

5.3 LIVESTOCK PRODUCTS IMPROVEMENT COMPONENT

Livestock products improvement component consists of i) Veterinary service improvement project, ii) Superior livestock breeding project, iii) Livestock farming technique improvement project, and iv) Capacity building for risk management project. This component is designed to insure that the livestock farming in rural area sustainably develops through measures and projects necessary for improvement of livestock products productivity and its stabilization.

The projects mentioned here are the ones that the local government can implement initially.

5.3.1 VETERINARY SERVICE IMPROVEMENT PROJECT

(1) Outline of Project

After shifting to market economy, veterinary service that had been government-owned was privatized and charged, consequently herders became reluctant to access to veterinary service. Therefore, its management is not steady and runs into a situation that number of veterinaries and medicines decrease and technique level is lacking. In addition, herders are finding it difficult to maintain livestock health. Through improving such situation and keeping livestock's health, stable livestock products are made possible.

Under privatization, since veterinaries have to learn management method of their own association, training for it is implemented. At the same time there is a necessity that herders side make a contract with veterinary's association and ask for measures to enable sustainable management of veterinary's association.

(2) Target Group and Implementing Organization

Target group: Veterinary association and herder's group

Implementing organization: *Soum* and *Aimag* government

(3) Purpose

1) Project purpose

Livestock health in rural area is maintained.

2) Overall Goal

Herders and veterinary association can fully cope with livestock disease and parasite.

(4) Outputs

1) Quality of Veterinary Service in Rural Area is Increased

Training to increase technique of veterinary (association) in rural area and training about management of the association are implemented.

Support to the veterinary' association in each *Soum* such as veterinary equipment and materials, livestock epidemic prevention related equipment and so on is implemented.

However, with an aim to increase ownership of the equipment and materials for the veterinary's association, cost sharing is required to the association.

2) Cooperation System between Herders and Veterinaries is Established. (Organizing Herders Group)

Under the guidance of administration of *Aimag* and *Soum* government, herder's group is organized and contract to supply veterinary service is signed with veterinary association. The group that could establish cooperation system by this contract is targeted to support. The contract writes clearly payment method to the veterinary service, response to prevention, disinfections, disease, and so on.

3) Livestock Medicine is Stably Supplied in Rural Area.

The NGO or *Soum* government establishes revolving fund of livestock medicine that is used very often. Under collaboration with veterinary association, the medicine is stocked. Herders pay compensation to the used medicine. Veterinary service association takes charge of management of the medicine and manages the revolving fund by using the compensation.

4) Herders Provide Elementary Knowledge on Livestock Health

Although veterinary service is provided for a fee, it was treated as part of the social service in the past, so it is necessary to explain reason of the fee-based service and get understanding. And, herders acquire right knowledge on livestock health, and increase low vaccination rate, and protect quality degradation due to breeding among closely related livestock. In addition, it is necessary to enable herders themselves to cope with basic diagnosis and treatment in the remote area where is difficult to get veterinary service. For this reason, incentive training is implemented to the representative herder's who are nominated among herders.

(5) Inputs

Veterinary training (veterinary technique, management ability), training for herders (knowledge on disease, basic treatment), livestock medicine (for stock, source of revolving fund), *Soum* veterinary equipment (cost sharing by veterinary association)

(6) Notable Points in Project Implementation and Role Sharing

Livestock health is very important for development of the sustainable livestock farming, as well as pasture and water resources that are base of the pastoral livestock farming. Therefore, improvement of veterinary service is essential component for the livestock farming system improvement in rural area.

For implementation of the project, it is necessary to organize veterinary association and herders. Furthermore, establishment of the fund for the medicine is planned. Therefore, in organization method and fund management, it is essential to make a clear rule to maintain

transparency and allow herders and organized members to access to various information. Also, in order to increase management method and contract operation of the veterinary association that is lacking knowledge, training for not only of technical matters but also of organization and accounting is necessary.

For implementation of the veterinary service improvement project, it is necessary that the following organizations get involved and promote the project while sharing some roles. Capacity building will be intensively implemented in the short term and then surrounding conditions will be improved in the medium and long term. Role sharing is shown below.

Table 5.3.1 Role Sharing in Veterinary Service Improvement Project

Responsible organization	Activity
Country (MFA)	<ul style="list-style-type: none"> • Formulation and budget allocation on veterinary training program and veterinary association management program • Budget allocation and implementation of campaign on livestock health for herders • Budget allocation for supporting procurement of veterinary's equipment • Improvement of system supplying sufficient medicine
<i>Aimag</i> government	<ul style="list-style-type: none"> • Implementation of training (management and technology) • Training for herders at remote locations
<i>Soum</i> government	<ul style="list-style-type: none"> • Organization of veterinary's association • Organization of herders group (Establishment of medicine fund) • Support for procurement of veterinary's equipment under support of the government, and implementation of soft loan
Veterinary's association	<ul style="list-style-type: none"> • Acquisition of organizing veterinary's association and management method. Technology improvement • Expansion of veterinary's equipment and medical services facilities

5.3.2 SUPERIOR LIVESTOCK BREEDING PROJECT

(1) Outline of Project

In rural areas, there is an issue that superior livestock are not introduced and breeding among closely related livestock is increased and then livestock quality is devastating. This project aims to solve this problem, and make a shift from quantity production to quality one, and increase its productivity.

(2) Target Group and Implementing Organization

Target group: herders, Implementing organization: *Soum* and *Aimag* government

(3) Purpose

1) Project Purpose

Superior livestock number is increased.

2) Overall Goal

Livestock production efficiency is improved.

(4) Outputs

1) Extension System of Superior Livestock Variety is Improved.

Soum government or *Aimag* government collect information on procurement of superior

livestock and arrange procurement system and extension system. Extension of superior livestock varieties is improved through implementation of livestock fund, herder's livestock purchase, and so on. It is considered to provide economic aid such as soft loan for herders to buy superior livestock.

If number of superior livestock will increase to some degree in the region, measures to further expand extension could be undertaken through implementation of livestock fairs and dealings in the region.

2) Technique and Knowledge on Livestock Breeding is Increased.

Through veterinary's capacity development, veterinary's knowledge on breeding is increased and artificial insemination technique is acquired.

3) Herder's Technique and Knowledge on Breeding is Increased.

Herders acquire knowledge on breeding through training program. Instructor is selected as a utilization of regional human resources among veterinaries in the local or herders with technique and past results, if any. Final aim is improvement through herder's self-supporting efforts.

(5) Inputs

Superior livestock varieties that become resource livestock fund, soft loan, training of veterinary, and training of herders, cost for livestock fair.

(6) Notable Points in Project Implementation and Role Sharing

Even though the livestock farming could stabilize through development of pasture and water resources, in consideration of vulnerability of pasture and water resources, it is necessary to increase livestock productivity. This project could be the first step of this productivity increase. Therefore, the project proposes measures that can improve the current situation in the local area, excluding the research and development on superior livestock varieties in the national institutes.

"Livestock Fund Project" executed in the Pilot Study has made an attempt to expand superior livestock by including them into the loaned livestock, so this project includes lots of factors. Therefore, when the project can be executed, it is necessary to implement it while utilizing the methods, recommendations, and lessons learned that are mentioned at "section 4.6.2 Livestock Fund Project" and "section 4.7.2 Evaluation of Livestock Fund Project" of this report.

For implementation of the superior livestock breeding project, it is necessary that the following responsible organizations get involved and they promote the project while sharing some roles. Capacity building will be intensively implemented in the short term and then surrounding conditions will be improved in the medium and long term. Especially "Livestock Fund Project" executed in the Pilot Study was effective to remedy for the poor

herder's lost livestock by *Dzud*, and it has been continuously operated by the *Soum* government and the council, consequently its sustainability is high. Therefore, the government should promptly prepare a budget for the project and implement it in reference to the Pilot Project.

Table 5.3.2 Role Sharing in Superior Livestock Breeding Project

Responsible organization	Activity
Country (MFA), and related Institutes	<ul style="list-style-type: none"> • To prepare a budget for procurement of superior livestock • To prepare a budget for "Livestock Fund Project" and to implement it (<i>Research and development on superior livestock</i>)
<i>Aimag</i> government, agriculture agency in <i>Aimag</i> government	<ul style="list-style-type: none"> • To collect information related with procurement of superior livestock and to arrange procurement system (in some cases, it is possible to execute it at <i>Soum</i> government) • To implement training *on superior livestock breeding technique • Capacity building of herder leader through training on livestock breeding technique • To hold livestock fair
<i>Soum</i> government	<ul style="list-style-type: none"> • With preparation of budget by the government: • To implement "Livestock Fund" with superior livestock • To implement soft loan for procurement superior livestock varieties • To operate continuous fund and continue refunding. To monitor loaned herders.
Herders	<ul style="list-style-type: none"> • Acquirement of technique and knowledge on livestock breeding • To implement training among herders by skilled herders

* In order to make it easy for herder to access to information, it is necessary to utilize human resources within the region, if possible, not to dispatch lecturer from *Ulaanbaatar*.

5.3.3 LIVESTOCK FARMING TECHNIQUE IMPROVEMENT PROJECT

(1) Outline of Project

After *Negdel's* disorganization, lot of staff member lost their jobs and became herders, besides, after shifting to market economy, collapse of COMECON system, global market principle and trade liberation made other industries go into a decline and lots of jobless person became herder. In this way unskilled herders increased. In addition, it is said that herding skill is low especially in younger generation recent years.

Under such circumstances it is required to train herders about basic herding technique by utilizing chances that herders gather at one place such as on *Bag's* day and thereby increase production technique.

(2) Target Group and Implementing Organization

Target group: herders, Implementing organization: *Soum* and *Aimag* government

(3) Purpose

1) Project Purpose

Herder's herding technique is increased.

2) Overall Goal

Livestock productivity is improved.

(4) Outputs

1) Herder's Number with Unskilled Herding Technique is Reduced. (Implementation of Inter-Herders Training)

Through sending unskilled herders to skilled herders and forming *Khot Aile*, practical training from herders to herders is implemented.

2) Basic Livestock Production Technique is Increased.

Text described basic technique (such as contents of wintering preparation, sufficient water supply to livestock in winter, *Otor* in summer, kind of supplementary feed and feeding time, copulation timing, raising of baby livestock, attention in weaning period, how to make home-made feed, how to sort out wool and cashmere, etc.) to increase wintering rate and fertility rate is distributed, and then training is implemented.

3) Basic Knowledge on Livestock Farming Management is acquired.

Training is implemented about basic issues, which covers points from elementary accounting knowledge and keeping accounting book, to livestock farming management.

(5) Inputs

Herders who accept herding technique training, training cost, cost for text of basic livestock production technique and training cost, cost for text of livestock farming management and training cost

(6) Notable Points in Project Implementation and Role Sharing

Establishment of herding technique training system by inter-herders training for unskilled herders will enable continuous technique acquirement. Also, a textbook on basic techniques will be prepared and distributed.

Nowadays, economic points should be involved in herder's household management, so training on elementary management will be implemented.

Table 5.3.3 Role Sharing in Livestock Farming Technique Improvement Project

Responsible organization	Activity
Country (MFA)	<ul style="list-style-type: none">• To prepare a budget for text creation on basic technique, to distribute it.• To prepare a budget for herding technique training.
<i>Aimag</i> government	<ul style="list-style-type: none">• To implement herding technique training
<i>Soum</i> government	<ul style="list-style-type: none">• To look for skilled herder who can be lecturer and to request cooperation.
herders	<ul style="list-style-type: none">• To acquire basic herding technique and to provide training by skilled herders.

5.3.4 CAPACITY BUILDING FOR RISK MANAGEMENT PROJECT

(1) Outline of Project

In order to improve livestock farming system in rural area and promote the whole industry, it is necessary to reduce various risks that are included in productivity increase of production technique and livestock farming in rural area, and to contribute to stable livestock production. Due to this stabilization, international quality standard and epidemic prevention standard is adopted in livestock farming in rural area, and supply of reliable quality livestock products is aimed, which is essential component to aim for export in the future.

(2) Target Group and Implementing Organization

Target group: *Soum* government, *Aimag* government

(3) Purpose

1) Project Purpose

Livestock farming system that is strong enough to cope with disaster in rural area, and coping with infectious disease is established.

2) Overall Goal

Livestock production in rural area is stabilized and then continuously increased.

(4) Outputs

1) Feed Stockpiling System is Improved.

Soum government establishes feed stockpiling fund that herders can easily access, adding to the current feed supply system of the national stockpiling department, and selling to herders who want to buy.

2) Livestock Shelter is Improved.

Existing livestock shelter is rehabilitated or newly constructed if necessary.

3) Herders Join in Livestock Insurance System.

Current livestock insurance system is now reviewed in the nation, so after its decision, its merits and procedures are clearly explained to herders, and public relations to recommend enrollment to herders are executed.

4) Weather Forecasting and Warning System is Arranged.

Although weather forecasting network is improving, system that its information reaches fully to herders is created. Public information distribution system of weather forecast, weather advisory, and alarm announcement are improved. As media to distribute such information, use of notice board or radio transmission or radio broadcasting is considered.

5) Public System for Epidemic Prevention and Quarantine is Improved.

It is necessary to plan and implement the following activities;

- Strengthening of observation and alarm announcement system based on information from the Government (discovery of abnormal livestock, disease diagnosis, epidemic prevention and abattage corresponding to its diagnosis, announce of movement restriction, vaccination, disinfections, establishment of emergency headquarters, etc. Process and method as system are clarified and announced widely for not only administration but also herders).
- Strengthening of livestock disinfection (rehabilitation/ construction of disinfection facilities))

6) Number of Livestock Theft Cases is Decreased.

It is necessary to plan and implement the following activities;

- Harsh penalty against livestock theft.
- Public information on livestock theft prevention by public organization, Educational activity by educational organization.
- Promotion of putting ear tags or branding on livestock.

(5) Inputs

Procurement cost for feed stockpiling, cost for shelter construction and rehabilitation, weather forecast and warning network improvement cost, and livestock retting pool rehabilitation /construction cost

(6) Notable Points in Project Implementation and Role Sharing

This project covers wide range of fields and involves lots of stakeholders. Therefore, it is necessary to establish system that the Ministry of Food and Agriculture takes a leading part and related organizations cooperate with them, in order to effectively promote the project.

For implementation of the capacity building for risk management project, it is necessary that the following responsible organizations get engaged and they promote the project while sharing some roles.

In "Livestock Fund Project" executed as the Pilot Study, improvement of livestock insurance and feed stockpiling system was tried. Since information on livestock insurance is not well spread across the region, it is necessary to inform its content and request herders to enroll. Although transportation system of stockpiled feed is arranged at *Aimag* level, it is not adaptable because it is necessary to buy by unit of truck. Also, it is necessary to establish system that *Soum* government located near herders stockpiles feed, because public supporting system¹ is required for herders to get feed when necessary, even though they have no money.

¹ "Livestock Fund project" of the Pilot Project adopted future payment system, in which herders receive feed in advance, and pay money at April when they have some amount of income by selling cashmere. Although interest was free till April and imposed after

Table 5.3.4 Role Sharing in Capacity Building for Risk Management Project

Responsible organization	Activity
Country (MFA)	<ul style="list-style-type: none"> • To prepare a budget for livestock shelter improvement • To review livestock insurance system and regulation • To arrange epidemic prevention and quarantine system • To study livestock theft prevention measure, content of public relations, promotion of ear tag and branding. And to prepare a budget for them. To study regulation to toughen penalty. • To start operation of livestock insurance system, and expand it.
National Agency for Meteorology, Hydrology, and Environment Monitoring (NAMHEM)	<ul style="list-style-type: none"> • To arrange meteorological information distribution system (Collaboration with MFA)
<i>Aimag</i> government	<ul style="list-style-type: none"> • To formulate livestock shelter rehabilitation/ new construction plan. • Public relations of livestock theft prevention measure.
<i>Soum</i> government	<ul style="list-style-type: none"> • To arrange feed stockpiling system (fund) • Public relations of livestock theft prevention measure in cooperation with <i>Aimag</i> government
Ministry of Science, Technology, Education and Culture	<ul style="list-style-type: none"> • Education for livestock theft prevention (Especially moral education is important in elementary education)

5.4 HERDERS ECONOMIC STABILIZATION COMPONENT

After shifting to market economy, social service that had been basically charge-free in the past switched to paid service, so herder's chance to pay cash increased and necessity of cash also heightened. However, herders don't get income corresponding to it, and income chance is limited too. In order to continue stable livestock farming continuously, there is a limit to cope with only livestock consumption and sale, so it is required to increase livestock products demand by adding added value and create new income source.

In the same way, there was a collapse of the distribution system, herder lost stable route to sell livestock products. Without market information, herders deal individually with middleman, as a result of that, producers cost is kept low, which is actual situation. Social infrastructure in rural area is not fully improved.

Therefore, in order to overcome such situation in herders economic stabilization component, two projects are implemented: i) livestock farming improvement project, and ii) market and distribution of livestock products improvement project.

5.4.1 LIVESTOCK FARMING IMPROVEMENT PROJECT

(1) Outline of Project

Added value of livestock products is increased through promotion of small scaled livestock products processing business in rural area. The project provides income chance and entrepreneurial chance, and aims to increase herders' and residents' livelihood in rural area.

then in the Pilot Project, it is recommendable to adopt future payment system with interest to successively maintain the Fund in the actual project.

(2) Target Group and Implementing Organization

Target group: herders, Implementing organization: *Soum* government and *Aimag* government

(3) Purpose

1) Project Purpose

Herders and residents start small scaled livestock products processing business.

2) Overall Goal

Livestock farming in rural area promotes. Herders' and residents' income chance and entrepreneurial chance increase.

(4) Outputs

1) Local Residents and Herders acquire Livestock Products Processing Technique.

Since small scale livestock products processing industry is implemented based on proposal from herders and residents, it is necessary for herders and residents to understand content of required techniques before preparing the proposal. With this view, processing technique training (wool processing, dairy products processing, meat processing, etc.) is implemented at advanced-places in each technique and NGO in question. It is a principle for participants to pay total full amount of the training cost or some portion, and *Soum* government implements arrangement of training in cooperation with *Aimag* government.

2) Local Residents and Herders acquire Economical Knowledge and Management Ability.

Herders/residents group prepares proposal based on training techniques mentioned in item 1). *Soum* government guides them so as to take systematic management style through screening proposals submitted by the group. In this way, training is implemented so as to acquire ability that herder's group systematically ships their livestock products and also buy daily commodity by themselves.

In addition since their management awareness is lacking from influence of socialism era, human resource development training to break away from the situation that "they sell what to be produced" not but "they produce what to be sold" and to understand market is implemented together.

3) Financing System to Start Small Scaled Livestock Products Processing Business is Improved.

When they start business money necessary for initial investment is financed. It is appropriate to use money of the *Soum* development fund of *Soum* government. The country and/or the others inject funds to *Soum* development fund, and *Soum* government starts finance after screening herder's and/or resident's business proposal.

Conditions for the finance is that technique raining in question and management training are fundamental, and others are organization of producers group and its grade of maturity, technique training plan (or request), management plan (production and sale plan), and etc., which are checked through documentary examination and interview by Government.

(5) Inputs

Fund necessary for finance, Experts of processing technique, Specialist of management and economy, Study tour (training of advanced cases), and other training cost

(6) Notable Points in Project Implementation and Role Sharing

In the herder's opinions gained through the Pilot Study, interest about items contained in the livestock farming improvement project was the next highest to "unused and low-used pasture development" due to water resources improvement. Now, 15 years passed after shifted to market-economy, local herders feel regional disparity when they witness economic growth in Ulaanbaatar and its suburbs. And they seek measures that ensure income source and its increase, which necessary for reducing disparity and increasing living. In addition this project is very important for promotion and development of the whole livestock farming.

In the Pilot Study, two projects of "Dairy products sales project" and "Wool processing and products sales project" were case studies. Since the herders group had no experience in systematic management in these two Pilot Projects, there was a necessity to acquire accounting knowledge through participatory and learning type workshops from planning stage of production, sales, and shipment. This work was very important one judging from the results, and also one of the key components of success from view points of ensuring sustainability and transparency of the projects.

On the other hand, the livestock farming improvement project can expect larger impact output with comparatively smaller investment for the local government that promotes this activity. This project is the one that supports small-scale livestock products processing project through utilization of the existing *Soum* Development Fund, and can be commenced promptly. It is necessary for the government to verify the case of the Pilot Study, to examine content of the finance, to ensure transparent process, and then to decide on the project. To that end, the government (*Soum* government in case of the Pilot Study) has to select the project and the group while referring to proposal method and selection method implemented in the Pilot Study, as described in Chapter 4.

For implementation of the livestock farming improvement project, it is necessary that the following responsible organizations get involved and they promote the project while sharing some roles. As above mentioned, it is primarily important to intensively implement capacity building of the targeted local herders with an aim to learn market economy and accounting knowledge, to acquire management ability, and to acquire new processing techniques.

Table 5.4.1 Role Sharing in Livestock Farming Improvement Project

Responsible organization	Activity
Country (MFA)	<ul style="list-style-type: none"> • To prepare a budget for <i>Soum</i> Development Fund for small scale livestock products processing industry promotion
<i>Aimag</i> government	<ul style="list-style-type: none"> • To formulate technique and management program in rural area • To implement training on technique and management capability acquirement*
<i>Soum</i> government	<ul style="list-style-type: none"> • To organize herders and residents • To implement training on technique and management capability acquirement * • To examine proposal submitted by herders/residents • To operate <i>Soum</i> Development Fund • To find new loan project that use refunded money from initial loan
Herders	<ul style="list-style-type: none"> • To acquire technique • To acquire management capability • To prepare project proposal • To repay loaned money • To propose new project
NGO or advanced places	<ul style="list-style-type: none"> • To accept trainee

* In order to make it easy for herder to access to information, it is necessary to utilize human resources within the region, if possible, not to dispatch lecturer from *Ulaanbaatar*.

5.4.2 MARKET AND DISTRIBUTION OF LIVESTOCK PRODUCTS IMPROVEMENT PROJECT

(1) Outline of Project

Training that is necessary for producers to ship directly livestock products and livestock processing goods to market is implemented and human resource development is also implemented. Furthermore, projects and measures that are related to agricultural products market facilities improvement, local industry promotion are implemented to improve *Soum* center and *Aimag* center, accessibility between local market and producers (herders). Those are contents of the project.

(2) Target Group and Implementing organization

Implementing organization: *Soum* government, *Aimag* government

(3) Purpose

1) Project Purpose

Local livestock products market is growing.

2) Overall Goal

Income chance and employment are created, and income is increased.

(4) Outputs

1) Market is Prepared (Development of Local Sales Base, Market/Base Development)

Market, which is a key to livestock products sale, is improved. Potential development base for livestock products sale is investigated and infrastructure is improved. As

proposed places, roadside place that is planned to open near future, places around the stations, and sightseeing base are considered. *Soum* government plays central roles in preparation of development plan and sales planning.

- 2) Herders and Residents acquire Knowledge on Market (Organizing Herders, Cooperative Shipping, Cooperative Business)

Training on market that is suitable for herders and residents is implemented. At the same time, training on organization and management is implemented together, and cooperative business is promoted.

- 3) Market Related Infrastructure is Improved (Roads, Electricity, Communication, Railway, etc.).

Although social infrastructure improvement largely depends on the national budget, it contributes to new business chance creation and market access, therefore, it is very important for livestock farming system in rural area. Through improvement of infrastructure related to market, condition for livestock farming system in rural area is arranged.

- 4) Market Information can be Utilized.

Aimag government widely distributes information on livestock products sales price at *Aimag* center, which is investigated by *Aimag* government once a month, together with investigated results at neighboring markets and capital *Ulaanbaatar* through bulletin board and radio transmission and radio broadcasting. Utilizing this information, herders make decision when they negotiate the price and sell products, and arrange shipping time when they ship products in cooperation.

- 5) Specification of Livestock Products (Wool, Cashmere) is becoming Widespread.

In buying and selling at local market, specification of livestock products is becoming widespread. Extension of specification to market related persons and producer is implemented and *Aimag* government monitors and guides it.

If specification is expanded as the first step to make system that qualified livestock products (wool and cashmere) is sold at high price, it can be expected to promote higher-valued added livestock products and improve the accompanying sales income of livestock products. Since there is a necessity to produce qualified livestock products, it can contribute to improvement of livestock farming and livestock products processing technique and incensement of productivity of livestock products. In addition, fairer dealing of livestock products is becoming available through promotion of specifications.

In "Wool processing and Product Sales Project" of the Pilot Project, as for securing raw materials, herders group was in a position compelled to buy poor qualified wool, because they did not have their own transportation measures and were comparatively vulnerable

situation. On this occasion, if price negotiation is done based on quality specification, it enables fair dealing; furthermore, herders also intend to move toward production corresponding to customer's need, and then both of seller and buyer can get profit. At present there is already wool quality specification, but its extension is not sufficient.

(5) Inputs

Economy guidance specialist, each processing specialist, training places, social infrastructure improvement (market, sales base), cost for text and poster creation of livestock products.

(6) Notable Points in Project Implementation and Role Sharing

Out of the Pilot Study, "Daily Products Sale Project" is partly regarded as case study of the market and distribution of livestock products improvement project. It was an improvement of livestock products sales base in rural area, which aimed to expand livestock products market, and to contribute to herders' income creation and increase. Important lesson learned here was that herders' organization around sales base and activity as a collective as well as improvement of livestock products sales base enabled to effectively increase profit. With improvement of sales base in rural area, it is necessary that the government (especially *Soum* government office and *Bag* governor, who are closest to herders) encourages herders to organize. This gives herders various chances to maximize profit; they can get advantage in negotiation that they can't carry out individually, they can avoid duplication of production, and they can adjust shipping time due to market information.

It is necessary for local government to find new sales base of livestock products such as daily products and wool products at roadside station, schools, hospitals, factories, etc., and to make efforts to hold together neighboring herders. In the Pilot Study, herders around the sanatorium managed by the *Soum* government shipped camel's processed milk as a healthy drink. However, herders are always shifting in search of good pasture, so they don't gather together when pasture around the base is in bad condition; thus, pasture condition around sales base always exists as an external factor of the project.

In addition herders have no market information, and measures to ship livestock products to market are limited too. Consequently middlemen really buy cheaply from them. In order to improve such situation, it is necessary for herders to organize, to conduct negotiations, and to overcome such situation through cooperative shipping. Since it is difficult for herders to get market information at present, it is necessary to distribute market information through bulletin board, radio transmission, and radio broadcasting.

For implementation of the market and distribution of livestock products improvement project, it is necessary that the following responsible organizations get involved and they promote the project while sharing some roles. Such role sharing is shown below.

Table 5.4.2 Role Sharing in Market and Distribution of Livestock Products Improvement Project

Responsible organization	Activity
Country (MFA)	• To support sales base improvement in rural area, to prepare a budget for it.
<i>Aimag</i> government	• To arrange sales base improvement plan in rural area. • Investigation and public relations for market information
<i>Soum</i> government	• To plan sales base improvement plan in rural area • To implement training on market economy
Herders	• Organization, cooperative shipping, cooperative operations, etc. • Enough understanding to market economy

5.5 HUMAN RESOURCES DEVELOPMENT COMPONENT

(1) Outline of Project

This component is essential to develop fully effect and results of which intents was brought from three components of “Pasture utilization /Well development and management”, “Livestock products improvement”, and “Herders economic stabilization”.

(2) Target Group and Implementing Organization

Target group: herders, residents, *Soum* government officials *Aimag* government officials

(3) Purpose

1) Project Purpose

Capacity of livestock farming in rural area related person is increased.

2) Overall Goal

Activity that residents and herders organize by themselves can start.

(4) Outputs

1) Administration becomes to Support Organizing Herders and Residents for Project Implementation on Livestock Farming Project in Rural Areas.

i) Herder's organizing process on well operation and maintenance

When herders organize group for well operation and maintenance, herders perform the following process. *Soum* government guides them so as to enable herders to organize through proper process.

Table 5.5.1 Organizing Process of Well Operation and Maintenance Group

- | |
|---|
| <p>(a) Herders hold a meeting (herders' meeting 1) and decide the following points.</p> <ul style="list-style-type: none"> (i) To decide group member to joint-manage well. (ii) To decide sharing of roles of well operation and maintenance (to decide three person of leader, cashier, and person in charge of maintenance) (iii) To decide group's well operation and maintenance cost, first contribution, collecting method, and management method. (iv) To unanimously agree on group's well operation and maintenance cost, opening of an account to manage well construction's contribution, and starting accumulation of money. (Construction contribution is divided into the national treasury and the <i>Soum</i> Well Fund.) (v) To decide well using method by outside users except member, and charge. (It is acceptable for <i>Soum</i> government to play a role in setting common charge in <i>Soum</i> or region) (vi) To unanimously agree on the above-mentioned contents. (vii) To draw up basic plan of pasture utilization around the well. On this occasion, to ensure plan that is prepared for case that they can't maintain the well (e.g. they can't use pasture around the well due to drought, or charge can't be paid, or they don't pay charge) <p>(b) To submit application form of well rehabilitation/construction after paying money for registration to <i>Soum</i> government.</p> <p>(c) To open an account for well operation and maintenance and to start accumulation of money. Cashier checks charge collection and account book. As a general rule, to set so as not to take out money from bank without more than two person's signing (e.g. Leader and cashier)</p> <p>(d) Herders group pay contribution to <i>Soum</i> government, <i>Soum</i> government diverts portion of the contribution to resource of <i>Soum</i> Well Fund, and sets aside it for <i>Soum</i> Well Fund.</p> <p>(e) Herders participate in well construction and monitor it. On this occasion, they learn basic well structure. At the same time, they acquire using method of well facilities such as pump and generator.</p> <p>(f) Herders sign contract on well use with <i>Soum</i> government. Points that were decided at herders meeting 1 (1) are described in the well use contract. Herders hold meeting (herders meeting 2), and all member confirm content of the contract.</p> <p>(g) Herders take technique training on well operation and maintenance.</p> |
|---|

ii) Herders Organizing Process (Livestock products improvement component and Herders economic stabilization component)

As for business promotion except well development as described at Livestock products improvement component and herders economic stabilization component, group's activity is prioritized. On this occasion, it is important for the group to be conscious of ownership to promote their own activity voluntarily. Also, when each group promotes the business, defining responsibility and roles and ensuring transparency of activity content and fund management contributes to sustainable organizational activity. Therefore having a contract is useful.

When administration implements the project, specific process is as follows:

Table 5.5.2 Herders or Residents Organizing Process by Administration

- a) Provision of project information on business promotion support, and confirmation of herder's/resident's intention to join.
- b) Confirmation of herder's/resident's group to do cooperative activity
- c) Proposal submission on the business of herder's/resident's group
- d) Proposal appraisal by administration (*Soum* government or *Soum* council)
- e) Contract between herder's/resident's group and *Soum* government (If there is a plan to get finance or support of equipment and materials, repayment plan or equipment list must be attached)

2) Herders/Residents become to be able to Play Systematically.

Through above-mentioned activity of organizing process, organizational activity and management know-how are acquired.

3) Administrative Officers acquire Technique and Knowledge necessary for the Livestock Farming System Improvement in Rural Area.

Local administrative officers attend at trainings that are implemented for each component and acquire these techniques. Or they acquire necessary technique "on the job training".

4) Herders/Residents acquire Technique and Knowledge necessary for the Livestock Farming System Improvement in Rural Area.

Herders/residents attend at trainings that are implemented for each component and acquire these techniques.

In addition, through training to make plan, herders/residents envisage their own future, and become to be able to plan anything necessary to achieve it. Its result is arranged into form of proposal and it is submitted to *Soum* government. (As for training method, PCM workshop used for the Pilot Study is one model. Referred to Annex PCM Workshop)

(5) Inputs

Cost for human resources training necessary for the livestock farming system improvement plan in rural area, text creation cost, plan formulation training cost targeted for herders/residents

(6) Notable Points in Project Implementation and Role Sharing

This component is important, because it is related in a cross-sectoral manner with other components. It is possible to implement program that technique training and workshop necessary for promotion of livestock farming are thoroughly carried out.

Necessary technical contents are extracted to some degree in any component as shown below. However, since livestock products processing technique covers wide-ranging of wool processing, daily products processing, and etc., it is important to implement it while understanding regional needs and potential.

Table 5.5.3 Item of Capacity Building Necessary for each Project

Technical matter	Target	Form	Budget source	Project in question	Component in question
Pasture measurement	Herders	Text distribution*a	MFA	Pasture utilization and well development	Pasture utilization / Well development and management
Traditional Well campaign	Herders	Text distribution*b			
Operation and maintenance technique of well equipment	Herders group for well operation and maintenance Person in charge of operation and maintenance in <i>Soum</i> government	Training*c	MFA <i>Aimag</i> government		
Livestock breeding technique (including technology of artificial insemination, etc.)	Veterinaries Herders	Training	MFA	Superior livestock breeding	Livestock products improvement
Basic livestock farming technique	Herders	Training, Technical guide book	MFA	Livestock farming technique improvement	
Livestock products processing technique (wool processing, daily products processing, etc.)	Herders/residents	• Training (use of NGO) • Study tour (visit to NGO and advanced places)*d	<i>Soum</i> development fund	Livestock farming technique improvement	Herders economic stabilization
Knowledge on market economy	Training	Training*e	MFA	Livestock farming improvement, Market and distribution of livestock products improvement	
Management activity (management of organization)	Herders/residents	Training*e	MFA	Livestock farming improvement (necessary for pasture utilization and well development, too)	

*a: Text creation in the Pilot Project of "Pasture utilization and well development" (Annex K)

*b: Text creation in the Pilot Project of "Traditional Well Campaign Project" (Annex L)

*c: Training on well equipment operation and maintenance was implemented in the Pilot Project of "Pasture utilization and well development".

*d: It was implemented in the Pilot Project of "Wool processing and product sales" too.

*e: It was implemented through workshop (participatory) in the Pilot Projects of "Pasture utilization and well development", "Wool processing and product sales", and "Daily products shipment and sales".

In addition, as for the cost on processing technique, it was provided charge-free in the Pilot Study, but, directionality to ask for partial or all expense to participants is required. However, financing for livestock products small scale processing business is implemented with training cost. It is required to utilize resource of the *Soum* development fund.

Important thing in the human resources development component is to recruit lecturer within the region, utilizing human resources in the region, if possible. This can provide circumstances that local herders are liable to ask about unclear points or question after training. If lecturer is dispatched from *Ulaanbaatar*, even though question arise, herders who are restricted in communication measures and transportation measures are compelled to be left unsolved, furthermore training cost become to be expensive.

Table 5.5.4 Role Sharing in Human Resources Development

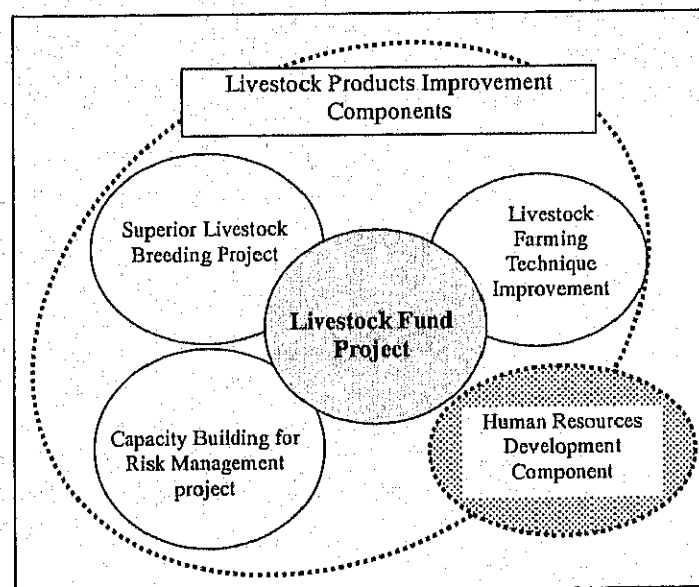
Responsible organization	Activity
Country (MFA)	<ul style="list-style-type: none"> • To distribute text on pasture measurement, and to review it periodically. • To formulate each technique training plan, to implement it and to review it.
<i>Aimag</i> government	<ul style="list-style-type: none"> • To arrange human resources survey for lecturer candidates • To formulate technique training plan, and to implement it. • To implement training (management and technique) • Training for remote herders.
<i>Soum</i> government	<ul style="list-style-type: none"> • To find small scale livestock products processing group for livestock farming improvement project • To report lecturer candidates and to <i>Aimag</i> government
Herders	<ul style="list-style-type: none"> • To create proposal of pasture utilization and well development, and small scale livestock products processing industry, and to submit it <i>Soum</i> government. • To contribute to technique extension as technique lecturer in region

5.6 TOWARDS REALIZATION OF SMALL SCALE PROJECT

The development components excluding “the Pasture Utilization/Well Development and Management” consist of a great variety of projects. In order to realize these projects, it is necessary to formulate the detailed plan of each project; however, this will take a lot of time because of the vast area. On the other hand, because not much of the national budget and most of it is allocated in the well development, there is a high possibility to need more time before its realization even if the detailed plan of projects were prepared. Therefore, what is necessary at present is for the local government promptly to implement feasible projects, and then to improve the low-developed conditions in the rural areas.

Small scale projects of “Livestock Fund”, “Dairy Products”, and “Wool Processing”, as the projects of the development components excluding “Pasture Utilization / Well Development and Management”, were implemented in the Pilot Project.

As shown in the right figure, for example, “Livestock Fund” project could cover three projects of “the Livestock Products Improvement” components, and it is also related with “the Human Resources Development” component. Although this project is largely characterized as a poverty program, it is possible to multilaterally cope with it by adding new revisions in a section of each project or component depending on the character of areas.



If the herders are grouped together for the well development, it is not difficult for this group to address "dairy products project" as the next step and to find ways to expand their cash income.

Through the Study, it was confirmed that the projects desired by residents, herders and *Soum* governments were "Livestock Fund", "Dairy products", "Wool Processing" and "Hides and Skin Processing"². As the others, "Vegetable Cultivation", "Fodder Crops Cultivation", "Livestock Breeding Improvement" and "Small Scale Loan" are popular. Although there are some projects that contain technically uncertain factors such as "Water Quality Improvement" and "Prevention of Desertification", most of the desired projects were small scale, which the *Soum* governments could implement with small amount of budget and careful consideration.

In order to realize the project that demands high technology and targets vast area, further time and cost are required. Therefore, the local government should prepare plan of small scale projects that could be realized by their capability, and make an effort at realizing the projects. Through implementation of these small scale projects, they should increase their planning ability and executing ability for the larger projects; then they will be prepared to approach the next stage.

5.7 ACTION PLAN OF PROJECT

Action plan of the projects formulated in the general plan is described as follows.

(1) Contents of the Project and Priority

As described in "Section 3.5 Priority of development component", "Pasture utilization / Well development and management" is top priority and basic in the livestock farming system improvement projects. The others of "Livestock products improvement", "Herders economic stabilization" and "Human Resource Development" are complementary, and they are extremely effective for the livestock farming in rural area.

For the administration side (Ministry of Food and Agriculture), it may be problem that the last three projects are out of its hands. However,, all of the projects are implemented by the same organization (*Soum*), and synergic effect of projects can be expected if these projects are promoted in parallel as much as possible.

(2) Understanding of Accuracy of the Project

1) Well Development Project

For the basic information related the Wells in the well development project, there are differences as shown below.

² In the Pilot Study, for the project on hide and skin processing, it was studied as measures to increase selling price of raw hide and skin, which are improvement of raw hide and skin preservation technique during summer as the simplest treatment and joint shipment during winter. However, it could not be implemented because of low quality, few demand in summer, relatively expensive transportation cost, lower unit price, necessity of low-temperature storage, and so on.

Table 5.7.1 Information Related to Well Improvement Project

	Herders shelter survey and Wells inventory survey	Water resources investigation by Transient Electromagnetic Method	Wells information
Pilot Study Area of three <i>Soums</i>	Implemented	Erdene: 28 points Ulaanbadrakh: 40 Points Khuvsgul: 20 points	Agriculture Agency of <i>Dornogobi Aimag</i> and Study Team reviewed and renewed UNDP data. Wells rehabilitation provability survey.
Other <i>Soums</i> in <i>Dornogobi Aimag</i>	Not implemented	About 10 points per each <i>Soum</i> , which were prioritized by <i>Soum</i> request	Agriculture Agency of <i>Dornogobi Aimag</i> and Study team reviewed and renewed UNDP data.
<i>Dundgobi</i> and <i>Umnugobi Aimag</i>	Not implemented	Not implemented	UNDP data

Therefore, if the well development plan is implemented outside of the Pilot Study Area, it is necessary to check well information (on well data and rehabilitation provability).

2) Small Scale Projects

Content of the project is changeable according to the regional characteristics and implementer's intent. However, the project is able to be structured according to "Chapter 4, Pilot Study".

(3) Preparation of Well Implementation Project

In order to implement the well implementation project, it is necessary to start organizing herder groups according to the process shown into Fig.5.2.8 Process of Well Construction. For this purpose, the *Aimag* government has to inform the *Aimag* policy of the well development to each *Soum*, and after that each *Soum* has to prepare a *Soum* well development plan and announce it to herders; then herders who want well development have to organize herder groups and start saving money for the well construction contribution.

(4) Necessity of Step-by-Step Implementation of the Project

1) Required Days for the Works

The project plan shows that about 100 wells including engineering wells and Traditional Wells will be implemented per *Soum* on average. However, half of them are Traditional Wells, thus it can be said that it is a reasonable number because it is based on the usual number of rehabilitation works and five new wells constructed in each *Soum* annually. The implementing body for Traditional Wells is herders. However, it is necessary for each *Soum* to arrange an implementation system to secure the Traditional Wells construction under *Soum* responsibility. To prepare the plan, "Section 4.6.6. TRADITIONAL WELL CAMPAIGN PROJECT" may be helpful for the *Soums*.

On the other hand, the number of engineering wells affects working schedule of the project. The actual number of wells to be implemented is calculated as 80% of planned number of engineering wells, since it seems that it is difficult to organize herders groups on 100% of the planned wells.

In the Gobi region, drilling rig (excavator) can work only 7 months from April to October. Based on the normal capacity of drilling rigs, total working period is calculated for each *Aimags* as follows:

Table 5.7.2 Estimated Necessary Years for Works

Kind of Work	Required days for one drilling site	Yearly drilling site	Planned number			Required period (years)		
			Dond gobi	Dorno gobi	Umnugobi	Dond gobi	Dorno gobi	Umnugobi
New Production Well	2weeks	14	74	115	91	5.3	8.2	6.5
New Shallow Well	2weeks	14	210	106	208	15.0	7.5	14.9
Production Well Rehabilitation	1week	28	94	53	82	3.4	1.9	3.0
Shallow Well Rehabilitation	1week	28	42	21	57	1.8	0.7	2.0
Shaft Well Rehabilitation	0.5week	56	161	175	74	2.9	3.1	1.4
TOTAL						28.4	21.5	27.7

*5 months from November to March are excluded from the workable period.

If it is assumed that contractors can provide 2 to 3 drilling machines and the total working period is set as 5 years, 2 to 3 contractors might work in each *Aimag*.

2) Step-by-Step Implementation of the Works

Average number of engineering wells in the project is about 30 to 40 per *Soum*. Since it is very difficult for the *Soum* government to manage implementation of 40 wells per year, it is assumed that the well implementation in a *Soum* will take 2 to 3 years in actuality. There are 14 or 15 *Soums* in each *Aimag*, so 3 to 4 *Soums* will be set per work package. The work of whole *Aimag* will be completed within about 5 years.

If the works in 3 *Aimags* start at the same time, there are considerations that scale of the works might be too large and it might become difficult to manage the project. Moreover, the projects have to be implemented through trials because the new system of the beneficiary's contribution in construction cost is involved in it. Thus, the total works should be divided into the 3 stages as shown below. It is judged realistic that the well development works should start from *Dornogobi Aimag* which was the detailed plan area.

Table 5.7.3 Working Plan

	Period										
	0	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
<i>Dornogobi</i>	—————→										
<i>Umnugobi</i>					—————→						
<i>Dundgobi</i>							—————→				

(5) Implementing Schedule (Project Cycle)

Implementation schedule of the above-mentioned works is shown below. Implementation period is roughly set to 5 years.

Table 5.7.4 Implementation Schedule

	January	February	March	April	May	June	July	August	September	October	November	December
First Year				Discussion with MFA, Opening of Office, Employment of local staff, Arrangement of car, etc.	Opening of office in Dornogobi Aimag, Discussion with Aimag government, Briefing session at Soums, Field survey, etc.		Field survey, Discussion with each Soum	Meeting with herders, Project recruitment	Technical review, Formulation of technical spec	Construction cost estimation and Donor approval	Bid of equipment and contract	Approval of contract
Next Year	Bid of well construction and well rehabilitation	Contract with contractor, Agreement (between Soum, project team, and herder group), Herder group's payment of contribution to the construction cost	Starting of procurement of equipment	Starting well construction work and rehabilitation				Meeting with herders, Project recruitment	Technical review, Formulation of technical spec	Construction cost estimation and Donor approval	Bid of equipment and contract	Approval of contract

Yearly repetition of the same contents

Monitoring of well use

(6) Flow of "Well Improvement Project" and Role Sharing

Flow from launch of well development project to starting well use and the role sharing of herders, the local administration and the nation/ donors are shown below.

Table 5.7.5 Flow of "Well Development Project" and Role Sharing

Step	Herders	Soum (Aimag)	Nation/Donor	Remark
1		Briefing and discussion about project content and implementing method (except Pilot Study Soums)		
2		Announcing for herders (project recruitment)	(Support)	
3	Project application; organizing and desires well site	Herders organization	(Support)	List of member, representative, livestock number, map of well and pasture use, etc.
4		Study of relevance		Well site and type, water resources investigation, possibility of well operation and maintenance, competition with other group etc.
5	Payment of contribution, establishment of well operation and maintenance fund	(Support)	(Support and confirmation)	Opening account at the Agriculture Bank
6	(Herders participation)	PC Workshop		Clarification of role sharing
7	(Herders participation)		Well construction	Herders labor services
8	(Final confirmation of well use)		Confirmation of water quality	Water quality analysis
9	Contract on well use			
10	Starting well use			

For the three Pilot Study *Soums*, since exchange of opinions between the Study Team and *Soums* has been frequently done, the *Soums* understand the contents and objectives of the project. On the other hand, other *Soums* were contacted by the Study Team only when the Team visited all *Soums* for RRA survey. Therefore, it is necessary to explain the contents of the project and implementation method for each *Soum* in the beginning of project.

The project intends to promote well development by bottom-up approach, so the actual process before starting construction work is very important. Because there are required assumptions of wells construction, that herders organize their own group for well use by their responsibility and determine own roles sharing, they need to establish well operation and maintenance funding and pay their contribution. It is also important that herders are invited to assist the well construction to heighten their ownership and the sense that the well is to be occupied by their group.

Since water quality is not good on the whole area, it is better that water quality analysis should be done during the construction or after the construction of the well; then the well will start to be used after getting herders approval on water quality.

It is difficult to start the survey and construction work in all *Soum* at the same time because of the vast area. It is important to keep fairness of the projects in an *Aimag*, thus all *Soums* in an *Aimag* are divided into 3 blocks, and it is better to complete all works in 2 to 3 routines, not to finish the working in one block then shift to the next block.

(7) Workflow and Role Sharing of Small Scale Projects

It is also important for the projects other than well development to be executed based on their own roles as herders, local governments, and the nation/donors as shown below.

Table 5.7.6 Workflow and Role Sharing of Small Scale Projects

Step	Herder	<i>Soum</i> (<i>Aimag</i>)	Nation/Donor	Remarks
1	Submit proposals	(Support)		Basic interview
2			Selection of proposal	Preparing selection criteria, discussion with <i>Soums</i>
3	Formulating project implementation plan (PO Workshop)			Developing sense as their own project, clarifying cost contribution
4			Planning project	Feasibility Study (technical and economical aspects), preparing budget
5	Explanation of project and final confirmation			Clarifying responsibility
6	Project implementation	(Support)		
7		Monitoring and evaluation		

It is important to select projects in consideration of herders technical level and economic sustainability.

CHAPTER 6 CONCLUSIONS AND RECOMMENDATIONS

The following recommendations are based on the results of the master plan for the three *Aimags* (Dundgobi, Dornogobi, and Umnugobi) which included studies from March 2003 to June 2003, the detailed plan for the Dornogobi *Aimag* which was studied from July 2003 to February 2004, and the Pilot Studies for three *Soums* which were studied from March 2004 to January 2006.

Among the recommendations, No.(1), (3) and (4) can apply only to the well development project in the area where "Desert-Steppe" pastures are dominant. On the other hand, No.(2) and No.(5)~(9), are basic matters on well development to be adopted over the whole Mongolia.

(1) Necessity of Early Realization of Wells Development

Livestock farming has a large impact on the people, region and development of Mongolia as follows: the lives of many people in the Gobi region depend on the pastoral livestock farming, proper pastoral livestock farming preserves environment in the Gobi region, and development of local livestock farming is indispensable in the development of Mongolia.

Wells provide the water that is essential not only for human survival but also for livestock of the Gobi region where water resources are restricted to groundwater. In the Gobi region, well breakdown was widespread; consequently, the pasture potential can't be effectively used as a resource. Pasture management and well development are necessary as steps to raise livestock stably.

Construction of deeper Traditional Wells that can secure water stably, as well as the Engineering Wells, are beyond of capacity of the local government and herders, so aid with public funds is a necessity. In addition, public organizations need to be involved to achieve orderly pasture use since individual well developments run the risk of pasture devastation through uncontrolled use.

Pasture management and well development that is proposed in the Study is based on effective development of wells for unused and/or low used pastures and improvement of well utilization. It is recommended that the Mongolian government should request all authorities concerned for early realization of these plans.

This plan can be carried out financed by Grant Aid, Soft Loan of donor or Mongolian budget. However, it is necessary to consider that Mongolian government decided to introduce the cost contribution of beneficiary method in well construction, but its experiences are few. Organizing the well user group is very important to effective well operation and maintenance but it requires a long process. Therefore, these soft component activities should be enhanced in implementation of well development project.

Moreover, there are many major matters in well development of Gobi Region described in recommendation (3) and (4). Hence, it is more effective for implementation to concentrate the budget to a selected area and not to divide it into small amount for every *Soum* (refer to section 5.7 Action plan of Project).

(2) Importance of Well Operation and Maintenance

The State budget will not be used to maintain the wells once they were rehabilitated /constructed by it in existing rule. Moreover, pumps and generators installed at Engineering Wells have a fixed expected lifetime, and these will breakdown easily if they are not used properly. In addition, if these broken machines are not repaired within the *Soum*, it will be necessary to send these machines to the makers or agencies in *Ulaanbaatar*; however, this takes a lot of time and cost for repair because the Gobi region is so remote. Therefore, if the herder do not solve well operation and maintenance, even a well obtained by large investment will be impossible to use.

Thus, especially in the remote Gobi region, well operation and maintenance is extremely important. Even though there is always a possibility that the related persons can easily perform well construction, well construction and well operation and maintenance should be considered as a unit.

It is necessary to promote organizing herder groups who take responsibility for well operation and maintenance. For that, human resource development in administration to support organizing activities is required. (refer to section 5.5 Human resource development)

Moreover, from technical viewpoint, it is difficult to maintain comprehensive well equipment by herders group without assistance from the beginning. Therefore, it is necessary to formulate a supporting system for group well maintenance activities at *Soum* government in parallel with Well development works. The system builds the skills of the technician, who take care of well maintenance at *Soum* level and spare parts stocking to sell to herders. (refer to Fig. 5.2.8)

(3) Typical Pasture Management and Well Development in Gobi Region

Pasture condition changes widely year by year in Gobi region, since climatic condition also varies widely. Hence, it can not be said that the pasture will be used stably around the improved well, or that it is high possible to migrate a long distance from the well with livestock. Therefore, such extensive grazing area has special character in the Gobi region, and number of wells used during 1 year becomes high. Therefore, a system to use plural wells in extensive area effectively is required.

A herder group, uses its own well, but has use of other group's wells without problem in the emergency period. In order to make this possible, a wide management system where each herder group makes agreements for well utilization is required. Thus, it is necessary to change the way of thinking from individual well utilization in each group to cooperation of well use in a wide area. Only *Soum* government can undertake this responsibility concerning adjustment in well use.

Therefore, it will be necessary for the *Soum* government to have a map marked with the well used by each herder as part of the *Soum's* basic map.

(4) Private Ownership of Pasture in Gobi Region

The pasture condition in Gobi region changes easily according to slight change of weather condition, as described in recommendation (3). Actually, pasture use that exceeds the *Soum* boundaries happens frequently. Thus, it is impossible that herder complies with pasture utilization rule in such region, if the pasture privatized rule is adopted.

(5) Necessity of Well Development Plan Managed by *Soum*

Since the herder group seeks new wells within the current grazing zone or the place adjacent to it, well development does not always contribute to unused and low used pasture development that the *Soum* wants.

Government Policy on Well Development issued in July 2005 shows that the local government can engage in well development too. As for the wells that are necessary for measures against drought and *Dzud*, in cases where the herder group does not want to develop them, it should be considered that the *Soum* plans to develop these wells under its control. The number of such wells should be restricted to two or three in consideration of the *Soum*'s ability to manage them, and contribution to the well construction might be paid from the *Soum* Well Fund under the agreement with the investors of the fund; alternatively, the government might pay this contribution.

Use of these wells would be done under a general rule that the users pay the Operation and Maintenance cost, and the *Soum* would decide the charge and management method, and inform it to *Aimag* government. If well use charge in each *Soum* will be widely different, it may generate distrust to *Soum* office and it may give adverse effect on the *Soum* Well Fund. Therefore, when such a situation happens, *Aimag* government will have to confirm the reasons and request to review it if necessary.

(6) Public Information on Herders Contribution to Some Portion of Well Construction Cost

Government policy demands that users contribute some portion of the construction cost prior to the well construction. Thus, the construction entity can know budget from the beginning because well users have to pay the cost up front.

The number of herder groups that can readily afford such a cost is limited. Therefore, the local government that wants well construction should actively recruit herder groups who want to use a well and the herder groups should also promptly start saving money for such construction. The *Soum* government will be able to apply the request of well construction to the organization once they save the required money.

The well development project cannot progress if herder groups do not save their contribution even if the government prepares a project budget. Therefore, it is desirable that to expand well user groups and encourage saving money for well construction cost as the nationwide campaign, together with public information about putting effort into new well development.

(7) Necessity of Establishing Operation and Maintenance System

Herders are not familiar with operating of engineering wells. Operation beyond the capability of the herders is required, a consequently problems will arise. Since it would be best if such problems could be solved on site, it is necessary to build establishment of well operation and maintenance into the well development plan.

In the operation and maintenance system, the *Soum* government should play the main role. To cope with easier repair, the *Soum* government needs to train a suitable person, and always stock spare parts necessary for repair. When repair cannot be handled in the *Soum*, it will be requested to the well company in the *Aimag*.

It is recommended that the government and the *Aimag* shall carry out establishing such a system systematically and together.

(8) Necessity of "Establishment of *Soum* Well Fund" – Toward Sustainable Well Operation and Maintenance -

In consideration of the *Soum's* role to carry out the above mentioned measures, the fact that the *Soum* government has no such budget is a big problem.

To solve this problem, herders need to pay some amount added on to their normal contribution at the well construction stage. By using the remainder of the money after paying the contribution accompanied with well construction to the government, it is recommended that the *Soum* government establish a "*Soum* Well Fund".

Soum Well Fund shall be used for well development in the whole *Soum*, including follow up of the wells invested in by the herders. With more financial backing, the *Soum* could promote well development more effectively.

(9) Importance of Administration Capabilities of Local Government

Small scale livestock farming projects implemented in the Pilot Study could all be carried out at the cost spent for one or two well developments. Such projects would payback the cost to the *Soum*; therefore, actual expenditure would be smaller.

If there is a lack of capabilities in the local administration, even if any project would be implemented, its success would be unsure. The *Soum's* administration capabilities would be enhanced through planning the project, and they would become activated through implementation of the project. Success of the project will make the *Soum* look forward to further development. Although the contents of small scale businesses are various, it is considered that a lot of projects can be managed by *Soum* Government level. Therefore, the government should consider activating the local (*Soums*) through implementation of these projects.

On the other hand, certain *Bags* get livestock contributions from herders, and utilize the funds gained through its operation with plans to stabilize herders life. As for promotion of the Traditional Well development, the Pilot Study also clarified that it is necessary to

strengthen the capabilities of the *Bag* so that it gets closer to the herders. Even locally, study is needed to specifically identify what capabilities the present *Soum* or *Bag* have.

(10) Updating and Expanding of GIS Database

The GIS database for pastures and water sources in 3 *Aimags* of Gobi region is prepared in the Study.

In this database, wells data has to be updated every year since facilities condition, users, and utilization also change. It is desirable that each *Soum* will arrange this data and that Agriculture Agency of *Aimag* government integrates all data.

It is also necessary to prepare same kind of GIS database in other *Aimags* and to promote plan preparation with them.

(11) Follow-up of Pilot Projects

Every Pilot Project is now in progress. The *Soum* governments should monitor progress of each project and make adjustments as need arises.

The *Soum* that is implementing the project should periodically report its situation to the *Aimag*, and the *Aimag* should also investigate it periodically.

ATTACHMENT

ATTACHMENT – A

SCOPE of WORKS and MINUTES of MEETING for the Study

SCOPE OF WORK

FOR

THE STUDY

ON

IMPROVEMENT PLAN OF LIVESTOCK FARMING SYSTEM IN RURAL AREA IN

MONGOLIA

AGREED UPON BETWEEN

MINISTRY OF FOOD AND AGRICULTURE

AND

THE JAPAN INTERNATIONAL COOPERATION AGENCY

ULANBAATAR, OCTOBER 3, 2002

A - 1

I INTRODUCTION

In response to a request from the Government of Mongolia (hereinafter referred to as the "GOJ"), the Government of Japan (hereinafter referred to as the "GOJ") has decided to conduct the Study on Improvement Plan of Livestock Farming System in Rural Area in Mongolia (hereinafter referred to as "the Study") in accordance with the relevant laws and regulations in force in Japan.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programs of the GOJ, will undertake the Study in close cooperation with the authorities concerned of the GOJ.

The present document sets forth the Scope of Work for the Study.

II OBJECTIVE OF THE STUDY

The objectives of the Study are:

1. To formulate a plan of actions to utilize pastureland and to manage wells for mitigating overgrazing situation, and thus contribute to the alleviation of damages caused by dzud and to the stabilization of livestock farming.
2. To carry out technology transfer to Mongolia counterparts through on-the-job training in the course of the Study.

III. STUDY AREA

The Study will cover the priority areas) in aims of Gobi and Steppe zone.

IV SCOPE OF THE STUDY

In order to achieve the above objectives, the Study shall consist of three (3) phases and shall cover the following items:

1. Phase I

<Main issue>

- Collection and analysis of basic data
- Formulation of the plan for pasture utilization system and of the plan for construction, rehabilitation, and maintenance of wells in line with the plan for pasture utilization system.

<Study item>


1) Diagnostic Analysis

1)-1 to select the three (3) aims as survey area

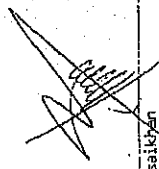
1)-2 to review of livestock farming development policy, plan, and project,


1)-3 to carry out field survey and collecting data such as natural condition, social condition, pastoral production, distribution condition, economic condition

- 1 -

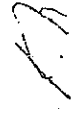

Mr. P. Dandondorj
State Secretary,
Ministry of Food and Agriculture

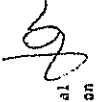
Witnessed by


Mr. K. Amarsaikhan
Director General,
Economic Cooperation, Management and
Coordination Department
Ministry of Finance and Economy


Mr. Kiichi Marita
Leader,
Preparatory Study Team,
Japan International Cooperation Agency

- 2 -







of herders, activities of herders, and others.

3)-4 to recognize present surrounding condition of livestock farming,

2). Formulation of the plan for pastureland utilization system

2)-1 to analyze the present condition of pasturing capacity and overgrazing.

2)-2 to collect the information of pasture land management.

2)-3 to analyze the appropriate pasture utilization system and control method for appropriate number of livestock,

3) Formulation of the plan for construction, rehabilitation, and maintenance of wells in line with the plan for pasture utilization system.

3)-1 to analyze the present condition of wells and its utilization by herders,

3)-2 to collect the information of hydrogeological condition,

3)-3 to analyze the operation and maintenance system of wells.

3)-4 to propose the areas for well construction and rehabilitation.

2. Phase II

<Main issue>

- Formulation of the detailed plan for sustainable livestock farming management system (include pasture utilization system)

- Formulation of the detailed plan for construction, rehabilitation, and maintenance of wells in line with the plan for pasture utilization system
<Study item>

2-1 to select the detailed survey area (equivalently one (1) aimag).

2-2 to plan and implement exploration (geophysical and hydrogeological surveys) for wells, and thus identify the types and locations toward their construction,

2-3 to estimate construction and rehabilitation cost.

2-4 to prioritize the wells for their construction and rehabilitation.

2-5 to select areas for the experimental study based on criteria set during the study.

2-6 to clarify the components of experimental study.

3. Phase III

<Main issue>

- implementation of the experimental study with following purpose:

a. to verify the validity of the plan for pastureland utilization system and for operation and maintenance of wells.

b. to enhance skills of Mongolian counterpart personnel and

-3-

K.A. P.D.

others for the effective pastureland utilization and for operation and maintenance of wells.

c. to strengthen the administrative systems of the organizations concerned.

<Study item>

3-1 to implement the experimental study for the components clarified in Phase II,

3-2 to monitor and evaluate the process of activities for the experimental study,

3-3 to formulate the final report.

V STUDY SCHEDULE

The Study will be carried out in accordance with the attached tentative schedule (ANNEX). The schedule is to be modified when both sides agree upon any necessity that will arise during the course of the Study.

VI REPORTS

JICA shall prepare and submit the following reports in English to the GOM:

1 Inception Report

Twenty (20) copies in English at the commencement of the Phase I.

2 Interim Report 1

Twenty (20) copies in English at the commencement of the Phase II.

3 Progress Report 1

Twenty (20) copies in English at the end of the Phase II.

4 Interim Report 2

Twenty (20) copies in English at the commencement of the Phase III.

5 Progress Report 2

Twenty (20) copies in English during the course of the Third phase of work.

6 Draft Final Report

Twenty (20) copies in English after the end of third phase of work in Mongolia. The GOM shall provide JICA with its comments on the Draft Final Report within one (1) month of receipt of the Draft Final Report.

7 Final Report

Fifty (50) copies in English within two (2) months of receipt of GOM comments on the Draft Final Report.

VII UNDERTAKINGS OF THE GOVERNMENT OF MONGOLIA

1 To facilitate smooth conduct of the study, the GOM shall take necessary measures:

-4-

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- 4-1 available data and information related to the Study,
- 4-2 counterpart personnel,
- 4-3 suitable office space with necessary equipment and furniture in Ulaanbaatar and survey sites, and
- 4-4 credentials or identification cards.

VIII UNDERTAKINGS OF JICA

- For the implementation of the Study, JICA shall take the following measures:
- 1 to dispatch, at its own expense, study team to Mongolia.
- 2 to pursue technology transfer to Mongolian counterparts in the course of the Study.

IX CONSULTATION

JICA and SPPD shall consult with each other in respect of any matter that may arise from or in connection with the Study.

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- 1-1 to secure the safety of the Japanese study team,
- 1-2 to permit the members of the Japanese study team to enter, leave and sojourn in Mongolia for the duration of their assignment therein, and exempt them from foreign registration requirements and consular fees,
- 1-3 exempt the members of the Japanese study team from taxes, duties, fees and any other charges on equipment, machinery and other materials brought into Mongolia for the conduct of the study
- 1-4 to exempt the members of the Japanese study team from income tax and charges of any kind imposed on or in connection with any employments, or allowances paid to the members of the Japanese study team for their services in connection with the implementation of the Study,
- 1-5 to provide necessary facilities to the Japanese study team for the receipt as well as utilization of the funds introduced into Mongolia from Japan in connection with implementation of the Study,
- 1-6 to secure permission for entry into private properties or restricted areas for the implementation of the Study,
- 1-7 to secure permission for the Japanese study team to take all data and documents (including photographs and maps) related to the Study out of Mongolia to Japan,
- 1-8 to provide medical services as needed. Its expenses will be chargeable on the members of the Japanese study team,
- 1-9 to provide necessary facilities to the Japanese study team for unrestricted re-export of equipment and machinery brought into Mongolia for the conduct of the Study,
- 1-10 to secure permission to use walkie-talkies and other wireless telecommunications for execution of the field study,
- 1-11 to provide services of liaison staff, local guides, laborers, drivers, fuel, rent-a-car, etc.

A 1 3

2. The Government of Mongolia shall bear claims, if any arises, against the members of the Japanese study team resulting from occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Japanese study team.

3. The Strategic Planning and Policy Department of the Ministry of Food and Agriculture (hereinafter referred to as "SPPD") shall act as counterpart agency to the Japanese study team and also as coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.

4. SPPD shall, at its own expense, provide the Japanese study team with the following, in cooperation with other organizations concerned,

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P.D.

MINUTES OF MEETING
FOR
THE STUDY
ON

IMPROVEMENT PLAN OF LIVESTOCK FARMING SYSTEM IN RURAL AREA
IN
MONGOLIA

AGREED UPON BETWEEN
MINISTRY OF FOOD AND AGRICULTURE
AND

THE JAPAN INTERNATIONAL COOPERATION AGENCY

ULANBAATAR, OCTOBER 3, 2002

K. Hanata
Mr. Kiyochi Hanata
Leader,
Preparatory Study Team,
Japan International Cooperation Agency

P. Demidporj
Mr. P. Demidporj
State secretary,
Ministry of Food and Agriculture

TENTATIVE SCHEDULE

MONTH	PHASE																					
	Phase I							Phase II							Phase III							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
REPORT	▽						▽						▽					▽				
WORK IN JAPAN	□						□						□					□				
WORK IN MONGOLIA																						
(Remarks)	I/R: Inception Report	I/R(1): Interim Report 1	I/R(2): Progress Report 1	I/R(1): Interim Report 2	I/R(2): Progress Report 2	I/R(1): Final Report	I/R(2): Progress Report 1	I/R(1): Interim Report 1	I/R(2): Draft Final Report	I/R(1): Interim Report 2	I/R(2): Progress Report 1	I/R(1): Final Report	I/R(2): Progress Report 1	I/R(1): Interim Report 1	I/R(2): Progress Report 1	I/R(1): Final Report	I/R(2): Progress Report 1	I/R(1): Interim Report 1	I/R(2): Progress Report 1	I/R(1): Final Report	I/R(2): Progress Report 1	

① : Comments on D/F/R by the Mongolian side

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I. INTRODUCTION

In response to a request from the Government of Mongolia (hereinafter referred to as "GOM"), the Preparatory Study Team (hereinafter referred to as "the Team"), headed by Mr. Kiichi NARITA was sent to Mongolia by the Japan International Cooperation Agency from 23 September to 11 October, 2002.

The team held a series of discussions in relation to the Scope of the Study on Improvement Plan of Livestock Farming System in Rural Area in Mongolia (hereinafter referred to as "the Study") with representatives of the Ministry of Food and Agriculture (hereinafter referred as "MOFA") and other relevant organizations. The list of participants in the series of meetings is attached as ANNEX 1. The following were agreed upon by both Mongolia and Japanese sides in relation to the Study.

II. RESULTS OF DISCUSSIONS

1. Title of the Study

Both sides agreed that the title of the Study should be changed from "The Study on Improvement of Water Supply Source in Rural Areas" to "The Study on Improvement Plan of Livestock Farming System in Rural Area"

2. Study Area

Both sides confirmed that the study area covers three (3) Aimags in Phase I, one (1) Aimag in Phase II, and a few soums in Phase III. MOFA will inform JICA of their priority areas (3 Aimags) by the end of February, 2003.

3. Study Schedule

MOFA requested to start the Study as early as possible. MOFA also requested to implement Phase III study as early as possible.

4. Steering Committee

For the smooth and effective implementation of the study, both sides agreed upon the need for establishment of a steering committee chaired by MOFA in the course of the Study. Expected participants of the steering committee are as follows:

- (1) Ministry of Food and Agriculture
- (2) Ministry of Finance and Economy
- (3) Other relevant research institutes for animal husbandry and

hydrogeology

- (4) Embassy of Japan in Mongolia
- (5) JICA Mongolia Office
- (6) JICA Study Team

5. Counterpart organization and personnel

(1) Both sides confirmed that the Strategic Planning and Policy Department is responsible for coordinating and implementing the Study with the assistance by the Study team and JICA.

(2) MOFA promise to assign the necessary number of counterparts for the Study Team.

6. Counterpart Training in Japan

MOFA requested the training of counterpart(s) on specific relevant subjects in Japan for the efficient implementation of the Study. The team promised to convey it to the JICA headquarters in Tokyo.

7. Reports

(1) Both sides confirmed that the final report of the Study would be opened to the public.

(2) MOFA requested that final report would be made both in English and Mongolian. The team promised to convey it to the JICA headquarters in Tokyo.

8. Equipment and Facilities

MOFA promised to provide the Study team with a suitable office space within the buildings of MOFA and Aimag centers and to make its best effort to provide desks, chairs and telephones in the office.

MOFA requested JICA to support following equipments and materials for the Study. The team promised to convey it to the JICA headquarters in Tokyo.

- Vehicle and relevant equipments
- Photocopy machine
- Personal computers and printers
- Other necessary equipments for the Study

9. Maps

MOFA requested to make maps of pasture capacity, grazing and location of water wells for three (3) Aimags which will be covered in Phase I

Study:

10. Others

Both side confirmed that the detailed contents and method of the study (i.e. how to implement geophysical and hydrogeological surveys and so on) will be explained by Inception Report.

ANNEX

LIST OF PARTICIPANTS

Mongolian Side

Ministry of Food and Agriculture

Mr. P. Damdindorj State Secretary

Mr. Davaadorj Gochoo Director, Strategic Planning and Policy Department

Mr. Damdindorj Batmunkh Senior Officer, Policy Implementation and Coordination Department

Ms. T. Erdenejargal Asia desk officer, External Relations and Cooperation Division

Japanese Side

Preparatory Study Team

Mr. Kiichi NARITA Leader, Herder's organization

Mr. Yusuke TADA Member, Livestock farming / Pasture land

Mr. Akira KAMATA Member, Ground water / Well management

Mr. Hitoshi FUJIE Member, Project planning / Preliminary evaluation

Ms. Makiko KATO Member, Interpreter

JICA Expert

Mr. Yukio SUZUKI JICA Expert, Ministry of Food and Agriculture

JICA Mongolia Office

Mr. Akira SHIMIZU Assistant Resident Representative, JICA Mongolia Office

ATTACHMENT – B

MINUTES of MEETING on REPORTS

- (1) Inception Report
- (2) Interim Report (1)
- (3) Progress Report (1)
- (4) Interim Report (2)
- (5) Progress Report (2)
- (6) Progress Report (3)
- (7) Progress Report (4)
- (8) Draft Final Report

(1) Inception Report

MINUTES OF MEETING
ON
INCEPTION REPORT
FOR


THE STUDY FOR IMPROVEMENT PLAN OF LIVESTOCK FARMING SYSTEM
IN RURAL AREA
IN MONGOLIA

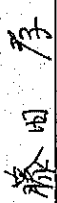
AGREED UPON BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
AND

MINISTRY OF FOOD AND AGRICULTURE MONGOLIA

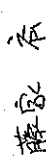
Ulaanbaatar,
April 3, 2003

B - 1


DAMDINDORJ PUMISAGDORJ
State Secretary
Ministry of Food and Agriculture,
MONGOLIA


TAKASHI FUJITA
Leader
Study Team
Japan International Cooperation
Agency (JICA)

Witnessed by


HITOSHI FUJIE
Agricultural Development
Study Division
Japan International Cooperation
Agency (JICA)

In accordance with the Scope of Work for the Study for Improvement Plan of Livestock Farming System in Rural Area in Mongolia (hereinafter referred to as "the Study"), the Government of Japan, through Japan International Cooperation Agency (JICA), dispatched to Mongolia the Study Team, headed by Mr. Takashi FUJITA, for the implementation of the Study. At the commencement of the Study, the Study Team submitted officially twenty (20) copies of the Inception Report in Mongolian language and five (5) copies in English explaining the basic concepts, methodology and schedule of the Study in the presence of Mongolian organizations represented by the Ministry of Food and Agriculture, Mongolia, (MOFA) on April 3, 2003 at the Head office of MOFA.

Prior to the discussion on the Inception Report, the following issue was confirmed regarding the request from the Ministry of Food and Agriculture Mongolia:

The Study Area in Phase-I study were selected in three (3) Aimag such as Dundgovi, Dornogovi and Omnogovi.

As a result of explanation and exchange of opinions on the Inception Report, the Mongolian side and Japanese side agreed upon the following points:

1. The Mongolian side accepted that the contents of the Inception Report were prepared in due compliance with the conditions set forth in the Scope of Work for the Study and agreed that the Study Team would proceed to the next stage of the Study in accordance with the methodology and schedule mentioned in the Inception Report.
2. The Mongolian side confirmed that suitable office space, with necessary equipment and furniture in the office of MOFA, would be provided by the Mongolian side as mentioned in the Scope of Work.
3. The both sides agreed to collaborate with each other for the efficient implementation of the Study so that the objectives of the Study be attained as described in the Scope of Work for the Study.
4. Upon the request of the Study Team, the Mongolian side agreed to nominate necessary counterparts for each member of the Study Team.



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5. Upon the request of the Study Team, the Mongolian side agreed to take responsibility for obtaining the reports, data and other information required for the Study.

6. The Mongolian side requested preparation of Maps, which will be printed from GIS, and the Study Team agreed to decide the contents of GIS database and maps based on the discussion between the both side, including pasture capacity, grazing and location of water wells.

7. The both sides agreed that one candidate Aimag would be selected for Phase-II Study Area based on the criteria decided through careful discussions between the both sides.

8. The Mongolian side requested to conduct a counterpart training in Japan during the Study period, and the Study Team promised to convey that request to the JICA headquarter.

ANNEX

LIST OF PARTICIPANTS

Mongolian Side

Ministry of Food and Agriculture

State Secretary

Director, Strategic Planning and Policy Department

Head of Water Policy and Coordination Division,

Strategic Planning and Policy Department

Senior Officer, Strategic Planning and Policy Department

Dr. D. BATMUNKH

Ministry of Finance and Economy

Ms. L.NASANBUYAN

Officer, Economic Cooperation, Management and Coordination Department

Mongolian Academy of Sciences Institute of Geoecology

Division of Water Resource and Utilization

Dr. N. JADAMBAA

Japanese Side

Study Team

Mr. FUJITA Takashi

Team Leader/ Agro-pastoralism Development Planner

Mr. YAMAMOTO Norifumi

Hydrogeologist-I/ Water Quality Specialist

Mr. HIROSHIGE Hideki

GIS Expert/Coordinator

JICA Headquarters

Mr. FUJIE Hiroshi

Officer, Agriculture, Forestry and Fisheries Development Study Department

JICA Mongolia Office

Mr. TSURUHARA Toshiyasu

Assistant Resident Representative, JICA Mongolia Office

Ms. A.SAIKHANTUYA

Program Officer, JICA Mongolia Office



H.F.

P.D.

H.F.

P.D.

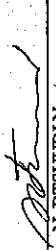



(2) Interim Report (1)

MINUTES OF MEETING
ON
INTERIM REPORT

FOR
THE STUDY FOR IMPROVEMENT PLAN OF LIVESTOCK FARMING SYSTEM
IN RURAL AREA
IN MONGOLIA
AGREED UPON BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
AND
MINISTRY OF FOOD AND AGRICULTURE MONGOLIA

Ulaanbaatar,
August 8, 2003


N. BTSUURI Nantsag
State Secretary
Ministry of Food and Agriculture,
MONGOLIA


FUJITA Takashi
Leader
Study Team
Japan International Cooperation
Agency (JICA)

In accordance with the Scope of Work for the Study for Improvement Plan of Livestock Farming System in Rural Area in Mongolia (hereinafter referred to as "the Study"), the Government of Japan, through Japan International Cooperation Agency (JICA), dispatched to Mongolia the Study Team, headed by Mr. FUJITA Takashi, for the implementation of the Study. At the commencement of the Study, the Study Team submitted officially twenty (20) copies of the Interim Report in Mongolian language and five (5) copies in English explained a) the contents and results of Phase-I Study, b) the preliminary draft of Improvement Plan, c) Study Area in Phase-II, and d) the basic concepts, methodology and schedule of the Study in Phase-II in the presence of Mongolian organizations represented by the Ministry of Food and Agriculture, Mongolia (MFA), on August 6, 2003 at the Head office of MFA.

As a result of explanation and exchange of opinions on the Interim Report, the Mongolian side and Japanese side agreed upon the following points:

1. The Mongolian side accepted that the contents of the Interim Report were prepared in due compliance with the conditions set forth in the Inception Report and agreed that the Study Team would proceed to this stage of the Study in accordance with the methodology and schedule mentioned in the Interim Report.
2. The Mongolian side agreed that Dornogobi Aimag was selected for Phase-II Study Area based on the criteria decided through careful discussions between the both sides.

ANNEX

LIST OF PARTICIPANTS

Mongolian Side

Ministry of Food and Agriculture

Mr. N. BITSUURI Nantsag

State Secretary

Mr. Ch. PUNTSAGSUREN

Head of Water Policy and Coordination Division,

Strategic Planning and Policy Department

Senior Officer, Strategic Planning and Policy

Department

Dr. D. BATMUNKH

Japanese Side

Study Team

Mr. FUJITA Takashi

Team Leader/ Agro-pastoralism Development Planner

Mr. KOGA Naoki

Animal Science and Steppe Management Expert

Mr. AYURZANA Enkh-Aungalan

Nomadic Pastoralism Socio-Economy Specialist

Ms. ISHIKAWA Akemi

Pastoralist Organization Specialist

Mr. YAMAMOTO Norifumi

Hydrogeologist-/ Water Quality Specialist

Mr. HIROSHIGE Hideaki

GIS Expert/Coordinator

(3) Progress Report (1)

In accordance with the Scope of Work for the Study for Improvement Plan of Livestock Farming System in Rural Area in Mongolia (hereinafter referred to as "the Study"), the Government of Japan, through Japan International Cooperation Agency (JICA), dispatched to Mongolia the Study Team, headed by Mr. FUJITA Takashi, for the implementation of the Study. At the end of the field survey of the Phase II of the Study, the Study Team submitted officially twenty (20) copies of the Progress Report (1) in Mongolian language and five (5) copies in English explained a) the contents and results of Phase-II Study, b) the draft of Improvement Plan in Dornogobi Aimag, c) the plan and preliminary results of Pilot Study Area in Phase-III, and d) the basic concepts, methodology and schedule of the Study in Phase-III in the presence of Mongolian organizations represented by the Ministry of Food and Agriculture, Mongolia (MFA), on December 25, 2003 at the Head office of MFA.

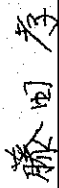
As a result of explanation and exchange of opinions on the Progress Report (1), the Mongolian side and Japanese side agreed upon the following points:


1. The Mongolian side accepted that the contents of the Progress Report (1) were prepared in due compliance with the conditions set forth in the Inception Report
2. The Mongolian side agreed that the Study Team would proceed to the next stage of the Study in accordance with the methodology and schedule mentioned in the Progress Report (1).

MINUTES OF MEETING
ON
PROGRESS REPORT (1)
FOR
THE STUDY FOR IMPROVEMENT PLAN OF LIVESTOCK FARMING SYSTEM
IN RURAL AREA

IN MONGOLIA
AGREED UPON BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
AND
MINISTRY OF FOOD AND AGRICULTURE MONGOLIA

Ulaanbaatar,
December 26, 2003


FUJITA Takashi
Leader
Study Team
Japan International Cooperation
Agency (JICA)


G. DAVADORJ
Director/
Strategic Planning and
Policy Department
Ministry of Food and Agriculture,
MONGOLIA

ANNEX

LIST OF PARTICIPANTS

Mongolian Side

Ministry of Food and Agriculture

Dr. G. DAVAADORJ

Mr. Ch. PUNTSAGSUREN

Director, Strategic Planning and Policy Department

Head of Water Policy and Coordination Division,

Strategic Planning and Policy Department

Dr. D. BATMUNKH

Senior Officer, Strategic Planning and Policy

Department

Japanese Side

Study Team

Mr. FUJITA Takashi

Mr. KOGA Naoki

Ms. ISHIKAWA Akemi

Mr. HIROSHIGE Hideki

Team Leader/ Agro-pastoralism Development Planner

Animal Science and Steppe Management Expert

Pastoralist Organization Specialist

GIS Expert/Coordinator

(4) Interim Report (2)

In accordance with the Scope of Work for the Study for Improvement Plan of Livestock Farming System in Rural Area in Mongolia (hereinafter referred to as "the Study"), the Government of Japan, through Japan International Cooperation Agency (JICA), dispatched the Study Team to Mongolia, headed by Mr. FUJITA Takashi, for the implementation of the Study. At the end of the 3rd field survey in the Phase III of the Study, the Study Team submitted officially twenty (20) copies of the Progress Report (2) in Mongolian language and five (5) copies in English explained a) the contents and results of the 3rd field survey in Phase-III Study, and b) the implementation of the Pilot Projects, c) the establishment of GIS database, and d) the succeeding methodology and schedule of the Pilot Study, in the presence of Mongolian organizations represented by Ministry of Food and Agriculture, Mongolia (MFA), on July 5, 2004 at the Head office of MFA.

As a result of explanation and exchange of opinions on the Progress Report (2), the Mongolian side and Japanese side agreed upon the following points:

1. The Mongolian side accepted that the contents of the Progress Report (2) were prepared in due compliance with the conditions set forth in the Inception Report.
2. The Mongolian side agreed that the Study Team would proceed to the next stage of the Study in accordance with the methodology and schedule mentioned in the Progress Report (2).

MINUTES OF MEETING ON PROGRESS REPORT (2) FOR

THE STUDY FOR IMPROVEMENT PLAN OF LIVESTOCK FARMING SYSTEM IN RURAL AREA

IN MONGOLIA


AGREED UPON BETWEEN

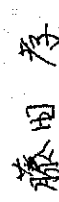
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

AND

MINISTRY OF FOOD AND AGRICULTURE MONGOLIA

Ulaanbaatar,
July 7, 2004


N. BATSUURINAMSAG
State Secretary
Ministry of Food and Agriculture,
MONGOLIA


FUJITA Takashi
Leader
Study Team
Japan International Cooperation
Agency (JICA)

ANNEX

LIST OF PARTICIPANTS

Mongolian Side

Ministry of Food and Agriculture

Mr. N. BATSURI Nantsag

Mr. I. HANIMKHAN

Mr. Ch. FUNTSAGSUREN

Dr. D. BATMUNKH

State Secretary

Director of External Relations and Cooperation

Division, Strategic Planning and Policy Department

Head of Water Policy and Coordination Division,

Strategic Planning and Policy Department

Senior Officer, Strategic Planning and Policy

Department

Japanese Side

Study Team

Mr. FUJITA Takashi

Mr. KOGA Naoki

Ms. ISHIKAWA Akemi

Mr. KATABE Yuji

Mr. HIROSHIGE Hideki

Team Leader/ Agro-pastoralism Development Planner

Animal Science and Steppe Management Expert

Pastoralist Organization Specialist

Well Rehabilitation and Maintenance Specialist

GIS Expert/Coordinator

(5) Progress Report (2)

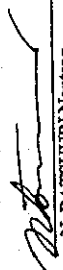
In accordance with the Scope of Work for the Study for Improvement Plan of Livestock Farming System in Rural Area in Mongolia (hereinafter referred to as "the Study"), the Government of Japan, through Japan International Cooperation Agency (JICA), dispatched to Mongolia the Study Team, headed by Mr. FUJITA Takashi, for the implementation of the Study. At the commencement of the Study, the Study Team submitted officially twenty (20) copies of the Interim Report (2) in Mongolian language and five (5) copies in English and explained a) the contents and results of Phase-II Study, b) the Improvement Plan, and c) the basic concepts, methodology and schedule of the Study in Phase-III in the presence of Mongolian organizations represented by the Ministry of Food and Agriculture, Mongolia (MFA), on 17 March, 2004 at the Head office of MFA.

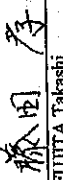
As a result of explanation and exchange of opinions on the Interim Report (2), the Mongolian side and Japanese side agreed upon the following points:

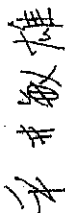
1. The Mongolian side accepted that the contents of the Interim Report (2) were prepared in due compliance with the conditions set forth in the Inception Report and agreed that the Study Team would proceed to this stage of the Study in accordance with the methodology and schedule mentioned in the Interim Report (2).
2. According to the proposal of JICA that the Study Period should be extended for a year owing to the contents of the Pilot Studies, the Mongolian side agreed that the Study Period originally finished in March 2005 will be extended until March 2006.
3. According to the request of the Study Team, the Mongolian side agreed that the Mongolian side will arrange for the smooth transit of the Study Team in the Study Area (Dornogobi Aimag) for fear of influence by the foot and mouth disease.
4. According to the request of the Study Team, the Mongolian side agreed to consider the nomination of the necessary counterparts for additional two (2) members who are in charge of Rural Finance (1) Small and Medium-sized Enterprises Business Administration and Small-scaled Processing of the Study Team.

MINUTES OF MEETING
ON
INTERIM REPORT (2)
FOR
THE STUDY FOR IMPROVEMENT PLAN OF LIVESTOCK FARMING SYSTEM
IN RURAL AREA
IN MONGOLIA
AGREED UPON BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
AND
MINISTRY OF FOOD AND AGRICULTURE MONGOLIA

Ulaanbaatar,
19 March, 2004


N. BATSUJURI Nantsag
State Secretary
Ministry of Food and Agriculture,
MONGOLIA


FUJITA Takashi
Leader
Study Team
Japan International Cooperation
Agency (JICA)

Witnessed by

HIRAI Toshio
Resident Representative
Mongolian Office
Japan International Cooperation
Agency (JICA)




ANNEX

LIST OF PARTICIPANTS

Mongolian Side

Ministry of Food and Agriculture

Mr. N. BATSUURI Nantsag

Mr. Ch. FUNTSAGSUREN

Dr. D. BATMUNKH

State Secretary

Head of Water Policy and Coordination Division,

Strategic Planning and Policy Department

Senior Officer, Strategic Planning and Policy

Department

Japanese Side

JICA Mongolian Office

Mr. HIRAI Toshio

Resident Representative

Study Team

Mr. FUJITA Takashi

Mr. KOGA Naoki

Ms. ISHIKAWA Akemi

Mr. HIROSHIGE Hideaki

Team Leader/ Agro-pastoralism Development Planner

Animal Science and Steppe Management Expert

Pastoralist Organization Specialist

GIS Expert/Coordinator

(6) Progress Report (3)

In accordance with the Scope of Work for the Study for Improvement Plan of Livestock Farming System in Rural Area in Mongolia (hereinafter referred to as "the Study"), the Government of Japan, through Japan International Cooperation Agency (JICA), dispatched the Study Team to Mongolia, headed by Mr. FUJITA Takashi, for the implementation of the Study. At the end of the 5th field survey in the Phase III of the Study, the Study Team submitted officially twenty (20) copies of the Progress Report (3) in Mongolian language and five (5) copies in English explained a) the monitoring and midterm evaluation results of the Pilot Projects b) the design of dairy products shipment and sales project s, c) the succeeding methodology and schedule of the Pilot Study, in the presence of Mongolian organizations represented by Ministry of Food and Agriculture, Mongolia (MFA), on July 5, 2004 at the Head office of MFA.

As a result of explanation and exchange of opinions on the Progress Report (3), the Mongolian side and Japanese side agreed upon the following points:

1. The Mongolian side accepted that the contents of the Progress Report (3) were prepared in due compliance with the conditions set forth in the Inception Report
2. The Mongolian side agreed that the Study Team would proceed to the next stage of the Study in accordance with the methodology and schedule mentioned in the Progress Report (3).

MINUTES OF MEETING ON PROGRESS REPORT (3) FOR

THE STUDY FOR IMPROVEMENT PLAN OF LIVESTOCK FARMING SYSTEM IN RURAL AREA

IN MONGOLIA

AGREED UPON BETWEEN


JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

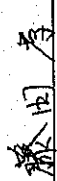
AND

MINISTRY OF FOOD AND AGRICULTURE MONGOLIA

Ulaanbaatar,

December 13, 2004


BATSUURI Namtsag
State Secretary
Ministry of Food and Agriculture,
MONGOLIA


FUJITA Takashi
Leader
Study Team
Japan International Cooperation
Agency (JICA)



ANNEX

LIST OF PARTICIPANTS

Mongolian Side

Ministry of Food and Agriculture

Mr. Ts. GANKHUYAG

Mr. N. BATSUURI

Mr. Ch. PUNTSAGSUREN

Mr. D. BATMUNKH

Vice Minister

State Secretary

Head of Water Policy and Coordination Division,

Strategic Planning and Policy Department

Senior Officer, Strategic Planning and Policy

Department

Japanese Side

Study Team

Mr. FUJITA Takashi

Mr. KOGA Naoki

Ms. HIROSHIGE Hideki

Mr. GOTO Koji

Mr. TEJIMA Shigeharu

Team Leader/ Agro-pastoralism Development Planner

Animal Science and Steppe Management Expert

Pastoralist Organization Specialist

Rural Finance and Small business management

Specialist

Coordinator

(7) Progress Report (4)

In accordance with the Scope of Work for the Study for Improvement Plan of Livestock Farming System in Rural Area in Mongolia (hereinafter referred to as "the Study"), the Government of Japan, through Japan International Cooperation Agency (JICA), dispatched the Study Team to Mongolia, headed by Mr. FUJITA Takashi, for the implementation of the Study. At the end of the 7th field survey in the Phase II of the Study, the Study Team submitted officially twenty (20) copies of the Progress Report (4) in Mongolian language and five (5) copies in English explained a) the monitoring and 2nd midterm evaluation results of the Pilot Projects, b) the succeeding methodology and schedule of the Study, in the presence of Mongolian organizations represented by Ministry of Food and Agriculture, Mongolia (MFA), on September 28, 2005 at the Head office of MFA.

As a result of explanation and exchange of opinions on the Progress Report (4), the Mongolian side and Japanese side agreed upon the following points:

1. The Mongolian side accepted that the contents of the Progress Report (4) were prepared in due compliance with the conditions set forth in the Inception Report.
2. The Mongolian side agreed that the Study Team would proceed to the next stage of the Study in accordance with the methodology and schedule mentioned in the Progress Report (4).

MINUTES OF MEETING ON PROGRESS REPORT (4) FOR

THE STUDY FOR IMPROVEMENT PLAN OF LIVESTOCK FARMING SYSTEM IN RURAL AREA IN MONGOLIA


AGREED UPON BETWEEN

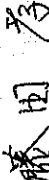
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

AND

MINISTRY OF FOOD AND AGRICULTURE MONGOLIA

Ulaanbaatar,
September 28, 2005


BATSUURI Namtsag
State Secretary
Ministry of Food and Agriculture,
MONGOLIA


FUJITA Takashi
Leader
Study Team
Japan International Cooperation
Agency (JICA)

YJK

ANNEX

LIST OF PARTICIPANTS

Mongolian Side

Ministry of Food and Agriculture

Mr. N. BATSUURI

Mr. Ch. FUNTSAGSUREN

Mr. D. BATMUNKH

Mr. Yo Sambalkhmidov

State Secretary
Head of Pasture-Crop Irrigation Division, Policy
Implementation Coordination Department
Senior Officer, Policy Implementation Coordination
Department
Senior Office, Information, Monitoring and Evaluation
Department

Japanese Side

Study Team

Mr. FUJITA Takashi

Mr. KOGA Naoki

Mr. TEJIMA Shigeharu

Mr. ISHIZAKI Noriyuki

Mr. KATAYE Yuji

Mr. HIROSHIGE Hideki


Team Leader/ Agro-pastoralism Development Planner
Animal Science and Pasture Management Expert
Pastoralist Organization Specialist / Rural Finance (2)
Rural Finance (1) and Small business management
Specialist
Well Rehabilitation and Maintenance Specialist
GIS Expert / Coordinator

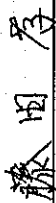


(8) Draft Final Report

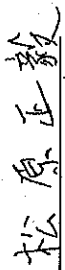
MINUTES OF MEETING
ON
DRAFT FINAL REPORT
FOR
THE STUDY FOR IMPROVEMENT PLAN OF LIVESTOCK FARMING SYSTEM
IN RURAL AREA
IN MONGOLIA
AGREED UPON BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
AND
MINISTRY OF FOOD AND AGRICULTURE, MONGOLIA

Ulaanbaatar,
January 24, 2006


BATSURI Namsag
State Secretary
Ministry of Food and Agriculture,
MONGOLIA


FUJITA Takashi
Leader
Study Team
Japan International Cooperation Agency
(JICA)

Witnessed by



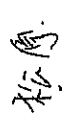

MATSUBARA Masatake
Leader
JICA Monitoring Team
Japan International Cooperation Agency
(JICA)

In accordance with the Scope of Work for the Study for Improvement Plan of Livestock Farming System in Rural Area in Mongolia (in three Always in Gobi region) (hereinafter referred to as "the Study"), the Government of Japan, through Japan International Cooperation Agency (JICA), dispatched the Study Team to Mongolia, headed by Mr. FUJITA Takashi, for the implementation of the Study. At the final stage of the Study, the Study Team submitted officially twenty (20) copies of the Draft Final Report in Mongolian language and five (5) copies in English and explained its contents with the strategy of Master Plan, in the presence of Mongolian organizations represented by Ministry of Food and Agriculture, Mongolia (MoFA), on January 18, 2006 at the Head office of MoFA.

Seminars on the Master Plan and results of Pilot Projects were held at Ulaanbaatar on January 19, 2006 and at Sainshand on January 21, 2006. Representatives from related agencies and the herders groups who are the participants of the pilot projects of the Study participated in the seminars.

As a result of explanation and exchange of opinions on the Draft Final Report (hereinafter referred to as "the Report"), the Mongolian and the Japanese sides agreed upon the following points:

1. The Mongolian side well understood that the contents of the Report were prepared in due compliance with the conditions set forth in the Inception Report.
2. The comments on the Report by the Mongolian side shall be collected and summarized by the responsibility of the Ministry of Food and Agriculture. And the comments shall be presented to the JICA Mongolia Office officially in written form by no later than February 20, 2006. The comments shall be presented in Mongolian and English.
3. The comments on the Report will be discussed between the both sides through JICA Mongolia Office. And the Final Report will be completed by no later than March 31, 2006 and be sent to the Mongolian side promptly.
4. The Mongolian side shall distribute the Final Report to the parties concerned. And the advisory committee headed by the Minister of Food and Agriculture will inform JICA Mongolia Office of its official decision.
5. Close communication between the both sides shall be maintained regarding the preparation of the Final Report.
6. The Mongolian side will make the best use of the Final Report in order to sustain the outcome of the Study and realize the action plans recommended in the Final Report.

ANNEX

LIST OF PARTICIPANTS

Mongolian Side
Ministry of Food and Agriculture
Mr. N. BATSUURI
State Secretary
Dr. G. DAYAADORJ
Director, Strategic Planning and Policy Department
Dr. P. BAYANMUNKH
Director, Policy Implementation Coordination Department
Mr. Ch. PUNTSAGSUREN
Head of Pasture-Crop Irrigation Division, Policy Implementation Coordination Department
Dr. D. BATMUNKH
Senior Officer, Policy Implementation Coordination Department
Ms. T. ERDENEJARGAL
Senior Officer, External Cooperation Division

Japanese Side
Japan International Cooperation Agency (JICA), Monitoring Team
Dr. MATSUBARA Masahiko
Leader
JICA, Headquarter
Mr. TOYAMA Takashi
Project Officer
JICA Mongolia Office
Ms. A.SAIKHANTUYA
Program Officer, JICA Mongolia Office

Study Team
Mr. FUJITA Takashi
Team Leader / Agro-pastoralism Development Planner
Mr. KOGA Naoki
Animal Science and Pasture Management Expert
Mr. TEIJIMA Shigeharu
Pastoralist Organization Specialist / Rural Finance (2)
Mr. HIROSHIGE Hideaki
GIS Expert / Coordinator



松原

ATTACHMENT – C

LIST of MEMBERS

List of JICA Study Team Member

Position	Name
Team Leader/Agro-pastoralism Development Planner	Fujita Takashi
Animal Science / Pasture Management Expert	Koga Naoki
Nomadic Pastoralism Socio-Economy Specialist	Ayurzana Enkh-Amgalan
Pastoralist Organization Specialist / Rural Finance (2)	Ishikawa Akemi Tejima Shigeharu
Hydrogeologist-1/ Water Quality Specialist	Yamamoto Norifumi
Hydrogeologist-2/ Well Construction Manager	Oga Hiroyuki
Geophysicist	Saito Akira
Well Rehabilitation and Maintenance Specialist	Katabe Yuji
Rural Finance (1) / Small Business Management Specialist	Goto Koji Ishizaki Noriyuki
Hides and Skin Processing	Davaasambuu Dejid
GIS Expert / Coordinator	Hiroshige Hideki

List of Mongolian counterpart personnel

Institution	Name	Position
Ministry of Food and Agriculture	N. Batsuuri	State Secretary
	G.Davaadorj	Director of Strategic Planning & Policy Department
	Ch. Puntsagsuren	Head of Pasture-Crop Irrigation Division, Policy Implementation Coordination Department
	D. Batmunkh	Senior Officer, Policy Implementation Coordination Department
Geo ecology center	N. Jadambaa	Senior scientist
Livestock research center	S, Tserendash	Chief of Steppe and Fodder sector
	B. Minjigdorj	Chief of Livestock sector
Mongolian National University	T. Ulaanbaatar	Doctor

