Project Title
Afforestation Project in Tongliao, Inner Mongolia
Gold Standard ID
GS3031
Type of Certification
☒ Initial Certification ☐ Performance Certification ☐ New Area Certification ☐ Annual Reporting

For each item listed below, please provide a general description in the corresponding box. In total, this document shall not exceed 5 pages. Be aware that carbon market specific terms may not be appropriate for the readers of this summary. The formatting requirements provided in chapter 7.4 must be followed.

1. Key Project Information

(a) Project activities

Shanghai Roots & Shoots started the Million Tree Project (MTP) in 2007. By planting trees in Tongliao region, we aim to fight against desertification and climate change with the help and fund from various corporate, school and individual donors.

In 2014, MTP planned to afforest an area about 190 hectares in Tongliao and would like to apply this afforestation project to Gold Standard. If approved, this will be the first carbon certification project in the region and will generage long-term benefit to the local community. The planting and maintenance work will be implemented by the local villagers under the supervision of Shanghai Roots & Shoots. Hybrid poplars are the major tree species to be planted. In hilly and sandy areas, bushes and other vegetations , such as grass sand blocks, will also be considered and implemented. With this project, this area will have its vegetation coverage and carbon sink increased, sand dunes stablized, water reserved and soil improved. Meanwhile, this project will generate extra jobs and income for local residents, bring advanced agro-forestry practices to the community and develop sustainable land management education there.

(b) Organisations that are involved in the project (project participants)

Jane Goodall Institute – Shanghai Roots & Shoots (the project owner)
Shanghai Roots & Shoots is part of a global network of localized non-profit organizations (NPO) that promote active civil society in over 130 countries worldwide. Established in 1999, Shanghai Roots & Shoots encourages youth to be advocates for environmental and wildlife protection, as well as poverty alleviation and social initiatives by giving them the tools and support to carry out projects of their own design. In 2004 Shanghai Roots & Shoots became the first foreign affiliated non-profit organization formally approved by the government of the People's Republic of China. Shanghai Roots & Shoots exists in Shanghai as a broad network of student groups organized through over 300 schools of all academic levels that range from the primary to university level. Student volunteers organize hands-on projects that include citywide recycling drives, environmental educational initiatives, and poverty alleviation projects in neighboring provinces.

Climate Bridge Ltd. (the credits buyer)
Climate Bridge Ltd. is the largest developer and dealer of VER projects in China with more than 7 million tones issued to date, and the top 15 global buyer of CDM projects based on UNEP data with over 100 projects registered. Climate Bridge focus on one-stop service of carbon emission reduction projects, including project development, portfolio management and trading service for CDM, GS and VCS projects. Besides, Climate Bridge also provides low-carbon consulting by helping clients to make carbon strategic planning and asset management. In addition, Climate Bridge pubCOlish "Bridge to China's Caron Market" regularly, covering China market updates, policy highlights and in-depth research and analysis.

The Gold Standard ®
Premium quality carbon credits

(c) Communities involved in the project

The project is located in Zhaogensumo Village, Bagatala Town, Keerqin Left Back Banner, Tongliao Municipality, Inner Mongolia, China. This village consists 190 families and the population is 749 people.

(d) Location of the project area and the planting area

The project is located to south of the Zhaogensumo Village.
The boundaries of the project area reach (East) the borders of Xiba Village and Zhaogen Village, (West) borders of Zhaogen Village and Bianjie Village, (South) herding land owned collectively by village residents, and (North) 30-year contracted farm land of village residents.
The following map shows the project area which includes two separate areas, Project Area 1 is on the west with a size of 80 hectares and Project Area 2 is on the east with a size of 110 hectares.
The planting area almost covers the whole project area except for two roads inside.
See the maps in 'Section 2. Shapefiles' for details

(e) Size of the project area and the planting area

Zhaogen(sumo) Village lies 10 km west of Bagatala Town, west of G204. The total area of this village is 84591 Mu (5629 hectares), including farm land, herding land, forests, roads, houses etc.). This village is sepearted into two natural residence compounds, called Zhaogen and Xiba. As shown in the map, the project area is 190 hectares and the planting area is also about 190 hectares which almost covers the whole project area except for two roads inside.

(f) Risk of change to the project area (during the crediting 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 asfinding 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.
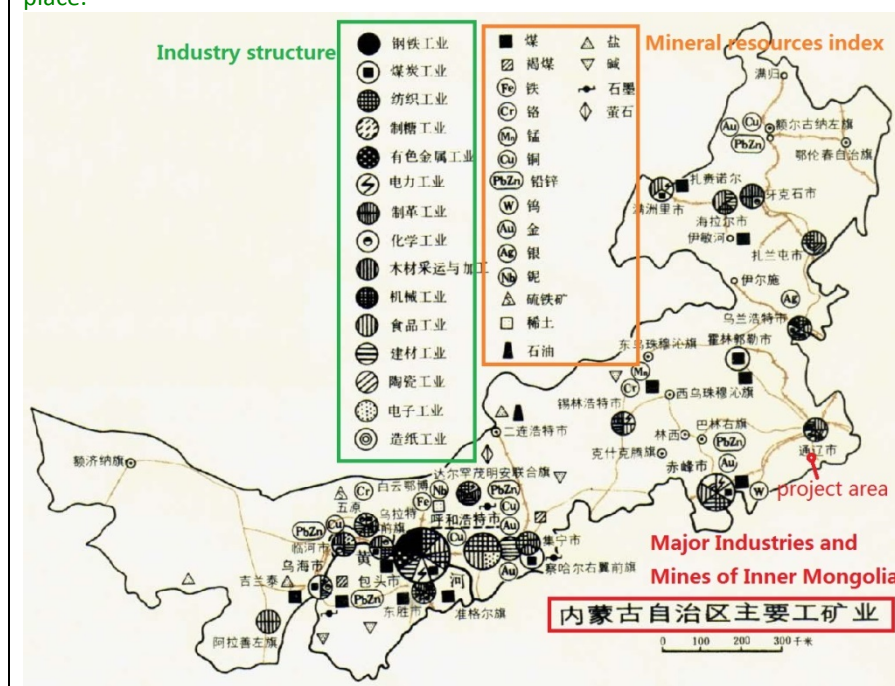
(f)   Risk of change to the project area (during the crediting period)

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 project owner has signed the Agreement with all individual villagers and the local government is very supportive of this project. Therefore the potential risk should be very low. The project owner will visit and monitor the area regularly. It is also required that the village committe update the project owner on a regular basis and communicate any potential change to the project area with the project owner. If there are any problmes, both parites will discuss and solve them in a way that causes the least harm to the project area and the trees.

(g)   Risk of change to the project activities (during the crediting period)

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 assets and will do good to protect them from invading sand dunes.

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.

(h)   Timeframe for the project activities

-    the project start date (planting start date): 11/04/2014;
-    the crediting period: 11/04/2014 to 10/04/2044, totally 30 years

(i)   Number of (predicted) CO2-certificates

106,604 tCO_2

(j)   Land-use history and current situation of the project area

Keerqin Left Back Banner is on the south of Keerqin Sandy Land, right in the typical agro-herding mixed region in North China. Keerqin 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 Keerqin 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 Keerqin 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).

(j) Land-use history and current situation of the project area

Zhaogen(sumo) Village 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 this village, which belongs to village residents collectively as herding land. However, this area is 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.

(k) Socio-economic history and current situation

Keerqin Left Back Banner has a population of about 0.4 million. Among them, 75,000 live in town, and 331,000 live in villages. 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.

Zhaogen(somo) Village has 190 families and 749 residents. All of them are ethnically Mongolian minority people. There are 5,038 heads of cows, horses, goats and pigs; 1,048 heads of chickens, ducks and geese. The village leadership team consists of 10 people. There are 22 China Communist Party members and 7 China Youth League members. In 2012, the overall food production is 2.85 million kg, net individual income 5,300 RMB. Over 96% of all residents live in cement houses.

(l) Forest management applied (past and future)

There's no large scale afforestation project in Zhaogen Village before. Most of the trees currently growing in Zhaogen Village were planted by individuals randomly without systemetic forest management.

The future 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.

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.

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 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).

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

(l)   Forest management applied (past and future)

between the project owner 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
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.

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.)

(m) Forest characteristics (including main tree species planted)

There is 2,850 Mu (190 hectares) of land to be planted with trees. The major tree species is hybrid poplar (*Popullus simonii*), as well as a small quantity of scotch pines, elms and willows. Also bushes may also be planted to stabilize the sands, fences and sand/grass grids will help to control desertification and sand dune mobility. In lower grounds and less hilly areas, poplars will be planted; in hilly sand dunes, bushes will be planted as pioneer vegetation. Locally grown hybrid poplar breeds will be chosen to be planted, such as Zhelin 4.

(n)   Main social impacts (risks and benefits)

Benefits:
− 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.

Risks:
− There still might be herding practices against the prohibited areas, which will cause the death of the young trees.
− Possible tree diseases and contagion.
Benefits:
− 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

Risks:
Gap between expected economic income generated from carbon certification and what is actually received

(o)   Main environmental impacts (risks and benefits)

Benefits:
− A new forest of 3,000 Mu (200 hectares) to increase vegetation coverage, slow down wind and decrease the negative impact of sandstorms on the village and farm land.

(o)   Main environmental impacts (risks and benefits)

- 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.

Risks:
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)   Financial structure

Year 1 – Year 5, ~0.9-1 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, ~0.2-0.3 million RMB, to maintain the forest, carry-out regular monitoring and investigation, deliver education and instructions to local people

Year 10- Year 30, ~0.5-0.8 million RMB, to maintain the forest, carry-out regular monitoring and investigation, deliver education and instructions to local residents

Funds of the afforestation project will be provided by Shanghai Roots & Shoots in long term. The cost for monitoring, forest inventories and regular audits will also be covered by Shanghai Roots & Shoots.

2. Shapefiles

Please provide *shapefiles* in the *supporting documents* and provide a reference to these *supporting documents* in this template.

(a)   Project area

There are two areas, the Project Area 1 on the west and Project Area 2 on the east. Project Area 1 has a size of 80 hectares and Project Area 2 has a size of 110 hectares.

(a) Project area

(b) Planting areas

The planting areas are illustrated by 5 shapefiles, named under MU 1 to MU 5. The total size of the planting areas is 190 hectares.

(c) Eligible planting area

The eligible planting area is the same as the planting areas, with a size of 190 hectares.

(c) Eligible planting area

(d) Modelling Units

There are five modelling units.

(e) Infrastructure (roads, houses, etc.)

There are two roads inside the project area.

(e)   Infrastructure (roads, houses, etc.)

(f)   Water bodies

No water bodies are located inside the project area.

(g)   Sites with special significance for indigenous people and local communities - resulting from the Local Stakeholder Consultation (LSC)

N/A.

(h)   Where indigenous people and local communities are situated

N/A.

(i)   Where indigenous people and local communities have legal rights, customary rights or sites with special cultural, ecological, economic, religious or spiritual significance

N/A.

3. Boundaries

Please provide evidence that boundaries of the project area and the planting are 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.

Please provide evidence that boundaries of the project area and the planting are clearly distinguishable in the field.