Report Number : ICRR0020455

1. Project Data

Project ID P088816	Project Name MN-Index-Based Livestock Insurance	
Country Mongolia	Practice Area(Lead) Finance & Markets	Additional Financing P115119

L/C/TF Number(s) IDA-40690,IDA-46870,TF-13074,TF-54740,TF-94002,TF-94827	Closing Date (Original) 30-Jun-2010	Total Project Cost (USD) 20,581,486.00
Bank Approval Date 26-May-2005	Closing Date (Actual) 31-Mar-2016	

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	7,750,000.00	2,906,038.39
Revised Commitment	11,247,882.04	2,674,371.81
Actual	10,337,873.38	2,674,371.81

Sector(s)
Other Agriculture, Fishing and Forestry(66%):Insurance and Pension(20%):Central Government (Central Agencies)(14%)

Theme(s)
Rural services and infrastructure(25%):Other social development(25%):Natural disaster management(24%):Other Private Sector Development(13%):Regulation and competition policy(13%)

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2. Project Objectives and Components

a. Objectives

According to the Development Credit Agreement (page 19) of June 17, 2005, the original project development objective is: "to assist Mongolia to ascertain the viability of the Index-Based Livestock Insurance Project (IBLIP) to reduce the impact of livestock mortality for herders’ livelihoods through: (i) developing and testing a pilot Index-Based Livestock Insurance (IBLI) Program in Selected Aimags (Provinces); and, (ii) building the institutional capacity and legal and institutional framework for the prospective replication and scale-up of said pilot Index-Based Livestock Insurance Program nationwide."

According to the Amended and Restated Development Credit Agreement (page 21) of March 18, 2010, the revised project development objective is: "to assist Mongolia to ascertain the viability of the Index-Based Livestock Insurance Project (IBLIP) to reduce the impact of livestock mortality for herders' livelihoods through: (i) scaling up the Index-Based Livestock Insurance (IBLI) Program in Selected Aimags (Provinces); and, (ii) building the institutional capacity, and legal and institutional framework, for the sustainability of the Index-Based Livestock Insurance Program."

The essential difference between the original and the revised project is that the latter scales up the original pilot covering four aimags (provinces) to a nationwide operation covering all aimags and the nine districts of the capital Ulaanbaatar.

b. Were the project objectives/key associated outcome targets revised during implementation?

Yes

Did the Board approve the revised objectives/key associated outcome targets?

Yes

Date of Board Approval

24-Feb-2010

c. Components

The original project comprised five components (Project Appraisal Document (PAD), pages 5-7):
1. **Pilot Index-Based Livestock Insurance Program** (US$6.32 million estimate at appraisal, US$12.79 million actual) aimed to pilot two index-based livestock insurance (IBLI) products --- the base insurance product (BIP) and the disaster response product (DRP) --- by providing them to herders through insurance companies. The activities included: (a) livestock data collection; (b) IBLI software development; (c) provision of technical support to the Project Implementation Unit (PIU) and insurance company staff, together with the provision of essential materials; (d) provision for and management of the Contingent Debt Facility (CDF) for the payment to livestock insurance policyholders of compensation for disaster-related livestock losses under the DRP and stop-loss amounts on eligible claims under the BIP; and, (e) pilot performance monitoring, review, and refinement.

2. **Promotion and Public Awareness** (US$0.89 million estimate at appraisal, US$0.96 million actual) aimed to create awareness and to educate key stakeholders on the details of the insurance products and the IBLI pilot. The activities included: (a) identification of stakeholder public awareness needs and concerns; (b) preparation and circulation of promotional materials; (c) face-to-face education of key stakeholders, clients and beneficiaries; (d) radio and television (TV) programs; (e) national and provincial workshops; and (f) inter-soum (inter-rural district) and inter-aimag (inter-provincial) exchange visits.

3. **Institutional Capacity Building** (US$0.65 million estimate at appraisal, US$0.67 million actual) aimed to support the establishment of the institutional framework and capacity necessary for the potential expansion of the insurance products following demonstration of the viability of the concept. The activities included: (a) strengthening livestock data systems; (b) developing the legal and regulatory framework for the IBLI program; and, (c) examining options for the nationwide expansion of the IBLI program.

4. **Monitoring and Evaluation** (US$0.27 million estimate at appraisal, US$0.39 million actual) aimed to involve stakeholders during the pilot program to track access by different social groups, to monitor responses to the new products, and to determine if and how herders modify their behavior. The activities included: (a) a baseline survey; (b) annual field-based monitoring; (c) impact assessment surveys; (d) a post-event monitoring framework; and, (e) monitoring and evaluation training and capacity building.

5. **Project Management** (US$1.50 million estimate at appraisal, US$2.02 million actual) aimed to provide support to the PIU to enable it to function effectively and provide adequate management for the implementation of the project. The activities included: (a) the provision of training, technical assistance, furniture, computers and software, and vehicle; (b) monitoring and evaluation of project activities; (c) procurement; and, (d) financial management of project accounts.

The revised project comprised five components (2010 Restructuring Paper (RP), pages 5-6):

1. **Index-Based Livestock Insurance Programs** (US$11.35 million estimate at restructuring, US$12.79 million actual) aimed to scale up the insurance program. In addition to the five original activities supported under the original project, the revised component added three activities: (a) separating commercial insurance from the disaster response product (DRP); (b) introducing the government catastrophic coverage (GCC) product; (c) adding more aimags (provinces) to the coverage --- from four to nine aimags in 2010, an additional six aimags in 2011 (if the previous expansion was successful), and an additional six aimags in 2012 (if reinsurance or additional contingency funds could be secured); and, (d) shifting from using annual mid-year censuses to introducing sample-based surveys, as the basis for calculating livestock mortality.

2. **Promotion and Public Awareness** (US$0.96 million estimate at restructuring, US$0.96 million actual) continued the awareness activities as originally planned, but scaled back the face-to-face education activity because of the high cost of the activity and because of the complexity involved in conducting the activity for the 21 aimags covered by the revised project.

3. **Institutional Capacity Building** (US$0.675 million estimate at restructuring, US$0.67 million actual) continued to support the capacity building of key public institutions implementing the insurance program. In addition to the three original activities supported under the original project, the revised component added two activities: (a) the development of a livestock insurance law, and (b) capacity building to support the Federal Regulatory Commission (FRC) in developing an appropriate regulatory framework for the IBLI.

4. **Monitoring and Evaluation** (US$0.395 million estimate at restructuring, US$0.39 million actual) remained unchanged from the original component in the original project.

5. **Project Management** (US$2.027 million estimate at restructuring, US$2.02 million actual) remained unchanged from the original component in the original project.

d. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project Cost: The PAD estimated the original project cost, including physical and price contingencies and taxes and duties, at US$9.88 million. Following six restructurings, covering the expansion of the insurance program nationwide, the project cost increased to US$22.92 million.

Financing: The IDA financed SDR5.14 million (US$7.75 million equivalent) of the original project cost. The financing instrument was a Specific Investment Loan. Fifty nine perfect, US$4.61 million, of this credit was disbursed. Additional financing of the original project cost was provided by the Japan Policy and Human Resource Development (PHRD) fund in the amount of US$1.32 million and by the multi-donor Financial Sector Reform and Strengthening Initiative (FIRST) grant facility in the amount of US$0.56 million. A hundred percent of the PHRD grant and 45 percent of the FIRST grant was disbursed.

Following six restructurings, covering the expansion of the insurance program nationwide, the IDA added SDR6.3 million (US$10.0 million equivalent) in financing. Fifty seven percent of this credit, US$5.72 million, was disbursed. Additional financing of the incremental project cost was provided by the Government of Japan in the amount of US$0.36 million, the Swiss Agency for Development and Cooperation (SDC) in the amount of US$1.98 million, and the Korea Partnership on Poverty Reduction and Socio-Economic Development in the amount of US$0.70 million. All these grants were fully disbursed.

Borrower Contribution: The Government of Mongolia financed US$0.25 million of the original project cost.

Dates: The project was approved in May 26, 2005 and became effective in September 1, 2005.

The project was restructured six times. The first restructuring in June 2008 allowed the completion of a fourth insurance cycle, added a fourth aimag to the coverage, and extended the project closing date by a year from June 30, 2010 to June 30, 2011. With the second restructuring in March 12, 2009, the project took over the activity financed by the Financial Sector Reform and Strengthening Initiative (FIRST) grant facility which had disbursed US$0.25 million, subsequently cancelled the activity for administrative reasons, and added US$0.61 million to the financing provided by the Swiss Agency for Development and Cooperation (SDC). The third restructuring in July

17, 2009 expanded the technical assistance for the project and added US$0.7 million to the financing provided by the Republic of Korea. The fourth restructuring was a Level I restructuring approved by the Board in February 24, 2010. The restructuring: revised the project development objective of the operation; revised three of the five components of the project; scaled up the insurance program nationwide; added US$10.0 million to the financing provided by the IDA; and, extended the project closing date by another two years and nine months from June 30, 2011 to March 31, 2014. The fifth restructuring in March 30, 2012 added analytical activities, including an impact assessment; added a new expenditure category to allow the IDA to pay for the reinsurance premium on the market; and, added another US$1.45 million to the financing provided by the SDC. The sixth amendment in August 29, 2013 established the equalization reserve; allowed indemnity payments to be borne by insurers rather than by the PIU; permitted master policies to be developed between insurers and financial institutions; and, extended the project closing date by another year from March 31, 2015.

The project closing date was March 31, 2016.

3. Relevance of Objectives & Design

a. Relevance of Objectives

Original Project:

The project, in its original version as a pilot index-based livestock insurance program and in its revised version as a nationwide index-based livestock insurance program, remains relevant to the economic conditions in Mongolia at the project closing date.

The agriculture sector plays a central role in the Mongolian economy, accounting for a third of gross domestic product (GDP). The sector is dominated (to the extent of 87 percent of agriculture GDP) by animal husbandry, which supports half the population. Livestock provide rural households with their most vital source of income, jobs, and food security, and their principal means for investing and storing wealth; the importance of livestock has risen following the shift by rural households from collectivized farming to family-based herding in the three decades preceding the project.

At the same time, livestock herder families make up a large percentage of the poor in Mongolia. Herd sizes need to be greater than 200 to sustain a family at a reasonable level of income, yet 80 percent of herders had less than 200 animals. Moreover, the livestock herder families are vulnerable to a dzud (a Mongolian term for a severe winter marked by the huge loss of livestock). Historically, between 1999 and 2002, one third of the national herd was lost in successive dzuds, costing the economy US$20 million.

The Government's livestock risk management policies, while helpful for less extreme risks, have been ineffective against severe dzuds. Restocking is the most important goal for herders following a dzud and insurance represents a logical complement to their risk management activities. Insurance, however, has historically faced challenges in Mongolia, including moral hazard problems, with herders lacking the incentive to minimize the impacts of dzuds on their herds as they received payouts based on their individual losses. Index based livestock insurance, on the other hand, pays for losses based not on the individual herder's losses but linked to the region's (soum-level's) livestock mortality. Herders retain small losses that do not affect the viability of their livelihoods, while large losses are transferred to the private insurance industry, and only the final layer of catastrophic losses is borne by the Government.

The project, in its original version as a pilot index-based livestock insurance program and in its revised version as a nationwide index-based livestock insurance program, continues to be well aligned with the strategic objectives of the World Bank Group's Country Partnership Strategy for Mongolia for Fiscal Year 2013-2017.

The CPS for 2013-17 supports three areas of priority in Mongolia's Comprehensive National Development Strategy: (i) enhancing Mongolia's capacity to manage the mining economy sustainably and transparently; (ii) building a sustained and diversified basis for economic growth and employment in urban and rural areas; and, (iii) addressing vulnerabilities through improved access to services, safety net provision, and improved disaster risk management.

The project is highly relevant to the attainment of the third priority. Index based insurance represents a combination of self-insurance, market-based insurance, and social insurance. It is a market approach to disaster risk management that shares risks between herders, the insurance industry, and the government. In the language of the CPS, it reduces the vulnerability of herder households exposed to natural disasters.

Revised Project:

Apart from the increase in geographic scope, none of the original objectives were changed.

Rating	Revised Rating
High	High

b. Relevance of Design

Original Project:

The overall design of the project is broadly aligned to the project's objectives. Both the original and the revised project development objective are well specified. And, the Results Frameworks for the original pilot (PAD, pages 23-24) and the revised scaled up projects follow a logical chain from activities to outputs and outcomes.

The formal statement of the original project's development objective was to ascertain the viability of the IBLI to reduce the impact of livestock mortality on herders' livelihoods by, first, developing and testing a pilot IBLIP in selected aimags, and the second, building the institutional capacity and legal and institutional framework for the prospective replication and scaling-up of the pilot IBLIP nationwide.

The achievement of the original project development objective was to be evidenced by two outcome indicators: the insurance companies indicating their intention to continue or expand the base insurance product (BIP) after the project, and the Government committing to continue the disaster response product (DRP) after the project.

The decision to conduct the original project as a pilot in four aimags (Bayankhongor, Khentii, Uvs, and, following project effectiveness, Sukhbaatar) in three consecutive seasons was logical: IBLI was a new and innovative concept. Herders needed to be educated on the IBLI concept and the IBLI products. The private insurance companies had to be engaged to participate in the IBLIP. And, the Government had to establish the legal and institutional framework to implement the IBLIP, including beyond the project completion date.

Revised Project:

The revised project sought to spread the benefits of the IBLIP to all herders nationwide, while learning from the experience and the lessons of the pilot effort.

The formal statement of the revised project's development objective parallels that of the pilot: it is to ascertain the viability of the IBLI to reduce the impact of livestock mortality on herders' livelihoods by, first, scaling up the IBLIP nationwide, and second, building the institutional capacity, and legal and institutional framework, for the sustainability of the IBLIP.

The achievement of the revised project development objective was to be evidenced by two outcome indicators: the insurance companies indicating their intention to continue offering IBLI products beyond the project completion date, and, the Government committing to continue the IBLIP beyond the project completion date, specifically by adopting the enabling legislation for the program.

Rating	Revised Rating
High	High

4. Achievement of Objectives (Efficacy)

Objective 1

Objective

To assist Mongolia to ascertain the viability of the Index-Based Livestock Insurance Project to reduce the impact of livestock mortality for herders' livelihoods through: (i) developing and testing a pilot Index-Based Livestock Insurance Program in Selected Aimags (Provinces); and, (ii) building the institutional capacity and legal and institutional framework for the prospective replication and scale-up of said pilot Index-Based Livestock Insurance Program nationwide.

Rationale

The original pilot project met most of its output targets.

The index-based livestock insurance program functioned in the four pilot aimags. The insurance companies sold and serviced the base insurance product (BIP), a commercial product that paid indemnity when the soum-level livestock mortality rate exceeded a specified threshold. The indemnity payment reached a maximum when the mortality rate hit an "exhaustion point". Herders who purchased the BIP were automatically registered for the disaster response product (DRP), a social product financed by the Government. Herders who did not purchase the BIP paid MNT40.0 per sheep unit for the DRP. The DRP began payouts at a mortality rate exceeding the BIP "exhaustion point".

- Three insurance companies participated in the pilot project in 2006 (from a baseline of none in May 2005), and four beginning in 2007 and through 2009. The original target was to have two to six companies participate in the pilot project by the third year of project implementation, in 2008.
- A hundred percent of soums in the pilot aimags offered IBLI products. The original target was to have 80 percent of soums in the pilot aimags offer IBLI products by the third year of project implementation.
- Some 68 percent of all herders in pilot aimags were in contact with insurance agents offering livestock risk insurance. The original target was to have 60 percent of all herders in contact with insurance agents by the third year of project implementation.
- Approximately 14 percent of herders in the pilot aimags purchased the BIP. The original target was to have five percent of herders in the pilot aimags purchase the BIP by the third year of project implementation.
- As herders who purchased the BIP automatically got the DRP, approximately 14 percent of herders effectively purchased the DRP. The original target was to have five percent of herders in the pilot aimags purchase the DRP by the third year of project implementation.
- The participating insurance companies provided 100 percent of contractual payments into the Livestock Insurance Indemnity Pool (LIIP) and the Government BIP reserves as contractually required, meeting the original target.
- A hundred percent of indemnity payments due were received by herders in the pilot aimags, meeting the original target.

The herders could make informed decisions on purchasing the BIP and DRP, following the conduct of intensive promotion and education activities.

- Some 83 percent of herders in the four pilot aimags were aware of the products being offered. The original target was to have 75 percent of herders in the pilot aimags aware of the products beginning the third year of project implementation.
- Fifty percent of herders in the pilot aimags received information on the IBLIP in face-to-face engagements with project public awareness teams. The original target was to have 50 percent of herders in the pilot aimags receive information on the IBLIP beginning the third year of project implementation.

Efforts to develop the institutional framework and capacity to implement the IBLIP were introduced. The livestock data system was strengthened. The initial steps to develop the legal and regulatory framework that would permit the scaling up of the pilot project to a nationwide program was initiated. And, options for the nationwide expansion of the IBLI pilot were examined.

- The capacity of the NSO to conduct the mid-year census was enhanced, with enumerators trained on census questionnaire usage. The NSO successfully started using a sample survey methodology, instead of the more costly census methodology, to build its livestock data system and calculate livestock mortality. The original target was to have cost effective methods for livestock data collection by the NSO tested. A comprehensive technical assistance program delivered by the National Statistical Advisory Service of the U.S. Department of Agriculture was instrumental in strengthening the institutional capacity of the NSO.

- A Legal Working Group, established by the Government in 2008, decided that the IBLI should be regulated under a new and independent IBLI Law. To help draft the new law, an IBLI Working Group was organized in 2010. The original target was to have the regulations for the IBLI be drafted by the fifth year of project implementation.
- Interest among the insurance companies in the global reinsurance market was generated, following international meetings between the participating insurance companies and five international reinsurance firms. The original target was to have mechanisms for transferring risk out of the country identified.

Information was available on the performance, outreach and impact of the pilot IBLIP.

- The baseline survey was carried out in three pilot and three non-pilot aimags in 2005, covering a total of 24 soums. The annual field-based monitoring report was produced for each year of the pilot project. All were produced on schedule except the fourth, as financing from the Korean grant became effective only in August 2010. The first impact assessment was conducted in 2007. A second impact assessment was to be prepared in 2010. The original target was to have an annual monitoring report in each year of project implementation: a baseline survey in the first year; an annual monitoring report in the second year; an annual monitoring report and an impact assessment (and, if necessary a post-event indemnity response report) in the third year; an annual monitoring report (and, if necessary a post-event indemnity response report) in the fourth year; and, a final monitoring and evaluation report (and, if necessary a post-event indemnity response report) in the fifth year.

Outcomes

The efficacy of the original project is assessed as High. The uptake by herders of the BIP, was greater than expected and sustained through the pilot period: 2,400 policies were sold in all 56 pilot soums in 2006; 3,700 in 2007; 4,047 in 2008 (for a premium of US$120,000); and, 5,654 in 2009 (for a premium of US$275,000). The herders hiked their participation rate in the program despite declining cashmere prices in 2008 and 2009, which cut their cash resources. The IBLIP pilot passed the viability tests of 2008, when high livestock mortality triggered indemnity payments of US$340,000 to 1,783 herders, and of 2009, when indemnity payments of US$275,000 were made to 2,117 herders. The production by the NSO of high quality livestock mortality data supported the operation in the pilot years. The IBLI reduced the impact of livestock mortality on herders' livelihoods, according to an October 2015 study by the German Institute for Economic Research (DIW), providing the herders with cash to cover their expenses for food, health and education, in lieu of their selling animals, and relieving them of credit constraints.

- The four insurance companies participating in the IBLIP pilot conveyed their intention to continue and expand the base insurance product (BIP) in 2010, after the pilot. The insurance companies chose to continue their participation in the program despite suffering two successive years of losses in 2008 and 2009.
- The Government committed to continue the IBLIP, shifting from a pilot project in four aimags to a nationwide project in 21 aimags and seeking additional financing for the expansion. In the revised project, the Government would drop the disaster risk product (DRP) and replace it with the government catastrophic coverage (GCC) product.
- After insurance payouts following the 2010 dzud, herders who received a payout restocked a larger number of livestock than those who did not, and restocked their herd more rapidly too. With the more ready and targeted provision of support to herders, the IBLIP reduced both the cost of response and the negative impact of the dzud on herder welfare. Because herders paid premiums and received payouts, the program effectively transferred to the private insurance industry the large implicit contingent liability historically imposed on the Government by dzud events.

Rating
High

Revised Objective

To assist Mongolia to ascertain the viability of the Index-Based Livestock Insurance Project to reduce the impact of livestock mortality for herders' livelihoods through: (i) scaling up the Index-Based Livestock Insurance Program in Selected Aimags; and, (ii) building the institutional capacity, and legal and institutional framework, for the sustainability of the Index-Based Livestock Insurance Program.

Revised Rationale

The revised scaled-up project exceeded most of its output targets.

The index-based livestock insurance program functioned in the all aimags covered by the scaled-up project. The IBLI successfully secured international reinsurance, with the reinsurance contracts concluded with SCOR Global Property and Casualty in 2010, with Qatar Reinsurance Company Limited in 2013, and with Swiss Re Ltd. and Lloyds Syndicate thereafter.

- Seven private insurance companies participated in the IBLIP by the tenth insurance cycle (from a baseline of none in May 2005), offering insurance contracts to almost 10,000 herders in all 21 aimags. Monre Insurance joined the program in 2012, and Normin Insurance and Practical Insurance in 2013. The scaled-up project surpassed the target for this output --- to have four companies participate in the program, the same as the original target.
- A hundred percent of soums in selected aimags (330 soums in all 21 aimags) offered IBLI by end-March 2016 (from zero percent in the baseline), surpassing the target. The revised target was to have 90 percent of soums in selected aimags offer IBLI.
- Only forty six percent of herders were in contact with insurance agents offering livestock risk insurance (LRI) (from zero percent in the baseline). The revised target was to have 60 percent of herders in contact with insurance agents offering LRI. The project fell short of the target, although the shortfall occurred after the insurance program was rolled out nationwide --- the result reflected difficulties with raising awareness of the LRI among herders in all 21 aimags of the country.
- All seven participating insurance companies provided contractual payments into the Livestock Insurance Indemnity Pool (LIIP) and into the LRI reserves, as contractually required, meeting the target. About MNT614.0 million (45 percent of the gross premium) was deposited in the LIIP account in 2014, and MNT245.0 million (18 percent of the gross premium) was allocated to the LRI reserve account. The target was fully achieved. The revised target was to have participating insurance companies provide 100 percent of contractual payments into the LIIP and LRI reserves as contractually required.
- A hundred percent of all indemnity payments due were distributed to soum-level institutions (banks), meeting the target.
- A hundred percent of indemnity payments due were received by herders, meeting the target. A total MNT278.8 million were paid out during the life of the project.

Herders were able to make informed decisions on purchasing BIP and GCC, largely as a result of the promotion and public awareness campaign. More innovative techniques --- a risk management board game --- were introduced to educate herders of the insurance products in the scaled-up project. Previous face-to-face education drives were scaled back after they proved too costly during the pilot phase. A trainers' training initiative and a decentralization of the promotion activities to the aimags reduced the cost and increased the coverage of the information campaign.

- Some 85.3 percent of herders were aware of the products, exceeding the revised target of 80 percent.
- Some 56 percent of herders received information from project public awareness teams, exceeding the revised target of 50 percent.

There was an institutional framework and capacity in place to implement IBLIP in Mongolia. The institution-building effort in the scaled-up project focused on securing the sustainability of the legal and regulatory arrangements of the IBLIP and strengthening the capacity of key stakeholders including the National Statistics Office (NSO) and the Financial Regulatory Commission (FRC).

- The IBLI Law was passed by Parliament, exceeding the target that the regulations for the IBLI be simply drafted by the Government.
- Three hundred and thirty soums in 21 aimags and nine Ulaanbaatar districts had a new cost-effective method for livestock data collection by the National Statistics Office --- the sample survey, in lieu of the more costly census. The revised target was to have 200 soums have a cost-effective method for data collection by the NSO.

Outcomes

The efficacy of the revised project in achieving its objectives is assessed as High. The viability of the IBLIP was ascertained with the scaling up of the index based insurance program nationwide to cover 330 soums in all 21 aimags in the country and nine districts in the capital

Ulaanbaatar. Cumulatively, in ten insurance cycles over ten years, a total 93,700 herders purchased index-based insurance, paying US$405 million in premiums, and a total 16,545 herders received compensation for losses, collecting US$160 million in indemnity payments.

- All seven insurance companies participating in the IBLIP agreed to continue to offer IBLI products beyond the project completion date. Some 8.5-15.5 percent of herders now purchase IBLI products every year, according to monitoring reports.
- The Government committed to continue the IBLIP beyond the project completion date. Parliament passed the IBLI Law in June 2014 to lay the legal foundation for sustaining the IBLI program in the medium- to long-term. Under the cover of the new law, the Government established Agriculture Reinsurance Joint Stock Company (AgRe) as the new entity to manage the IBLI program going forward. The new company was registered under the Company Law of Mongolia with the General Authority for State Regulation in September 2014. The Government released MNT20.0 billion of the initial capital of the company. The AgRe would play the role of the Project Implementation Unit (PIU), and the Government, the role of the IDA Contingent Debt Facility, going forward.

Revised Rating
High

5. Efficiency

Economic and Financial Efficiency:

The economic rate of return (ERR) of the project was not computed at appraisal. It was argued that the probabilistic nature of the benefits of insurance, with herders receiving payouts only in years in which livestock mortality rates were high, rendered it infeasible to conduct a traditional economic and financial analysis of the project.

Rather, the PAD (pages 14-15 and 49-55) constructed a simple multi-period herd simulation model to provide insight on the benefits of the project to herders. Based on the model, the PAD asserted that herders who bought insurance were likely to have a marginally higher income and a higher herd ending-value over the long-term than herders who were uninsured. The PAD also concluded that a US$5.0 million contingent debt facility should allow the Government to finance all but the most catastrophic livestock losses over the three-year life of the pilot project, without jeopardizing the annual public budget.

The ICR (pages 24-25 and 49-57) updated the simulation model, using data collected from project reports, the NSO databases, and international databases, and with only minor adjustments to the assumptions. The model was run for a high mortality soum and a low mortality soum in the Bayankhongor aimag and yielded results that were qualitatively similar to that obtained at appraisal:

- Net income increases for a with-project (insured) herder over an uninsured herder: seven percent, six percent and four percent higher for a 30 percent, 50 percent and 100 percent animal value coverage level respectively in the Jargalant soum, and five percent, six percent and seven percent higher in the Bumbugur soum.
- The end-period (end-2015) herd value is higher for the with-project (insured) herder than for the uninsured herder: 12-19 percent higher (depending on the percentage of livestock species value insured) in the Jargalant soum.
- The end-period (end-2015) herd value is higher for the with-project (insured) herder in the low-mortality Jargalant soum than for the with-project (insured) herder in the high-mortality Bumbugur soum.
- The benefits of IBLI payouts increase with the amount of coverage herders choose for their livestock. The largest gains are reaped when 100 percent of the livestock is insured. Even then, the gains from insuring only 30 percent of the livestock value are considerable.
- The value at risk (at the 95% and 90% confidence level) of the herder’s income is higher when insurance is purchased than when it is not, in both soums. This implies that the insured herder is less exposed to low incomes than the uninsured herder, when 100 percent of the livestock value is insured.
- There is a high probability that the agricultural reinsurance (AgRe) company will be sustainable in the mid- to long-term. A stochastic simulation exercise shows that the AgRe’s capital can grow 40 percent to MNT29.0 billion in five years. Moreover, there is a 92 percent chance that the AgRe’s capital will be greater than the current level of MNT20.0 billion in five years.

Operational and Administrative Efficiency:

The original project was implemented according to design and on time, facilitating the scaling up of the index-based livestock insurance program nationwide in a revised project. The revised project was also efficiently implemented.

Efficiency Rating
High

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal		0	0 ☐Not Applicable
ICR Estimate		0	0 ☐Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

The outcome for the project is rated as Highly Satisfactory. There were no shortcomings in the operation's achievement of its objectives, in its efficiency, or in its relevance.

The relevance of objectives is rated as High. The original rating is High, and the revised rating is High.

The relevance of design is rated as High. The original rating is High, and the revised rating is High.

The efficacy of the project is assessed as High. The efficacy of the original project is assessed as High, and the efficacy of the revised project is assessed as High.

The efficiency of the project is assessed as High. The efficiency of the original project is assessed as High, and the efficiency of the revised project is assessed as High.

a. Outcome Rating
Highly Satisfactory

7. Rationale for Risk to Development Outcome Rating

The risk to the sustainability of the development outcome is assessed to be Substantial.

Corporate governance issues confront the agricultural reinsurance company (AgRe). The Government committed to the continuation of the IBLI with the creation of the AgRe and the provision of US$10 of the US$15 million capital commitment to the company. However, soon after the AgRe was formed and the acting chief executive officer (CEO) had secured a reinsurer license from the Federal Regulatory Commission (FRC), the charter of the company was amended and the composition of the board of directors changed, with additional powers vested on the board and a deputy CEO appointed to replace the acting CEO.

The Government did not provide any justification for the changes. Political influence in state-owned and state-run entities are a challenge in Mongolia. Given that the AgRe will be critical to the sustainability of the IBLI, political interference with the board and with management represents a significant risk to the sustainability of the development outcome.

Raising and maintaining the awareness of the herders of the IBLI and the IBLI products remains critical. It will be difficult to continue with the extensive and the intensive awareness raising activities that have been carried out so far by the PIU. Since taking over the responsibility for the implementation of the IBLIP in 2015, the AgRe has closed all the PIU regional offices in the aimags. The PIU regional offices had provided sales support to the insurance companies and maintained the awareness maintenance activities of the IBLIP. The decline in financing activity over the last 12 months may be related to the cessation of the promotion activities of the IBLIP.

As herders must fully understand the IBLI products before they participate in the program and pay the insurance premium, the IBLIP promotion activities take on the nature of a public good. Promotion activities should be maintained, and budgets provided to carry out these activities, because of their large positive economic and welfare impacts. The absence of these activities and the lack of budgets represent a significant risk to the sustainability of the development outcome.

a. Risk to Development Outcome Rating

Substantial

8. Assessment of Bank Performance

a. Quality-at-Entry

The project benefitted from strong points at entry:

The project was prepared using a robust multi-sector framework. The Bank designed and appraised the project as an agriculture and as a finance operation and fielded a collaborative team of agriculture and finance experts accordingly. The team members were knowledgeable of, and had previous experience, with index insurance. The Bank also drew on technical specialists and operations officers in other disciplines, who worked collaboratively, including with experts from the Food and Agriculture Organization (FAO), to prepare the project.

The project was well informed by: the previous history of livestock insurance initiatives in Mongolia, the best practice in index insurance, and the international experience with large scale agriculture insurance programs. The Bank considered the previous responses in Mongolia to high livestock mortality, including livestock restocking programs and the early attempts at introducing livestock insurance in the country. The Bank considered the best practice in index insurance available globally. And, the Bank also drew on the international experience with large scale insurance programs, particularly those offered by Mexico and India, among developing countries, and by the United States and Spain, among the advanced economies.

The project benefitted from a sound mitigation plan to address critical risks. To address the risk that insurance companies may not participate in the project or may withdraw if significant losses were suffered in the first two years of operation, the insurance program was designed to include a stop loss provision at 105 percent of the base premiums. To address the risk that the number of herders participating might be too few, the project required an intensive promotion and public awareness campaign and the program allowed herders to purchase insurance for as little as 30 percent of their stock. To address the risk that the livestock database might be insufficient and invalidate the statistical calculations of the insurance program, the plan called for direct support to the NSO to undertake a mid-year census and for the conduct of two dry run censuses.

The project merited the first World Bank Golden Plough Award for Innovative Project Design in 2007.

Quality-at-Entry Rating
Highly Satisfactory

b. Quality of supervision

The implementation support to the project was effective and well-coordinated. The Bank was highly attentive to the details of project implementation early on. Safeguards, procurement and financial management issues were addressed readily. As the project grew in scale and scope, the Bank was highly responsive to the client's demands. This was evidenced by the successful conclusion of the two restructuring exercises and the completion of the additional financing for scaling up the project nationwide. Any prospective delays in the change process were addressed rapidly and not allowed to negatively affect the implementation of the project.

As the project progressed from the pilot to the expanded phase, the Bank readily recognized that it needed to bring in additional international experts onto the process. The index insurance project remained fairly new and complex to the national staff even after the pilot experience and they needed assistance to expand the effort nationwide. The international experts helped guide the Government with the scaling up process, conducting sound institutional analyses and offering recommendations based on international experience and best practice.

Overall, the Bank coordinated the supervision activities of its own task teams and that of the national PIU staff and of the international experts effectively.

Quality of Supervision Rating
Highly Satisfactory

Overall Bank Performance Rating
Highly Satisfactory

9. Assessment of Borrower Performance

a. Government Performance

The Government was strongly committed to the project. It wanted to provide herders with a viable option to protect their welfare against the impact of the dzud. Index based insurance provided an effective means to accomplish that goal, with the additional advantage that it tapped the resources of the private sector. The Government established the legal and the institutional framework to implement the IBLIP and to sustain its operation in the medium- to long-term. The Government provided the policy framework and the political leadership to advance the objectives of the IBLIP, the viability of which was tested with subsequent adverse dzud events.

The Government readily shared its knowledge of and experience with IBLI with the international community in various international insurance and reinsurance fora. This had not been envisaged at the time of project appraisal. But the Government's generosity in sharing its experience added to the global knowledge of index based livestock insurance.

The Government was able to sustain its commitment to the IBLIP through the pilot phase and the expanded nationwide phase of the project --- a total of ten years. The enduring commitment is no mean achievement, as most national insurance programs in the developing world meet a high failure rate.

There may be some gaps, however, with the Government's management of the index-based livestock insurance program following the completion of the project. Following the passage of the IBLI Law in mid-2014, the AgRe is to take over the functions of the PIU going forward. To this end, the PIU previously undertook six actions (ICR, page 17) to effect an orderly transition of operations over to the AgRe. The activities included the closure of seven PIU branches in 2013 and another 14 branches in 2014, and the transfer of their assets to either the local department of the Ministry of Agriculture or to the local department of the National Emergency Management Agency. The PIU branches were previously responsible for carrying out the IBLIP's outreach efforts among herders, and with much success. Beneficiary awareness is critical in the case of optional insurance products, and the lack of herder outreach efforts will challenge the sustainability of the IBLI. Any reluctance on the part of the Government to support outreach efforts, including through budgetary allocations from the

Ministry of Finance, for example, will not be helpful either.

Government Performance Rating
Moderately Satisfactory

b. Implementing Agency Performance

The Ministry of Finance (MOF), with a Project Implementation Unit (PIU) of carefully selected, well qualified and highly committed staff, acted as implementing agency of the project. The MOF worked closely with the Ministry of Agriculture and the Ministry of Justice to implement the project.

The PIU worked effectively across a vast and sparsely populated country to reach out to herders and engage them to participate in the IBLIP. The PIU successfully overcame the difficulties of working on a complex project with a highly decentralized implementation. The PIU effectively orchestrated the implementation of the project across various sectors and at the central, aimag and soum levels.

The PIU demonstrated an enormous capacity to innovate in the face of multiple challenges. It remained flexible and made adjustments to implementation plans judiciously. It stretched out the limited resources made available to it to achieve commendable results. It also exploited opportunities to attain operational efficiencies.

The ministerial and provincial governments, the insurance companies, and the herders themselves were unanimous in commending the efforts of the PIU in implementing the project and in engaging all stakeholders in the change process.

Implementing Agency Performance Rating
Satisfactory

Overall Borrower Performance Rating
Satisfactory

10. M&E Design, Implementation, & Utilization

a. M&E Design

The project, which had a logical Results Framework, had a coherent M&E design. The project results, in terms of outputs and outcomes, were each linked to indicators which were generally adequate to measure the progress toward the achievement of the project objective. Any deficiency with the adequacy of any of the indicators to effectively measure the project outputs and outcomes were rectified as the project progressed from the pilot to the expanded phase. For instance, the indicator "cost effective new methods for NSO livestock data collection and statistics tested", listed in the original pilot project, proved difficult to measure. In the revised and expanded project, this output indicator was replaced with "the number of soums implementing effective new methods for NSO livestock data collection and statistics (production)".

The original M&E design called for, at the micro level, monthly and quarterly progress monitoring reports and an annual consolidated progress monitoring report and, at the macro level, an annual field-based monitoring and a mid-term and end-term impact evaluation. The M&E design also called for, in special circumstances, post-dzud event monitoring reports and ad hoc special studies.

Operations-wise, the original M&E plan required the creation of a centralized performance management system, supported by a detailed management information system. In terms of organization, the plan required the recruitment by the PIU of an M&E specialist, supported, when required, by international technical assistance.

b. M&E Implementation

The M&E activities of the project were successfully implemented.

A baseline survey, covering 16 insurance companies, 512 herder households, 24 soum administrations, and three aimag statistics offices, collected baseline values for the results indicators to implement the M&E plan.

The M&E results were reported in 15 Implementation Status and Results Reports (ISRs). The ISRs rated the development outcome (DO) and the implementation (IP) of the project as Satisfactory in all cases, except in the seventh and eight ISRs (of March 2012 and April 2013, respectively), when the DO and IP ratings both stood as Moderately Satisfactory.

The first impact assessment was conducted in 2007, implementing the original M&E plan. The second impact assessment required in the M&E plan was conducted after three insurance cycles and completed in 2015, following a methodology developed by an international consultant. The latter helped assess the proposition that the insurance program was a welfare improving intervention.

c. M&E Utilization

The M&E findings played an instrumental role in refining the IBLI products, especially during the pilot phase of the project.

The baseline survey revealed that experienced herders were more reluctant to alter their risk management strategies, and therefore less willing to buy IBLI products, than their younger peers. The finding enabled the PIU to tailor its public promotion strategy based on the beneficiary’s age.

The annual field-based monitoring reports improved the Government’s and the Bank’s understanding of the determinants of the herders’ uptake of the of the IBLI products.

Finally, the post-event monitoring frameworks proved useful at tracking and evaluating the logistics of IBLI project implementation, in particular, the timing, delivery, and receipt of premium and indemnity payments.

M&E Quality Rating
Substantial

11. Other Issues

a. Safeguards

Environmental Safeguards: The original pilot project was classified as an environmental Category C under OP/BP4.01 Environmental Assessment, and did not trigger any environmental safeguards policy. As the operation was a financial product project, it had no direct environmental impacts. Environmental safeguards compliance was rated as Satisfactory throughout project implementation.

Social Safeguards: The original pilot project did not trigger any social safeguards policy. It was established that since the IBLI was offered to all herders in the pilot aimags, regardless of their ethnic identity, the pilot project was not expected to have any specific effects on minority populations. Nonetheless, the M&E was required to systematically monitor diversity issues to ensure that access was actually offered to all herders.

The revised project triggered the OP 4.10 Indigenous Peoples policy, as the indigenous populations of the Tsaatan reindeer herders in the Tsagaannuur and Retsenlkhumbe soums in the Khuvsgul aimag were anticipated to be included in the scaling up of the project. While reindeers would thrive in a dzud, the herders also raised other livestock, a fact that triggered the social safeguards policy. In response, the PIU developed the Mongolia Index-Based Livestock Project Additional Financing Indigenous Peoples Planning Framework (IBLIP-IPF). The IBLIP-IPF was disclosed in-country in February 21, 2009, and in the Bank Infoshop in March 13, 2009. The IBLIP-IPF was disseminated among the Tsaatan communities through the aimag's local newspaper, the Dalai Eej; through the aimag library; and, through the Tsagaannuur soum governor's office. It was agreed that the number of Tsaatan beneficiaries would be recorded and reported to the PIU twice a year. Moreover, since the project also covered the Kazakh populations in the western provinces, all relevant project materials were translated into Kazakh. This ensured that minority herders in the Bayan-Ulgii aimag would understand the IBLI product and have the opportunity to participate in the project. Social safeguards compliance was rated Satisfactory in the final ISR for the project.

b. Fiduciary Compliance

Procurement: The inexperience and the high turnover rate among the PIU procurement staff initially caused minor issues. However, constant support from the Bank procurement specialist and the responsiveness of the PIU procurement staff themselves sorted the issues out. Seven ex-post procurement reviews were conducted during project implementation. The review reports and the supervision mission Aide Memoires offered recommendations that helped improve the management of the procurement process, including by: strengthening the procurement capacity through training workshops, preparation and dissemination of sample procurement documents, and design of a staffing plan for procurement implementation; separating the functions of financial management and procurement as the project was scaled up and creating a position for a new procurement and contract management officer; and, inviting the PIU to continually seek guidance and assistance from the Bank to ensure compliance with procurement rules and standards. Overall, there were no major procurement issues raised with the project. The management of the procurement process was rated Satisfactory in the final ISR for the project.

Financial Management: The financial management performance of the project was initially inconsistent during the implementation period covered by the first seven ISRs. The PIU financial management staff faced a steep learning curve and a high turnover rate. The Bank financial management team provided support and offered recommendations to help improve the project financial management performance: improve the areas of internal control particularly planning and contract management; budget project resources adequately to ensure the smooth and timely implementation of the project; improve the completeness and accuracy of financial records; and, conduct variance comparisons and analysis and include them in financial management reports. The implementation of the recommendations, together with the commitment of the PIU to field a stable financial management team, improved the financial management of the project through the last six ISRs. In general, financial reports and annual audits were submitted regularly and on time. Most of the financial management reports noted that the project had an adequate financial management system. All the audits carried out during project implementation were clean. The project financial management was rated Satisfactory in the final ISR of the project.

c. Unintended impacts (Positive or Negative)

The project did not have any unintended impacts.

d. Other

No other issues were raised by the ICR.

12. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment

Outcome	Highly Satisfactory	Highly Satisfactory	---
Risk to Development Outcome	Substantial	Substantial	---
Bank Performance	Satisfactory	Highly Satisfactory	---
Borrower Performance	Satisfactory	Satisfactory	---
Quality of ICR		Substantial	---

Note
When insufficient information is provided by the Bank for IEG to arrive at a clear rating, IEG will downgrade the relevant ratings as warranted beginning July 1, 2006.
The "Reason for Disagreement/Comments" column could cross-reference other sections of the ICR Review, as appropriate.

13. Lessons

The five lessons are drawn from the ICR, with some adaptation (ICR, pages 32-34).

One, risk taking, when tempered with sound risk management policies and strategies, can reap significant dividends. The IBLIP was a high risk operation for Mongolia, which had a rudimentary insurance industry in which rural herders, the private insurance industry, and the Government had little knowledge of and experience with index based insurance. Recognizing the risks, the Bank structured a project which: limited the scope of the original project to piloting the IBLI products; fielded a multi-sectoral project team which mustered best practice and international experience with index based insurance; and, drew a highly prescriptive development credit agreement which aimed to contain the risk of any misuse of the project funds. Through an effective pilot, and following the successful scaling-up of the initiative nationwide, the IBLIP has, after a ten year experience, emerged as an internationally recognized index based livestock insurance success story.

Two, contingent IDA financing has significant value. The IDA Contingent Debt Facility (CDF) provided catastrophe protection to the Government, which had responsibility for the social insurance package of the IBLI, at a time when the Government had little capacity to bear catastrophic risk. In 2005, a major dzud that led to the loss of 30 percent of the national herd triggered the payment of US$1.1 million from the CDF to herders. The CDF maintained the viability of the program when it was tested most severely. Subsequently, in 2007, international reinsurance companies started providing insurance protection to the IBLI portfolio.

Three, innovative projects need to be pilot tested, supported by a strong capacity building effort, boosted by an intensive promotion and public awareness campaign, and helped by a robust M&E implementation. The pilot in four aimags built the experience and the confidence to scale-up the project nationwide. The NSO, which worked to build and maintain the livestock mortality database so critical in index based insurance, was heavily supported with resources and technical assistance. The project took three-four years of intensive awareness raising at the soum level to ensure that enough understanding and awareness of the IBLI products was gained among herders. And, following a robust design, the M&E was implemented effectively not just to help track progress with the project but to help remedy elements in the insurance program that were deficient.

Four, new insurance products require a strong enabling environment and are helped by having payouts, a quality assurance mechanism, and reliable time-series data. The legal and institutional framework established for the IBLIP generated trust among herders and the private insurance industry in the IBLI products. Payouts to herders in the Bayankhongor aimag following the dzud in 2005 demonstrated to herders how the IBLI worked. The IBLIP invested heavily in product design to enable transparent payouts. And, Mongolia had a database of livestock mortality time series of relatively high quality and of sufficient length to enable it to pursue the index based insurance initiative.

And five, as the Mongolia IBLIP was resource-intensive for the Bank, any attempt to replicate the project elsewhere should also be adequately resourced. The project involved close cooperation and collaboration between agriculture and finance experts at the Bank over a lengthy ten year period. International experts in index based insurance were engaged by the Bank in project design and project supervision. And Bank senior management remained steadfast in its commitment to the project over both pilot and nationwide expansion phases.

14. Assessment Recommended?

No

15. Comments on Quality of ICR

The strengths of the ICR are:

One, the document is well organized and comprehensive, with the discussion unified around the analytic framework of the results chain. The relationships between the components, the clusters of project activities, and the associated outputs and outcomes are explicit and complete, both in the case of the original pilot project and the revised nationwide project. The ICR uses the results matrix to organize the enumeration of the project's outputs, in an annex (pages 37-48), and the assessment of the project's outcomes, in the main text (pages 19-24).

Two, the assessment of the achievement of the project outputs and final outcomes is candid and evidence-based. The few outputs that were missed are reported, together with all of the goals that were met. The percentage of herders making contact with insurance agents offering livestock re-insurance fell short of the target after the project was extended nationwide. The objective of the revised project was substantially achieved, with the outcome that that the pilot project was successfully scaled up nationwide and the impact of livestock mortality on herders' livelihoods reduced. The ICR has a clear attribution of the outcomes (ICR, pages 20-21).

Three, the update of the project economic and the financial analysis is systematic and evidence-based (ICR, pages 49-57). The ICR modified some of the assumptions used in the original simulation, raising the strike price for the IBLIP from six to seven percent starting in 2009, dropping the discontinued DRP product from the calculation, and including the revenue from milk in total revenue. The ICR used data from field surveys to conduct the simulation, with: the annual mortality rates drawn from the actual historical rates reported by the NSO; the 2010 severe dzud event (which caused the loss of 9.7 million heads of livestock worth US$477 million) included in the historical simulation; missing animal and animal product price data estimated using the Consumer Price Index (CPI) series; and production costs defined to include the costs of fodder, fuel costs, migration costs, the costs of veterinary services and taxes on animals. The simulation essentially corroborated the findings of the original analysis, except that the ICR version is backed up by hard evidence and empirical data.

Overall, the ICR was written following OPCS guidelines.

a. Quality of ICR Rating
Substantial