

Environmental Impact Study for Sanjiang Plain Agricultural Development Program (1) (2)

■ Evaluation Objectives

Designated as a high priority area for agricultural development in China, the Heilongjiang Province region has developed into an important food basket area in northern China. The Sanjiang Plain, located in Heilongjiang Province, is extremely important as the main breeding ground in East Asia as well as China, for a number of endangered bird species such as the Japanese crane and the oriental stork. It is also important as a stopover point for migrating waterfowl. In the Sanjiang Plain Agricultural Development Program (1) (2), JBIC provided assistance in agricultural infrastructure development in the Sanjiang Plain through the provision of two-step loans. Conservation measures were also implemented to reduce environmental impact. This study verifies the current status of the main subjects (wetlands, birds, etc.) of the conservation efforts after the ODA loan project completion.

■ Evaluation Results

(1) Impact on the Wetlands

Prior to the project implementation, recommendations for environmental conservation including the halting or the reduction of further land clearing/reclamation were proposed. Such measures were taken into account and resulted in the reduction of the area planned for land reclamation. However, there were some cases where the reclamation was executed in the conservation area. In addition, although a notification banning new land clearing in wetlands in Heilongjiang Province was issued in 1998, plans made prior to the notification were exempted. Consequently, there were some areas where new land clearing and land reclamation occurred even after the notification.

In this impact study, research on bird species was conducted at the same locations and methods as the environmental study conducted between 1999 and 2002 to ensure continuity of the collected data. The number of cranes recorded was slightly higher. While this increase in the number recorded does not necessarily reflect an increase in its population, combining this finding with a number of other past population surveys, the population is believed to be showing a slightly upward trend from a previously somewhat static number. On the other hand, the breeding population of the Whooper swan in the same area

has almost disappeared. During the study from 1999 to 2001, about 10 Whooper swans were recorded from May to June. In 2002, seven of them were recorded in early April, and in a field survey in 2007, only four. Because the nesting environment is located in an area with shallow waters, in addition to poaching or the loss of wetlands, other possible reasons for the disappearance include the change in vegetation accompanying lower water levels and drying of wetlands, reduction and loss of the nesting environment, and an ease of predator access.

(2) Initiatives and Issues in Wetland Conservation

In Naolihe National Nature Reserve located within Sanjiang Plain, hydrological and water quality monitoring are included in the management operations of the nature conservation. In practice, however, a comprehensive, periodic analysis system covering the ecology of wetlands in Naolihe National Nature Reserve has yet to be formalized. For this survey, hydrological data from the water use department was provided, and it is considered that utilizing such existing systems and data for more efficient management of the nature reserve is possible.

■ Conclusion and Recommendations

No serious impact that might lead to a drastic reduction of the current population of cranes, particularly in the Haolihe River area where the most serious impact was feared, was observed. The breeding population of Whooper swans in the Haolihe River basin was already in danger throughout the region by the mid-1990s and was considered to be almost extinct after the implementation of the project. Their continued existence remains under threat throughout the Sanjiang Plain.

One of the most significant negative impacts on the wetlands was the conversion of relatively good wetlands to farm land. There were some sections where the land clearing plans in the important wetlands were either halted or reduced under the environmental impact alleviation measures of the ODA loan project, which contributed to the conservation of the wetlands. Some wetlands, separated from the flood plains by a levee, were lost. However, work to return some agricultural land within the natural reserve areas to wetlands is proceeding and it is hoped that this will reduce the environmental impact. Careful monitoring is needed to avert predictable negative impacts on the wetlands including drying and declining water quality due to increased water use. Therefore, a monitoring system that identifies ecological conditions of wetlands, and the improvement in the management of the nature reserve based on data are desirable. As part of the management operations of the nature reserve, it is desirable to provide feedback on management of the wetlands based on ongoing accumulated data of the wetlands ecology.



Researcher measuring the nest of a white-naped crane

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Awarded Ph.D. in agricultural science, Kyoto University. Has served as academic advisor to Wild Bird Society of Japan since 1998. Has held positions as visiting professor at Beijing Forestry University, Nippon Bunri University, and The School of Graduate Studies, The Open Air University of Japan. Specializes in forest economics and nature conservation study.