China

Sanjiang Plain Agricultural Development Program (II)

External Evaluation: Keio University

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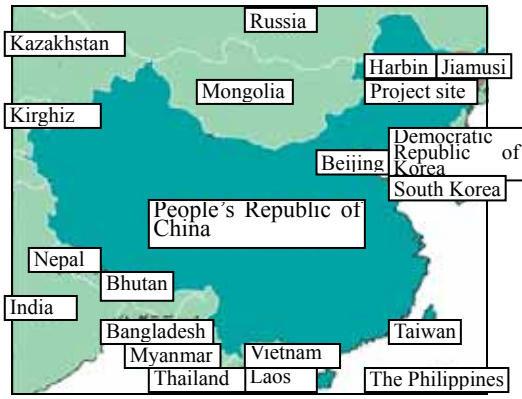
Field Survey : July, 2007

1. Project Profile and Japan's ODA Loan



Map of project area

Environmental Conservation Area set up during the implementation of the project

1.1 Background

The region, known as Sanjiang Plain (or the three river plain), is an alluvial plain formed by the three rivers of Heilongjiang, Songhuajiang and Wusulijiang. It is the largest plain in the northeastern region of China. Because of its fertility, this plain is considered one of the three major blacklands of the world. The cultivation of land in this region started at the end of the Qing dynasty and during the time the region was called as Manchukuo. However, after the creation of the People's Republic of China, parts of the region were brought under direct state control to be reclaimed. The reclamation progressed significantly when large contingents of soldiers were sent to the region to engage in the reclamation work. Many urban youths were also sent to the region to take part in the reclamation work, as were those who were migrated to the region as part of the rustication policy China implemented during its Cultural Revolution. As a result, although agricultural production dramatically increased, food production from the arid lands was insufficient and unstable because of inadequate agricultural infrastructure including the lack of a sophisticated water management system. Consequently, many reclaimed areas had to be abandoned mainly due to the difficulty of water management.

China achieved a dramatic increase in food production at the time the project was launched, but

* As part of the preparation for this project, a joint study was conducted with Mr. Ko Rinsei of Tsinghua University, China.

the cultivated acreage for food crops was on a downward trend, giving rise to concerns about the disruption of the balance between the supply and demand of food in the future.[1] Thus one of the most important tasks facing the Chinese government is developing the Sanjiang Plain as an important base for food production with great potential for expanding agricultural production.

1.2 Objectives

By funding sub-projects under the Heilongjiang Agricultural Reclamation Construction Plan under a two-step loan scheme through the intermediary of the Export-Import Bank of China., this project is to improve medium- and low-productivity rice fields and to add more value on food production, thereby ensuring China's food security and alleviating regional disparity in income levels.

1.3 Borrower/Executing Agency

Ministry of Foreign Trade and Economic Cooperation / Export-Import Bank of China[2]
Sub-Project Implementing Agency: Administrative Agency of Heilongjiang State-farms[3]

1 For details, see the ex-post evaluation of the Sanjiang Plain Longtouqiao Reservoir Construction Project.

2 Since 1999, the borrower of ODA for China has been changed to the Government of China (Ministry of Finance).

3 This project aims to establish a system for implementing sub-projects within a two-step loan framework through the Export-Import Bank of China with the Administrative Agency of Heilongjiang State-farms serving as the sole borrower. The two-step framework is adopted as a matter of form, but the support provided by the project is strongly marked by support for the Administrative Agency of Heilongjiang State-farms, the project's substantive executing agency.

1.4 Outline of Loan Agreement

Loan Amount/Disbursed Amount	17.702 billion yen (1996: 14.91 billion; 1997: 2.792 billion yen)/17.687 billion yen)
Exchange of Notes/Loan Agreement	December 1996 /December 1996 (September 1997)
Terms and Conditions -Interest Rate -Repayment Period (Grace Period) -Procurement	 2.3% 30 years(10 yea rs) General Untied
Final Disbursement Date	April 2003
Main Contractors （More than 1 billion yen）	—
Consulting Services (More than 100 million yen)	None
Feasibility Study (F/S), etc.	March 1984 F/S (JICA) April 1995 F/S (Government of China) March 1998 Basic design (Government of China) 1995 Special Assistance for Project Formation (SAPROF) (JBIC) 2000 SAPI

2. Evaluation Result

2.1 Relevance

In China's food supply system, one realizes that the Sanjiang Plain is an atypical area. After the communist revolution, the history of national land reclamation, during which many groups of pioneers were sent to the vast terrain, continues to this day. There are many farms here that are identified only by their numbers such as 597 or 853. These numbers represent simply the names of the military units that were sent to the Sanjiang Plain. The Administrative Agency of Heilongjiang State-farms, the project's executing agency, has two identities: an agency of the Government of Heilongjiang and the manager of farms that are under the direct control of the state. The Farmlands in the Sanjiang Plain which the Administrative Agency of Heilongjiang State-farms manages are under the contol of the state, the importance of this project is obvious in terms of the nation's food strategy. For this reason, the project is highly relevant

Corn fields expand on this farm in Sanjiang Plain (near the Jiang Chuan Farm)

2.1.1 Relevance at the time of appraisal

In the 9th Five-Year Plan for China's National Economy and Social Development, the Government of China emphasized agriculture to be one of the top priority issues for ensuring food security and alleviating regional disparity in income levels. As the Sanjiang Plain was one of the priority areas of its 1988 Priority Food Production Area Plan, the Government of China grappled with the Heilongjiang Agricultural Reclamation 10 Billion Loaf (5 million tons) Construction Plan .The Government of China set 500 million tons as the goal of commercial food production for 2000.

However, since the agricultural production in Heilongjiang Province's agricultural reclamation district was immature both in terms of the coverage and quality of agricultural infrastructure, The district's agricultural production was susceptible to meteorological disasters. Consequently, the district was mired in an unstable financial condition. In particular, there was an urgent need to overcome the water utilization condition unique to swamplands. The big challenge was to find ways to improve the existing structures of agricultural production and increase agricultural production and ensure stable supply of commercial food products.

As for the attention to the environmental impact, the project is a monumental project in the history of ODA projects. The Sanjiang Plain is a precious swampland that has attracted attention from all over the world as a habitat for cranes and other wildlife. In launching the present project, OECF (today's JBIC) endeavored to formulate a project proposal to be compatible with environmental protection by commissioning the Wild Bird Society of Japan to conduct the SAPI

study. The project was expected to serve as a model for formulating projects in cooperation with NGOs.

2.1.2 Relevance at the time of evaluation

In the 11th Five-Year Plan of China's national economy and social development, the importance of ensuring food security and alleviating the regional disparity in income levels is confirmed, as in the past. The sector policies in the agricultural sector have been hammered out in previous plans including the 10th Five-Year Plan of Chinese national agriculture and rural economic development, the 11th Five-Year Plan of national agriculture and rural economic development, the 11th Five-Year of national agricultural mechanization development, and the 11th Five-Year Plan of national agricultural reclamation economy and social development.

2.2 Efficiency

The actual project period was slightly longer than planned. While outputs surpassed the original plan, the project cost decreased slightly. Taken as a whole, there are no serious issues about the project's efficiency.

2.2.1 Outputs

The planned and actual outputs are shown in the table on the last page of this report. During the project period, there was a policy change to reduce the load on the environment by improving medium- and lower-productivity fields and decreasing the recalamation of land. Except this change, most outputs were realized as planned.

In the subprojects to improve medium- and lower-productivity fields, in addition to continuing the soil improvement project until the mid-1990s, efforts were made to improve the water drainage of upland fields by constructing water facilities such as those for irrigation, especially drainage facilities, by utilizing the machines introduced in the present project. As a result, the water management situation has changed as shown in Table 1.

Table 1. Available Irrigation Area and Area of Improved Drainage (hectares)

	Available irrigation area			Improved water drainage area		
	1997	2005	Rate of change	1997	2005	Rate of change
Sanjiang Plain	53.54	83.38	55.73	108.47	122.77	13.18
Other than Sanjiang Plain	7.55	11.03	46.09	10.63	14.24	33.96

Prepared with data provided by the executing agency.

The irrigation area increased by more than 55% in the Sanjiang Plain. While the change (13.18%) for water drainage improvement may appear insignificant, this translates to more than

14.3 hectares of area where water drainage was improved. For example, the improvements realized on Farm 850 are shown in Table 2.

Table 2. Improvement of Water Drainage Function on Farm 850

	Before Project	After Project
Coefficient of permeability (0～30cm)	0.25	0.35
(30～50cm)	0.06	0.25
(50～100cm)	0.05	0.10
Surface runoff coefficient	0.13	0.30

All data are from Liu's *"Sanko Heigen Shizen Kannkyo Henka to Seitai Hoiku* (Changes in Natural Environment in the Sanjiang Plain and Nurturing Ecology)", Science Press, 2002 (in Chinese).
Coefficient of permeability is defined as the speed at which water flows downward: the larger the coefficient, the greater the drainage capability.
Surface runoff coefficient is defined as the speed at which surface puddles flow sideways.

Before the project was implemented, since water tended to seep into the soil, fields in the project area were unsuitable for growing soybeans, corn, and other crops. However, production in these fields increased as a result of aridification achieved in the project.

2.2.2 Project period

Although the project period was 49 months from December 1996 to December 2000 in the original plan, it actually took 70 months from December 1996 to October 2002, a 143% extension of the plan. The reasons for the delay of the period were: 1) the government did not authorize the basic design until March 1998; 2) the ODA loan did not become effective until September 1997; the tendering was therefore also postponed until November 1997 and the start of construction lasted until April 1998. There is no delays in the construction schedule itself.

2.2.3 Project cost

While the planned cost was 44.01 billion yen (of which the ODA loan portion was 17.702 billion yen), the actual cost was 40.901 billion yen (of which 17.687 billion). The cost for the ODA loan portion was in accordance with the original plan while the project cost decreased around 7.6% in total.

2.3 Effectiveness

2.3.1 Increase in food production: Improvement of production technology

The amount of food produced exceeded the planned production volume, so the project was highly relevant.

Table 3. Increase in Food Production

	Actual value 1990	Planned value 2000	Actual value 2 000	Actual value 2005

cultivated acreage for food crops (ha)	1,656,666	2,000,000	1,818,622	1,904,847
Amount of food produced (ton)	3,094,849	7,148,001	8,141,318	10,265,095

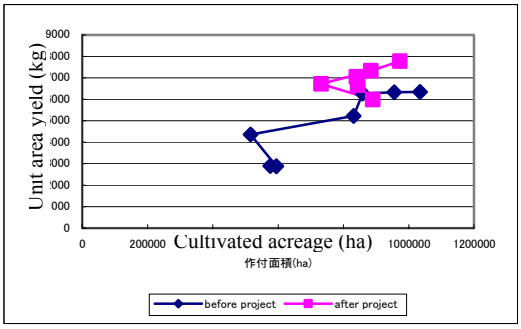
The planned value of 2000 is based on a plan formulated in 1990.

It is true that cultivated acreage did not increase very much, but the efforts that were made to avoid the adverse impact on the environment through reclamation of new lands are highly commendable. Indeed the increase in food production that exceeded the initial expectation should be interpreted as a reflection of the effectiveness of the project despite the limited increase in cultivated acreage. It goes without saying that the increase was brought about by the increase in productivity. This argument is verified in Figure 1.[4] If a graph is used to represent the amount of production per hectare of cultivated acreage, the amount realized after the project (represented by the red line) will be above the amount recorded before the project (represented by the blue line).

In order to examine the factors responsible for this upward shift, a graph will be drawn plotting the cultivated acreage along the horizontal axis and the amount of production along the vertical axis (the so-called production coefficient) by using food production data released by each of the four departments that have jurisdiction over the 53 farms dotting the Sanjiang Plain.

While there is no upward shift observed for paddy rice, there is for corn. Improvement of medium- and lower-productivity fields, which forms the core of the present project, is a project designed to improve water management in swamplands. Consequently, it hardly had any impact on the production technology of paddy rice that by nature is suitable for cultiation in swamplands, but the productivity of corn cultivation was increased by transforming swamplands iinto well-drained paddy fields.[5]

Fig. 1. Upward Shift in Food Production Technology



4 In the analysis below, irrigated rice, corn, and wheat are taken as examples and their sum total is defined as food.

5 If the amount of production is regressed against the cultivated acreage, the dummy variable for differentiating the amount of production before the project and after will vary significantly for all cereals including corn but not irrigated rice.

Agricultural and construction machineries introduced in the project were used mainly in engineering works for enhancing the drainage function of crop fields. As will be shown in 2.5, due to the high earnings from the paddy rice yields, cultivated acreage continues to expand even now. However, ironically, since the project area is a swampland, there is excess amount of water in the soil, which causes a lot of hardship for farmers; nevertheless, underground water is mostly used in cultivating the land, with the result that there are chronic shortages of surface water. In the context of sustainability, cultivating crops effectively that require much less water than paddy rice does is extremely important. Since rapid development has continued, up to now, underground water has been used in most cases.[6] Development of irrigation facilities for supplying surface water is desired. For example, on original farms, because of the use of underground water, the depth to which wells are dug has increased, from 0.15 m in 1997 to 0.16 m and 0.94 m in 1998 and 1999, respectively,[7] which means that groundwater is being depleted.

While there are causes for such concerns, the project is highly effective in terms of the efficient draining of crop fields.

Fig. 2. Production Coefficient of Cereal

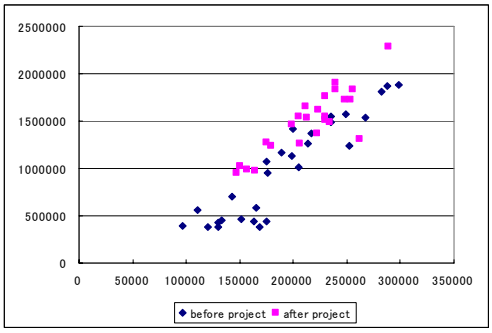


Fig.3. Production Coefficient of Irrigated Rice

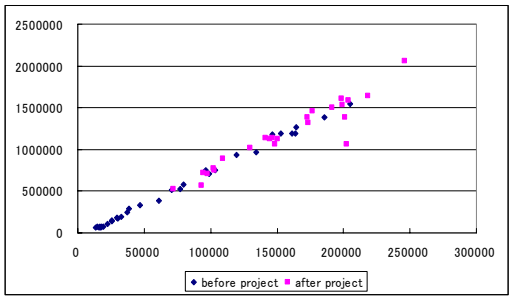
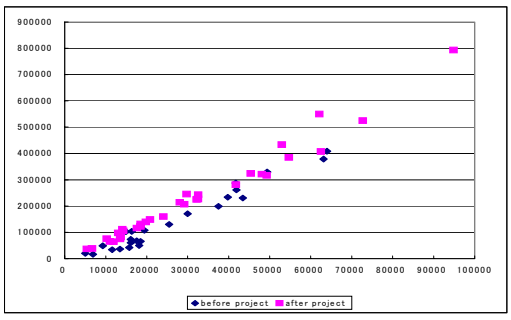


Fig. 4. Production Coefficient of Corn



In Figs. 2, 3 and 4, the horizontal axis represents cultivated acreage in hectares; the vertical axis represents production volume in tons.

2.3.2 Promotion of streamlining through mechanization

Progress in production technology does not by itself lead to increased crop yields. The vast

6 In the Administrative Agency of Heilongjiang State-farms where development is being achieved with ample funding, a large volume of groundwater is being pumped out, but in other areas, hardly any groundwater is being pumped.

7 Liu (2002)

terrain in the Sanjiang Plain is farmed by relying on mechanical power. The plain has a cultivated area of 1.338 million hectares (2005), or about 30% of the total cultivated area in Japan (4.67 million hectares as of 2006).

Summer in the Sanjiang Plain is mild, so the area is suitable for agriculture, but winter arrives early and is bitter cold. If the crops are not harvested in the short time, some crops will be left unharvested. It is thus noteworthy that the provision of harvesting machines under the project has enabled farmers to harvest in a short time the crops in the vast land.

The project supported the operation of the aeronautical station under the supervision of the Administrative Agency of Heilongjiang State-farms. In addition to monitoring agricultural activities, the aeronautical station engages in environmental protection activities including monitoring illegal reclamation of land in protected habitats.

Harvester

A plane belonging to the aeronautical station

2.3.3 Stock farming

The project also endeavored to develop stock farming principally by investing in Heilongjiang Wondersun Dairy Co., Ltd., which involved shipping crops, not immediately after they were harvested, but rather after value was added to them by using them as fertilizer. The dairy cattle that Wondersun Dairy owned increased from 128,000 to 177,000 heads of cattle, while the amount of mild produced nearly doubled from 235,000 tons to 463,000 tons. Dairy products made by Wondersun Dairy are famous throughout China. In other words, they have brand power.

2.3.4 Economic Internal Rate of Return (EIRR)

Although only the Administrative Agency of Heilongjiang State-farms is the final borrower in the project, the Agency implements several projects by distributing funds to departments under its supervision as well as to those under its direct control. In addition, instead of appraising the present project after having the ex-ante planned values confirmed and then launching the project,

the Agency launched the project after setting the objectives of the project as a whole and establishing the framework of the subprojects. EIRR was not calculated at the time of appraisal. This project can be classied as so-called sector loan. Consequently, following the established procedures taken in similar projects, EIRR is not calculated in this project.

2.4 Impact

2.4.1. Ensuring food security

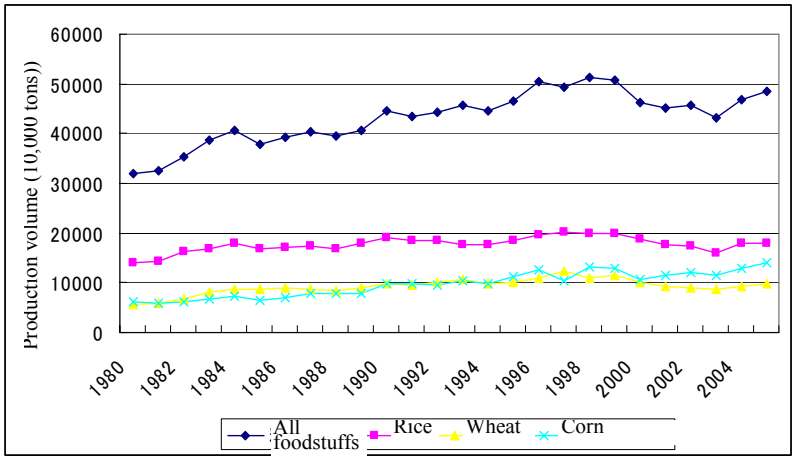
While China's cereal production reached 500 million tons in 1996, the diversion of farmland for industrial use and housing has advanced amidst rapid economic growth. As a result, cereal production has fallen below the 500-million-tons mark since 2000. This decline in production occurred against the background of a shift in labor population from farming to other industries and is as a result of the reduction in cultivated area that has occurred amidst the economic growth. Amidst these developments, the importance of Heilongjiang Province and Sanjiang Plain as areas of food production has increased. Cereal production in Heilongjiang Province, which accounted for 5.18% of China's total cereal production in 1990, gradually increased to 5.47% in 1995 and 5.51% in 2000, but rose sharply to 6.39% in 2005.

While the cereal cultivated acreage for Heilongjiang Province as a whole was 9.889 million hectares, cultivated acreage in the Administrative Agency of Heilongjiang State-farms was 1.9 million, and although the province represents only about 19% of the area of China, it accounts for around 33% of the total crop yields. The importance of the Administrative Agency of Heilongjiang State-farms for the Province and the whole of China is indisputable.

2.4.2 Solving the problems of regional disparity in income levels

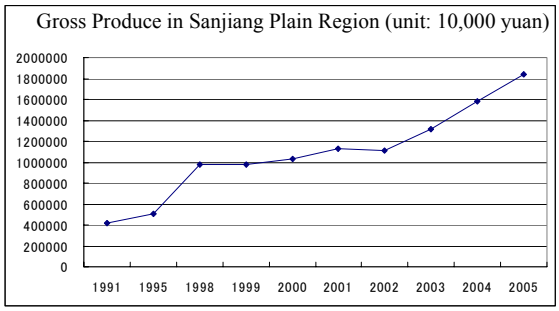
The economy is rapidly developing throughout China. The regional disparity in income levels is still the issue. However, there is no doubt that the economy of the Sanjiang Plain region is steadily improving. A glance at Figure 6 demonstrates this improvement. During the hearings held by the executing agency, many farmers testified that their standard of living improved from before and after the project. This suggests that people can feel that their standard of living improving.

Fig. 5. Total Food Production in China



Prepared on the basis of the China Rural Statistical Yearbook 2006

Fig. 6. Gross Produce in Sanjiang Plain



Housing area for ordinary farmers (Farm 853)

2.4.3 Impact on the environment

The Sanjiang Plain is a world-renowned habitat for cranes. There is a real possibility that wildlife there will be seriously harmed if large-scale development plans are carried out under this project without first carefully conducting environmental research. After China's Environmental Agency published the results of a study it conducted on the impact this project might have on the environment and concluded that there would be no such impact, another environmental research was conducted, and OECF (today's JBIC) carried out its Special Assistance for Project Formation (SAPROF). In the latter, JBIC proposed, among others, establishing sanctuaries, providing buffer zones for the sanctuaries, building a route to secure water resources, limiting the use of agricultural chemicals, planting trees for protection against wind, conducting periodic inspections, and increasing feeding areas. However, the implementation of environmental monitoring was inadequate. The executing agency informed that it would be difficult to secure the budget necessary for implementing these environmental measures. Thus the Special Assistance for Project Implementation (SAPI) was also carried out from 2000 to 2002.[8] As a result, some parts of the irrigation plan were cancelled, while four sanctuaries were established and a monitoring office was established. From these developments it can be considered that the project is not expected to have any particular impact on the environment.

8 The Wild Bird Society of Japan was involved in both SAPROF and SAPI. These were the first surveys that OECF conducted in cooperation with an NGO.

Column

It is notable that the formation and implementation of this project is supported by an NGO. Another feature of this project is that an NGO participated in promoting the project's effectiveness. Specifically, the Wild Bird Society of Japan proposed and cooperated with the implementation of a monitoring system for minimizing environmental destruction. The Wild Bird Society, which conducted monitoring activities in the Sanjiang Plain region, cooperated for this ex-post evaluation The Society made the following comments: .

> Compared with the mid-1990s, the number of cranes and other members of the family of *Gruidae* has increased in the Naolihe River basin. Also, awareness of the importance of swamps and their preservation has increased significantly since the 1990s, and various efforts have been made to address the issue of conservation. On the other hand, inadequate budget is an issue and undermine efforts to administer the sanctuaries. In the future, aridification and other problems would become more serious. Thus proper management of the sanctuaries, including monitoring the sanctuary environment, becomes essential.
>
> Experts with experience in monitoring swamplands and the staff of the field survey all cooperated in the wild bird field survey that was conducted as part of this project. In particular, the field survey staff are still working in departments of the farmlands for the protection of sanctuariesproject. We hope that these staff members would apply their experience in managing the sanctuaries in the future.

In addition to these comments, the Wild Bird Association of Japan provided large amounts of reference information including on the improvement of living standard and on the importance of water management. Besides the information from the executing agency, the knowledge provided by experts who have been involved with the project continuously – before, during and after – has contributed to this ex-post evaluation.

Photo: *Grus japonensis* in Naolihe River
Taken at the time of the field survey conducted by the Wild Bird Society of Japan in June, 2007

As will be examined in 2.5, since difficulties continue to remain putting into place a system for implementing environmental measures, monitoring should be continued in the days ahead and, if necessary, providing additional assistance should be considered.

2.5 Sustainability

2.5.1 Executing agency

2.5.1.1 Technical capacity

The Administrative Agency of Heilongjiang State-farms shares technical information with the state's agriculture department. Of the three administrative agencies of state-farms in China, the

Administrative Agency of Heilongjiang State-farms is the only one that compiles and publicly publishes a statistical yearbook on its own. This fact demonstrates that the Administrative Agency of Heilongjiang State-farms is very adept in information management. Thus there are no doubts about the technical competency of the executing agency.

The right to use the agricultural machines introduced in the project was transferred to individual farmers five years after their introduction. Users of agricultural machines are allowed to make plans for operating the machines at their own discretion, and as a result, they have been able to set them up in an effective manner. For example, when there is no need for them in the Sanjiang Plain, they are loaned out to farmers in Mongolia; earnings from such transactions all go into individuals who have the right to use the machines in the Sanjiang Plain. Engineers from the machine manufacturers are stationed in Harbin on a permanent basis. Thus good maintenance is ensured.

Pumping out Groundwater

Since the 1990s, the expansion in the production of paddy rice has been carried out mainly by expanding the scale of groundwater irrigation. At the same time, the rapid expansion of cultivated acreage meant the depletion of groundwater. For instance, in the Chuang Ye Farm, while wells for using groundwater only had to be 0.15 m deep in 1997 and 0.16 m deep in 1998, they had to be 0.94 m deep in 1999. Although the short-term effects on the agricultural production is unlikely, the more extensive use of ground water irrigation should be paid careful attention in consideration of sustainability. There are many research papers that point out that water resources should be managed with utmost care by selecting a rational method of development centering on the provision of facilities for using surface water.[9]

2.5.2 Operation and maintenance system

The Export-Import Bank of China is the executing agency for this project and the bank's main function is to serve as the intermediary of. The Administrative Agency of Heilongjiang State-farmers, the implementing agency in fact, supervises the project in cooperation with the agriculture department of Heilongjiang Province, which is essentially a planning and auditing department.

[9] For Example, Fu Qiang,Research on Assembling the Saving Water Technique and Synthetically Optimum of Well Irrigation for Rice in the Course of Field Produce of San Jiang Plain,Northeast Agricultural University、2000

The Administrative Agency of Heilongjiang State-farms belongs to Heilongjiang Province. In terms of human affairs while it belongs to the Ministry of Agriculture in terms of finance and technical support. Even by Chinese standards, it is a unique system. After the Cultural Revolution, the Government of China has a record of dispatching part of the organization of the People's Liberation Army, as it is, to the project area to engage in reclamation work. The managerial policy of the farmlands under the Administrative of Heilongjiang State-farms is set by the state (the Ministry of Agriculture).

In considering the environment of the Sanjiang Plain as a whole, there are many relevant agencies, including the Administrative Agency of Heilongjiang State-farms as well as the water usage department and environmental department, both of which belong to Heilongjiang State. It is concerned that the relationship among different organizations is too complicated. As these agencies do not conduct comprehensive collection of environmental data, it is difficult to have overall view on the environmental state in the Sanjiang Plain. This situation is presumably an obstacle in the formation and implementation of appropriate environmental policy. It is desirable to set up a single unified environmental monitoring system.

2.5.2.3 Financial status

No problem has been reported.

2.5.3 Operation and maintenance status

The burden of the operation and maintenance (O&M) of the machines that have been introduced in the project has been transferred from the Administrative Agency of Heilongjiang State-farms to the individual farmers that have acquired the right to use them. While the individual farmers are responsible for the O&M of the machines, the earnings belong to the farmers. This serves as a strong motivation to take good care of the machines. As a result, the machines are generally in good condition.

The crop fields are also kept in good condition. Today agricultural development in this region is absolutely dependent on the use of groundwater. At the present, the situation in this region is not critical.

On the current state of revolving funds, since the project is a two-step loan through the Export-Import Bank of China, it is possible to establish revolving fund. No revolving fund, however, was establish for the effective use of repaid fund. The use of revolving fund would improve the effectiveness of the project. The more effective management of repaid fund should

have been considered.

3. Feedback

3.1 Lessons Learned

When revolving fund is to be established for the effective use of repaid fund, the status of the revolving funds should be monitored carefully during the formation and management of a project.

3.2 Recommendations

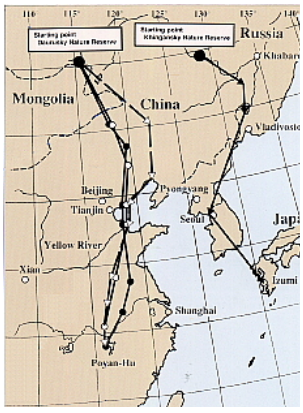
(Executing Agency)

Under the existing environmental monitoring system, several agencies sporadically collect basic environmental data such as those on water and flora/fauna. It is desirable to set up a unified scheme for data storage and analysis.

Routine monitoring on ground-water needs to be conducted. It is desirable to assess the conversion from ground water irrigation and surface water irrigation and the efficient use of water resource.

Column

There are many criticisms of ODA loans to China. However, the projects that have actually been implemented should not be underestimated. In addition to that this project aimed to achive food-sufficiency in China, a country that is realizing rapid economic growth, and that the areas where this project is implemented have the potential of becoming an area for Japan's future food production, and China and Japan are closely linked through their natural environments. Considering these factors, it can be said that this project is contributing to Japan's national interest. The type of rice cultivated in the Sanjiang Plain is japonica, so it is suited to Japanese taste. Soybeans, corn and other grains are also expected to be exported to Japan. Many migratory birds that make this region their habitat fly to Japan. From the perspective of the natural environment, the Sanjiang Plain and Japan belong to the same region. Even after the completion of the project, Japan should continue to involve itself in the development of agricultural development in this region, with which Japan has such close ties. In particular sharing technology for the effective use of groundwater and the knowledge on environmental conservation will become important. In addition to the possibility of providing technical assistance, the provision of ODA loans not limited to the central government should be assessed.



This map was provided by the Wild Bird Society of Japan.

Comparison of Original and Actual Scope

Item	Plan	Actual
1. Outputs	(1) Project to improve medium- and lower-productivity fields 600,000 ha Rice: 7,000 kg /ha Wheat: 3,000 kg/ha Corn: 6,000 kg/ha Soybean: 2,000 kg/ha	600,000 ha Rice: 8,066 kg /ha Wheat: 4,096 kg/ha Corn: 8,3860 kg/ha Soybean: 1,412 kg/ha
	(2) New reclamation project 20,000 ha	16,000 ha
	(3) Stock farming revitalization project ・Specialize in cow milk; 40 farms ・Grassland: 40,000 ha ・Cow: 40,000 cows increase	40 farms or more 40,000 ha or more 40,000 cows or more Wondersun Dairy Cow: 128,000→177,000 Milk: 235,000 tons→463,000 ton
	Expansion of fabrication plant、Construction project ・Rice milling plant: 2 plants	2 plants
2. Project Period	December 1996–December 2000	December 1996–June 2002
3. Project Cost Foreign Currency Local Currency Total ODA Loan Portion Exchange rate	 20 billion yen 14.91 billion yen (1.713 billion yuan) 44.01 billion yen 17.702 billion yen 1 yuan＝12 yen (as of Jan.1996)	 17.669 billion yen 1 million yen (1.76 billion yuan) 40.901 billion yen 17.687 billion yen 1 yuan = 13.2 yen (year/month – year/month average)