & Shoots and Climate Bridge (Shanghai) Ltd. monitored the project every year, including project area coverage, tree preservation rate, tree height and diameter at breast height, and biodiversity. At the same time, the staff learned about the opinions of local residents on the project through questionnaire surveys and face-to-face communication. Due to the COVID-19 outbreak, the staff monitored the carbon sink of the project at the end of 2020. In addition, the staff communicated with the village leaders about the opinions of local farmers on the project. In general, from August 2014 when LSC was published to December 2020 when the project staff conducted project monitoring in first certification period, no comments were received.

A stakeholder questionnaire surveys was held by project owner on 19/07/2023 in the 2th monitoring period in order to discuss the potential options with stakeholders. Based on the requirements from all stakeholders, the project owner agreed to continue to use Continuous Input and Grievance Expression Process Book. All stakeholders can raise any suggestion about negative impacts of the project operation from the contacts (Mr. Guo Yan, Tel: +86 186 4753 6135) at any time. When the contact person on the manual book receives feedback from local stakeholders, they will record the date of the stakeholders' appeal, the main issues of the appeal, and then report to the monitoring staff will report the inputs/grievances to general manager who is responsible to solve problem and improve situation. Within 7 days, they will provide the stakeholders with a response and solution.

METHOD	INCLUDE ALL DETAILS OF CHOSEN METHOD (S) SO THAT THEY MAY BE UNDERSTOOD AND, WHERE RELEVANT, USED BY READERS.
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Continuous Input / Grievance Expression Process Book (mandatory)	<p>The Continuous Input and Grievance Expression Process Book has been published on the notice board of the local village. Stakeholders can write their comments or suggestions in the book anytime.</p> <p>As most of the local residents are ethnically Mongolian, the book has been translated into Mongolian language for the convenience of locals.</p> <p>The project owner will check the book regularly and collect all the comments received.</p>
GS Contact (mandatory)	help@goldstandard.org
Other	/

APPENDIX 1 - SAFEGUARDING PRINCIPLES ASSESSMENT

Complete the Assessment below and copy all Mitigation Measures for each Principle into [SECTION D](#) above. Please refer to the instructions in the [Guide to Completing](#) this Form.

SOCIAL SAFEGUARDING PRINCIPLES		
Reference requirement	Question	Response
P.1 Human Rights		
P.1.1.1 	Does the project developer, its representatives and the Project disrespect internationally proclaimed human rights?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.1.1.1 	Is the project involved or complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.1.1.2 	Have local communities or individuals raised human rights concerns regarding the project (e.g., during the stakeholder engagement process, grievance processes, public statements)?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.1.1.3 	Is there a risk that rights-holders (e.g., Project-affected stakeholders) do not have the capacity to claim their rights?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.1.1.3 	Does this project undermine national or regional measures for the realisation of the right to development?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
If the answer to any of the questions above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.		
Not applicable		
Would the project potentially involve or lead to:		
P.1.1.1 	adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalised groups?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> POTENTIALLY <input type="checkbox"/> NO
P.1.1.2 	inequitable or discriminatory impacts on affected populations, particularly people living in poverty or marginalised or excluded individuals or groups, including persons with disabilities?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.1.1.3 	restrictions in availability, quality of and/or access to resources or basic services, in particular to marginalised individuals or groups, including persons with disabilities?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.1.1.3 	exacerbation of conflicts among and/or the risk of violence to project-affected communities and individuals?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> POTENTIALLY

	<input type="checkbox"/> NO
--	-----------------------------

Briefly describe below how the project incorporates a human rights-based approach.

For example, by describing how the project design:

- is informed by human rights analysis, including from UN human rights mechanisms (human rights treaty bodies, universal periodic review, special procedures)
- includes measures to assist the government to realise (respect, protect and fulfil) human rights under international law and to implement human rights-related standards in national law (whichever is higher)
- enhances the availability, accessibility and quality of benefits and services for potentially marginalised individuals and groups, and to increase their inclusion in decision-making processes that may impact them (consistent with the non-discrimination and equality human rights principle)
- provides reasonable accommodations to strengthen inclusivity and accessibility of project benefits and services to persons with disabilities.

Please add text here...

The project complies with Chinese Labour Law and relevant regulations while China has ratified two core UN human rights treaties, including the UN International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Economic, Social and Cultural Rights (ICESCR) .

On August 28, 2005, the Standing Committee of the National People's Congress approved China's accession to International Labour Convention No. 111, the Convention against Discrimination in Employment and Occupation. According to the Artical 12,13 and 14 of Labor Law of the People's Republic of China¹⁴, it is required to ensure the equal employment rights of women, people with disabilities, and others with the non-discrimination and equality human rights principle.

The project design begins with the integration of human rights principles, such as the right to a healthy environment, the right to sustainable development, and the right to participate in decision-making processes that affect one's life. The project design also emphasizes community engagement and participation. This involves consulting with local communities, understanding their needs and concerns, and incorporating their perspectives into the project design. For the disabilities who are not convenient to attend the meeting, the investigators adopted a household survey method to understand their opinions. This ensures that the project is responsive to human rights considerations and supports the empowerment and well-being of affected communities. By integrating human rights analysis and insights from UN human rights mechanisms into the project design, the afforestation project is able to achieve its environmental goals while respecting and promoting human rights principles. This approach ensures that the project is sustainable, inclusive, and beneficial for all stakeholders involved.

P.2 | GENDER EQUALITY AND WOMEN'S EMPOWERMENT

P.2.1.1 	Have women's groups/leaders raised gender equality concerns regarding the project, (e.g., during the	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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¹⁴ https://www.mohrss.gov.cn/xxgk2020/fdzdgknr/zcfg/fl/202011/t20201102_394625.html

	stakeholder engagement process, grievance processes, public statements)?	
P.2.1.2 	Does the project undermine the principles of non-discrimination, equal treatment, and equal pay for equal work?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.2.1.2 	Does the project prevent men and women from having equal opportunities to participate in identified tasks and activities, whether through paid work, volunteer work, or community contributions, as appropriate?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.2.1.2 	Does the project limit the participation of women or men based on pregnancy, maternity/paternity leave, or marital status?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.2.1.2 	Is information about project objectives being communicated in a way that is inappropriate for the local context and not tailored to the methods of understanding of both women and men, which could hinder their participation?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.2.1.3 	Has the project assessed gender risks without referencing the country's gender strategy or equivalent national commitment?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.2.1.4 	Has expert stakeholder(s) been involved, and has their input been requested for the project design on gender equality and women's empowerment?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

If the answer to any of the questions above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

Not applicable

Would the project potentially involve or lead to:

P.2.1.1 	adverse impacts on gender equality and/or the situation of women and girls?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.2.1.1 	exacerbation of risks of gender-based violence? For example, through the influx of workers to a community, changes in community and household power dynamics, increased exposure to unsafe public places and/or transport, etc.	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.2.1.2 	reproducing discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.2.1.2 	limitations on women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well-being.	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO

Briefly describe below how the project is addressing any identified risk to gender equality and women’s empowerment.

The project is addressing identified risks to gender equality and women's empowerment through a multifaceted approach.
First, it ensures that women are actively involved in all stages of the project, from planning to implementation and evaluation. This includes establishing mechanisms for women's participation in decision-making processes and ensuring their voices are heard and considered.
Second, the project provides equal employment opportunities for local women. It provides targeted support and resources to women, such as training and capacity-building opportunities, to enhance their skills and knowledge.

By taking these measures, the project aims to create an inclusive and enabling environment that promotes gender equality and women's empowerment, ensuring that women are not only beneficiaries of the project but also active contributors to its success.

P.3 | COMMUNITY HEALTH AND SAFETY

P.3.1.1 	Does the project involve potential risks to the health and safety of affected communities during its life cycle?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.3.1.2 	Does the project involve any potential risks to the workers' safety and health?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

If the answer to any of the questions above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

The owners of the trees do all the work themselves instead of hiring workers. The project has referenced Safety and Healthy in Forestry Work published by ILO and adapted it to meet the local conditions to ensure workers’ health and safety. The project participations has provided a first aid kit for workers.

Would the project potentially involve or lead to:

P.3.1.1 	construction and/or infrastructure development (e.g., roads, buildings, dams)?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
P.3.1.2 	air pollution, noise, vibration, traffic, injuries, physical hazards, poor surface water quality due to runoff, erosion, sanitation?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.3.1.2 	harm or losses due to failure of structural elements of the project (e.g., collapse of buildings or infrastructure)?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.3.1.2 	risks of water-borne or other vector-borne diseases (e.g., temporary breeding habitats), communicable and noncommunicable diseases, nutritional disorders, mental health?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.3.1.2 	transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g., explosives, fuel and other chemicals during construction and operation)?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.3.1.2 	adverse impacts on ecosystems and ecosystem services relevant to communities’ health (e.g., food, surface water purification, natural buffers from flooding)?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY

		<input checked="" type="checkbox"/> NO
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Briefly describe below how the project is addressing any identified risk related to community health and safety.

Improving Air Quality: Trees absorb carbon dioxide and release oxygen, thereby improving air quality. The afforestation project aims to increase the number of trees, which in turn will reduce air pollution and mitigate the risks of respiratory diseases in the community.

Water Purification: Forests help filter and purify water sources, ensuring that communities have access to clean drinking water. The afforestation project will enhance this process, minimizing the risk of water-related diseases.

Natural Hazard Mitigation: Trees and forests can act as natural barriers against natural hazards like floods, windstorms, and soil erosion. By planting trees in strategic locations, the project aims to reduce the impact of these hazards on the community, protecting their lives and property.

Community Engagement and Education: The project involves the community in its planning and implementation, ensuring that local knowledge and concerns are taken into account. Educational programs are also conducted to raise awareness about the importance of forests for community health and safety, encouraging community members to participate in tree planting and conservation activities.

By addressing these risks, the afforestation project not only enhances the environmental quality but also contributes significantly to the overall health and safety of the community.

P.4 | CULTURAL HERITAGE, INDIGENOUS PEOPLE, DISPLACEMENT AND RESETTLEMENT

P.4.1 | Sites of Cultural and Historical Heritage

<u>P.4.1.1 </u>	Does the project involve altering, damaging, or removing sites, objects, or structures of significant cultural heritage?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

Mr. Chen Hui, the chief of Horqin Left Rear Banner Forestry and Grassland Bureau, was consulted as Expert Stakeholder, who is familiar with the local cultural and historical situation.

The project planted trees in hilly and sandy areas of Zhaogensumogacha and Nugsitaigacha, Horqin Left Rear Banner of Tongliao City. The sites do not include cultural and historical heritage.

Would the project potentially involve or lead to:

<u>P.4.1.1 </u>	activities adjacent to or within a cultural heritage site?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
<u>P.4.1.1 </u>	significant excavations, demolitions, movement of earth, flooding or other environmental changes?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
<u>P.4.1.1 </u>	alterations to landscapes and natural features with cultural significance?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
<u>P.4.1.1 </u>	adverse impacts to sites, structures, or objects with historical, cultural, artistic, traditional or religious values or	<input type="checkbox"/> YES

	intangible forms of culture (e.g., knowledge, innovations, practices)? (Note: projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	<input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.4.1.2 	utilisation of tangible and/or intangible forms (e.g., practices, traditional knowledge) of Cultural Heritage for commercial or other purposes?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.4.1.2 	If answer to question above is "YES" or "POTENTIALLY" - are the communities made aware of their right under the law, scope and nature of proposed development and its potential consequences?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.4.1.3 	If answer to question above is "YES" - does the project provide equitable sharing of benefits from commercialisation of such knowledge, innovation, or practice, consistent with their customs and traditions?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.4.1.4 	If answer to question above is "YES" - are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.4.1.4 	If answer to question above is "YES", has project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Mr. Chen Hui, the chief of Horqin Left Rear Banner Forestry and Grassland Bureau, was consulted as Expert Stakeholder, who is familiar with the local cultural and historical situation.
The project planted trees in hilly and sandy areas of Zhaogensumogacha and Nugsitaigacha, Horqin Left Rear Banner of Tongliao City. The sites do not include cultural and historical heritage.

[P.4.2 | Forced Eviction and Displacement](#)

P.4.2.1 	Does the project involve any risks related to involuntary relocation of people?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

Mr. Chen Hui, the chief of Horqin Left Rear Banner Forestry and Grassland Bureau, was consulted as Expert Stakeholder, who is familiar with the project implementation situation.
The project was afforestation in the sandy land of Zhaogensumogacha and Nugsitaigacha, with no residents.

Would the project potentially involve or lead to:

P.4.2.1 	risk of forced evictions or involuntary relocation of people?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
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P.4.2.2 	temporary or permanent and full or partial physical displacement (including people without legally recognisable claims to land)?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.4.2.2 	economic displacement (e.g., loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.4.2.2 	If answer to question above is “YES” or “POTENTIALLY”, <ul style="list-style-type: none"> - has the project developed Resettlement Action Plan or Livelihood Action Plan in consultation and agreement with affected individual, group or community? - has the project integrated Resettlement Action Plan or Livelihood Action Plan into the Project design? 	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.4.2.3 	If answer to question above is “YES” - are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.4.2.3 	If answer to question above is “YES”, have project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Mr. Chen Hui, the chief of Horqin Left Rear Banner Forestry and Grassland Bureau, was consulted as Expert Stakeholder, who is familiar with the project implementation situation. The project was afforestation in the sandy land of Zhaogensumogacha and Nugustaigacha, with no residents.

P.4.3 | LAND TENURE AND OTHER RIGHTS

P.4.3.1 	Does the project involve any risks related to identifying and managing legitimate tenure rights that may be affected by the project?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

Mr. Chen Hui, the chief of Horqin Left Rear Banner Forestry and Grassland Bureau, was consulted as Expert Stakeholder, who is familiar with the local cultural and historical situation.

a. The project is not involved any change to land tenure arrangements.

b. The project is not involved any uncertainties with regards land tenure, access rights, usage rights or land ownership

Would the project potentially involve or lead to:

P.4.3.1 	impacts on or changes to land tenure arrangements and/or community-based property rights/customary rights to land, territories and/or resources?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.4.3.1 		<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY

	tainties with regards to land tenure, access rights, usage rights or land ownership? Examples include, but are not limited to water access rights, community-based property rights and customary rights.	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> NA
P.4.3.2 	Changes in legal arrangements, if yes, are the changes done in line with relevant laws and regulations?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.4.3.2 	Changes in legal arrangements, if yes, are these changes agree with free, prior and informed consent of the involved stakeholders?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.4.3.3 	Does some other entity (other than the project developer) hold uncontested land title for the entire Project Boundary	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA
P.4.3.4 	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA
P.4.3.4 	If answer to question above is "YES", have project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.4.3.5 	Have project developer in consultation with stakeholders established a functioning mechanism to receive, process, resolve, communicate and record grievances?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

The project land belongs to the village collectives, of which the initial project land planted in 2014 belongs to Zhaogensumogacha, and the new project land planted in 2016 belongs to Nugsitaigacha. The villagers from Zhaogensumogacha and Nugsitaigacha have been planting trees themselves.

[P.4.4 | INDIGENOUS PEOPLES](#)

P.4.4.1 	Does the project involve Indigenous People within the Project area of influence who may be affected directly or indirectly by the Project?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Mr. Chen Hui, the chief of Horqin Left Rear Banner Forestry and Grassland Bureau, was consulted as Expert Stakeholder, who is familiar with the project implementation situation. The project land belongs to the village collectives, of which the initial project land planted in 2014 belongs to Zhaogensumogacha, and the new project land planted in 2016 belongs to Nugsitaigacha. The villagers from Zhaogensumogacha and Nugsitaigacha have been planting trees themselves. No extra workers are hired for tree planting or maintenance

Would the project potentially involve or lead to:

<p>P.4.4.1 </p>	<p>affect areas where indigenous peoples are present (including project area of influence)</p>	<p><input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO</p>
<p>P.4.4.1 </p>	<p>affect areas, land and territory claimed by indigenous peoples?</p>	<p><input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO</p>
<p>P.4.4.1 </p>	<p>impacts (positive or negative) to the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples?</p>	<p><input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO</p>
<p>P.4.4.7 </p>	<p>If answer to above questions is "YES" or "POTENTIALLY",</p> <ul style="list-style-type: none"> - Is it determined that the proposed project may affect the rights, lands, resources, or territories of indigenous people? - Has an "Indigenous People Plan" (IPP) or "Indigenous People Plan Framework" been elaborated and included in the project documentation? - Was the plan developed in accordance with the effective and meaningful participation of indigenous peoples and in accordance with UNDP Guidelines? 	<p><input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA</p>
<p>P.4.4.3 </p>	<p>risk of forcibly removing indigenous people from their lands and territories?</p>	<p><input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO</p>
<p>P.4.4.4 </p>	<p>utilisation and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?</p> <p>Consider, and where appropriate ensure, consistency with the answers under Principle 4.1 above</p>	<p><input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO</p>
<p>P.4.4.5 P.4.4.6 </p>	<p>If answer to question above is "YES" or "POTENTIALLY"</p> <ul style="list-style-type: none"> - Did the project obtain free, prior and informed consent from indigenous people before taking their cultural, intellectual, religious, and/or spiritual property? - Does the project ensure that the indigenous people receive an equitable sharing of benefits resulting from the use of their traditional knowledge and practices? ? - Does the project ensure that the sharing of benefits resulting from the use of indigenous peoples' traditional knowledge and practices is culturally appropriate and inclusive? 	<p><input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA</p>

	- Does the project ensure that the provision of equitable sharing of benefits does not impede land rights or equal access to basic services including health services, clean water, energy, education, safe and decent working conditions, and housing?	
P.4.4.8 	Does the project lack appropriate feedback and grievance channels for Indigenous Peoples and their representatives?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.4.4.8 	Has a grievance mechanism not been established at the beginning of programme or project implementation with due consideration given to customary dispute settlement mechanisms among the Indigenous Peoples concerned and will it remain operational throughout the project cycle?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.4.4.9 	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.4.4.9 	If answer to question above is "YES", have project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Mr. Chen Hui, the chief of Horqin Left Rear Banner Forestry and Grassland Bureau, was consulted as Expert Stakeholder, who is familiar with the project implementation situation. The project was afforestation in the sandy land of Zhaogensumogacha and Nugustaigacha, with no residents.

P.5 | CORRUPTION

P.5.1.1 	Does the project involve, or is it complicit in, contributing to or reinforcing corruption or corrupt projects?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.5.1.1 	Does the project have a risk of encouraging bribery, kickbacks, or other unethical behavior?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

The project does not involve and is not complicit in corruption. The project complies with Chinese Labour Law and relevant regulations, does not condone or support corruption.

ECONOMIC SAFEGUARDING PRINCIPLES

P.6 | ECONOMIC IMPACTS

P.6.1 | LABOUR RIGHTS AND WORKING CONDITIONS

P.6.1.1 	Does the project involve, facilitate, or condone forced labor, or pose a potential risk of forced labor?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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P.6.1.1 	Does the project violate any labor or health and safety laws, international obligations, or ILO conventions?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.2 	Does the project violate the principles of equal opportunity and fair treatment in its employment decisions?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.3 	Does the project violate national laws, if available regarding non-discrimination in employment?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.4 P.6.1.5 	Does the project allow child labor?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.7 P.6.1.8 	Does the project have insufficient processes and measures in place to ensure the safety and health of project workers?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.9 	Does the project have insufficient measures to safeguard and support vulnerable project workers, such as women, people with disabilities, migrant workers, and young workers, and to prevent any kind of harassment, abuse, bullying, or exploitation, including gender-based violence (GBV)?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.10 	Does the project have no grievance mechanism available for workers to voice workplace concerns? Is information about this mechanism not provided to workers at the time of recruitment, or is it not easily accessible?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Mr. Chen Hui, the chief of Horqin Left Rear Banner Forestry and Grassland Bureau, was consulted as Expert Stakeholder, who is familiar with the labour rights of the project.

a. All employees are engaged in the project implementation on a voluntary basis. The project fully respects the employee's rights in accordance with all labour related laws.

b. The project activity does not interfere with legal rights regarding employees' freedom of association or their right to collective bargaining.

The project fully respects the employee's freedom and rights.

c. The afforestation companies have signed an Agreement with all individual workers and the village committee. The committees represents all local people's rights, making sure they are satisfied with the working agreement. It is also agreed by both parties that all practices related to the project shall follow the laws and regulations.

In this monitoring time, 11 of villagers has been employed as forest ranges with an salary of 67.5 RMB/ha/year, who are on the duty of the daily forest management.

Would the project potentially involve or lead to:

(NOTE: APPLIES TO BOTH PROJECT AND CONTRACTOR WORKERS)

P.6.1.1 	use of forced labour?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.1.1 	working conditions that do not meet national labour laws and international commitments?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO

P.6.1.1 	working conditions that may deny freedom of association and collective bargaining?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.1.1 	absence of documented working agreements with all individual workers <i>if such agreements do not exist, or do not address working conditions and terms of employment, the project developer shall provide reasonable working conditions and terms of employment.</i>	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.1.1 	use of migrant workers? <i>if engaged, the developer shall ensure that they are engaged substantially equivalent terms and conditions to non-migrant workers carrying out similar work.</i>	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.1.1 	having no arrangements for basic services ¹⁵ for workers? <i>the project developer shall put in place and implement policies on the quality and management of the accommodation and provision of basic services in a manner consistent with the principles of non-discrimination and equal opportunity. Workers' accommodation arrangements should not restrict workers' freedom of movement or of association</i>	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.1.2 	any form of discrimination or harassment based on factors unrelated to job requirements, such as gender, race, nationality, ethnicity, social or indigenous origin, religion or belief, disability, age, or sexual orientation?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.1.2 	any form of discrimination in any aspect of employment, such as recruitment, compensation, working conditions, training, job assignment, promotion, termination, or discipline?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.1.2 	harassment, intimidation, and/or exploitation, especially in regard to women?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.1.3 	discriminatory working conditions and/or lack of equal opportunity where national law provides provision to address non-discrimination in employment?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.1.4 	use of child labour? (including third-party engaged workers)	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY

¹⁵ Basic services requirements refer to minimum space, supply of water, adequate sewage and garbage disposal system, appropriate protection against heat, cold, damp, noise, fire, and disease-carrying animals, adequate sanitary and washing facilities, ventilation, cooking and storage facilities and natural and artificial lighting, and in some cases basic medical services.

		<input checked="" type="checkbox"/> NO
P.6.1.4 	inadequate and verifiable mechanisms for age verification?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.7 	no processes and measures in place for the safety and health of project workers?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.7 	No provision of safety and health training provisions, including on the proper use and maintenance of personal protective equipment conducted by competent persons and the maintenance of training records?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.7 	No provision to record and document accidents, diseases, incidents, and any resulting injuries, illnesses, or deaths?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.8 	occupational health and safety risks due to physical, chemical, biological and psychosocial hazards (including violence and harassment) throughout the project life-cycle?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.9 	No measures to protect vulnerable project workers from harassment, exploitation, and gender-based violence (GBV)? This includes women, people with disabilities, migrant workers, and young workers.	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.10 	No grievance mechanism available for workers to voice workplace concerns.	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.11 	No measures for due diligence and the establishment of policies and procedures to manage and monitor the performance of third-party employees in the project?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

The owner of the trees do all the work themselves instead of hiring workers. Shanghai Roots & Shoots and Climate Bridge (Shanghai) Ltd. has referenced from Safety and Healthy in Forestry Work published by ILO and adopted it into local conditions as the Health & Safety Policy. The workers health and safety policy, including items covering safe transport, is made available for and implemented by the village committee. The village head is appointed as the one to have overall responsibility. The workers health and safety policy, including measures for workers to stay in camps for a longer period of time, is made available for and implemented by the village committee to ensure that conditions for accommodation and nutrition in-take comply at least with those specified in the ILO Code of Practice on Safety & Health in Forestry. The main work of the villagers involved in the project is replanting the trees and patrolling. These activities in this MP did not involve any dangerous operations and didn't need the protective equipment.

[P.6.2 | NEGATIVE ECONOMIC CONSEQUENCES](#)

P.6.2.1 	Is there a risk of project failure during implementation or after project certification due to a lack of financial resources?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.2.2 	Does the project have potential negative impacts or pose a risk to the local economy?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

P.6.2.2	Are there any potential risks or negative impacts this project may have on vulnerable or marginalised social groups, despite the benefits it may bring?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Project developers has demonstrated financial sustainability in afforestation design. There was a stakeholder consultation carried out regarding the project (Stakeholder Consultation Report). Local people were actively involved in expressing their opinions and comments. Therefore, the consultation meeting helps to incorporate local opinions in the development of the project. And the project will provide direct and indirect employment opportunities, which will lead to economic well-being of local residents.

Would the project involve or lead to:

P.6.2.2	economic impacts (negative/detrimental) to the local economy?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.2.2	negative economic consequences during and after project implementation, e.g., for vulnerable and marginalised social groups in targeted communities?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

There was a stakeholder consultation carried out regarding the project (Stakeholder Consultation Report). Local people were actively involved in expressing their opinions and comments. Therefore, the consultation meeting helps to incorporate local opinions in the development of the project. And the project will provide direct and indirect employment opportunities, which will lead to economic well-being of local residents.

P.7 | CLIMATE AND ENERGY

P.7.1 | GHG EMISSIONS

P.7.1.1	Does the project have a risk of increasing greenhouse gas emissions over the Baseline Scenario?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

The project planted 1,370.96 hectares of native trees (Pinus sylvestris and poplar), and will helps to remove greenhouse gas (GHG) emissions by an estimated 449,706 tCO_{2e} during the crediting period.

Would the project involve or lead to:

P.7.1.1	increase greenhouse gas emissions over the Baseline Scenario?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
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If the answer is "yes" or "potentially" to the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

The project planted 1,370.96 hectares of native trees (Pinus sylvestris and poplar), and will help to remove greenhouse gas (GHG) emissions by an estimated 449,706 tCO_{2e} during the crediting period.

P.7.2 | ENERGY SUPPLY

P.7.2.1 	Does the project pose a risk to the availability and reliability of energy supply to other users?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

This is afforestation project, will not affect the availability and reliability of energy supply to other users.

Would the project involve or lead to:

P.7.2.1 	negative impact on the availability and reliability of energy supply to other users?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
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If the answer is "yes" or "potentially" to the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

This is afforestation project, will not affect the availability and reliability of energy supply to other users.

P.8 | WATER

P.8.1 | IMPACT ON NATURAL WATER PATTERNS/FLOWS

P.8.1.1 	Does the project increase water usage to a level that will not allow for the maintenance of environmental flows?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.8.1.1 	Does the project result in the discharge of wastewater that does not meet the required standard for beneficial reuse and could therefore negatively impact the environmental flow?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.8.1.1 	Does the project have the potential risk to exceed the rate of recharge for the groundwater source?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.8.1.1 	Does the project involve any processes or activities that could contaminate the groundwater and render it unsuitable for use?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

There is a small lake in the southeast of the new added area with a buffer zone of about 95 meters. Native tree species such as Pinus sylvestris are planted in the buffer zone.



Would the project involve or lead to:

P.8.1.1 	affect the natural or pre-existing pattern of watercourses, groundwater and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.8.1.1 	Wastewater discharge of quality that does not meet the required standard for beneficial reuse?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.8.1.1 	significant extraction, diversion of ground water? For example, construction of dams, reservoirs, river basin developments, groundwater extraction	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.8.1.2 	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

No fertilizer that will negatively affect the groundwater was used during tree planting. Groundwater resources are plentiful around the project area which will remain sufficient during the whole project period. During this monitoring period, the groundwater in and around the planting area was not negatively affected by the project.

[P.8.2 | EROSION AND/OR WATER BODY INSTABILITY](#)

P.8.2.1 	Does the project have a risk of negatively impacting the catchment and has it been assessed and addressed?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Mr. Zhang Tonghui, deputy chief of Naiman Research Station of Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences was consulted as the Expert Stakeholder, who is experienced in scientific research on local environment. The project will reduce soil erosion and conserve water.

Would the project involve or lead to:

P.8.2.2	negatively impact on the catchment area?	
P.8.2.5	<i>If yes, Erosion prevention measures, including soil and slope protection measures, must be implemented before project commencement. These measures should involve natural terracing, infiltration strips, permanent ground cover, hedge and tree rows, and effective slope length assessment. Regular reassessment of these measures is necessary.</i>	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.8.2.6	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Mr. Zhang Tonghui, deputy chief of Naiman Research Station of Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences was consulted as the Expert Stakeholder, who is experienced in scientific research on local environment.
The project will reduce soil erosion and conserve water.

P.9 | ENVIRONMENT, ECOLOGY AND LAND USE

P.9.1 | LANDSCAPE MODIFICATION AND SOIL

P.9.1.1	Is there any risk of soil resource degradation or loss of ecosystem services provided by soils in the project?	
P.9.1.3	<i>If yes, the project shall maintain healthy soils by minimising negative impacts on soil health, productivity, structure, and water retention. Steps to minimise soil degradation include crop rotation, composting, using N-fixing plants, and reducing tillage and ecologically harmful substances.</i>	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

The common-seen flora, fauna and other vegetations are mentioned in books such as Desertification and Ecological Restoration of Horqin Sandy Land by Jiang Deming etc. To protect the relevant biota, the soil will be refilled after planting to recover the soil structure. No further human interference will be allowed inside the proejct area.

Would the project involve or lead to:

P.9.1.4	production, harvesting, and/or management of living natural resources by small-scale landholders and/or local communities?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.9.1.4	if answer to above question "yes" or "potentially", does project adopt appropriate and culturally sensitive sustainable resource management practices?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

The project planted trees on sandy land, does not involve the use of land and soil for production of crops or other products.

P.9.2 | VULNERABILITY TO NATURAL DISASTER

P.9.2.1	Does the project have any risks associated with natural or man-made hazards that could result from land use changes due to the project?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Not applicable

Would the project involve or lead to:

P.9.2.2	any potential risks that require emergency preparedness and response planning?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> POTENTIALLY <input type="checkbox"/> NO
P.9.2.2	if answer to above question "yes" or "potentially", did the project developer disclose appropriate information about emergency preparedness and response to affected communities?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

The emergency preparedness and response planning would be made as followed: Technical and awareness training would be implemented to local farmers/communities, and strengthening patrolling and monitoring. Some of trainings about responsibilities of daily work have been provided for the forest rangers in this monitoring period. The frequency of the training is about 1-2 times every year. The special training records has been provided as evidence. According to the Forest Conservation Act of China, local government has set the fireproofing period (Every year from March 15th to June 15th, and from September 15th to November 15th) when using fire is forbidden in the open air; and once a fire disaster occurs, the local government should be responsible for relevant rescuing immediately. After implementation of the project, forest rangers have been hired from local residents who were responsible for daily patrolling and monitoring. As the "A.2 GS LUF Risks and Capacities assessment" assessed, the actual risk of fire is low. In this monitoring time, there are no fire happened on the project area.

P.9.3 | BIOSAFETY AND GENETIC RESOURCES

P.9.3.1 	Does the project involve the transfer, handling, and use of genetically modified organisms/living modified organisms that may result in adverse effects on biological diversity?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

The tree species planted in the project are local poplars and pines, not genetically modified organisms.

Would the project involve or lead to:

P.9.3.1 	the transfer, handling and use of genetically modified organisms/living modified organisms (GMOs/LMOs) that result from modern biotechnology	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.9.3.1 	If answer to above question is "yes" has a risk assessment by a competent Expert stakeholder been carried out in accordance with Annex iii of the Cartagena protocol on biosafety to the convention on biological diversity?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.3.2 	If answer to above question is "yes" has any risks identified in the risk assessment?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.3.3 	Forestry (for example Afforestation/Reforestation) involving GMO planting? <i>Note - Forestry projects (for example Afforestation/Reforestation) involving GMO planting are not eligible for Certification under Gold Standard for the Global Goals.</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

The tree species planted in the project are local poplars and pines, not genetically modified organisms.

[P.9.4 | RELEASE OF POLLUTANTS](#)

P.9.4.1 	Does the project have a risk of releasing pollutants to air, water, and land in routine, non-routine, or accidental circumstances?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

the Afforestation Project will not release pollutants to the environment.

Would the project involve or lead to:

P.9.4.1 	any potential risk of pollutant release that cannot be avoided?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.9.4.3 	If answer to above question is "Yes" or "potentially", has the project identified all potential pollution sources that may	<input type="checkbox"/> YES <input type="checkbox"/> NO

	degrade the quality of soil, air, surface, and groundwater in the project area?	<input checked="" type="checkbox"/> NA
P.9.4.2 	If answer to above question is "Yes" or "potentially", do the pollution prevention and control technologies and practices applied during the project life cycle align with national regulations or international best practices?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.4.3 	If answer to above question is "Yes", is there a monitoring plan to ensure that mitigation measures are implemented, and resources are protected?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

the Afforestation Project will not release pollutants to the environment.

[P.9.5 | HAZARDOUS AND NON-HAZARDOUS WASTE](#)

P.9.5.1 	Does the project involve the generation of waste materials (both hazardous and non-hazardous)?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.9.5.3 	Does the project involve risk of release of hazardous materials resulting from their production, transportation, handling, storage, or use?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.9.5.5 	Does the project involve the use of any chemicals or materials subject to international bans or phase-outs?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

The Project does not involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials in this monitoring periods.

Would the project involve or lead to:

P.9.5.1 	the generation and management of waste materials?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.9.5.1 	treatment, destruction, or disposal of waste material?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.5.1 	If answer to above question is "Yes", does the project involve an environmentally friendly method that includes appropriate control of emissions and residues resulting from the handling and processing of waste material?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.5.3 	risk of release of hazardous materials resulting from their production, transportation, handling, storage, or use?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.5.3 	If answer to above question is "yes", does project has measures in place to address health risks?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

P.9.5.4 	Involve manufacture, trade, and use of chemicals and hazardous materials subject to international bans or phase-outs due to their high toxicity to living organisms, environmental persistence, potential for bioaccumulation, or potential for depletion of the ozone layer	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
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If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

The Afforestation Project does not involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials.

[P.9.6 | PESTICIDES & FERTILISERS](#)

P.9.6.1 	Does the project involve the use of chemical pesticides?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.9.6.5 	Does the project involve purchase, store, manufacture, trade or use products that fall in Classes IA (extremely hazardous) and IB (highly hazardous)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.9.6.6 	Does the project use fertilisers, and if so, are measures being taken to minimise their use and nutrient losses to the environment?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Unless there is a serious pest problem, the farmers are not allowed to apply pesticides. Shanghai Roots & Shoots and Climate Bridge (Shanghai) Ltd.provides guidelines for pesticide use. During this monitoring period, no chemical pesticides were used. No fertilizer is applied to the project area and the buffer area in this monitoring period.

Would the project involve or lead to:

P.9.6.1 	chemical pesticides use for pest management?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.9.6.4 	If answer to question above is "yes" or "potentially", does project has documented Chemical Pesticides Policy in place?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.6.5 	purchase, store, use, manufacture, or trade in Class II (moderately hazardous) pesticides?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.9.6.5 	If answer to question above is "yes" or "potentially", does project has appropriate controls on manufacture, procurement, or distribution and/or use of these chemicals?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Unless there is a serious pest problem, the farmers are not allowed to apply pesticides. Shanghai Roots & Shoots and Climate Bridge (Shanghai) Ltd.provides guidelines for pesticide use. During this monitoring period, no chemical pesticides were used.

P.9.7 | HARVESTING OF FORESTS

P.9.7.1 	Does the project have a risk of unsustainable forest management, including timber harvesting?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.9.7.1 	Does the project pose a risk of depleting biodiversity and ecosystem functionality in areas where improved forest management is undertaken?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.9.7.1 	Does the project risk not meeting requirements for environment-friendly, socially beneficial, and economically viable plantations using native species whenever possible?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

The Project does not involve the harvesting of forests.

P.9.8 | FOOD SECURITY

P.9.8.1 	Does the project involve the risk of negatively influencing access to and availability of food for people affected?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to the question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

The Project does not involve the negative influence on access to and availability of food for people affected.

Would the project involve or lead to:

P.9.8.1 	modification of the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
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If the answer is "yes" or "potentially" to the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

The Project does not involve the negative influence on access to and availability of food for people affected.

P.9.9 | ANIMAL WELFARE

P.9.9.1 	Does the project involve any risks to animal welfare? Animal welfare shall be ensured by providing access to water and food, appropriate environment, humane treatment, and staff training. Evidence of mistreatment will be treated as an immediate non-conformity.	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.9.9.2 	Does the project involve any potential risk of excessive or inadequate use of veterinary medicines?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.9.9.4 	Does the project involve the risk of administering synthetic growth promoters, including hormones?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

*The Project does not involved animal welfare.
Before the implementation of the project, the project area was sandy land with almost no animals and plants, belonging to endangered ecosystems (HCV 3) as per HCV approach.*

Would the project involve or lead to:

P.9.9.1 	animal husbandry or harvesting of fish populations or other aquatic species? ¹⁶	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.9.1 	limiting access for animals to basic needs like drinking water, adequate food, daylight, appropriate shelter etc.?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.9.9.3 	inadequate measures to isolate sick animals and control the spread of disease, especially zoonotic diseases?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.9.5 	inadequate low-stress methods, equipment, and facilities that facilitate calm animal movement.	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.9.6 	inadequate measures to ensure that animals are exposed to the least stress possible during transportation and slaughtering?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.9.7 	inappropriate spacing per animal and stocking rates per land unit?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.9.8 	inadequate measures to address the specific needs of aquatic animals?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.9.9 P.9.9.10 	primary production of living natural resources such as animal husbandry, aquaculture, and fisheries? If the answer is yes, implement industry-standard sustainable management practices in line with to one or more relevant and credible standards and utilise available technologies.	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

If the answer is "yes" or "potentially" to any of the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here...

¹⁶ 'Involve' means if the project mechanism and/or impact(s) are achieved via changing animal husbandry practices in some way.

P.9.10 | HIGH CONSERVATION VALUE AREAS AND CRITICAL HABITATS

P.9.10.1 	Does the project have the risk of negatively impacting HCV areas and/or critical habitats?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.9.10.2 	Does the project in the project area or area of downstream impacts have risks to the following: native tree patches, individual native trees, freshwater resources (including rivers, lakes, swamps, temporary water bodies, and wells), habitats of rare, threatened, and endangered species, and biodiversity-enhancing areas?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

During this monitoring period, all the project area was planted with poplar and pinus sylvestris and 100% of the planting area has been managed to enhance the bio-diversity of the native eco-systems. Except for planting trees, bushes and other vegetation are also introduced to reclaim the desertified land. In addition, fences were built around the project area to keep out grazing animals, and special villagers were assigned to manage forests and prevent logging.

Would the project involve or lead to:

P.9.10.1 	identified habitats as HCV areas and or Critical habitats?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input type="checkbox"/> NO
P.9.10.1 	If answer to above question is "yes", does the project have any risks that could negatively impact the catchment, project success, and surrounding HCV and ecological assets, as well as any measurable adverse impacts on the criteria or biodiversity values for which the critical habitat was designated, and on the ecological processes supporting that biodiversity?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> NA
P.9.10.1 	If answer to above question is "yes", is a robust, appropriately designed, and long-term Habitats and Biodiversity Action Plan absent which will make the project unable to achieve net gains of those biodiversity values for which the critical habitat was designated?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
P.9.10.2 	Does the project area or area of downstream impacts have native tree patches, individual native trees, freshwater resources (including rivers, lakes, swamps, temporary water bodies, and wells), habitats of rare, threatened, and endangered species, and biodiversity-enhancing areas?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input type="checkbox"/> NO
P.9.10.2 	If the answer to the above question is "yes", will the project have any adverse effects on these areas?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> No <input type="checkbox"/> NA
P.9.10.3 	If the answer to above question is "yes", does the project has opportunities to minimise unwarranted conversion or degradation of the habitat and to enhance the habitat as part of its development?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> No <input type="checkbox"/> NA
P.9.10.4 	Is the project applying Land Use & Forest Activity Requirements and managing a minimum 10% of the project	<input checked="" type="checkbox"/> YES

	area to protect or enhance the biological diversity of native ecosystems following HCV approach as per the given requirements?	<input type="checkbox"/> No <input type="checkbox"/> NA
P.9.10.5 	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA

If the answer is "yes" or "potentially" to any of the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Mr. Zhang Tonghui, deputy chief of Naiman Research Station of Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences was consulted as the Expert Stakeholder, who is experienced in High Conservation Value Areas and Critical Habitats of the project.

Before the implementation of the project, the project area was sandy land with almost no animals and plants, belonging to endangered ecosystems (HCV 3) as per HCV approach. All the project area was planted with poplar and pinus sylvestris and 100% of the planting area has been managed to enhance the bio-diversity of the native eco-systems. Except for planting trees, bushes and other vegetation are also introduced to reclaim the desertified land. In addition, fences were built around the project area to keep out grazing animals, and special villagers were assigned to manage forests and prevent logging.

[P.9.11 | ENDANGERED SPECIES](#)

P.9.11.1 	Does the project lead to the reduction or negative impact on any recognised Endangered, Vulnerable or Critically Endangered species?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Mr. Zhang Tonghui, deputy chief of Naiman Research Station of Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences was consulted as the Expert Stakeholder, who is experienced in the biodiversity of the project. No endangered species.

Would the project involve or lead to:

P.9.11.2 	distortion of habitats of endangered species?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NA
P.9.11.2 	If answer to the above question is "yes", does the project plan to protect and enhance them?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
P.9.11.2 	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA

If the answer is "yes" or "potentially" to any of the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Mr. Zhang Tonghui, deputy chief of Naiman Research Station of Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences was consulted as the Expert Stakeholder, who is experienced in the biodiversity of the project. No endangered species is found in the project area.

P.9.12 | INVASIVE ALIEN SPECIES

P.9.12.1 	Does project introduce any alien species (not currently established in the country or region of the project) into new environments?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

The project planted the native species in project area including the Poplar and Scotch Pine .

Would the project involve or lead to:

P.9.12.1 	risk of introducing any alien species with a high risk of invasive behaviour regardless of whether such introductions are permitted under the existing regulatory framework?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.9.12.1 	risk of potential accidental or unintended introductions including the transportation of substrates and vectors (such as soil, ballast, and plant materials) that may harbour alien species.	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.9.12.2 	risk of spreading alien species into areas in which they have not already been established?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO

If the answer is "yes" or "potentially" to any of the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

All seedings planted in the project area are locally purchased, and cross regional transportation is not involved.

APPENDIX 2 - CONTACT INFORMATION OF PROJECT DEVELOPER(S)

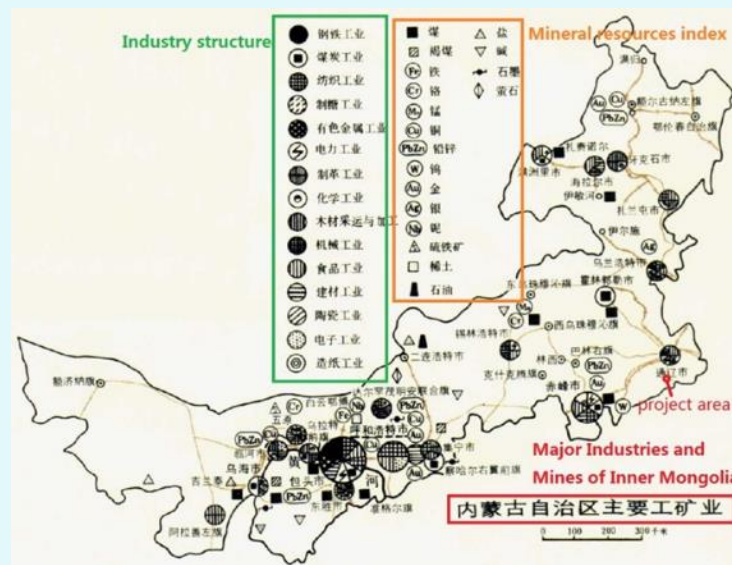
Organization name	Climate Bridge (Shanghai) Ltd.
Registration number with relevant authority	91310120563113084C
Street/P.O. Box	33 Fushan Road, Pudong New Area
Building	Block B, Level 24, Jiangong Mansion
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E-mail	projects@climatebridge.com
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Contact person	Zhiwen Gao
Title	CEO
Salutation	Mr
Last name	Gao
Middle name	/
First name	Zhiwen
Department	/
Mobile	/
Direct tel.	+86 21 2301 9950
Personal e-mail	gao.zhiwen@climatebridge.com

APPENDIX 3 - LUF ADDITIONAL INFORMATION

Risk of change to the Project Area during Project Certification Period:

Possible changes of the control and rights over the land will happen if a) the government orders to change the use of land for legitimate reasons; b) the village residents collectively decide to change their minds and dishonor the agreement signed.

According to the law, once the village’s collective land permit is issued, the government cannot overrule it unless national security reasons are involved, such as finding major mineral resources underground. As the municipality government website shows, there are no major mineral resources discovered in this town. Below is a map showing the mineral resources in this province. The project area is located in the red dot labelled place.



If there’s a need for construction of a new road, the government must negotiate with the villagers to get all their approvals. First, the project area is at least 1km off the main road. There is little risk of using the project area for infrastructure purposes. Second, there are over 100 villagers involved in the project who also own the trees, it will not be easy to get all their consent especially when the trees are older thus benefitting them in a greater way. Putting in a lot of time, labour and money to change the project area will be an unlikely choice.

	<p>Such situations are rare and unlikely to happen since the village collectives where the project located have signed the agreements to participate the afforestation project and the local government is very supportive of this project. Therefore the potential risk should be very low.</p> <p>The monitoring team from Roots & Shoots and Climate Bridge visited and monitored the area every year. It is also required that the village committee update the project developer on a regular basis and communicate any potential change to the project area with the project developer. If there are any problems, both parties will discuss and solve them in a way that would cause the least harm to the project area and the trees. In the first period, the Nugustaigacha project area (1180.96 hectares) was added to this project (GS ID: GS3031), and no negative impact to the project occurred.</p> <p>According to the Forest Conservation Act of China, local government will set the fireproofing period when using fire is forbidden in the open air; and once a fire disaster occurs, the local government should be responsible for relevant rescuing immediately. The chemical pesticides are allowed to be used only if there is a serious pest problem erupted in the project area, and the pesticides will be used in accordance with the National Pesticides Policy. During this monitoring period, no natural risk occurred, such as fire, pest and frost.</p>
<p>Risk of change to the Project activities during Project Certification Period:</p>	<p>For Zhaogensumogacha project area, this risk is also very low as the afforestation project is protected by the bilateral agreement, once the forest is established, the land property cannot be changed unless something uncontrollable happens. As this is a joint decision of families living in the village and each family involved owns a portion of the trees, there's much less risk of them reneging on the tree planting commitment. It is reasonable to believe the local villagers will take care of the trees as they are their own</p>

	<p>assets and will do good to protect them from invading sand dunes.</p> <p>There could be needs for new pasture land after the environmental conditions have improved under the new tree canopy, but all the villagers have agreed to set up barriers around the planting area to prevent the animals from treading and grazing, and a person will be assigned to maintain the barriers regularly at the early stage of planting. If local people need new pasture land, they have a lot other choices than infringing on the project area. Also, as trees mature, the forest is stable enough for controlled grazing given the vegetation restoration inside the forest is as good as expected.</p> <p>The basic situation of the Nugustaigacha project area (the new area) is the same as that of the Zhaogensumogacha project area, so the risk is very low. During this monitoring period, barriers were set up around the planting area to prevent the animals from treading and grazing, and the villagers maintain the barriers regularly, and the preservation rate of trees was good. So, there is no risk of change to the project activities.</p>
<p>Land-use history and current status of Project Area:</p>	<p>Horqin Left Rear Banner is on the south of Horqin Sandy Land, right in the typical agro-herding mixed region in North China. Horqin Sandy Land used to have a lot of lakes, forests and flourishing grasslands. However, due to climate change and uncontrolled human activities, the ecological system there has rapidly changed. Vegetation vanished, land desertified, grassland degraded and salinized. In 1950s, the desertified area in Horqin Sandy Land only took 22% of the total size. However, in late 1980s, the percentage was increased by 2.94% annually. In late 1990s, the desertified area took as high as 53.8% (Zhao, 2000). According to the satellite images and field investigation conducted in 1990s, the land utilization pattern in Horqin Sandy Land has changed significantly. In</p>

general, desertification keeps getting worse. Stabilized sand dunes, moving sand dunes, grasslands have decreased, but semi-stabilized sand dunes, farm land and forests have increased (Jiang, 2001).

Zhaogensumogacha lies 10 km west of Bagatala Town, west of G204. The total area of this village is 84,591 Mu (5629 hectares), including farm land, herding land, forests, roads, houses etc.). The afforestation project is planned on the south area of Zhaogensumogacha, which belongs to village residents collectively as herding land.

Nugusitaigacha belongs to Nugustai Town and is located on the west side of Xinlu Expressway. The afforestation project is located in the north of Nugusitaigacha, which belongs to village residents collectively as herding land.

However, before the project was implemented, the project area was severely degraded with some semi-fixed and fixed sand dunes.

There's no large-scale forest in this area according to local government records, only some elms and willows scattered around. Based on the baseline survey, the planting area are mostly sandy with sparse shrub and grassland in summer. In the absence of this project, the current situation of desertification will continue.

Totally 190 hectares of poplars were planted in the Zhaogensumogacha project area, and 1180.96 hectares of poplars and pinus sylvestris were planted in the Nugustaigacha project area.

Socio-Economic history:

Horqin Left Rear Banner has a population of about 0.4 million, and Mongolian population, Han population, Manchu population and Hui population account for 74.69%, 23.49%, 1.54% and 0.15% of the total population respectively. Among them, 75,000 live in town, and 331,000 live in

	<p>villages. The sown area of grain crops is 2.81 million mu, and the grain output is about 1 million tons. There are 630,000 heads of cows, 1.43 million heads of goats and 700,000 heads of pigs.</p> <p>In 2011, the GNP is 913 million, food production is 300 million tons, total livestock count is 2.08 million heads and average net income is 5,692 RMB.</p> <p>In 2023, the GDP is 14 billion RMB, the per capita disposable income of urban residents is 35,957 RMB, and the per capita disposable income of rural residents is 19,437 RMB¹⁷.</p>
<p>Forest management applied (past and future)</p>	<p>There’s no large scale afforestation project in Zhaogensumogacha and Nugusitaigacha before. Most of the trees currently growing in Zhaogensumogacha and Nugusitaigacha were planted by individuals randomly without systemetic forest management.</p> <p>The forest management of this project will cover planting/replanting, weeding, pruning, intermediate cutting, pest control and sand dune stabalization etc. The primary purpose of this afforestation project is to improve the environment. Hence, the forest management work will follow the principle of minimizing human interference with natural forest growth.</p> <p>There will be selective harvesting during the crediting period, which is a kind of measures of tree thinning for the healthy growth of the forest, not for commercial benefits.</p> <p>Year 1- Year 3, Young Stand:</p> <p>The main focus is the survival of trees. To achieve optimal survival rate measures to be taken include: irrigating the trees to raise the survival rates; pruning if trees are tall and with a lot of branches, based on forestry manager’s</p>

¹⁷ http://www.houqi.gov.cn/zwgk/zfxxgk/fdzdgknr/ghxx/fzgh/202403/t20240307_642583.html

judgement; replanting according to the survival situation of the forest; weeding where necessary to reduce the influence of weeds on young forests; setting up fences and a forest ranger system to control human impact on forest survival; building grass grids to lower sands from shifting and to protect young seedlings; inter-planting bushes and other vegetation among trees; and regularly implementing pest control and fire control work. The inventory work focuses mainly on random survey on survival rate, maintenance rate, tree height, basal diameter and diameter at breast height (DBH).

Year 4 – Year 10, Middle Stand:

The main focuses are the healthy growth of the trees, the restoration of a stable micro eco-system and establishing a basic evaluation system. This includes regular maintenance work such as weeding and pruning annually and more monitoring and inventory work. With good continual records of survival rate, tree height, DBH, species diversity, crown closure, stand vegetation structure etc., an evaluation model of the tree growth and forest health will be developed and improved year by year.

Year 11 – Year 15, Near-mature Forest

The main focus is to maintain a stable eco-system within the forest. Pruning will not be allowed if the main trunk of the tree is over 8 meters. Where the crown closure is too dense, tree thinning can be discussed between the project developer and local villagers for the greater good of the forest. The forestry manager will continue working on monitoring the forest. Based on the data collected throughout the years, including species diversity, crown closure, stand vegetation structures, a forest health monitoring model can be established to evaluate how healthy the forest is. The tree growth model will be modified with new data.

Year 16 – Year 30, Mature Forest

	<p>We will encourage the owner of the land and trees to keep up the forest as an ecological barrier for the village; take crown closure as indicator, and apply tree thinning to increase the spatial heterogeneity of forest.</p> <p>Besides, the field practices shall be established based on real situation and the judgement of forestry managers and once emergency situation occurs (e.g. losses caused by pests), contingency plans will be applied by modifying the activities (selective pruning, replanting, etc.)</p> <p>In the first monitoring period, grass grids and bushes were planted among trees, fences were set around the project area, irrigation systems were built and areas with low survival rates were replanted. In addition, local villagers carried out pest control and fire control work every year under the guidance of forestry station staff, and monitoring team from Shanghai Roots & Shoots and Climate Bridge (Shanghai) Ltd. monitored tree growth and biodiversity.</p>
<p>Forest characteristics (including main tree species planted)</p>	<p>There was 1,370.96 hectares of land planted with trees.</p> <p>In 2014, 190 hectares of poplars were planted in the Zhaogensumogacha project area, and in 2016, 1180.96 hectares of poplars and Pinus sylvestris were planted in the Nugusitaigacha project area (the new area). So, the major tree species are poplar and pinus sylvestris, of which the area of poplar is 662.56 hectares, and the area of pinus sylvestris is 708.44 hectares. Also bushes were planted to stabilize the sands, fences and sand/grass grids could help to control desertification and sand dune mobility.</p>
<p>Main social impacts (risks and benefits)</p>	<p>Risks:</p> <ul style="list-style-type: none"> - There still might be herding practices against the prohibited areas, which will cause the death of the young trees. - Possible tree diseases and contagion. <p>Due to the social conditions of Zhaogensumogacha project area and Nugustaigacha project area (the new area) are</p>

	<p>the same and the project activities are consistent, so the risks are the same.</p> <p>At the beginning of the project, a few herders grazed in the project area, therefore Roots & Shoots and Climate Bridge has conducted the stakeholder consultation meetings with local communities and local Forest Bureau by emphasizing the importance of the prohibition of herding in early phase of the planting area. Due to long-term publicity and training, almost no herders grazed in the project area since then.</p>
<p>Main environmental impacts (risks and benefits)</p>	<p>Benefits:</p> <ul style="list-style-type: none"> -A new forest of 1,370.96 hectares increase vegetation coverage, slow down wind and decrease the negative impact of sandstorms on the village and farm land. -Preserve water and soil resources and prevent soil erosion. -Mixed methods of sand control can stabilize the sand dunes, stop desert from expanding, and protect community livelihood. -Create a new carbon sink and increase the carbon sink amount by maintaining the forest in a healthy condition for a long time. -In the long term, the forest can improve the soil characteristics. -Rebuild the mixed ecological system of forests and grasslands, increasing biodiversity in project area. <p>Due to the environmental conditions of Zhaogensumogacha project area and Nugustaigacha project area (the new area) are the same and the project activities are consistent, so the benefits are the same. During this monitoring period, the forest coverage in the project area has increased, the dust weather in the project area has decreased and the soil quality has improved significantly.</p> <p>Risks:</p>

In early phases, the planting and irrigation practices might cause some wind and soil erosion, and consume some underground water but the forest can improve the soil conditions in long term.

Due to the environmental conditions of Zhaogensumogacha project area and Nugustaigacha project area are the same and the project activities are consistent, so the risks are the same.

Increased forest coverage in the project area



Financial structure

Year 1 – Year 5, ~6.6-7.3 million RMB, to plant the trees and maintain them, set up fences and the irrigation system, deliver education and instructions to local people, encourage agro-forestry practice and carry-out regular monitoring and investigation.

Year 5 – Year 10, ~1.5-2.2 million RMB, to maintain the forest, carry-out regular monitoring and investigation, deliver education and instructions to local people.

Year 10- Year 30, ~3.6-5.8 million RMB, to maintain the forest, carry-out regular monitoring and investigation, deliver education and instructions to local residents.



For the initial project area in Zhaogensumogacha, Roots & Shoots has provided the fund for planting and forest maintenance, the potential carbon revenue could increase the income of local communities and will also be significant supplement for funding of the long-term forest management, including biodiversity protection and enhancement.

For the area in Nugusitaigacha, local Forestry Bureau has provided the fund for planting and forest maintenance for the first five years of the project lifetime, the potential carbon revenue could cover the cost of the continuous forest maintenance and benefit the local communities by increase their household income as well.

Infrastructure (roads/houses etc):

There are two roads in MU1, four roads in MU2 and MU3.



	
<p>Water bodies:</p>	<p>There is a small lake in the southeast of the new area (Nugusitaigacha project area) with a buffer zone of about 95 meters. Native tree species such as <i>Pinus sylvestris</i> are planted in the buffer zone.</p> 
<p>Sites with special significance for indigenous people and local communities - resulting from the Stakeholder Consultation:</p>	<p>According to LSC, there is no sites with special significance for indigenous people and local communities.</p>
<p>Where indigenous people and local communities are situated:</p>	<p>According to LSC, there is no sites with special significance for indigenous people and local communities.</p>
<p>Where indigenous people and local communities have legal rights, customary rights or sites with</p>	<p>According to LSC, there is no sites with special significance for indigenous people and local communities.</p>

special cultural,
ecological, economic,
religious or spiritual
significance:

APPENDIX 4 - DESIGN CHANGES

A4.1. Details of proposed or actual design change

>>

N/A

A4.2. Describe the impacts of design change on the following

a. Additionality

>>

N/A

b. Applicability of methodology and other methodological regulatory documents with which the project activity has been certified

>>

N/A

c. Compliance with the monitoring plan of the applied methodology

>>

N/A

d. Level of accuracy and completeness in the monitoring of the project activity compared with the requirements contained in the registered monitoring plan

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N/A

e. Scale of the project activity

>>

N/A

f. Stakeholder consultation

>>

N/A

g. Sustainable development criteria

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Based on the section 4.6.1 of the document "Design Change Requirements v 1.1": The project developer shall assess any necessary revisions in the SDG Impact and Safeguarding Principles assessment following the design changes, and incorporate those changes. Therefore, the SDG Impact has been revised in according with the newest SDG TOOL.

According to Section 4.1.16 in Principles & Requirements, Option 1 was used to evaluate the SDG impact in first monitoring period (11/04/2014 to 31/12/2020) and the SDG13, SDG15, and SDG 16 were identified. From 13 March 2022, the SDG Impact Tools are a mandatory part of the project development cycle, and then Option 2 was used in second period time (01/01/2021 to 31/12/2023) to demonstrate SDG impacts of the project and the SDG13, SDG15, and SDG 8 were identified according to latest SDG Impact Tools. The monitoring indicators has been changed from the SDG 16 to SDG 8 "Total number of jobs".

h. Safeguarding assessment

>>

N/A

i. Compliance with applicable legislation

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N/A

j. Only for LUF Projects: Transparent summary of all approved changes in Project Area, Eligible Area and accompanying changes in ex-ante emissions removals.

DATE OF APPROVED DESIGN CHANGE (MM/DD/YYYY)	PROJECT AREA (HA)		ELIGIBLE AREA (HA)		EX-ANTE ESTIMATE (TCO2E)	
	INCREASE OR DECREASE ?	VALUE (HA)	INCREASE OR DECREASE?	VALUE (HA)	INCREASE OR DECREASE ?	PERCENTAGE (%)

There is no post registration design change of “ligible Area”

DOCUMENT HISTORY

Version	Date	Remarks
1.5	29 June 2023	Editorial changes to match V2.1 of the Safeguarding Principles Requirements
1.4	21 June 2023	Editorial changes to match V2.0 of the Safeguarding Principles Requirements
1.3	14 April 2023	Integrated the design change memo as annex of the document. Editorial changes
1.2	14 October 2020	Hyperlinked section summary to enable quick access to key sections Improved clarity on Key Project Information Inclusion criteria table added Gender sensitive requirements added Prior consideration (1 yr rule) and Ongoing Financial Need added Safeguard Principles Assessment as annex and a new section to include applicable safeguards for clarity Improved Clarity on SDG contribution/SDG Impact term used throughout Clarity on Stakeholder Consultation information required Provision of an accompanying Guide to help the user understand detailed rules and requirements
1.1	24 August 2017	Updated to include section A.8 on 'gender sensitive' requirements
1.0	10 July 2017	Initial adoption