

# Terminal Evaluation

## Asia

### 1. Outline of the Project

**Country:**

Mongolia

**Project title:**

The Project for the Improvement of Technology on Diagnosis of Animal Infectious Diseases

**Issue/Sector:**

Livestock Sanitation

**Cooperation scheme:**

Project-type Technical Cooperation

**Division in charge:**

Livestock and Horticulture Division, Agricultural Development Cooperation Department

**Total cost:**

570 Million Yen

**Period of Cooperation**

1 July 1997 - 30 June 2002

**Partner Country's Implementing Organization:**

Mongolian State University of Agriculture, Institute of Veterinary Medicine (IVM),  
Immunological Research Center (IRC)

**Supporting Organization in Japan:**

Obihiro University of Agriculture and Veterinary Medicine, Kitasato University, Gifu University, Nihon University

**Related Cooperation:**

Long-term Training Program

### 1-1 Background of the Project

In Mongolia, Livestock farming represents 30 percent of the GDP, 40 percent of employment and 40 percent of the country's exported manufactured products. The development of livestock farming is regarded as an important area in the economic reformation, which had been conducted since the mid-1980s, and the Mongolian government is aiming at expanding exports of agricultural farming products. Thus, important issues are taking countermeasures for and controlling animal infectious diseases.

IVM is the only organization for veterinary education and research, and is in charge of the study and diagnosis of livestock diseases and the development of vaccine. However, after the transition to a market economy, information from overseas was stopped, and the progress of research technology in IVM became stagnated. As a result, the quality of public livestock sanitation service declined in IVM. This gave rise to the possibility of an outbreak of serious infectious diseases among the livestock, which would be a future obstacle to the government plan to increase agricultural farming products.

Under this circumstance, the Mongolian government requested Japan to provide Project-type Technical Cooperation to improve technology on the diagnosis of animal infections, in order to minimize a loss in livestock production, to increase agricultural farming and food production income, and to acquire more foreign exchange.

### 1-2 Project Overview

In this Project, basic and applied technology of immunological research on infectious diseases was transferred to researchers in the Mongolian State University of Agriculture and Institute of Veterinary Medicine (IVM), in order to improve the service of public livestock sanitation.

#### (1) Overall Goal

The livestock industry is developed through the improvement of the technology on diagnosis of animal infectious diseases.

## (2) Project Purpose

The immunological and immunological research in the diagnosis of animal infectious diseases is reinforced through the basic and applied research activities.

## (3) Outputs

The staff of veterinary department of the University and IVM will attain skills of basic and applied research techniques for immunological diagnosis of animal infectious diseases.

## (4) Inputs

Japanese side:

Long-term Experts	10	Equipment	150 Million Yen
Short-term Experts	38	Local Cost	64 Million Yen
Trainees received	22		

Mongolian side:

Counterparts	41
Local Cost	147.95 Million Togrogs (15 Million Yen)

## 2. Evaluation Team

### Members of Evaluation Team

Team Leader/General: Kazuo NAKAGAWA, Managing Director of Agricultural Development Cooperation Department, JICA  
Veterinary Diagnosis and Extensions: Akira ARAKAWA, Professor Emeritus, Osaka Prefecture University  
Veterinary Diagnosis Research and Development: Takeshi MIKAMI, Laboratory of Veterinary Public Health, College of Bioresource Science, Nihon University  
Evaluation Planning: Kayo TORII, Staff, Livestock and Horticulture Division, Agricultural Development Cooperation Department, JICA  
Evaluation Analysis: Kanji HOSHINO, SOWA Consultants Inc.  
Translator: Makiko KATO, Japan International Cooperation Center

### Period of Evaluation

3 April 2002 - 12 April 2002

### Type of Evaluation:

Terminal Evaluation

## 3. Results of Evaluation

### 3-1 Summary of Evaluation Results

#### (1) Relevance

The livestock sector in Mongolia is the most important sector developing the economy and improving the people's standard of living. The Government has set the increase in the exports of livestock products as its national policy. As the improvement in diagnosis technology of animal infections and reinforcement of measures to prevent epidemics are important in promoting livestock products, the project purpose is highly relevant. Moreover the Mongolian government has a policy to promote the export of livestock products and thus a disease control system is a top priority. The Project Purpose is consistent with the Mongolian policy as well as with JICA's Country Program for Mongolia emphasizing the development of Agriculture.

#### (2) Effectiveness

The Immunological Research Center (IRC) established those related technologies to infections caused by viruses, bacteria and parasites including diagnosis technologies of infectious diseases. International Symposium 2001 and achievement of publication

by counterparts indicate the progress in their research. From the questionnaire survey results, 40 out of 41 counterparts said that "they had become used to the provided facilities" and were "confident with the transferred technology". These responses demonstrate that technology has been transferred smoothly.

Although IRC is a newly formed organization in order to conduct the Project, it has been provided with the necessary inputs, and the counterparts have acquired the necessary skills through the guidance of experts and the training in Japan. The Project Purpose has been achieved through the activities and inputs of this Project only, as IRC has received no cooperation from other donors.

### (3) Efficiency

Some of the Long-term Experts were not dispatched as planned, but their tasks were covered by the achievements of Short-term Experts. The training in Japan and provision of machinery and materials were conducted appropriately and utilized effectively. There were some problems on the Mongolian side; e.g., the dependence on Japan for the purchase and management of machinery and materials; the veterinary department of the Mongolian State University did not allocate personnel as counterparts, despite it was initially planned. However, the Project Outputs were achieved with the efforts of the experts and the counterparts.

### (4) Impact

There was a wide gap between the Project Purpose ("the reinforcement of research on immunological and immunological infectious diseases") and the Overall Goal ("development of livestock industry"). As the Project activities were conducted only in the IRC, the organizational, economical and social impacts have not been observed, yet. In order to achieve the Overall Goal, the following issues must be considered; development and operation of policy for livestock farming; foundation of an institute to promote diagnosis technology; and maintenance of veterinary services.

However, there were some side-impacts in the technological aspect. For instance, the diagnosis technology developed in the Project was adopted by the veterinary department of the Mongolian State University and the Ministry of Food and Agriculture: Increased awareness and understanding of the technology of immunological diagnosis were found among veterinary clinics and state research laboratories. If a biological complex and veterinary centers are founded in the future, the transferred technology will be disseminated.

### (5) Sustainability

The technical sustainability is high, since the counterparts have acquired the necessary skills and can attain new skills or knowledge through the network of researchers, whenever needed. However, IRC is not sustainable in the financial aspect, as it has been dependent on Japan for funding to cover supplies and maintenance throughout the Project term, and most of the budget from the Mongolian Veterinary Association is spent on personnel costs. As the Mongolian government is planning to increase the budget to develop scientific technology, IRC must utilize this opportunity, as well as assuring its own revenues.

## 3-2 Factors that promoted realization of effects

### (1) Factors concerning Planning

N/A

### (2) Factors concerning the Implementation Process

Effective coordination between the dispatch of experts and the acceptance of trainees contributed to the achievements. The trainees studied in Japan for about 10 months, which fostered a personal relationship between the trainees and the staff of the accepting institution (a university). This enabled them to receive technical advice even after the training period.

## 3-3 Factors that impeded realization of effects

### (1) Factors concerning Planning

At the planning stage, the consideration given to managerial and financial aspects of the implementing organizations was insufficient.

As IRC is a research institute and does not carry out actual diagnostics, it must cooperate with the Ministry of Food and Agriculture, which conducts diagnoses, in order to achieve the Project Purpose and the Overall Goal. The plan should have covered this point.

## (2) Factors concerning the Implementation Process

Being weak in financial and personnel resources, IRC became overly dependent on Japanese support in operating the Project and managing and maintaining the machinery.

### 3-4 Conclusion

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The technology of diagnosis of animal infectious diseases has been transferred to counterparts and the Project Purpose is expected to be achieved within the Project period. However, there are still some problem regarding Relevance and Sustainability, and it is necessary that the Mongolian side improve IRC's organizational system.

### 3-5 Recommendations

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(1) IRC needs to establish an appropriate system with regard to maintaining the provided machinery; this includes the recruitment of technicians.

(2) The Mongolian side should take necessary measures as soon as possible to consider the future status of IRC, including consolidation with another independent center or related research institute, after the termination of the Project.

(3) It is critical to allocate a budget for the maintenance of equipment and procurement of necessary reagents in IRC. It is expected that IRC to make full use of government funds which are to be doubled for research activities.

(4) In order to promote the diagnostic techniques developed in the Project, the Mongolian State University of Agriculture needs to form a specific plan to collaborate with the Ministry of Food and Agriculture.

(5) To achieve the Overall Goal, it is necessary not only to improve the techniques of diagnosis on infectious diseases, but also to solve other issues in the livestock industry, such as over-grazing, how best the nomadic lifestyle should accommodate to the market economy, natural disasters and water supply. The Mongolian government needs to establish a committee of related organizations and formulate a strategic framework for development of the livestock sector.

### 3-6 Lessons Learned

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(1) In designing a project framework, careful consideration on institutional, financial, and managerial aspects of implementing organization has a critical importance.

(2) Effective coordination between the counterpart trainings and the dispatch of experts is useful in technology transfer.

(3) A realistic goal should have been set to clarify the future direction of the project to keep Project purpose and Overall goal on the right path.

### 3-7 Follow-up Situation

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Based on the recommendation, JICA dispatched a follow-up expert for two years from 2003, to give advice to the Mongolian State University of Agriculture in the area of establishing an IRC system and to the Ministry of Food and Agriculture in the area of livestock industry policy-making.