

Gold Standard for the Global Goals
Transition Annex
*(To be used by all GS CDM/VER stand alone projects and PoAs,
Micro Scale stand alone projects and Micro PoAs)*



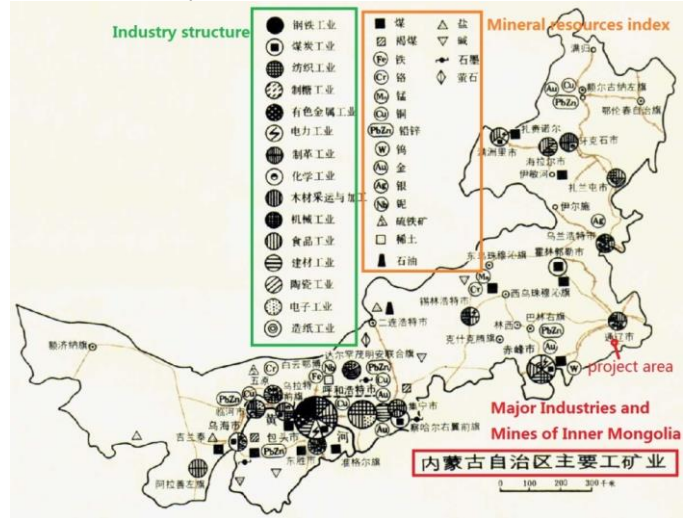
Version 1 – September 2017

KEY PROJECT INFORMATION

Title of Project/PoA/Activity:	Afforestation Project in Tongliao, Inner Mongolia
GS ID of the project/PoA/activity:	3031
GS Version:	GS AR 0.9
Brief description of Project:	<p>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.</p> <p>In April of 2014, 190 hectares of Populus L. (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. During this 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.</p> <p>According to Afforestation/Reforestation Requirements (Version 0.9), 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.</p> <p>In 2016, 1,180.96 hectares of native tree species (<i>Pinus sylvestris</i> L. var. <i>mongholica</i> Litv. and <i>Populus</i> L., 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.</p> <p>The project's aim is to slow down desertification and increase carbon sequestration by planting trees on the sandy land. The</p>

	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 residents, brought advanced agro-forestry practices to the community and developed sustainable land management education there.
Project type: Energy/Land Use	Land Use
For Renewable Energy Projects – intention to apply RECs Labels (y/n)	/
GS Stream (CDM/VER):	VER
Scale (large/scale/micro):	large
GS Registration Date:	25/11/2015
GS Crediting period start date:	11/04/2014
CDM Registration Date:	/
CDM Crediting period start date:	/
Project Developer:	Climate Bridge (shanghai) Ltd.
Project Representative:	Climate Bridge (shanghai) Ltd.
Project Participants and any communities involved:	N/A
Host Country/Location:	P.R.China (host)
Methodologies applied:	Gold Standard Afforestation/Reforestation (A/R) GHG Emissions Reduction & Sequestration Methodology (version 1.0)
SDG Impacts:	SDG 13 Impacts SDG 15 Impacts SDG 16 Impacts
Estimated amount of SDG Impact (GSVERs and others)	449,706 t GSVERs
For Land-use & Forest Projects only – delete if irrelevant	
Size of the Project Area and Planting Area [submit shape file]:	<p>The initial project area is located in Zhaogensumogacha with a size of 190 hectares and the new added area is located in Nugusitaigacha with a size of 1,180.96 hectares.</p> <p>Therefore the total size of the project area is 1,370.96 hectares, and the following map in Section 2 shows the project area including the two parts mentioned above, Part 1 is the initial area while Part 2 refers to the new area. And the planting area is also about 1,370.96 hectares which almost covers the whole project area except for some inside roads.</p>
Risk of change to the Project Area and/or land title during Project Certification Period:	<p>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.</p> <p>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</p>

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.

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.

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.

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.

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

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.


	<p>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 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. Herding to a reasonable degree is good for the ecosystem as the excrements of livestock will help the vegetation to grow and regenerate.</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 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).</p> <p>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.</p> <p>Nugusitaigacha belongs to Nugustai Town and is located on the west side of Xinlu Expressway. The afforestation project is</p>

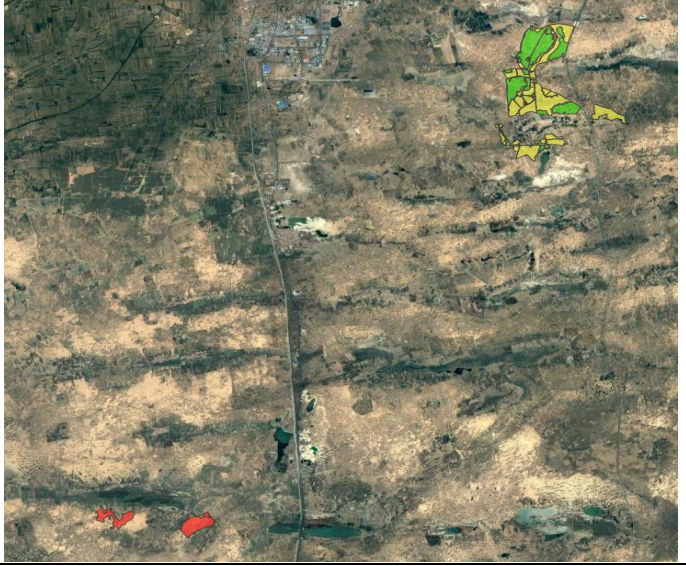
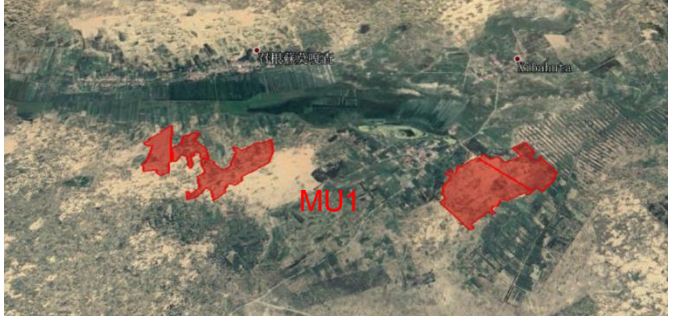
	<p>located in the north of Nugusitaigacha, which belongs to village residents collectively as herding land.</p> <p>However, before the project was implemented, the project area was severely degraded with some semi-fixed and fixed sand dunes.</p> <p>There's no large-scale forest in this area according 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.</p> <p>190 hectares of poplars were planted in 2014 in the Zhaogensumogacha project area, and 1180.96 hectares of poplars and pinus sylvestris were planted in 2016 in the Nugustaigacha project area (the new area), and the tree preservation rate was good by now.</p>
<p>Socio-Economic history:</p>	<p>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 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 2020, the GDP is 12.283 billion RMB, the per capita disposable income of all the residents of 19,681 RMB, of which the per capita disposable income of urban residents is 29,632 RMB, and the per capita disposable income of rural residents is 14,956 RMB .</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: The main focus is the survival of trees. To achieve optimal survival rate measures to be taken include: irrigating the trees</p>

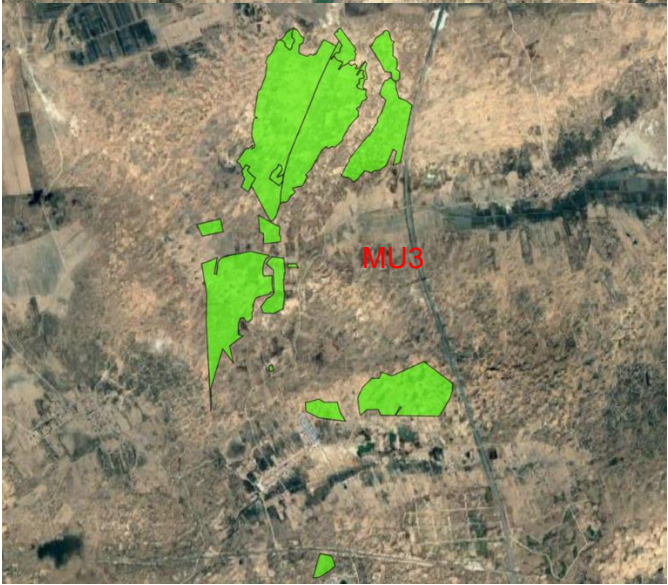
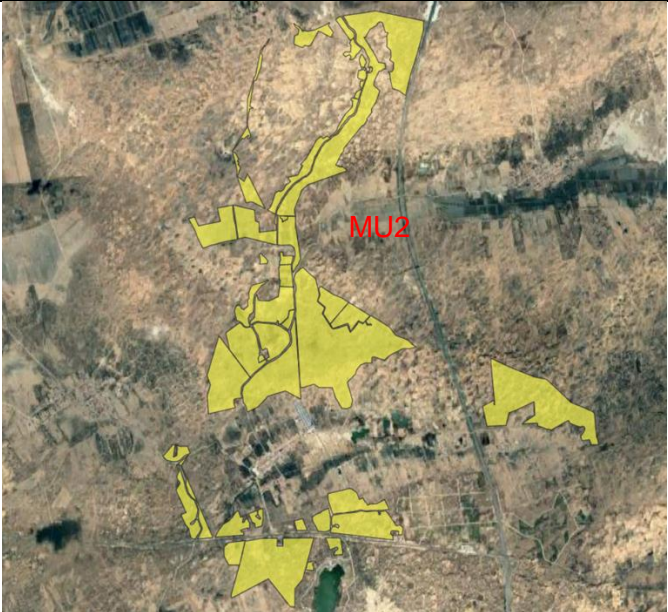
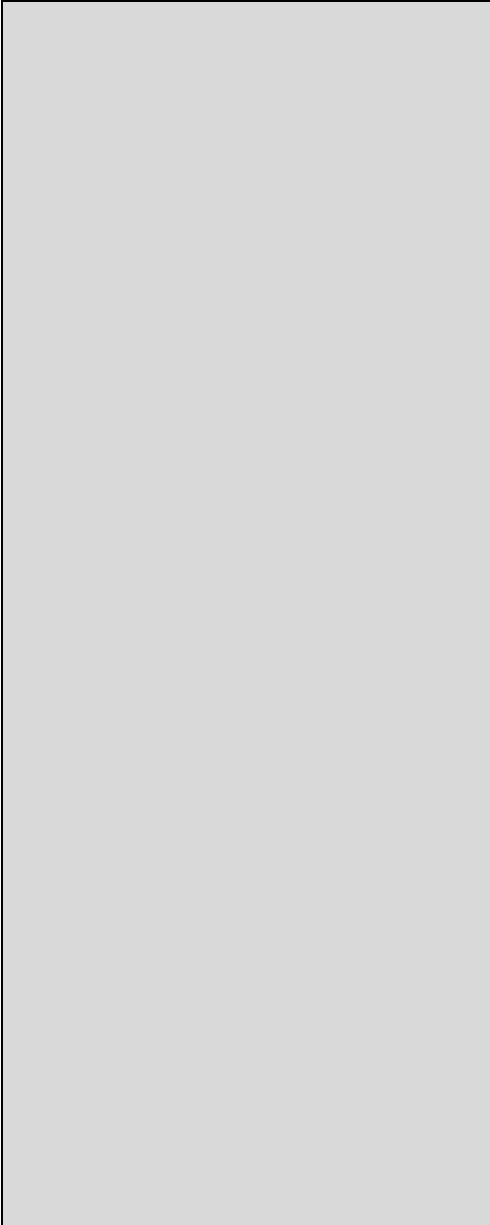
	<p>to raise the survival rates; pruning if trees are tall and with a lot of branches, based on forestry manager’s judgement; replanting according to the survival situation of the forest; weeding where necessary to reduce the influence of weeds on young forests; setting up fences and a forest ranger system 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).</p> <p>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.</p> <p>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.</p> <p>Year 16 – Year 30, Mature Forest 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>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.</p>

	<p>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>Benefits:</p> <ul style="list-style-type: none"> - Contain the desertification in this area, improve local environment and provide easy and feasible model for communities nearby to learn and replicate. - Promote local economic development by improving ecological environment, infrastructure and desertification control, as well as generating more jobs and incomes for locals. - Deliver advanced land management concepts and skills to local residents, encourage them to learn new skills and try a new livelihood which is more sustainable and has less negative impact on environment. - Improve community development and empower grassroots organizations in this area. - Enrich feeds for livestock by recovering vegetation and encourage agro-forestry. - Increased income for local people. - A more sustainable livelihood that is environmentally friendly. - Raised awareness of local people to protect the environment. - Improved health of local people due to fewer sandstorms. <p>Due to the social 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 significantly, effectively slowing down desertification and improving the living environment of local residents. At the same time, the project provided relevant training for local farmers, including planting, fire prevention and forest management, which improved their abilities.</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. - Gap between expected economic income generated from carbon certification and what is actually received. <p>Due to the social conditions of Zhaogensumogacha project area and Nugustaigacha project area (the new area) are 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</p>

	<p>planting area. Due to long-term publicity and training, almost no herders grazed in the project area since then. During this monitoring period, the tree preservation rate exceeds 85%. Although there was some tree diseases and contagion in part of the planting area, the diseases have been well controlled and no significant loss occurred.</p> <p>The Gap between expected economic income generated from carbon certification and what is actually received is still a potential risk due to the small size of the project, especially for the early phase of the project lifetime when the trees haven't grown big enough. But as a pilot project in Tongliao City, the project has received technical support and initial funding from Roots & Shoots and local Forest Bureau which could help local villagers to cover the planting cost and maintenance cost for the first five years, and after the first issuance of carbon credits, the carbon revenue could continuously support the long-term maintenance of the forest which could also inspire other similar afforestation projects to be implemented around the project area.</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> <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.</p> <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 risks are the same.</p>
<p>Financial structure</p>	<p>Year 1 – Year 5, ~6.6-7.3 million RMB, to plant the trees and maintain them, set up fences and the irrigation system,</p>

	<p>deliver education and instructions to local people, encourage agro-forestry practice and carry-out regular monitoring and investigation.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>For the new 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.</p>
<p>Project Area:</p>	<p>The project area mainly including two part, part 1 is located in Zhaogensumogacha with a size of 190 hectares and part 2 is the new added area located in Nugusitaigacha with a size of 1180.96 hectares.</p> 
<p>Planting Area:</p>	<p>The planting areas are illustrated by 3 shapefiles, named under MU 1 to MU 3, of which MU2 and MU3 are the new added areas. The total size of the planting areas is 1,370.96 hectares.</p>

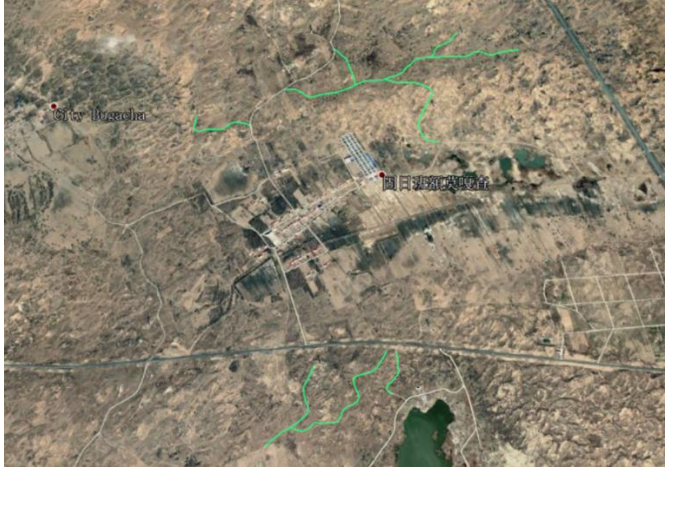

	
<p>Eligible Planting Area:</p>	<p>The eligible planting area is the same as the planting areas, with a size of 1,370.96 hectares. The eligible planting area has been assessed according to Annex C of the LUF Activity Requirements (Version 1.2.1, April 2020), please refer to Key Project Information for details.</p>
<p>Modelling Units:</p>	<p>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 (the new area), where 708.44 hectares of pinus sylvestris were planted in 2016. The green area (MU3) represents the Nugusitaigacha project area (the new area), where 472.52 hectares of poplars were planted in 2016.</p> 



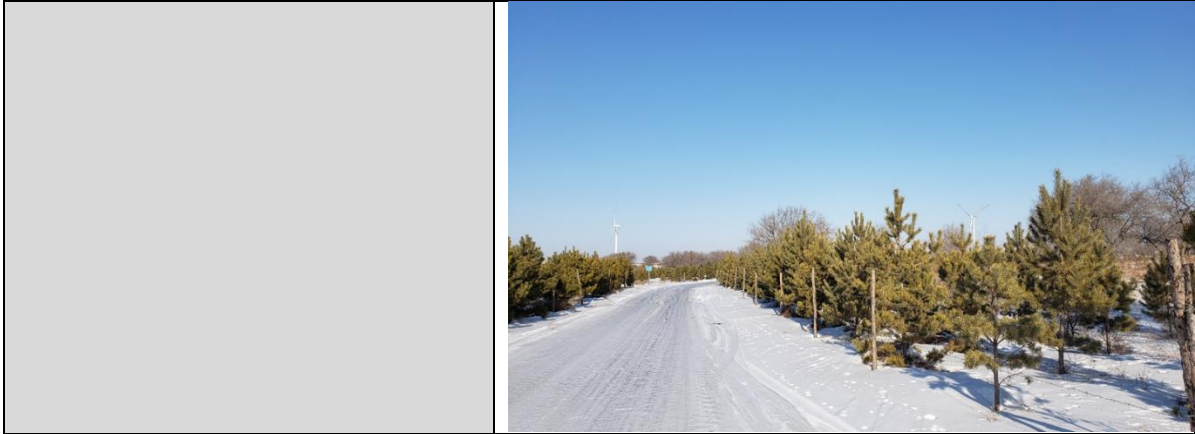
Infrastructure (roads/houses etc):

There are two roads inside 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 special cultural, ecological, economic, religious or spiritual significance:</p>	<p>According to LSC, there is no sites with special significance for indigenous people and local communities.</p>
<p>Evidence that Project Boundary is clearly distinguishable in the field:</p>	<p>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.</p> 

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NOTE: This Annex shall be used for all PoAs if the sustainable development assessment is conducted at PoA level. In case sustainable development assessment is conducted at activity level, then this Annex shall be filled for each of the activities.

SECTION A Sustainable Development Goals (SDG) outcomes

A.1 Relevant target for each of the three SDGs

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According to Section 4.1.16 in Principles & Requirements, option 1 was used to demonstrate SDG impacts of the project.

As per review of the SDG targets and indicators from the relevant National SDG Indicators, the following three SDG targets were selected for the project:

1. **SDG13: Climate action: Take urgent action to combat climate change and its impacts.**

Target 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

The project's aim is to slow down desertification and increase carbon sequestration by planting trees on the sandy land. The project carried out training about afforestation and climate change for stakeholders, enhanced their awareness of ecological protection, and strengthen the capacity of the project area to respond to and adapt to climate change. Therefore, the project achieved the SDG13.

2. **SDG15: Life on land: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.**

Target 15.2: 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.

Target 15.3: By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.

Target 15.4: By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development.

The project planted 1,370.96 hectares native trees (pinus sylvestris and poplar) on sandy land, will combat desertification, restore degraded land and soil and increase biodiversity. Therefore, the project achieved the SDG15.

3. **SDG16: Peace, justice and strong institutions: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.**

Target 16.7: Ensure responsive, inclusive, participatory and representative decision-making at all levels.

The development of the project was decided by all villagers, Shanghai Roots & Shoots and the afforestation companies have signed the Agreement with all individual villagers, and the local government is very supportive of this project. The project generated extra income for local residents, brought advanced agro-forestry practices to the community and developed sustainable land management education there. The planting and maintenance work were implemented by the local villagers. Therefore, the project achieved the SDG16.

A.2 Explanation of methodological choices/approaches for estimating the SDG outcome

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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 1) (hereinafter referred to as "Methodology A/R V1"), 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.)

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$R_{non-tree_BSL}$ = Root-to-Shoot ratio for non-tree biomass in baseline;

$A_{BSL,t}$ = Sum of project area; ha

SDG 15 Baseline outcome:

In baseline situation, the planting area are mostly sandy land with very few species and quantities of animals and plants. The SDG 15 cannot be achieved in baseline situation. Therefore, SDG 15 baseline outcome is sandy land with low biodiversity.

SDG 16 Baseline outcome:

In baseline situation, normal people, especially the Chinese Mongolian minority of local village rarely participate in decision-making. The SDG 16 cannot be achieved in baseline situation. Therefore, SDG 16 baseline outcome is normal people barely involved in the decision-making.

II. Calculate project outcomes

SDG 13 Project outcome:

According to Methodology A/R V1, 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 CO₂e

$\Delta C_{tree_PROJ,i,t}$ = Change in carbon stock in tree biomass of stratum i in project in year t; t CO₂e

$C_{tree_PROJ,i,t}$ = Carbon stock in tree biomass of stratum i in project at time t; t CO₂e

$B_{tree_PROJ,i,j,t}$ = 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; m³/ha

$D_{tree,j}$ = Density of tree species j; t (d.m.)/m³

$BEF_{tree,j}$ = 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 V1, no other emissions are considered.

Calculation of leakage emissions

According to Methodology A/R V1, 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 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. Therefore, the estimated SDG 15 project outcome is significantly increase in biodiversity.

SDG 16 Project outcome:

The development of the project was decided by all villagers, Shanghai Roots & Shoots and the afforestation companies have signed the Agreement with all individual villagers, and the local government is very supportive of this project. The planting and maintenance work were implemented by the local villagers. Therefore, the estimated SDG 16 project outcome is normal people, especially the Chinese Mongolian minority of local village can be involved in the decision-making.

A.3 Data and parameters fixed ex ante for monitoring contribution to each of the three SDGs

(Include a compilation of information on the data and parameters that are not monitored during the crediting period but are determined before the design certification and remain fixed throughout the crediting period like IPCC defaults and other methodology defaults. Copy this table for each piece of data and parameter.)

Relevant SDG Indicator	SDG Indicator 13.3.2: Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions
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)
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

Relevant SDG Indicator	SDG Indicator 13.3.2: Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions
Data/parameter	R_{tree_BSL}
Unit	Dimensionless

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Description	Root-shoot ratio for tree/non-tree in baseline.
Source of data	Methodology A/R V1
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

Relevant SDG Indicator	SDG Indicator 13.3.2: Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions
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

Relevant SDG Indicator	SDG Indicator 13.3.2: Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions
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 V1
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

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Relevant SDG Indicator	SDG Indicator 13.3.2: Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions
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	For ex ante estimation, the growth curve (age-volume) equations are used to estimate the stem volume. For the ex-post estimation during the following verification will use allometric equations of each tree species to calculate the stem volume.
Purpose of data	Calculation of project net GHG removals by sinks
Additional comment	N/A

Relevant SDG Indicator	SDG Indicator 13.3.2: Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions
Data/parameter	D_{tree}
Unit	m ³
Description	Density of tree in project; t d.m.
Source of data	Methodology A/R V1
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

Relevant SDG Indicator	SDG Indicator 13.3.2: Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions
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 V1
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

Relevant SDG Indicator	SDG Indicator 13.3.2: Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions
Data/parameter	R_{tree}
Unit	Dimensionless
Description	Root-to-Shoot ratio for tree biomass in project
Source of data	Methodology A/R V1
Value(s) applied	0.2
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

Relevant SDG Indicator	SDG Indicator 13.3.2: Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions
Data/parameter	CF_{tree}
Unit	t C/t (.d.m.)
Description	Carbon fraction of project tree biomass
Source of data	Methodology A/R V1
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

SECTION B Safeguarding Principles Assessment

B.1 Analysis of social, economic and environmental impacts

>> (Refer the GS4GG Safeguarding Principles and Requirements document for detailed guidance on carrying out this assessment. The assessment of following Safeguarding Principles Assessment is required to be carried out by GS Version 2.0, 2.1 and 2.2 projects. GS v1.0 projects will carry out assessment of all the safeguarding principles discussed in the GS4GG Safeguarding Principles and Requirements document.)

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Safeguarding principles	Assessment questions	Assessment of relevance to the project (Yes/potentially/no)	Justification	Mitigation measure (if required)
3.1 Human Rights	<p>a. Does the Project respect internationally proclaimed human rights and not complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights?</p> <p>b. Does the Project not discriminate with regards to participation and inclusion?</p>	Yes	<p>a. Yes, 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)¹.</p> <p>b. Yes, there was a stakeholder consultation carried out regarding the proposed project. Local people were actively involved in expressing their opinions and comments.</p>	-
3.2 Gender Equality and Women's Rights	<p>a. Is there a possibility that the Project might reduce or put at risk women's access to or control of resources, entitlements and benefits?</p> <p>b. Does the Project take into account gender roles and the</p>	Yes	<p>a. No, Chinese Labour Law forbid any form of discriminate based on gender, race, religion, sexual orientation or on any other basis.</p> <p>b. No, Chinese Labour Law forbid any form of discriminate based on gender, race, religion, sexual orientation or on any other basis.</p> <p>c. No, Chinese Labour Law forbid any form of</p>	-

¹ <http://hrlibrary.umn.edu/research/ratification-china.html>

	<p>abilities of women or men to benefit from the Project's activities?</p> <p>c. Would the Project potentially reproduce or further deepen discrimination?</p>		<p>discriminate based on gender, race, religion, sexual orientation or on any other basis.</p>	
<p>3.3 Community Health, Safety and Working Conditions</p>	<p>Is there a possibility that the Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community?</p>	<p>Yes</p>	<p>The owners of the trees do all the work themselves instead of hiring workers. The project has referenced Safety and Healty 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.</p>	<p>-</p>
<p>3.4.1 Sites of Cultural and Historical Heritage</p>	<p>Does the Project Area include sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g., knowledge, innovations, or practices)?</p>	<p>No</p>	<p>Mr. Chen Hui, the chief of Horqin Left Rear Banner Forestry and Grassland Bureau, was consulted as Expert Stakeholder, who is farmilar with the local cultural and historical situation.</p> <p>The project is located in Zhaogensumogacha and Nugsitaigacha, Horqin Left Rear Banner of Tongliao City. The sites do not included cultural and historical heritage.</p>	<p>-</p>

<p>3.4.2 Forced Eviction and Displacement</p>	<p>Does the Project require or cause the physical or economic relocation of peoples (temporary or permanent, full or partial)?</p>	<p>No</p>	<p>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>	<p>-</p>
<p>3.4.3 Land Tenure and Other Rights</p>	<p>a. Does the Project require any change to land tenure arrangements and/or other rights? b. For Projects involving land-use tenure, are there any uncertainties with regards land tenure, access rights, usage rights or land ownership?</p>	<p>No</p>	<p>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</p>	<p>-</p>
<p>3.4.4 Indigenous Peoples</p>	<p>Are indigenous peoples present in or within the area of influence of the project and/or is the project located on land/territory claimed by indigenous peoples?</p>	<p>No</p>	<p>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</p>	<p>-</p>

			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.	
3.5 Corruption	Does the Project involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects?	No	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.	-
3.6.1 Labour Rights	a. Does the project developer ensure there is no forced labour and that all employment is in compliance with national labour and occupational health and safety laws, with obligations under international law, and consistency with the principles and standards	Yes	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	-

	<p>embodied in the International Labour Organization fundamental conventions?</p> <p>b. Do workers be able to establish and join labour organisations?</p> <p>c. Does working agreements with all individual workers be documented and implemented?</p>		<p>association or their right to collective bargaining.</p> <p>The project fully respects the employee's freedom and rights.</p> <p>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.</p>	
3.6.2 Negative Economic Consequences	<p>a. Could the Project Developer demonstrate the financial sustainability of the Projects implemented, also including those that will occur beyond the Project Certification period?</p> <p>b. Should the Projects consider economic impacts and demonstrate a consideration of</p>	Yes	<p>a. Project developers demonstrate financial sustainability in afforestation design.</p> <p>b. Yes, 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</p>	-

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	potential risks to the local economy and how these have been taken into account in Project design, implementation, operation and after the project?		will provide direct and indirect employment opportunities, which will lead to economic well-being of local residents.	
3.7.1 Emissions	Will the Project increase greenhouse gas emissions over the Baseline Scenario?	Yes	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 tCO₂e during the crediting period.	-
3.7.2 Energy Supply	The Project shall not affect the availability and reliability of energy supply to other users.	No	This is afforestation project, will not affect the availability and reliability of energy supply to other users.	-
3.8.1 Impact on natural water patterns and flow	Will the Project affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	Yes	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. 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.	
3.8.2 Erosion and/or water body stability	a. Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion?	Yes	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.	-
3.9.1 Landscape modification and soil	Does the Project involve the use of land and soil for production of crops or other products?	No	No, the project planted trees on sandy land, does not involve the use of land and soil for production of crops or other products.	-
3.9.2 Vulnerability to Natural Disaster	Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions?	Yes	Yes, the project is vulnerable to flooding, drought and other extreme climatic conditions.	
3.9.3 Genetic Resources	Could the Project be negatively impacted by the use of genetically	No	The Project not involved the use of genetically modified organisms or GMOs (e.g., contamination, collection and/or	-

	modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development)?		harvesting, commercial development)	
3.9.4 Release of pollutants	Could the Project potentially result in the release of pollutants to the environment?	No	No, the Project will not release pollutants to the environment.	-
3.9.5 Hazardous and Non-hazardous Waste	Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials?	No	The Project does not involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials.	-
3.9.6 Pesticides and fertilizers	Will the Project involve the application of pesticides and/or fertilisers?	No	The Project does not involve the application of pesticides and/or fertilisers.	-
3.9.7 Harvesting of forests	Will the Project involve the harvesting of forests?	No	The Project does not involve the harvesting of forests.	-
3.9.8 Food	Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration or	No	The Project does not involve the negative influence on access to and availability of food for people affected.	-

	export or economic incentives?			
3.9.9 Animal Husbandry	Will the Project involve animal husbandry?	No	The Project does not involved animal husbandry	-
3.9.10 High Conservation Value Areas and Critical Habitats	Does the Project physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified?	Yes	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.	
3.9.11 Endangered Species	Are there any endangered species identified as potentially being present within the Project boundary (including those that may route through the area)?	No	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.	-

SECTION C Monitoring plan

C.1 Data and parameters to be monitored

(Include specific information on how the data and parameters that need to be monitored in the selected methodology(ies) or proposed approaches or as per mitigation measures from safeguarding principles assessment or as per feedback from stakeholder consultations would actually be collected during monitoring. Copy this table for each piece of data and parameter.)

Relevant Indicator/Safeguarding Principle	SDG	SDG Indicator 13.3.2: Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions
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		N/A
Purpose of data		Assessment of SDG target

Additional comment	/
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Relevant Indicator/Safeguarding Principle	SDG	SDG Indicator 13.3.2: Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions
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		N/A
Purpose of data		Assessment of SDG target
Additional comment		N/A

Relevant Indicator/Safeguarding Principle	SDG	SDG Indicator 13.3.2: Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions
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		N/A
Purpose of data		Assessment of SDG target
Additional comment		N/A

Relevant Indicator/Safeguarding Principle	SDG	SDG Indicator 15.4.1: Coverage by protected areas of important sites for mountain biodiversity
Data / Parameter		Biodiversity (Numbers of flora and fauna)
Unit		
Description		Status of biodiversity
Source of data		Questionnaire
Value(s) applied		N/A
Measurement methods and procedures		A questionnaire provided for local stakeholders to collect their comments on the local ecosystem and biodiversity.

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Monitoring frequency	Yearly during operation period
QA/QC procedures	N/A
Purpose of data	Assessment of Safeguarding Principles
Additional comment	N/A

Relevant Indicator/Safeguarding Principle	SDG SDG Indicator 16.7.2: Proportion of population who believe decision-making is inclusive and responsive, by sex, age, disability and population group
Data / Parameter	Human and institutional capacity
Unit	Dimensionless
Description	Decision-making structures at local village
Source of data	Records and questionnaires
Value(s) applied	N/A
Measurement methods and procedures	The meetings and activities organized for local residents related to the planting project will be recorded and the results will be assessed annually. Also a questionnaire will be provided for local stakeholders to collect their comments on the local institutional capacity.
Monitoring frequency	Yearly during operation period
QA/QC procedures	N/A
Purpose of data	Assessment of Safeguarding Principles
Additional comment	N/A

C.1.1 Other elements of monitoring plan (if applicable)

>>

Not applicable.

SECTION D Duration and crediting period

D.1 Duration of project

D.1.1 Start date of project

>>

11/04/2014 (planting start date)

D.1.2 Expected operational lifetime of project

>>

30 years

D.2 GS Crediting period of the project/activity

30 years

D.2.1 Start date of the ongoing GS crediting period

>>

11/04/2014

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D.2.3 End date of the ongoing GS crediting period

>>

10/04/2044

D.2.3 Total length of the GS crediting periods

>>

30 years

SECTION E Stacking of new assets

>>

Not applicable.

Appendix 1. Contact information of project participants

Organization name	Climate Bridge (Shanghai) Ltd.
Registration number with relevant authority	91310120563113084C
Street/P.O. Box	33 Fushan Road, Pudong New Area
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