



新疆天然草地生态保护与利用 及牧民定居示范工程

The Project for Protection of Natural Grassland and Nomad Settlement Model in Xinjiang Uygur Autonomous Region

China-Japan Intergovernmental Technical Cooperation

“The Project for Protection of Natural Grassland and Nomad Settlement Model in Xinjiang Uygur Autonomous Region”



Working Together for a
Greener Xinjiang



- Japan International Cooperation Agency (JICA) China Office
- Department of Science and Technology of Xinjiang Uygur Autonomous Region
- Animal Science Academy of Xinjiang Uygur Autonomous Region



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Project Background

The Xinjiang Uygur Autonomous Region, which is the field of this project, is mostly arid or semi-arid land, and nomadic grazing is a traditional part of life primarily in the northern region. This grazing spans hundreds of kilometers over the course of a year. There are 480,000 km² of usable natural grasslands in the Xinjiang Uygur Autonomous Region; however, with the increasing population and demand for meat since 1950, the number of livestock has increased, placing a significant burden on these natural grasslands.

The government of the Xinjiang Uygur Autonomous Region has sought to implement a nomad settlement project to stabilize the lives of nomads through the development and popularization of alternative industries, such as crop farming, and new methods of farming, such as stall breeding and feed crop cultivation. This in turn decreases the burden put on the natural grasslands and thereby helps to protect and restore them.

However, the nomads of this region have no experience with stall breeding, and there are insufficient human resources for cultivating technological extension workers to instruct the nomad peoples in new technologies. Furthermore, deficient irrigation technology in the settlement region has led to salt damage, livestock illness and other detrimental factors which have prevented the nomads from getting a stable income after settlement. This in turn has prompted many nomads to return to nomadic grazing, which, because of the increase in livestock numbers due to stall breeding, has had an even greater impact on natural grasslands.



This project, therefore, seeks 1) to help resolve these issues through the introduction of improved planning methods and technologies for establishing a sustainable settlement project that protects the natural grasslands and improves the livelihoods of the region's nomadic peoples and 2) to strengthen the extension system used to promote this settlement project.

Project Objective

The objective of this project is to accomplish the following:

To establish a technological support system for settled nomadic peoples through the implementation of model initiatives enabling the functioning of a sustainable settlement project which both protects the natural grasslands and improves the lives of nomads in the model region.

More specifically, the above objective is to:

Increase settlement and protect the natural grasslands of the Xinjiang Uygur Autonomous Region by improving the lives of nomadic peoples.

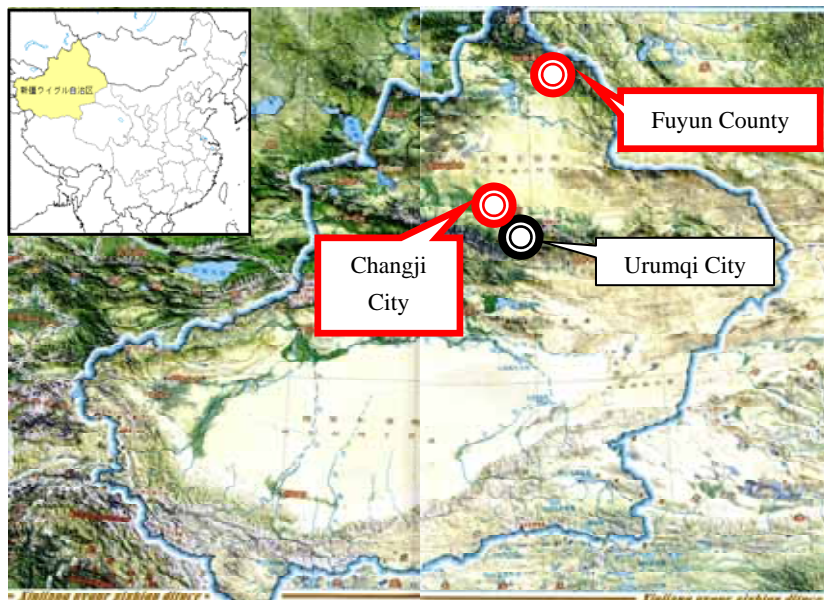
This project shall run for approximately 59 months, from May 2007 to March 2012, and will primarily involve the following in order to achieve its stated objective.

- (1) The establishment of a natural grassland protective utilization plan, a land utilization plan, a farming program, planning of water utilization and a technological extension system plan for the model region.
- (2) The implementation of a pilot project, based on model region planning, for protecting the natural grasslands and improving the lives of the nomadic people.
- (3) The strengthening of a technological extension system for promoting a sustainable settlement project.

Project Target Regions

The target regions for this project are Changji City and Fuyun County, Altay Prefecture, which are all located within the Xinjiang Uygur Autonomous Region. The model sites are Akeqi Village in the Miaoergou Township of Changji City and Qiabula Village in the Dure Township in Fuyun County.

The pilot project will be implemented in each region with 20 livestock farming households possessing highly model characteristics.



-Overview of Model Villages-

[Akeqi Village]

- Area (Township): 1,176km²
- Population / Households: 541 / 108
- Annual Rainfall: 193mm
- Crops: wheat, cotton, corn, alfalfa
- Irrigation: groundwater (drawn from wells)

[Qiabula Village]

- Area (Township): 5,057km²
- Population / Households: 1,250 / 198
- Annual Rainfall: 159mm
- Crops: wheat, corn, alfalfa
- Irrigation: snow runoff (drawn from rivers)

Fundamental Project Policies

In order to achieve the stated objective of this project “to establish a technological support system for settled nomadic peoples through the implementation of model initiatives enabling the functioning of a sustainable settlement project which both protects the natural grasslands and improves the lives of nomads in the model region,” the following five fundamental policies have been established.

- (1) Implement a project which emphasizes autonomy.
- (2) Utilize planning methods which are based on farming strategies that take into consideration the characteristics of the region and nomad settlements.
- (3) Strengthen technological extension capability through the implementation of a phased training process.
- (4) Utilize existing technological manuals.
- (5) Strengthen the links between natural grassland management and the settlement project.

The top priority of this project is to strengthen the links between natural grassland management and the settlement project.

In order to successfully protect and restore the natural grasslands as well as improve the livelihood of settled villages through improved agricultural production, the links between the two must be carefully balanced and maintained. And it is important that all of the organization concerned with the policies and measures of this project are connected to one another and that the policies and measures of both natural grassland protection and the nomad settlement model be closely linked at the various stages of planning, pilot project implementation, monitoring and evaluation.





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[Natural Grasslands]

Natural grasslands are being depleted due to livestock overgrazing during winter, spring and fall pasturing. Stock farming done through pasturing is well suited to the utilization of the environment's natural abundance; however, in order to earn more income, livestock numbers are increased beyond its potential. And continued pasturing of more livestock than the volume of grass lead to a situation where stock farming becomes unsustainable. Thus, a response which balances the amount of natural resources (amount of natural grassland used by each farm) with the amount usable (number of livestock that can be bred; maximum production volume with artificial grasslands (within settlements)) is necessary.

[Artificial Grasslands]

Artificial grasslands can be used to grow feed for livestock as well as farm products. They help keep agricultural income from depending solely upon the sale of livestock, and thus they play an important role in stopping the depletion of natural grasslands. For this reason, it is necessary to examine rational land use strategies and instruct settled nomads in techniques for cultivating feed crops (alfalfa and corn) so that they can perform livestock breeding which is not completely dependent upon pasturing. Furthermore, it is necessary to teach settled nomads techniques for cultivating cash crops (soybeans and sunflower seed oil) so that their livelihoods can be improved.



[Settlements]

Settlement can greatly improve the lives of the elderly, women and children in a variety of areas, such as medicine, education and work. However, in order to be able to sustain a stable lifestyle while continuing stock farming well into the future, it is crucial that natural grasslands be used in an appropriate manner. Thus, it is essential that the number of livestock that can be bred, the livestock breeding method, and the method of sale be managed appropriately. Furthermore, in order to bring about a more positive home life, family lifestyles must be examined and, if necessary, improved with the aim of providing a healthier, more comfortable and abundant life.

[Training]

Training is indispensable for successfully extending the activities and output of the project. Issues faced thus far with regard to training for nomad settlements include a shortage of extension workers, instruction methods, and training texts and materials. In order to be able to continue pursuing agriculture and be able to maintain their livelihood after settlement, the content of necessary technological instruction and the development of the extension system must be strengthened.



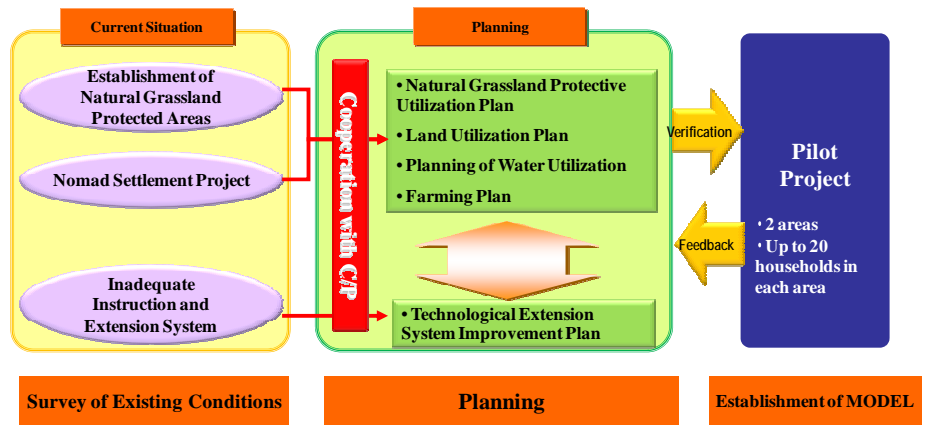
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Project Implementation

The main purpose of this project is the implementation of model initiatives enabling the functioning of a sustainable settlement project which both protects the natural grasslands and improves the lives of nomads in the model region, and these initiatives are to be carried out in the three areas of 'planning', 'technological improvement' and 'system enhancement'. In particular it is crucial to emphasize the development of self-sufficiency; to maintain coordination between personnel within the government of the autonomous region, the cities, the counties, the townships and the towns as well as the technological extension coordinators and those connected with testing and research organizations; and to build a system for continuing and expanding technological instruction for settled nomads.

Also, all project initiatives shall be joint efforts by China and Japan, emphasizing "process" more than "results" with all "processes" aimed at technology transfer.



Planning

At the model sites, planning which takes into consideration field surveys and collected data about model sites will be used to devise methods of efficient land utilization, water utilization, farming which rationally utilizes natural grassland and artificial grassland, and methods for maintaining and improving nomad settlers' income. During planning the aim will be to strengthen both C/P independence and cooperation.

- Natural Grassland Protective Utilization Plan: carrying out of recovery monitoring and measures emphasizing nomad initiative
- Land Utilization Plan: improvement of the productivity of cultivated land while protecting and managing cultivated land
- Planning of Water Utilization: implementation of rational water utilization and measures against salt accumulation
- Farming Program: introduction of stall breeding, improved livestock, feed coordination, and income from sources other than stock breeding
- Technological Extension System Plan: introduction of a phased training system which promotes the inclusion of female trainees

Pilot Project

Necessary technological displays and demonstrations in the areas of natural grassland protection, land utilization, water utilization and farming will be carried out based on the plans which have been developed. Also, the county and township technology extension coordinators shall, based on the technological extension system plan, perform technological instruction for farms involved in the project. During the implementation period of this pilot project the needs of farmers shall be assessed whenever necessary and reflected in the training content and pilot project activities.

The following three fundamental principles shall guide the implementation of the pilot project.

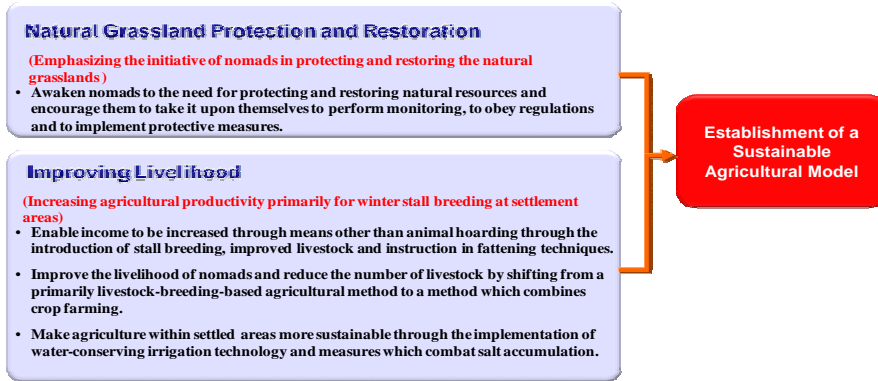
- (1) Increase settled nomads' awareness of the need to protect natural grasslands and improve their agricultural production technology.
- (2) Improve the capacity of the technological extension system for supporting (1) above.
- (3) Strengthen inhabitant organization to synergistically enhance the results of (1) and (2) above.

Project Output

Establishment of a Natural Grassland Protective Agricultural

One predicted output of this project is the establishment of a natural grassland protective agricultural model.

The establishment of a sustainable agricultural model means achieving both of the aims given in the chart below, namely “emphasizing the initiative of nomads in protecting and restoring the natural grasslands” and “increasing agricultural productivity primarily for winter stall breeding at settlement areas.”



Improvement of the Technological Extension

The second output of this project is the improvement of the technological extension system by establishing a “technological extension system engaged in problem solving” via coordinated links between technological extension coordinators at the regional, city, county and township levels.

By clearly identifying the roles of coordinators at the regional, city, county, and township levels at each phase of project management (planning, implementation, evaluation, and issue selection), areas for improvement in project execution will become more evident.

Also, by cultivating and strengthening farmers’ organizations, they can be expected to help with the effective lateral expansion of knowledge from one group of settled nomads to another.



Establishment of Manual

The third output of this project, after comparative examinations of the results of each model site are examined and recommendations adopted, is the creation of manuals. These manuals shall be used for planning the establishment of sustainable settlement projects that both successfully protect natural grasslands and improve the livelihoods of nomads, and for technical instruction following nomad settlement.

These manuals are expected to be used in enhancing the effectiveness of training and the sustainability and scope of technology employed. Currently, they are expected to be of three varieties: “Planning”, “Technological Extension System” and “Extension Instruction Tools”.

These manuals shall be established at each phase of implementation (planning, training, and pilot project implementation) and amended as needed. In particular, the Extension Instruction Tools manual is meant to be usable by as many farmers as possible; hence, its content must be carefully crafted and contain illustrations and other aids which help deepen understanding.

China and Japan will work together in both choosing recommended topics for inclusion and in creating these manuals; and following the conclusion of this project, the Chinese counterparts will make amendments and additions as needed.



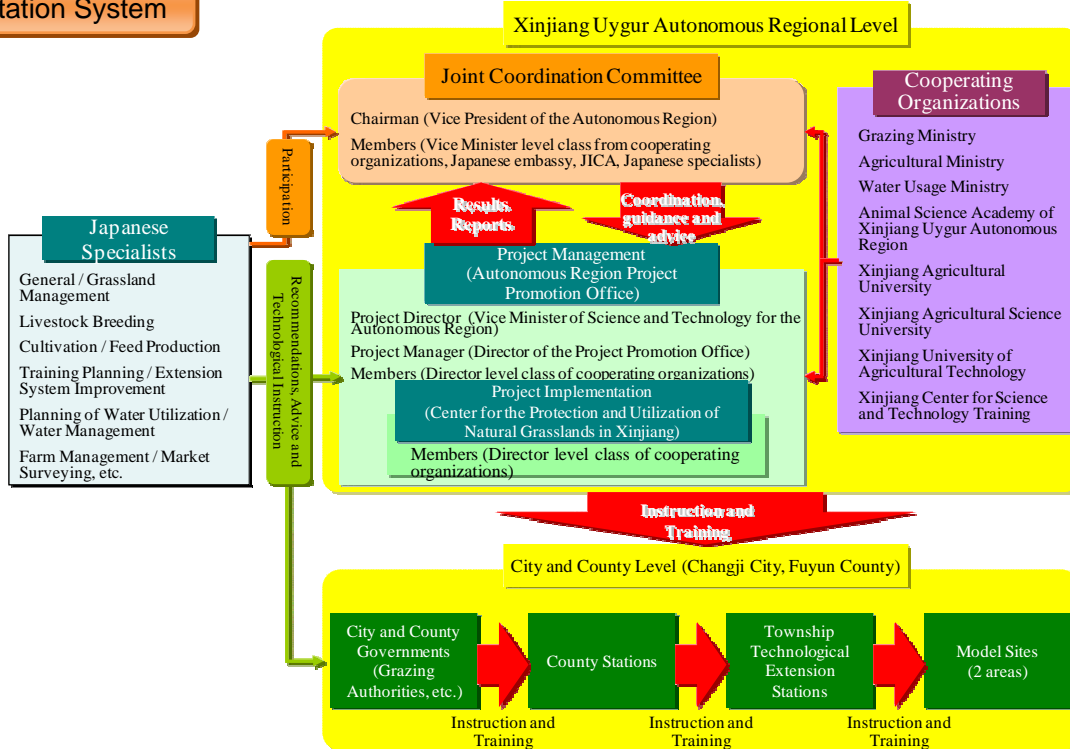
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Implementation

	2007	2008	2009	2010	2011
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Preparation Phase					
Discussion of implementation planning and creation of inception report	■				
Creation of Various Plans related to Model Sites					
Organizing the planning teams; discussion of schedule, etc.	■				
Collection of existing information; review of existing plans	■				
Issue analysis	■				
Selection of model farms and field surveys at model sites	■				
Planning	■				
Implementation of orientation sessions		■			
Pilot Project Implementation					
Planning and implementation		■	■	■	■
Monitoring and evaluation		■	■	■	■
Strengthening of Technological Support System					
Pamphlet creation, training, seminars, technical instruction		■	■	■	■
Manual creation, extension planning					■
Project Management					
Evaluation of performance indicators, mid-term and final evaluations		■		■	■

Implementation System



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