# NON-PERMANENCE RISK REPORT OF ZHANGYE IMPROVED GRASSLAND MANAGEMENT PROJECT

Document Prepared By Gansu Heihe Electric Power Sales Co. Ltd.

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| **Project Title** | Zhangye Improved Grassland Management Project |
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# 1 INTERNAL RISK

## 1.1 Project Management

The grass species planted in the project are all native species, and no ongoing enforcement is required to prevent encroachment by outside actors.

The management team include individuals with significant experience at least 5 years in all skills necessary to successfully undertake all project activities and maintain a presence in the country or is located more than a day of travel from the project site.

The management team includes individuals who have successfully managed projects through validation of GHG credits under the VCS Program (the registered VCS project 1361, 1825, 1826, 1832 and 1866), therefore this mitigation is scored as -2.

There is a specific mitigation plan made by project proponent for potential risks to the project, which includes a process for monitoring progress and documenting lessons learned or corrections that may be needed, and incorporating them into project decision-making in future monitoring periods, therefore this mitigation is scored as -2.

## 1.2 Financial Viability

According to the project design, the only cash in of the project will be the revenue from carbon credits and it will take over 30 years for the cumulative cash flow to break even based on the estimated volume of GHG emission removals generated from the project and the estimated credit price of 10 USD/t.

The cash out of the project is mainly for the purchase of grass seeding and fence material during the first three years, which has been fully secured by Zhangye Finance Department according to the Project Design, therefore this mitigation is scored as 3.

## 1.3 Opportunity Cost

According to the AFOLU Non-Permanence Risk Tool (Version 4.0), where the majority of baseline activities over the length of the project crediting period are subsistence-driven, an NPV analysis is not required, but an assessment of the net impacts of the project on the social and economic well-being of the communities who derive livelihoods from the project area shall be undertaken.

According to the assessment in Section 3.1.4 of the Project Description, the baseline scenario of the project is continuation of pre-project use (i.e. lands remain degraded grassland), which is subsistence-drive and no NPV analysis is required. And as described in Section 4 of the Project Description, the project has net positive impacts on social and economic well-being of the communities who derive livelihoods from the project area, therefore this question is scored as zero.

Also, the ownership of 261,059.80 ha of the project belongs to the state and village collective. All the project landowners agreed to authorized Zhangye Academy of Forestry Sciences the rights of land usage, grassland management and carbon credits of the project area, and the authorization has also been confirmed by the Zhangye Forestry and Grassland Bureau. After the implementation of the project, Zhangye Forestry and Grassland Bureau has cooperated with Zhangye Academy of Forestry and authorized the Zhangye Academy of Forestry Sciences the rights to control and operate the project as Project Proponent during the whole project crediting period. And the carbon revenue will be fully used for the continued implementation and sustainable management of the project. Therefore the project is protected by legally binding commitment to continue management practices that protect the credited carbon stocks over the length of the project crediting period, this mitigation is scored as -2.

### 1.4 Project Longevity

Totally, 261,059.80 ha of degraded grassland have been managed scientifically by fence building and reseeding of local high-quality forage. See the section 2.1.1 of the Project Description. The implementation of the project will generate GHG emission removals by increasing soil organics, mitigate the impact of climate change on the local ecological environment. The project longevity will be more than 40 years and the crediting period is selected to be 40 years.

And according to the agreement signed between Zhangye Forestry and Grassland Bureau and Zhangye Academy of Forestry Sciences, the management practice will be legally continued over the length of the project crediting period, this mitigation is scored as 10.

# 2 EXTERNAL RISK

### 2.1 Land Tenure and Resource Access Impacts

According to the evidence of lands rights, with support of Zhangye animal husbandry and Veterinary Bureau (before 2019), the landowners all agreed with Zhangye Academy of Forestry Sciences as the project proponent and authorize they the rights of land usage and to take care of the maintenance and overall management of the grassland during the project crediting period and the authorization has also been confirmed by the Zhangye Forestry and Grassland Bureau (after 2019). Therefore this mitigation is scored as 0.

## 2.2 Community Engagement

Since the project land are degraded grassland ecosystem, few residents living within the project area. And for the households living within 30km of the project boundary outside the project area, nearly all of them have been consulted during the Participatory Rural Appraisal (PRA) of the project competed by Dahua Engineering Management Co., Ltd in November 2016. According to the PRA report, the project generates net positive impacts on the social and economic well-being of the local communities who derive livelihoods from the project area.

And during the first monitoring period (25-July-2017 to 31-December-2021), the community impacts have been monitored through interviews and questionnaires from 16-September-2021 to 01-October-2021, and the monitoring results showed there were net community benefits achieved from the implementation of the project just as anticipated (please refer to Monitoring Report for details). Therefore this mitigation is scored as -5.

## 2.3 Political Risk

The project is located in China. According to World Bank Institute's WG[1], the six indicators of China are respectively -1.56 (Voice and Accountability), -0.36 (Political Stability and Absence of Violence/Terrorism), 0.44 (Government Effectiveness), -0.23 (Regulatory Quality), -0.29 (Rule of Law) and -0.28 (Control of Corruption), averaged over the most recent five years, so the mean governance score is -0.38, therefore the score is 4.

China has an established Designated National Authority under the CDM and has at least one registered CDM Afforestation/Reforestation project, therefore this mitigation is scored as -2.

[1] https://info.worldbank.org/governance/wgi/

And total political risk is scored as 2.

# 3 NATURAL RISK

## 3.1 Fire

### 3.1.1 Significance

Insignificant.

There is a separation zone at a certain distance in the project area, and according the Project Description of the project, grassland fire prevention and monitoring are carried out in the project area every year, so the fire damage is not devastating.

### 3.1.2 Likelihood

Less than every 10 years.

There could be fire that may damage the grass during the project lifetime, but the fire will be prevented by routine overseeing.

During the first monitoring period (25-July-2017 to 31-December-2021), there was regular records of routine overseeing for fire prevention, and no fire disaster occurred.

### 3.1.3 Score (LS)

LS= 2

### 3.1.4 Mitigation

According to the Grassland Law of China, local government shall carry out the construction of grassland fire prevention facilities. And the project proponent is experienced in local natural risk control and has established a Grassland management manual for the project which includes specific instruction in fire prevention. Therefore, the mitigation is scored as 0.25.

## 3.2 Pest and Disease Outbreaks

### 3.2.1 Significance

Insignificant.

According to historical records, the pest and disease risk are not common, upon routine overseeing, the pest was treated by biological control once occurred according to local Pest Control and Prevention Policy.

### 3.2.2 Likelihood

Less than every 10 years.

There could be pest and disease that may damage the grass during the project lifetime, but the pest and disease will be prevented by routine overseeing.

During the first monitoring period (25-July-2017 to 31-December-2021), there was regular records of routine overseeing for diseases and insects prevention, and no significant diseases and insects disaster occurred.

### 3.2.3 Score (LS)

LS= 2

### 3.2.4 Mitigation

The eagle's nest was built in the project area to prevent rodent. Also, upon routine overseeing, the diseases will be treated immediately by biological control once occurred. The chemical pesticides are allowed to be used only if there is a serious pest problem erupted in the project area. And the project proponent is experienced in local natural risk control and has established a Grassland management manual for the project which includes specific instruction in pest and disease prevention and control. Therefore, the mitigation is scored as 0.25.

## 3.3 Extreme Weather

### 3.3.1 Significance

Insignificant.

For the project, the potential extreme weather could be frost in winter. Grass species planted in the project are native species, which can adapt to the local climate. In case of frost disaster, grass can grow smoothly in the second year.

### 3.3.2 Likelihood

Less than every 10 years.

The project area is located in the north foot of Qilian Mountain, where the temperature is low, but the frost disaster has little impact on the grassland.

During the first monitoring period (25-July-2017 to 31-December-2021), there were frost occurred in winter in the project area, due to the grass species planted in the project are native species, which can grow smoothly in the second year.

### 3.3.3 Score (LS)

LS= 5

### 3.3.4 Mitigation

Grass species planted in the project are native species, which can adapt to the local climate. In case of frost disaster, grass can grow smoothly in the second year. Therefore, the mitigation is scored as 0.25.

## 3.4 Geological Risk

### 3.4.1 Significance

Minor.

The geological risk such as earthquakes around the project area are mostly low intensity, and the geological risk have little impact on grassland, so the damage will be minor.

### 3.4.2 Likelihood

Every 25 to less than every 50 years.

During the first monitoring period (25-July-2017 to 31-December-2021), no earthquake or other geological risk occurred.

### 3.4.3 Score (LS)

LS= 1

### 3.4.4 Mitigation

If there is an earthquake occurred, the Project Proponent and local Forestry and Grassland Bureau will be responsible for the recovery of the grassland with support of local government. And the project proponent is experienced in local natural risk control and has established a Grassland Management Manual for the project which includes specific instruction in geological risk control. Therefore the mitigation is scored as 0.25.