ADB

Report and Recommendation of the President to the Board of Directors

Project Number: 39229
August 2008

Proposed Asian Development Fund Grant and Technical Assistance Grant
Mongolia: Agriculture and Rural Development Project

Asian Development Bank

CURRENCY EQUIVALENTS
(as of 15 August 2008)

Currency Unit	–	togrog (MNT)
MNT1.00	=	$0.0008673
$1.00	=	MNT1,152.95

ABBREVIATIONS

ADB	–	Asian Development Bank
ADF	–	Asian Development Fund
BOM	–	Bank of Mongolia
EARP	–	environmental assessment and review procedure
GDP	–	gross domestic product
GTZ	–	Deutsche Gesellschaft fűr Technicshe Zusammenarbeit (German Agency for Technical Cooperation)
IEE	–	initial environmental examination
IFAD	–	International Fund for Agriculture Development
JFPR	–	Japan Fund for Poverty Reduction
MNE	–	Ministry of Nature and Environment
MOF	–	Ministry of Finance
MoFA	–	Ministry of Food and Agriculture
PMU	–	project management unit
PRC	–	People's Republic of China
PPTA	–	project preparatory technical assistance
SOE	–	statement of expenditure
TA	–	technical assistance

NOTE

In this report, "$" refers to US dollars.

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GRANT AND PROJECT SUMMARY

Recipient	Mongolia
Classification	Targeting classification: General intervention Sector: Agriculture and natural resources Subsectors: Agriculture production, agroprocessing, agribusiness Themes: Sustainable economic growth, private sector development Subthemes: Promoting economic efficiency and enabling markets, developing rural areas, private sector investment
Environmental Assessment	Category B
Project Description	The Project will develop value chains to deliver unique premium value products to niche markets. The Project will deliver these outputs through three components: (i) value-chain development under which it will establish a deposit account to guarantee 50% of the total amount of loans made by private commercial banks to agribusiness enterprises for value-chain development investment plans (selected by the bank from among a group of prequalified plans with high public goods elements), (ii) a local grant and infrastructure development facility to develop rural infrastructure and services, and (iii) project management. In a break with traditional approaches, the Project will provide private enterprises with resources to undertake value-chain investments that have typically been undertaken by public agencies.
Rationale	Agribusiness development is essential for developing agriculture and improving rural incomes in Mongolia. While Mongolian agribusiness enterprises have little quality- or price-based comparative advantage in international markets, they do have a comparative advantage derived from the distinctive qualities of Mongolian agricultural products. This provides the basis for developing a brand that could command a premium in niche markets. However, realizing niche market potential will require comprehensive coordinated value-chain development. The Project will achieve this development by providing private enterprises with the resources to undertake investments in the value chain coordinated with investments in their own processing facilities.
Impact and Outcome	The impact of the Project will be agriculture and rural growth that sustains premium value differentiation for Mongolian products. The project outcome is expected to be a reliable supply of premium value Mongolian agriculture products to selected niche markets.
Project Investment Plan	The investment cost of the Project is estimated at $47.50 million including taxes and duties of $6.88 million.

Financing Plan

Source	Amount ($ million)	%
ADB ADF Grant	14.72	31.0
Government	1.41	3.0
Commercial Banks	11.00	23.2
Enterprises	20.37	42.8
Total	**47.50**	**100.0**

ADB = Asian Development Bank, ADF = Asian Development Fund.
Source: ADB estimates.

Grant Amount and Terms

The Asian Development Bank (ADB) will provide a grant of $14,720,000 from its Special Funds resources. The grant will be subject to conditions set forth in the draft Grant Agreement. Grant financing for the Project is justified on country considerations. Based on debt sustainability analysis and the revised Asian Development Fund (ADF) grants framework, Mongolia is eligible for 100% of grant financing during 2007─2008. ADF grants aim to provide development assistance to help the country tackle development issues in an environment of debt vulnerability and assist the country in developing the private sector creating employment opportunities and achieving sustainable economic growth without increasing external debt burdens. Grant effectiveness will be assessed within the broader context of program and project performance. The design of this Project and its monitoring framework has clear indicators to measure the inputs, activities, and outputs.

Period of Utilization

Until 31 December 2012

Estimated Project Completion Date

30 June 2012

Executing Agencies

Ministry of Finance (MOF) and Ministry of Food and Agriculture (MoFA)

Implementation Arrangements

MOF will be the Executing Agency for the value-chain development component. An independent project management unit (PMU) will be established for this component. Participating commercial banks in collaboration with PMU will administer project loans. MoFA will be the Executing Agency for the rural infrastructure and services development component. A PMU for this component will be established at MoFA. Overall project coordination will be the responsibility of a project manager reporting to a project advisory board.

Procurement

With the assistance of the value-chain development PMU, where applicable, project enterprises will be encouraged to follow ADB's *Procurement Guidelines* (2007, as amended from time to time), Section 3.12, and adopt appropriate procurement procedures. Project enterprises will be encouraged to procure goods through competitive bidding and shopping when such procedures are applicable in the interest of economy and efficiency. For all other

procurement, contracts for goods estimated to cost more than $0.5 million and contracts for works estimated to cost more than $1.0 million will be procured using international competitive bidding (ICB) procedures. Contracts for goods and works estimated to cost less than the ICB values but equal to or more than $100,000 will be procured through national competitive bidding procedures in accordance with standard government procedures subject to modifications agreed with ADB. Contracts for goods and works estimated to cost less than $100,000 will be procured using shopping procedures. Relevant sections of ADB's *Anticorruption Policy* (1998, as amended to date) will be included in all procurement documents and contracts.

Consulting Services

The Project will require 436 person-months of consulting services: 42 person-months international and 394 person-months national. All consultants will be selected and engaged in accordance with ADB's *Guidelines on the Use of Consultants* (2007, as amended from time to time). Technical experts will be recruited individually by the value-chain development PMU as requested by project enterprises to support enterprises in the implementation of their investment plans. Recruitment will be through a cost-sharing arrangement whereby enterprises requesting experts will bear 60% of the costs of engagement. The project manager, both project directors, and staff of both PMUs will be engaged individually. The remaining consultants will be recruited through firms under two packages (one package each for the value-chain development component and the rural infrastructure and services development component) following quality- and cost-based selection procedures using an 80:20 quality–cost ratio.

Project Benefits and Beneficiaries

The Project will foster sustainable agriculture and rural development in Mongolia. Mongolian agriculture products will claim at least a 30% price premium over comparable products in target markets by 2015 after project investments. Incomes of agriculture producers participating in the supply chains supported by the Project will increase by an average of at least 60% from 2008 to 2015. At least 2,500 families are expected to benefit from project investments, and investments by enterprises are expected to create at least 800 new jobs. In addition to its direct benefits, the Project has substantial demonstration benefits. The resolution of uncertainties and coordination problems is expected to induce project enterprises to expand their value-chain investments by at least 20% over their project-funded levels within 5 years of project completion. The Project is expected to induce at least 25 more enterprises to undertake similar value-chain development investments within the same time period. Since the premium value of Mongolian agriculture products derives from custodianship of the environment and social responsibility and, therefore, provides economic incentives for environmental and social responsibility, the Project is expected to have substantial positive environmental and social benefits that are difficult to quantify.

Risks and Assumptions

Risks to achieving project outputs arise from inadequate capacity of the enterprises to implement their investment plans, delays in procurement processes, delivery delays by contractors, and misuse of funds by enterprises. These risks will be addressed through project management support. Project outcomes could be at risk due to inadequate capacity of enterprises and farmers, contract enforcement issues, and inadequate awareness of the nature of niche market demand. These risks have been addressed through careful selection of enterprises, business advisory support through PMUs, and complementary technical assistance (TA) for Agricultural Marketing and Brand Development. At the highest impact level, risks arise from negative impacts of failures of a few enterprises on the reputation of Mongolian businesses and "free-riding" by low-quality enterprises. These risks are addressed through the brand development activities contained in the accompanying TA and project management support. Adverse incentives for banks and enterprises to collude to capture project funds have been mitigated by providing for thorough assessment of internal control mechanisms of participating banks and spot audits by PMU. The risk that banks subject investments to less than full due diligence has been mitigated through thorough preparation of investment proposals of project enterprises in addition to due diligence by banks. The perceived risk that having the deposit account in the same bank that makes the loans will make the account vulnerable to a raid by the commercial bank is not considered substantial. All the potential risks from moral hazard or adverse incentives will be additionally mitigated by spot audits performed by PMU.

Technical Assistance

The associated TA of $2,000,000 equivalent, proposed to be financed on a grant basis by the Japan Special Fund funded by the Government of Japan, for Agricultural Marketing and Brand Development will be directed to capitalizing on opportunities in niche markets to develop a premium brand for Mongolian agriculture products. The brand development will be primarily aimed at developing partnerships between Mongolian enterprises and external premium brands to develop a virtual vertically integrated value chain. The long-term objective is to provide an opportunity for Mongolian enterprises to develop their own indigenous brands for the export market. The TA will contribute to realizing the impact of the Project—agriculture and rural growth that sustains premium value differentiation for Mongolian products. The outcome of the TA will be the creation of a process for brand development and management that is sustainable and replicable by the institutions charged with managing that process while providing a demonstration effect with two leading enterprises and involving other enterprises in the longer-term institutional process. TA outputs will be a brand framework, content of business proposals, and an institutional framework for sustained brand management and development including a business plan for a brand management agency.


MONGOLIA
AGRICULTURE AND RURAL DEVELOPMENT PROJECT
RUSSIAN FEDERATION
PEOPLE'S REPUBLIC OF CHINA
UVS
HOVSGOL
BULGAN
SELENGE
DARHAN-UUL
ORHON
ZAVHAN
ARHANGAY
ULAANBAATAR
HENTIY
DORNOD
BAYAN-OLGIY
HOVD
TOV
GOVISUMBER
GOVI-ALTAY
BAYANHONGOR
OVORHANGAY
DUNDGOVI
DORNOGOVI
SUHBAATAR
OMNOGOVI
Ulaangom
Moron
Olgiy
Hovd
Uliastay
Altay
Bayanhongor
Arvayheer
Tsetserleg
Harhorin
Mandalgovi
Dalanzadgad
Sayrshand
Zamyn-Uud
Choybalsan
Ondorhaan
Baruun-Urt
Darhan
Erdenet
Bulgan
Choyr
Zuunmod
Altanbulag
Hatgal
Bayan-Ovoo
Gashuun Suhayt
Tsogt-Ovoo
96°00'E
111°00'E
50°00'N
42°00'N
0 50 100 150 200 250
Kilometers
National Capital
Provincial Capital
City/Town
Main Road
Provincial Road
Railway
River
Provincial Boundary
International Boundary
Boundaries are not necessarily authoritative.

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I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on (i) a proposed grant to Mongolia for the Agriculture and Rural Development Project, and (ii) proposed technical assistance (TA) for Agricultural Marketing and Brand Development. The design and monitoring framework is in Appendix 1.

II. RATIONALE: SECTOR PERFORMANCE, PROBLEMS, AND OPPORTUNITIES

A. Performance Indicators and Analysis

2. The agriculture sector is important to growth and poverty reduction in Mongolia. The Asian Development Bank (ADB)-funded agriculture sector strategy [1] contains a detailed sector analysis. In 2007, agriculture accounted for 20% of gross domestic product (GDP); 40% of employment; 14% of export earnings; and 25% of GDP growth. But productivity is low and production risky with less than 10% of production processed beyond the most basic stage. Growth, mostly from higher livestock numbers, has brought problems of desertification, pollution, and breed dilution. The result is a stagnant rural economy, poverty, and threats to the environment. Market orientation, efficiency, and sustainability of agriculture and rural development are objectives of ADB's country strategy and program for 2006–2008.[2] Agriculture employs almost half the labor force and is the most important source of income in rural areas where 43% of the 2.5 million population live. In 2003, rural poverty was estimated at 43%. In addition to being chronically poor, the rural poor are vulnerable to income shocks. For example, during 2000–2001, severe weather killed large numbers of livestock and impoverished many herders. Rural incomes are tied to agriculture production patterns, and consumption varies noticeably with production cycles. Agriculture and rural development, therefore, is crucial to broadening and sustaining Mongolia's growth, and providing opportunities for the many poor who have not benefited from recent growth.

3. Agribusiness value chains are a crucial lever of rural development and income improvement in Mongolia. A range of industries uses agricultural raw materials—meat, dairy, leather, cashmere, camel hair processing and garments, wool carpets and blankets, felt products, and fruit and wild berry products. However, current production (except for cashmere) is a fraction of what it was before the transition to a market economy. Enterprises face keen competition from manufacturers from the People's Republic of China with surplus capacity, economies of scale, and government support. Domestic manufacturers confront worsening raw material quality (caused by supply chain deficiencies) that affects processing efficiency and the quality of end products. An overview of agribusiness is presented in Appendix 2.

B. Analysis of Key Problems and Opportunities

1. Opportunities in Niche Markets

4. Delivery of premium products to niche markets by Mongolian enterprises can induce sustained agricultural and rural growth. Without the development of such a niche, Mongolian agriculture will struggle in increasingly competitive international markets with severe negative environmental and social implications. Mongolian agriculture has little comparative advantage in competing on quality and cost alone. But the sector can capitalize on the same challenging qualities that suppress comparative advantage to develop a unique brand to create premium

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[1] ADB. 2004. *Mongolia: Agriculture Sector Strategy Study.* Manila.
[2] ADB. 2005. *Mongolia: Country Strategy and Program 2006–2008.* Manila.

value. While Mongolia's traditional production practices, harsh and fragile environment, and unique geography restrict the potential for mass, standardized, low-cost production methods, these qualities offer an opportunity for differentiation for brands that are seeking to differentiate and grow as consumers increasingly demonstrate willingness to pay a premium for quality high-performance products that are authentically, ethically, and ecologically produced. Capitalizing on these opportunities, luxury brands are increasingly working with producers to boost brand perceptions and grow. For example, the multibrand RED campaign and the partnership between Knorr (Unilever) and Phu Quoc fish sauce have successfully targeted sophisticated consumers. Similarly, Mongolian enterprises can lend characteristics to established premium brand products to create powerful themes that can boost brand perceptions and sales.

5. Performance, process, origin, and shared ideology can create niche premium value for Mongolian products. The strength, resilience, and potency of raw materials (e.g., the superior warmth and softness of Mongolian cashmere, the concentrated nutrients of its wild berries) provide a strong platform for performance-based value. The unique farming culture and lifestyle (e.g., hand-combed cashmere, pasture-reared meat, hand-picked berries) provide the basis for process-based value. Origins in the unique, mysterious, and remote steppes and forests provide the basis for origin-based premium. Finally, consumers are willing to pay more to become a part of something bigger than only consumption—Mongolian products permit consumers to assume some of the unique spiritual and cultural qualities of the producers and feel that they are contributing to some common good or a better world remote from their urban industrial lifestyles. The performance, process, and origin of Mongolian products can be developed and combined to create credible and compelling brands with substantial price premiums.[3] For example, a Mongolian wool carpet uses durable natural fibers, employs sustainable processes, and originates in a unique environment. Mongolian cashmere recognized for performance, process, and origin could command a greater premium when imbued with a distinct ideology.

6. The Government has targeted this opportunity in its Ecologically Clean Product Program to promote the production and marketing of natural and agricultural products. External partners have attempted to realize this potential through programs for specific products. The Government of Switzerland assisted in developing the Camel Act brand for camel milk products. The United States Agency for International Development has worked to develop brand identity around the Fibremark cashmere label. These initiatives have targeted success, but none has achieved a sectorwide impact. Realizing opportunities to create successful premium brands for agriculture products will require a two-pronged approach to (i) address value-chain constraints to delivering the quality and reliability expected by international markets, and (ii) increase the access of Mongolian enterprises to premium markets through brand development.

[3] The most highly rewarded differentiation built on superior performance from a unique process, origin, and ideology can command premiums of 20% or more over generic products. For instance, organic produce that is grown to strict environmental standards without chemical pesticides or artificial fertilizers and processed without additives typically costs 10%–40% more than similar conventionally produced products. Surveys undertaken during project preparation indicate that about 40% of consumers are ready to pay a 10% premium for origin-guaranteed products. Columbian coffee has successfully benefited from creating more than a geographic indicator, and its brand has sold two and a half times more than its category average at a 60% price premium. The consequences for cooperative members, in terms of income, have been remarkable. Success stories from products leveraging-shared ideology include Wala, the producer of Dr. Hauschka holistic skin care products, which is now a multimillion dollar business with thousands of hectares of farmland all over the world providing raw ingredients for the products in an environmentally responsible manner and supporting local communities in an economically sustainable way. With fair trade growing in Britain by 40% per year, brands that are consistent with its philosophy are well placed to capture niches within saturated categories and maintain a good premium.

2. Constraints to Meeting Niche Market Opportunities

7. Efforts to bring Mongolian products to international markets have stumbled because orders were not met on time or shipments rejected due to quality shortfalls. For example, while the United States Agency for International Development cashmere program had some success in connecting Mongolian producers to international markets, several program participants struggled to meet quality and reliability requirements along their value chain including those for the most basic production and had difficulty in meeting and maintaining buyer standards. The challenges lie in basic production, quality along supply chains, and final production.

8. **Basic Production**. Improving productivity, quality, and reliable availability of primary agricultural products is difficult. Partly the result of the harsh climate, production problems are also linked to management, land fertility, production techniques, availability and affordability of quality inputs, plant health, pest and disease issues, and application of appropriate technologies. For example, while local animals are well adapted to deal with the natural pastures and the severe climate, significant energy is needed to keep animals warm during winter. With only average quality of feed from natural pastures, growth rates are slow without supplementary feeding; and animals are more vulnerable to parasites and infectious diseases.

9. **Quality and Reliability along Supply Chains**. Most agricultural supply chains are poorly organized and equipped with inadequate market information and weak linkages leading to uncertainties in quantity, quality, and timing of supply. When the previously centralized supply chain infrastructure collapsed, many enterprises ceased operation leaving gaps and inadequate information flows. Since then, gaps have been filled largely by hundreds of small or one-person businesses (locally known as “changers”) trading a range of goods and agricultural materials. The huge number of people and businesses, the scatter of producers and traders over large areas, a general lack of awareness of the needs of final markets, and the lack of appropriate equipment along the chain have affected the quality of raw materials reaching processors.[4]

10. Insufficient working capital constrains improvements along supply chains. The ability to provide funding to regular suppliers when they need it most or in times of emergency helps to build relationships. Traders from the People’s Republic of China often tour supplying areas with cash at the time of festivals when producers need cash to purchase traditional gifts. In turn, they gain a right to procure raw materials at fixed prices. Cash-strapped Mongolian agribusinesses cannot compete with this liquidity and, therefore, fail to build relationships with suppliers. Furthermore, enterprises have to rely on cash flow to make purchases and cannot always guarantee that they will pay premiums for quality. Without guaranteed funding for delivering

[4] The impact of poorly organized and equipped supply chains on the quality of inputs used by chain captain processors can be dramatic. For example, while about up to 50% of the total area of skins purchased by leather processors each year is damaged in some way and, therefore, not usable for the production of high-quality products, trade sources estimate that up to 50% of the damage occurred not while the animal was alive but in the supply chain through a variety of poor practices and arrangements.

high-quality raw materials, producers often do not take actions to improve the quality of raw materials. All these factors affect reliability and quality along the supply chains.[5]

11. **Final Production**. Mongolian agribusinesses face four key challenges in meeting the standards required to develop sustainable, higher, added-value export businesses: (i) processing technology, (ii) costs, (iii) management capacity and systems, and (iv) customer service. Many enterprises are operating with outdated or inappropriate equipment from the 1970s and 1980s (when Mongolia received significant assistance from Eastern Europe and the former Soviet Union). Output quality and reliability cannot meet international market standards, production efficiencies are low, energy and other running costs high, and environmental impacts (i.e., water use) above international standards. Costs are also high because of low raw material quality, significant waste, and high cost of finance. Most companies have rudimentary management systems or lack capacity to effectively manage systems. Strongly allied to the problems of improving management capacity is the lack of customer service understanding and ethos among the management of major agroprocessors. Some observers cite this as a critical reason why Mongolia has largely failed to develop sustainable large-scale export businesses even for relatively low added-value products. International buyers experimenting with buying in the country have been deterred by these cultural and attitudinal differences.

3. Value-Chain Development to Meet Niche Market Needs

12. These constraints cannot be addressed individually. They must be analyzed and addressed as a comprehensive value-chain development challenge with coordinated improvements in basic production, supply chains, and final production. While enterprises have made piecemeal improvements to their production systems in recent years, continuing problems of low quality and unfocused basic production and problems in the supply chains have prevented them from stepping up production to optimal levels. Almost 80% of the 50 plus agribusiness enterprises surveyed during project preparation said that investing in upgrades in processing capabilities would be useless without improvements in raw material quality and improved certainty of supply. Without these investments, agribusinesses cannot secure long-term contracts and so, cannot pay premium prices to upstream producers and intermediaries for assured supplies of quality raw materials. Without assurances of price premiums from downstream enterprises, upstream participants in value chains do not invest in improving quality and reliability. Almost 90% of surveyed herders and primary producers reported that they would rather leave quality issues to downstream buyers and accept lower premiums than invest in

[5] Banking dominates Mongolia's finance sector with combined assets amounting to more than 80% of gross domestic product (GDP) and more than 90% of finance sector assets in 2006. Banking comprises 16 commercial banks, all of which have been privatized with four having foreign ownership. Following a series of banking crises in 1994, 1996, and 1998, the financial performance of banks has, in general, improved over the last 3 years; and the subsector was profitable between 2000 and 2006. Banks generally adhere to Basel Core Principles. The total capital-to-asset ratio of banking increased from less than 4% in 1998 to 17% in 2005. Asset quality of banks has also improved despite the rapid growth in lending—annual credit grew on average by 81.5% between 2000 and 2005 and by 42% in 2006 primarily driven by economic recovery, a more competitive financial market structure, and foreign capital inflows. The officially reported nonperforming loan ratio declined from 54% in 1999 to 9% in 2006 while loan loss reserves increased in line with Bank of Mongolia (BOM) guidelines. Notwithstanding this improvement, banking remains at an early stage of overall development as indicated by the fact that most lending is short term and collateral based; and interest rates are high reflecting a shortage of term funding, inadequate credit appraisal systems at many banks, and uncertainties in the law regarding nonjudicial foreclosure. The absence of an effective collateral framework is a key impediment to financial intermediation. ADB. 2000. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan and Technical Assistance Grant to Mongolia for the Second Financial Sector Program*. Manila (Loan 1743-MON and TA3459-MON, approved on 22 June) supported measures to expand the types of collateral that banks can accept from immovable to movable property and financial assets, and to reduce the cost of collateral registration. The Civil Code was amended to allow banks to seize immovable property without a court decision. However, continuing ambiguity in the legal framework removes a strong incentive for borrowers to meet their debt obligations.

improving quality when the ability of downstream buyers to guarantee premium prices is uncertain. The problem is one of a classic coordination failure while all the participants in value chains would be better off if they acted in concert with no one willing to act first.

13. The Government has tried to address this problem by funding upstream improvements through improved input supply, training, management support, infrastructure development, or better support services. However, these investments have rarely achieved the necessary coordination with private downstream investments. Consequently, they have not delivered products needed by downstream enterprises or the markets they serve and have failed to generate expected benefits. Furthermore, efficiency and flexibility are imperative if value chains are to be successful in today's global, highly competitive markets. Government programs are not especially well-known for either of these qualities. Value-chain development needs an innovative approach that combines the flexibility, efficiency, and information-gathering advantages of the private sector to deliver publicly funded upstream investments for value-chain development in coordination with private investments in downstream improvements.

14. Changing attitudes among Mongolian agribusinesses offer an opportunity to try innovative approaches to value-chain development. Increasingly, enterprises are realizing that they cannot grow without comprehensive value-chain development. In a small and increasingly crowded domestic marketplace with increasingly quality-conscious consumers—and having tried and failed to develop sustainable export businesses, some companies have become aware of the need to take control of their supply chains and, particularly, of the need to take action themselves to decisively determine the quality, quantity, and availability of their raw materials. Properly supported and encouraged, these mindset changes will have a significant effect on both the quality and quantity of raw materials available, and ensure that basic production is aligned with market needs and has significant positive rural development impacts.[6]

15. Coordinated development of agriculture value chains is in line with ADB's strategy for Mongolia (footnote 2), which targets increased market orientation. The ADB-funded Agriculture Sector Development Project[7] laid the foundation for production improvements by building up rural infrastructure and support services, inducing changes in production methods and planning, and changing mindsets of producers from centralist approaches to increased business awareness. However, achievements need to be channeled toward greater market orientation by aligning production with specific supply chains and markets. ADB projects have consistently demonstrated that agriculture development merely from supply perspectives does not allow effective commercialization and development. While previous development programs including those under the Agriculture Sector Development Project have assisted players along the supply chain, the key lesson from previous assistance is that coordination of this support along the supply chain is an essential next step. ADB projects in several countries have demonstrated that coordination along supply chains yields stronger production responses and higher benefits.

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[6] Through the process of creating their initial outline proposals (Supplementary Appendix A), a number of the private enterprises engaged during project preparation have developed comprehensive plans for integrated value-chain development. These plans recognize in concrete terms, and probably for the first time in Mongolia, the need for companies to think in a holistic manner about their business and its connections to both raw material supply and final markets, and to make strategic investments throughout the value chain in order to be able to target niche added-value markets. As a result of this process, enterprises have developed plans to begin to resolve many of the problems of the supply chain, raw material quality, reliability and frequency of supply, and other problems that currently plague agribusinesses. These plans have been developed in combination with their purely private investment plans for upgrading production facilities, reducing costs, and improving management and marketing.

[7] ADB. 2000. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to Mongolia for the Agriculture Sector Development Project*. Manila.

16. The gender aspect of value-chain development cannot be neglected. Women and agribusinesses run by women play a critical role in the production of agricultural raw materials. Seventy percent of rural women are unpaid family workers engaged in informal micro production, processing, and trading as well as household food manufacturers. Furthermore, increased focus on developing the untapped potential of businesses run by women will have the dual benefit of increasing raw material quality and the certainty of supply while addressing gender aspects of rural poverty including gender income disparities.

III. THE PROPOSED PROJECT

17. Although Mongolia's agriculture sector has received substantial assistance (Appendix 3), the Project will be the first large-scale holistic approach to developing agriculture value chains specifically aimed at sustaining and delivering premium value products. More importantly, the Project will, in a break with traditional models, provide private enterprises with resources to undertake value-chain investments that have typically been undertaken by public agencies. A problem analysis is provided in Appendix 4.

A. Impact and Outcome

18. The project impact will be sustainable agriculture and rural growth that maintains premium value for Mongolian products. The outcome will be the reliable supply of premium value agriculture products to niche markets by selected enterprises. The outcome is expected to have the desired impact beyond immediate project achievements because the Project will serve as a demonstration for enterprises and value-chain participants who are not immediate project beneficiaries.

B. Outputs

19. The Project will develop value chains to deliver unique premium value products to niche markets. The Project will deliver these outputs through three components: (i) value-chain development, (ii) rural infrastructure and services development, and (iii) project management.

20. **Value-Chain Development.** This component is expected to make loans available to approximately 15 private enterprises (out of a total of 23 enterprises endorsed by the advisory board established to oversee implementation of the project preparatory technical assistance [PPTA]), to undertake value-chain development investments that have high public goods

content and the potential to deliver premium value products to niche markets.[8] The 23 endorsed enterprises prepared outline proposals with support from PPTA and endorsed by the project advisory board. These proposals were presented to commercial bank credit officers and management, who selected those that they considered most creditworthy. PPTA consultants worked with the 15 most creditworthy companies to prepare bankable proposals for consideration by commercial banks. The final decision to approve loans to enterprises will be made by commercial banks using their own loan appraisal methodology. Banks will make loans to enterprises using their own funds. Project funds will be used to make deposits at each participating bank to cover 50% of the loan disbursements to project enterprises by that bank. Deposits are expected to range from $300,000 to $1.5 million. If a loan is declared as a loss, the commercial bank will be able to recover 50% of the principal outstanding from the deposit account. Summaries of investment plans endorsed by the project advisory board are presented in Appendix 5. Detailed financial analyses of four representative investment plans are presented in Supplementary Appendix B. Full bankable proposals of the four representative enterprises are available as Supplementary Appendix C. The proposed supply chain investments address the major constraints to value-chain development (paras. 7–11). The Project will promote social and gender responsiveness of enterprises by imparting relevant gender awareness and capacity development training for management and assessing the performance and impact of project enterprises from social and gender perspectives.

21. **Rural Infrastructure and Services Development.** This component will fund investments that will either support value chains in the longer term or have a large public good element making them unattractive to private investors. Investments will build upon three priority areas identified in the ADB-funded Agriculture Sector Strategy Study: (i) development of livestock testing and veterinary extension centers, (ii) business advisory and technical support to agricultural cooperatives, and (iii) development of fodder supply and storage facilities to foster fodder market development. The Project will finance laboratory equipment, civil works, and training for veterinary centers; training for water point establishment and operation; stocking herds, equipment, and training for marketing cooperatives; and equipment and training for fodder facilities. Selection criteria for investments and envisioned procedures for their development, implementation, and monitoring are in Appendix 6. Male and female community

[8] The project advisory board was chaired by the Ministry of Finance (MOF) and had two representatives from the Ministry of Food and Agriculture (MoFA), one representative from the Ministry of Industry and Trade, three civil society representatives, one representative from the German Agency for Technical Cooperation (GTZ), and one representative from ADB. The project advisory board considered the following criteria when endorsing enterprises: (i) ownership of the enterprise is Mongolian, (ii) the enterprise is engaged in agribusiness, (iii) the enterprise has products and/or services that have the potential for premium value, (iv) the enterprise has been in operation at least for 3 years, (v) the supply chain of the enterprise is located in Mongolia and is seen to make a substantial impact in the agriculture sector, (vi) the enterprise has adequate machinery and equipment to fulfill its plan or proposes to procure the required machinery as part of its plan, (vii) the enterprise has chain captain status, and (viii) the public good element and positive social and environmental externalities of its proposed investment plan. A transparent and rigorous procedure was applied to screen enterprises and is detailed in Supplementary Appendix A. Enterprises were invited to apply to the Project through advertisements in national newspapers and information seminars in major cities. Applicants were screened on the basis of the above criteria. The information of screened companies was physically checked and validated. The companies were then assisted in preparing investment proposals. The final screening of enterprises was made on the basis of the following criteria applied to their investment proposals: (i) type of raw materials purchased, (ii) source of purchases, (iii) annual value of purchases, (iv) purchasing system, (v) projected turnover increase, (vi) liabilities and/or turnover, (vii) expansion of production capacity, (viii) modernization of final production, (ix) improved management and skills, (x) investments in supply chains, (xi) improved management of suppliers, (xii) improvements along supply chains, (xiii) improved raw material quality, (xiv) improved finished product quality, (xv) development of new value-added products, (xvi) development of uniquely Mongolian products, and (xvii) development of exports. The project advisory board endorsed 23 enterprises as being eligible to receive project funds; they were assisted by project preparatory technical assistance (PPTA) consultants in preparing outline proposals. Project enterprises represent the milk, meat, herbal products, fruit products, leather, and wool and cashmere sectors.

members will be consulted in the identification, selection, and possibly implementation of community-based rural infrastructure and support service development investments.

22. **Project Management.** Two project management units (PMUs) will be established: one at the Ministry of Finance (MOF) for the value-chain development component and one at the Ministry of Food and Agriculture (MoFA) for the rural infrastructure and services development component. Staff from PMUs, MoFA, MOF, project advisory board, and participating banks and enterprises will receive training (including gender awareness and capacity development for social and gender responsiveness) in line with the gender action plan in Appendix 7. The value-chain development PMU will work closely with participating banks to (i) ensure that proceeds of the grant are deposited into deposit accounts in accordance with respective financing agreements; (ii) forecast funding requirements of the participating companies and arrange funds flow; (iii) monitor the use of funds against agreed plans; (iv) provide business advisory services and, in liaison with ADB and the Government, develop and assist in implementing corrective actions as necessary; (v) monitor performance of project enterprises; (vi) monitor compliance with covenants and environmental and social performance of the investments, and help to correct the situation as necessary; (vii) organize stakeholder mobilization and gender awareness workshops including workshops to facilitate harmonization with relevant ongoing projects; and (viii) prepare and submit required reports for the component.

23. Implementation of the rural infrastructure and services development component will be the responsibility of experts from MoFA in collaboration with *aimag* (province) agriculture experts overseen by the MoFA project working group. PMU will assist MoFA by (i) assisting in evaluating investment proposals, (ii) forecasting funding requirements for the component and arranging funds flow, (iii) monitoring implementation and compliance with covenants, (iv) organizing stakeholder mobilization and gender awareness workshops including workshops to facilitate harmonization with relevant ongoing projects, and (v) preparing and submitting required reports for the component. Investments will be identified in consultation with communities participating (or with the potential to participate) in supply chains of enterprises supported by the Project. MoFA experts and project working group will coordinate selection. Where available, informal herder groups like those established under the Agriculture Sector Development Project, local community councils established under the World Bank's Sustainable Livelihoods Project, or other local organizations will be used as agents for local input into investment selection and implementation.

C. ADF IX Grant

24. Based on the November 2005 debt sustainability analysis [9] and revised Asian Development Fund (ADF) grants framework, Mongolia is eligible for 100% grant financing. ADF grants aim to provide development assistance to help the country tackle development issues in an environment of debt vulnerability; and assist the country in developing the private sector, creating employment opportunities, and achieving sustainable economic growth without increasing external debt burden. Grant effectiveness will be assessed within the broader context of program and project performance. The project design and monitoring framework have clear indicators to measure inputs, activities, and outputs (Appendix 1).

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[9] World Bank. 2005. *Mongolia: 2005 Article IV Consultation-Staff Report; Staff Statement; and Public Information Notice on the Executive Board Discussion.* International Monetary Fund (November, pages 60–78).

D. Special Features

25. **Public Support for Value-Chain Development**. Value-chain investments have public goods characteristics. Benefits from these investments are not strictly appropriable by downstream investors. For example, participants in the chain can redirect improved products and intermediate inputs resulting from investments of downstream investors to buyers other than the investor. Also, many investments have initial costs beyond the reach of small producers. Furthermore, not having undertaken such investments or coordinated actions, participants are not certain of their financial benefits. Initial returns are likely to be low as participants in the chain go through a period of learning as they improve coordination and management, set up delivery systems, adopt technologies, and establish information systems. Finally, the early period could have participants reneging on contracts or otherwise subverting agreements as they go through a period of realizing the gains of long-term partnerships. Private investment in such development, therefore, is less than optimal because of the uncertainty, learning, and coordination problems. Special consideration for the public goods nature of value-chain investments is, therefore, necessary; and a case for public support is credible.

26. A case for public support for value-chain investments can be motivated also by their positive spillover effects. As the benefits to long-term partnerships along supply chains are demonstrated, other enterprises and producers will be induced into developing such partnerships and, thereby, increasing the efficiency of the sector as a whole and incomes of more than the initial participants. In the particular case where supply chains are developed to realize the potential in the markets for premium-value products, positive environmental and social externalities will be substantial. Enterprises targeting such markets will have to ensure that their supply chains adhere to standards demanded by the markets and, therefore, will undertake investments with particularly high positive social and environmental impacts. Finally, public support for value-chain development through project enterprises will strengthen the financial system by increasing the capacity of commercial banks to move from the currently prevalent collateralized short-term lending to lending against potential cash flow and business prospects.

27. Enterprises endorsed by the project advisory board have developed integrated investment plans that include investments in the supply chain, improved or expanded production, new and improved products, enhanced internal capacity, and improved marketing activities. The most critical elements of these plans from the point of view of the companies are the planned investments in improvements of raw material quality and the supply chain. The enterprises endorsed by the project advisory board have proposed using 34.4% of their total investments for capital equipment and buildings, 26.7% to improve supply chain management, and 38.9% for working capital. A detailed description of proposed investments is provided in Appendix 5.

28. **Benefits of the Financial Intermediary Loan Modality.** Traditional modes of funding public investments are not suitable for value-chain development. Such investments through separate government-funded programs have not been sufficiently flexible or coordinated with private investments. The financial intermediary loan modality will overcome this shortcoming by providing private enterprises with funds to undertake quasi-public investments that support their own purely private value-chain development investment plans. This will ensure that investments with substantial public goods content and high economic, social, and environmental benefits are fully integrated with commercial investment decisions. At the same time, due diligence applied by commercial banks to the value-chain development proposals will ensure that the investments are financially viable. Given that commercial banks will make loans to enterprises using entirely

their own funds, the requirement to relend ADB grant proceeds to a financial intermediary[10] is not applicable. Because private enterprises will borrow funds for the investments, they are expected to ensure that procurement is undertaken with accepted commercial practices. The loan disbursement systems of participating banks will provide an established channel for funding and collecting repayments. ADB's direct supervision of procurement and disbursement will not be necessary.

29. **Provision of a Unifying Core to a Diverse Range of Initiatives**. The Project will focus the resources of many ongoing and planned initiatives on value-chain development. The Rural Economies Development Project funded by German development assistance through German Agency for Technical Cooperation (GTZ) provides credit guarantees and advisory services to small- and medium-sized businesses. Agreement has been reached with GTZ that the Rural Economies Development Project will focus resources on project value chains. The Market Access for the Poor Project funded by International Fund for Agricultural Development (IFAD) aims to increase the added value of agriculture products, improve raw material quality, and improve access to finance. Agreement has been reached with IFAD that the market access project will assist project enterprises with the parts of their investment plans that deal with basic production. In addition, it will mobilize 20 grassroots groups integrated in project value chains and support them in developing and financing business plans to participate in project supply chains. IFAD is also assisting two project enterprises through a pilot program to test arrangements for partnerships with participants in their supply chains. A joint ADB–IFAD review of the pilot will be used to strengthen implementation arrangements for the Project at the end of the second year of implementation. A component of the Sustainable Livelihood Project funded by the World Bank will help herder groups develop and implement pasture management plans. The World Bank has agreed that the component will be pilot tested in project supply chains. If successful, the pilots will be replicated in more project supply chains through the Project's rural infrastructure and services development component.

E. Project Investment Plan

30. The investment cost of the Project is estimated at $47.50 million including physical and price contingencies and taxes and duties (Table 1). Costs to be paid by the Government include $0.67 million in taxes and duties.[11] Detailed cost estimates are provided in Appendix 8.

Table 1: Project Investment Plan
($ million)

Item	Amount[a]
A. Base Cost[b]	
1. Value-Chain Development	39.55
2. Rural Infrastructure and Services Development	2.22
3. Project Management	2.40
Subtotal (A)	**44.17**
B. Contingencies[c]	**3.33**
Total (A+B)	**47.50**

[a] Includes taxes and duties of $6.88 million.
[b] In early 2008 prices.
[c] Physical contingencies computed at 5% for all goods and services. Price contingencies are computed at 6.8% for 2008, 0.7% for 2009, 1.4% for 2010, 0.4% for 2011, and 0.5% thereafter for foreign costs; and 10.5% for 2008, 9.5% for 2009, 9.0% for 2010, and 8.0% thereafter for local currency costs.
Source: Asian Development Bank estimates.

[10] ADB. 1987. *Review of Bank Policies on Credit Lines to Development Finance Institutions*. Manila (R27-87).
[11] Taxes on value-chain development investments of private enterprises will be paid by the borrowing enterprises.

F. Financing Plan

31. The Government has requested grant financing of $14,720,000 equivalent from ADB's Special Funds resources to finance the Project. The Government will finance $0.67 million in taxes and duties and a portion of the cost of management of the rural infrastructure and services development component. Participating banks will provide $11.00 million in loans to project enterprises using their own funds. The loans are expected to have terms up to 7 years with grace periods up to 3 years during which interest will be paid. Commercial banks will determine interest rates using market-based assessments. The enterprises will contribute $20.37 million of their own funds. The financing plan is in Table 2.

Table 2: Financing Plan
($ million)

Source	Total	%
Asian Development Bank ADF Grant	14.72	31.0
Government	1.41	3.0
Commercial Banks	11.00	23.2
Enterprises	20.37	42.8
Total	**47.50**	**100.0**

ADF = Asian Development Fund.
Source: Asian Development Bank estimates.

32. Participating banks will lend to enterprises using entirely their own funds at rates no less than the prevailing ordinary capital resources rate with market-based spreads on individual loans reflecting the credit risk assessed by the banks themselves and their cost of funds.[12] The flow of funds under the Project is shown in Supplementary Appendix D. Every time a bank makes a disbursement for a project loan, the Government will deposit funds into a deposit account at that bank in dollars and togrog to guarantee 50% each of the dollar and togrog loan disbursement to the enterprises. The deposit account will always show a balance equal to 50% of the total outstanding principal balance on loans made by the bank to project enterprises. If a project loan is declared as a loss by a bank in its reporting to Bank of Mongolia (with the endorsement of the value-chain development PMU), the deposit account balance will be debited by the bank by an amount equal to 50% of the loan amount declared as a loss. PMU and ADB will review each loan agreement between the bank and the project enterprises to ensure that the cost and margin structure of the proposed lending is fair and transparent. This rather complicated guarantee scheme is considered efficient given the present legal framework in

[12] Interest rates for deposits and loans are fully liberalized with banks free to charge interest on a risk-reward basis. Market interest rates are showing a declining trend with increasing competition and gradual decrease in the inflation rate with lending rates dropping faster than those on deposits. Lending rates have dropped from 26.6% in 2002 to 20% in 2006 while deposit rates have dropped from around 14% in 2002 to 13.5% in 2006. The interest spread dropped from 15.4% in 2002 to 8.9% in 2006 but nevertheless remains high.

Mongolia and the undesirability of using direct Government lending schemes that borrowers view as less strict than commercial lending.[13]

G. Implementation Arrangements

1. Project Management

33. The project advisory board established to oversee PPTA will monitor implementation and ensure coordination across components. The board will have two representatives from MOF (including the chairperson); one representative each from MoFA, the Ministry of Nature and Environment (MNE), and the Ministry of Industry and Trade. Representatives of ADB may attend meetings as observers. Representatives of project enterprises and civil society may be invited to meetings as observers when necessary. The board will meet at least every 6 months to review progress and will receive quarterly reports on implementation of each of the two components. A project manager will be appointed as secretary to the board and will be responsible for implementation of the board's decisions. The project manager will report to the board and will be responsible for the overall management of the Project, management of the project imprest account, facilitation of community-based monitoring of the Project, and coordination of activities that impact across different components and with other projects undertaken by other agencies in Mongolia.

34. MOF will be the Executing Agency for the value-chain development component and for the portion of the project management component associated with value-chain development. It

[13] The Project will provide a guarantee of up to 50% of the principal of the term loans provided by commercial banks to the enterprises. By making an interest free deposit equivalent to 50% of the loan principal, the Project will effectively lower the commercial bank's cost of funds on the loan by 50%. The subsidy is justified on the grounds of the strong public goods nature of the planned investments by the enterprises. The subsidy is intended to help develop term lending to agribusiness by encouraging commercial banks to engage in term lending initially by providing them with a set of well-screened potential clients. During its transition to a market economy, ADB has consistently supported the reform and development of Mongolia's finance sector. The Government and ADB are currently implementing the Financial Regulation and Governance Program. Building on progress achieved under two Financial Sector Program loans, the Financial Regulation and Governance Program aims to help develop a sound and broad-based finance sector using a holistic approach to address the remaining legal and regulatory, institutional, and policy constraints. A broad-based financial system compromising banks, nonbank financial institutions, savings and credit cooperatives, securities markets, and the insurance subsector reduces the risks associated with overreliance on the banking system and increases the supply of long-term capital for productive investment. It will, in turn, promote growth and create jobs. Increased competition from alternative sources of financial intermediation will enhance efficiency, and the financial system as a whole will become more resilient to exogenous shocks. The Financial Regulation and Governance Program's objectives are to (i) reduce the cost of borrowing and expand access to credit by improving the collateral framework, (ii) improve governance in banks to protect depositors, (iii) enhance the role of the nonbank financial subsector in mobilizing savings for investment capital, and (iv) improve investor confidence by reducing risks from money laundering through the financial system.

will sign financing agreements with participating commercial banks.[14] MOF will establish an independent PMU to manage this component. A full-time PMU director responsible for implementation and supported by consultants will report to the project manager. PMU will work in collaboration with the participating banks which will appoint project coordinators from among their staff. PMU will ensure that funds received by the banks are disbursed in accordance with the financing agreements and that the use of funds by enterprises is in accordance with the approved investment plan. It will conduct spot audits to prevent collusion between banks and borrowing enterprises and other misdemeanors in the use of project funds. MoFA will be the Executing Agency for the rural infrastructure and services development component and the portion of the project management component associated with the rural infrastructure component. MoFA will establish a PMU for the component. MoFA has established a working group to oversee implementation of this component and will provide technical experts from MoFA to assist in project implementation.[15] A full-time PMU director responsible for implementation of the component and supported by consultants will report to the project manager.

2. Implementation Period

35. The Project will be implemented over 4 years from 2008 to 2012. The value-chain investments are expected to be completed over 4 years. Participating banks will administer the outstanding loans after project completion. Rural infrastructure and services development investments will be completed by year 4. An implementation schedule is provided in Appendix 9.

3. Procurement

36. With the assistance of the value-chain development PMU, where applicable, project enterprises will be encouraged to follow ADB's *Procurement Guidelines,* Section 3.12 (2007, as amended from time to time), and undertake procurement in accordance with established commercial practices acceptable to the Government and ADB. To be acceptable, the enterprises will (i) demonstrate that procedures are appropriate in the circumstances; (ii) ensure

[14] Khan Bank was selected as a partner in the Project through consultation with MOF and BOM because it (i) is financially sound, (ii) meets BOM's prudential requirements, (iii) has adequate staff for the management of project funds, (iv) has an acceptable record of medium-sized corporate lending, and (v) has at least 20% of its loan portfolio in rural areas. The complete due diligence report on Khan Bank is available in Supplementary Appendix E. Other commercial banks will be selected if they meet the same criteria and are considered acceptable to MOF, BOM, and ADB; and due diligence of the bank (conducted to the same standard as that conducted on Khan Bank) is considered to be acceptable by the Government and ADB. The Banking Law, enacted in 1996 and amended several times, provides the legal basis for BOM to regulate and supervise banking. About 40 staff members are in charge of supervising 16 banks. BOM has made substantial progress in strengthening its regulatory capacities in recent years. The International Monetary Fund has been supporting BOM in establishing and upgrading various regulations. The loan classification and loan loss provisioning standards are simple, conservative, and well-implemented. The classification criteria consist of quantitative criteria based on the duration of loans overdue and qualitative criteria based on the conditions of borrowers. To minimize discretion, the qualitative criteria are only used to downgrade the classification derived from the quantitative criteria and are mainly based on numerical indicators such as return on assets (net profit as a percentage of assets) and capital-asset ratio. The amount of loan loss provisioning is determined according to the classification under BOM guidelines (e.g., 1% for performing, 5% for past due). The required provisioning rates for substandard and doubtful loans were increased by the amendment of the guidelines (25%–40% for substandard, and 50%–75% for doubtful) in 2004. Commercial banks submit loan classification reports monthly to BOM.BOM has established a standard set of prudential ratio regulations including for (i) capital adequacy, (ii) liquidity, (iii) credit concentration, and (iv) foreign exchange risk. Banks are required to submit reports on these indicators every month. A prompt corrective action program was established to allow BOM to take supervisory actions against undercapitalized banks from an order to cease paying dividends to placement of the bank in conservatorship depending on capital inadequacy.

[15] Technical expertise is expected to be needed in civil engineering, extension, and participatory planning.

that goods and services financed using project funds are purchased with consideration to economy and efficiency at a reasonable price, given time of delivery, quality, and efficiency; and (iii) ensure that goods and services to be financed by project funds are procured from ADB member countries. Enterprises will be encouraged to procure goods through international competitive bidding and shopping, when applicable, in the interest of economy and efficiency. The Government has agreed to use ADB procurement procedures with regard to economy and efficiency. PMU will oversee procurement by enterprises to ensure that ADB guidelines are followed. In case of noncompliance, the Government will have the right to recall the loan to the violating enterprise. For all other procurement, contracts for goods estimated to cost more than $0.5 million and contracts for works estimated to cost more than $1.0 million will be procured using international competitive bidding procedures. Contracts for goods and works estimated to cost less than the ICB values but equal to or more than $100,000 will be procured through national competitive bidding procedures in accordance with standard government procedures subject to modifications agreed with ADB. Contracts for goods and works estimated to cost less than $100,000 will be procured using shopping procedures. Relevant sections of ADB's *Anticorruption Policy* (1998, as amended to date) will be included in all procurement documents and contracts. The procurement plan is in Appendix 10.

4. Consulting Services

37. The Project will require 436 person-months of consulting services: 42 person-months international and 394 person-months national. All consultants will be selected and engaged in accordance with ADB's *Guidelines on the Use of Consultants* (2007, as amended from time to time). Technical experts will be recruited individually by the value-chain development PMU as requested by project enterprises to support enterprises in the implementation of their investment plans. Recruitment will be through a cost-sharing arrangement whereby enterprises requesting experts will bear 60% of the costs of engagement. The project manager, both project directors, and staff of both PMUs will be engaged individually. The remaining consultants will be recruited through firms under two packages (one package each for the value-chain development component and the rural infrastructure and services development component) following quality- and cost-based selection procedures using an 80:20 quality–cost ratio.[16] The outline terms of reference are provided in Supplementary Appendix F.

5. Anticorruption Policy

38. ADB's *Anticorruption Policy* was explained to and discussed with the Government and Executing Agencies. Consistent with its commitment to good governance, accountability, and transparency, ADB reserves the right to investigate directly or through its agents any alleged corrupt, fraudulent, collusive, or coercive practices relating to the Project. To support these efforts, relevant provisions of ADB's *Anticorruption Policy* are included in the grant regulations and the bidding documents for the Project. In particular, all contracts financed by ADB in connection with the Project will include provisions specifying the right of ADB to audit and examine the records and accounts of the Executing Agencies and all contractors, suppliers, consultants, and other service providers as they relate to the Project.

[16] The following national consultants will be required for the value-chain development component: agribusiness specialist and/or project director, project monitoring specialists, financial analysts, business advisors, environment specialist, and social and/or gender specialist. For the rural infrastructure component, the following national consultants will be required: project director, project monitoring specialist, environment specialist, social and/or gender specialist. The following international consultants will be recruited for the value-chain development component: value-chain development advisor, and technical experts. A project manager will be recruited for overall coordination.

6. Disbursement Arrangements

39. The grant will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2007, as amended from time to time). To facilitate funds flow on the value-chain development component, each participating bank will open a special account and will, with the endorsement of the value-chain development PMU, apply to ADB through MOF for advance deposits into the special account to cover 50% of projected disbursements to enterprises for project investment plans during the next 6 months. Upon receipt of this request, ADB will disburse funds in dollars to the special account. The participating commercial bank will make transfers from the special account to a deposit account equal to 50% of every disbursement made by the commercial bank to project enterprises for project investment plans. The deposits into the deposit account will be in dollars and togrog— guaranteeing 50% each of the dollar and togrog disbursement to the enterprise.[17] The commercial banks will use procedures to liquidate transfers from the value-chain development special account to the project deposit account in accordance with rules spelled out in financing agreements between MOF and the commercial banks. The participating commercial banks will release funds to MOF from the project deposit account equal to 50% of every principal repayment that they receive on project loans (after deducting interest payment to the commercial bank).[18] The commercial bank will have entered into a loan agreement with a project enterprise (that stipulates use of funds) endorsed by ADB including terms and conditions required by ADB prior to making disbursements to the enterprise. Before any project loan is declared as a loss, the value-chain development PMU and the commercial bank will make all reasonable efforts to either revive the business or recover the outstanding loan amount.

40. The Government will establish an imprest account for the Project at a commercial bank acceptable to ADB to be managed by the project manager. The initial amount to be deposited in the account will not exceed estimated expenditures for the next 6 months or 10% of the grant amount, whichever is lower. The imprest account will be liquidated in accordance with ADB's *Loan Disbursement Handbook* and detailed arrangements agreed between the Government and ADB. Statement of expenditure (SOE) procedures will be used for reimbursing eligible expenses or liquidating advances to the imprest account. Any individual payment to be reimbursed or liquidated under SOE procedures will not exceed $50,000.

7. Accounting, Auditing, and Reporting

41. MOF, MoFA, and participating commercial banks will maintain separate accounts and financial statements for project funds in accordance with appropriate accounting standards and have these audited annually by independent auditors acceptable to ADB. The use of special and imprest accounts and SOE procedures will be part of the audit, and a separate opinion will be submitted. Enterprises receiving project funds will be required to maintain accounts according to international accounting standards and to have these audited annually by independent auditors acceptable to ADB.[19] The audit report covering the audited project accounts and financial statements for each fiscal year will be submitted to ADB in English not later than 6 months after the end of each fiscal year. The project manager, through the advisory board, will submit quarterly reports and diagnostic semiannual reports to ADB detailing project progress, problems, measures taken to overcome them, and expected progress over the next 6 months as well as any major issues. Within 3 months of physical completion of the Project, the project manager, through the advisory board, will submit a project completion report to ADB detailing the utilization of grant proceeds, project implementation analysis, and the

[17] The exchange rate to be applied when converting from dollars to togrog will be the commercial bank's reference buying rate for dollars on the date of the disbursement to the project enterprise.
[18] Releases to MOF will be in the same currency as repayments from the project enterprises.
[19] Enterprises will adopt international accounting standards within 2 years of receiving project funding.

socioeconomic impact of the Project with special attention to poverty reduction. The Government was advised of ADB's requirement for timely submission of audited project accounts and financial statements, and the suspension of disbursements of the ADB grant in case of noncompliance.

8. Project Performance Monitoring and Evaluation

42. The two PMUs overseen by the project manager will monitor project performance as part of quarterly reporting to the advisory board, the respective Executing Agency, and ADB incorporating a community-based monitoring system. Monitoring of value-chain investments will follow business development and monitoring plans prepared by the value-chain development PMU with project enterprises to ensure that enterprises are utilizing project funds for intended purposes and that expected results are being produced. PMUs (with assistance from the social development specialist) will establish a (sex-disaggregated) database; carry out annual review and consultations on the social, gender, and participatory aspects of the Project; and ensure the collection of sex-disaggregated end-line data and information. Any deviations in the use of funds by enterprises will, if possible, be resolved in consultation between PMU and the enterprises. ADB must endorse major modifications. PMU will monitor rural infrastructure projects using standard reporting and periodic field visits. Data on inputs and outcomes of the rural infrastructure and services development component will be organized using software developed by the Agriculture Sector Development Project (footnote 7). To identify baseline indicators on infrastructure availability and stakeholder needs, PMU will commission a survey and prepare an inventory of existing infrastructure and support service programs once an eligible locality has an approved subproject proposal. The survey will be repeated and inventory updated at the conclusion of subproject implementation.

9. Project Review

43. MOF, MoFA, participating commercial banks, and ADB will review the Project semiannually. A midterm review, not later than 2 years and 6 months after commencement, will include a comprehensive evaluation of implementation arrangements and progress as well as stakeholder consultations. Recommendations will be made for adjustments as appropriate to the project scope, cost estimates, and implementation arrangements. Three months after project completion, the impact of the Project will be evaluated according to a schedule and terms of reference to be agreed by MOF, MoFA, and ADB.

IV. PROPOSED TECHNICAL ASSISTANCE

44. The accompanying TA for Agricultural Marketing and Brand Development will be directed to capitalizing on opportunities in niche markets to develop a premium brand for Mongolian agriculture products. The brand development will be primarily aimed at developing partnerships between Mongolian enterprises and external premium brands to develop virtual vertically integrated value chains. The long-term objective could be to provide an opportunity for Mongolian enterprises to develop their own indigenous consumer brands for the export market. A number of high-end brands (i) want to stay away from mass production price discounts, and (ii) would be interested in building the idea of Mongolia as a premium and/or exclusive product source. For example, Loro Piana and Dunhill have been building up Mongolia as a premium source of products. Furthermore, companies such as Burberry and Diesel are known for developing strong links with suppliers to improve their information technology and production capabilities. Enterprises selected for funding through the Project have inherent elements of performance, process, and origin to varying degrees. The TA will build on and combine these to provide a platform for creating credible and compelling brands.

45. The TA will contribute to realizing the impact of the Project—agriculture and rural growth that sustains premium value differentiation for Mongolian products. The outcome of the TA will be the creation of a process for brand development and management that is sustainable and replicable while providing a demonstration effect. The TA output will be to develop and demonstrate a process for collaborative brand development including a brand framework, content of business proposals, and an institutional framework for sustained brand management and development including a business plan for a brand management agency, three model brand partnership agreements between Mongolian enterprises and international brands, and three collaborative brands. Activities will involve building a hypothetical brand case, facilitating partnerships and enterprise selection (including internal and external surveys), designing brand proposals and proposal packs, making proposals, brokering partnerships and concluding deals, defining the collaborative brand, creating brand collateral, conducting the brand trial, and finally, launching the brand.

46. Appendix 11 provides the terms of reference, cost estimates, and financing plan for the TA. The estimated TA cost is $2.2 million equivalent. An ADB grant of $2,000,000 equivalent is proposed from the Japan Special Fund funded by the Government of Japan. The Government will finance $200,000 equivalent to cover remuneration of counterpart staff and the costs of additional transport, surveys, and documents. Brand development will be contracted out to an international branding firm. Selection will follow ADB's *Guidelines on the Use of Consultants*. Equipment will be procured using shopping following ADB's *Procurement Guidelines*. MOF will be the Executing Agency. An independent PMU will implement the TA and gradually evolve into a branding agency. The TA is expected to commence in December 2008 and be completed by December 2010. Equipment procured through the TA will be transferred to MOF upon TA completion.

V. PROJECT BENEFITS, IMPACTS, ASSUMPTIONS, AND RISKS

A. Benefits and Impacts

47. **Economic and Financial Benefits.** The Project will foster sustainable agriculture and rural development. Mongolian agriculture products will claim at least a 30% price premium over comparable products in target markets by 2015 after project investments. In addition to direct benefits, the Project has substantial demonstration benefits. The resolution of uncertainties and coordination problems are expected to induce project enterprises to expand their value-chain investments by at least 20% over project-funded levels within 5 years of project completion. The Project is expected to induce at least 25 additional enterprises to undertake similar value-chain investments within the same period. Since the premium value of Mongolian agriculture products derives from custodianship of the environmental and social responsibility and, therefore, provides incentives for environmental and social responsibility, the Project will have substantial positive environmental and social benefits that are difficult to quantify. The economic analysis is in Appendix 12 and further details in Supplementary Appendix G.

48. **Poverty Reduction, Social, Gender, and Environmental Impacts**. The Project will have direct and indirect impacts on poverty reduction. Direct impacts will come from employment in expanded enterprise operations and higher rural incomes from higher value at the basic production and intermediate supply chain level. Incomes of agriculture producers participating in the supply chains are expected to increase by an average of at least 60% from 2008 to 2015. At least 2,500 families will benefit from project investments, and investments are expected to create at least 800 new jobs. The Government of Japan has approved an associated Japan Fund for Poverty Reduction (JFPR)-funded project, Water Point Establishment and Extension Stations for Poor Herding Families. It will increase the access of

especially disadvantaged communities to rural infrastructure and support services, and give particular attention to the issue of indigenous groups. A JFPR-funded project for Income Improvements for Herders and Intermediaries is being conceptualized for approval in 2009 to improve the access of socially disadvantaged groups to project benefits and to mitigate negative impacts on small intermediaries and indigenous groups.[20]

49. The Project is classified as category C for involuntary resettlement. No land acquisition or demolition of fixed assets will be required for project implementation. PMUs will monitor investments and, if adverse involuntary resettlement impacts are associated with project investments, further disbursements to the enterprise involved or the relevant rural infrastructure investment will be subject to compliance with ADB's *Involuntary Resettlement Policy* (1995). The Project is classified as category B for impact on indigenous peoples as it will have no adverse impact. The two JFPR projects (para. 48) are being designed to address issues related to socially disadvantaged groups. They will specifically take into account issues of ethnic minorities and ensure that they benefit from and are not adversely impacted by the Project. The summary poverty reduction and social strategy is presented in Appendix 13.

50. An environmental assessment is provided in Appendix 14. The Project is classified as category B in terms of environmental impacts. For the value-chain development component, the sample initial environmental examination (IEE) of four representative value-chain development investment plans was undertaken. If selected, the enterprises will undergo the environmental assessment and review procedure (EARP) process and will prepare detailed environmental assessments in accordance with MNE and ADB requirements. For the rural infrastructure and services development component, the indicative rural infrastructure and support service development investments were reviewed; and the scale and nature of activities are not expected to have any significant environmental impact. Thus, this project component is classified as category C under the ADB environmental assessment criteria. MNE concurs with this conclusion. Reviews of both project components conclude that the Project is not expected to result in significant environmental impacts warranting an environmental impact assessment. A summary IEE was prepared and is available as Supplementary Appendix H. The key element of the summary is the EARP for the value-chain investment plans. EARP was discussed and has the agreement of MNE.

51. The brand image targeted by the Project will depend upon environmentally sustainable production along the supply chain. Production practices that fit into the brand image will derive a premium from protecting the environment and preserving the traditional lifestyle and culture. The Project, therefore, goes beyond safeguard measures to minimize negative impacts and is expected to contribute to actively protecting the environment and cultural identity.

B. Risks

52. Inadequate capacity of enterprises to implement investment plans, delays in procurement, delivery delays by contractors, and misuse of funds by enterprises pose risks to project outputs. These risks will be addressed by project management support. The value-chain development PMU will provide advisory services to ensure smooth implementation of plans. PMU for the rural infrastructure and services development component will provide procurement and implementation support. Both PMUs will assist in developing contracts holding contractors liable for delivery delays. The value-chain development PMU will monitor the use of funds by

[20] Activities may include training for herders (setting up groups or cooperatives among herders), mitigation measures for smaller changers including business reorientation for them, and provision of lower interest rate loans to herders and changers.

enterprises; close monitoring by ADB and the banks will provide assurance on their use. Project outcomes could be at risk if enterprises cannot operate and manage expanded and upgraded value chains. Investment plans have taken this into account and provided for consultant support. This risk will be further mitigated through advisory services provided by PMU and parallel projects implemented by GTZ and IFAD. Some breach of contracts is expected, especially in the early stages. However, this risk will be mitigated by lending for working capital—suppliers often renege on contracts because enterprises are not able to make advance payments for procurement. Another risk to outcomes is the failure of participants to understand the nature of niche markets and expectations. Complementary TA will create internal brand awareness to mitigate this risk. Project impacts will be at risk if some enterprises fail to meet export targets and negatively impact the brand. This risk will be mitigated through project management support and by accompanying TA to establish partnerships between international companies and enterprises. These partnerships will allow enterprises access to international expertise and advice making it easier to deliver on expectations. Another risk is that some domestic enterprises "free-ride" on the brand with bad products. The long-term mitigating counterbalance to this will be the development of associations to act as custodians of the brand. Toward this end, accompanying TA will develop partnerships with initiatives of the United States Agency for International Development and GTZ. Finally, adverse incentives may be provided for banks and enterprises to collude to capture project funds. However, the Project is designed such that project funds can be captured only if the banks' own funds are also captured through collusion. The internal control mechanisms of Khan Bank, a participating commercial bank, are considered adequate to detect such collusion. The mechanisms of any additional participating banks will be checked during due diligence to ensure that they would detect such collusion. Also, since banks are not subject to unilateral first loss, they might subject investments to less than full due diligence. The thorough preparation that investment proposals of project enterprises have been subjected to provides a degree of comfort on the creditworthiness of proposals in addition to due diligence by banks. Finally, a perceived risk is that having the deposit account in the same bank that makes the loans will make the account vulnerable to a raid by the commercial bank. However, this risk is no greater than that for other deposit accounts in Mongolia. This risk is not considered substantial. All the potential risks from moral hazard or adverse incentives will be additionally mitigated by spot audits performed by PMU. Any misdemeanors will subject the involved commercial bank and borrower to immediate disqualification from participating in the Project.

VI. ASSURANCES AND CONDITIONS

A. Specific Assurances

53. In addition to the standard assurances, the Government has given the following assurances which are incorporated in the legal documents:

(i) Within 3 months of grant effectiveness, the Government will ensure that PMUs are established in a manner acceptable to ADB, headed by a project director, and staffed with competent personnel.

(ii) The Government will ensure that project enterprises use project loan proceeds for the purpose of the investment plan endorsed by the advisory board and that the recommendations of PMU in case of deviations are followed.

(iii) The Government will ensure that adequate budgetary allocations for counterpart funds are made, approved, and released for proper project implementation. The Government will provide adequate office and other facilities necessary for timely and effective project implementation.

(iv) Except as agreed with ADB, the Government will not grant any debt amnesty, or forgive loan repayment obligations with respect to the project loans.

(v) The Government will ensure that within 2 years of the first disbursement to each project enterprise, the enterprise will produce annual financial statements certified by independent auditors acceptable to ADB in line with international accounting standards.

(vi) The Government will ensure that project activities are carried out (a) in accordance with all applicable environmental laws and regulations of Mongolia, ADB's *Environment Policy* (2002), the IEEs and summary IEE; and (b) in compliance with EARP.

(vii) The Government will ensure that each of the IEEs prepared for the four representative enterprises is reviewed and updated in accordance with EARP at the stage of approval of the financing proposal of each such enterprise and submitted to and approved by MNE prior to start of civil works or procurement.

(viii) The Government will ensure that public consultation and information disclosure procedures are conducted in accordance with MNE and ADB requirements for each investment plan classified as a category B project under ADB's *Environment Policy*.

(ix) The Government will ensure that the Project shall not cause any land acquisition, resettlement, or limits on access to land. In the event of (a) any involuntary resettlement; (b) land acquisition; or (c) resettlement activities during project implementation, the Government shall inform ADB, prepare necessary resettlement plans in accordance with ADB's *Involuntary Resettlement Policy* and the Government's applicable laws and regulations, disclose these resettlement plans to affected people and submit them to ADB for approval prior to award of civil works contracts. In the event of discrepancies between the Government's laws and regulations and ADB's *Involuntary Resettlement Policy*, ADB's *Involuntary Resettlement Policy* shall prevail.

(x) The Government will ensure that the Project does not cause any negative impact on indigenous people. In the event of any unanticipated or unforeseen negative impact on indigenous people, the Government will ensure that the Project is implemented in accordance with ADB's *Policy on Indigenous Peoples* (1998).

(xi) Consistent with ADB's and the Government's commitment to good governance, accountability, and transparency, the Government will ensure that the project funds are utilized effectively and efficiently to implement the Project and to achieve the project objectives. The Government will ensure that MOF and MoFA (a) undertake necessary measures to create and sustain a corruption-free environment; (b) ensure that the Government's Anticorruption Law and ADB's *Anticorruption Policy* are enforced and are complied with during project implementation, and that relevant provisions of ADB's *Anticorruption Policy* are included in bidding documents for the Project; (c) facilitate ADB's exercise of its right to investigate directly or through its agents any alleged corrupt, fraudulent, collusive, or coercive practices relating to the Project; (d) conduct periodic inspections of the activities of project contractors related to fund withdrawals and settlements; (e) ensure that PMU for value-chain development component conducts spot audits; and (f) ensure that all contracts financed by ADB in connection with the Project include provisions specifying the right of ADB to audit and examine the records and accounts of the Executing Agencies and all contractors, suppliers, consultants, and other service providers as they relate to the Project. The Government will cooperate with any audit and investigation and extend necessary assistance including access to all relevant books and records as well as engagement of independent auditors and experts that may be needed for satisfactory completion of such audits and investigations. All external costs

related to the audits and investigations including the spot audit performed by PMU shall be funded from the grant.

(xii) Within 12 months after grant effectiveness, the Government will cause MOF and MoFA to ensure the establishment of a project performance monitoring system acceptable to ADB and the Government.

(xiii) The Government will ensure that the Executing Agencies adopt the project gender action plan and that the plan is implemented in a timely manner over the entire project period, adequate resources are allocated for this purpose, gender-related indicators are included in the monitoring and evaluation system for the Project, and that sex-disaggregated data are collected and monitored.

(xiv) The Government and ADB will jointly undertake a midterm review of the Project in the second year of project implementation to assess implementation progress and identify necessary changes in project design, implementation schedule, and/or implementation arrangements.

B. Condition for Disbursement

54. No withdrawals will be made from the grant account to the special account of any participating commercial bank until the following condition has been met: MOF and a participating commercial bank will have duly executed and delivered a financing agreement which shall include the terms and conditions as referred to in the Grant Agreement, and such financing agreement will have become fully effective and binding upon the parties thereto in accordance with its terms.

VII. RECOMMENDATION

55. I am satisfied that the proposed grant would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve

(i) the grant not exceeding the equivalent of $14,720,000 to Mongolia from ADB's Special Funds resources for the Agriculture and Rural Development Project, with such terms and conditions as are substantially in accordance with those set forth in the draft Grant Agreement presented to the Board; and

(ii) the provision of technical assistance not exceeding the equivalent of $2,000,000 on a grant basis to the Government of Mongolia for Agricultural Marketing and Brand Development.

Haruhiko Kuroda
President

21 August 2008

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and/or Indicators	Data Sources and/or Reporting Mechanisms	Assumptions and Risks
Impact Agriculture and rural growth that sustains premium value differentiation for Mongolian products (combined impact of the Project and TA)	Incomes of agriculture producers in project areas increased by an average of at least 60% from 2008 to 2015 Mongolian agriculture products claim at least a 30% price premium over comparable products in selected markets by 2015	National Statistics, Ministry of Food and Agriculture monitoring system, international market surveys, and marketing journals	**Assumptions** • The enterprises pass on increased value along the supply chain. • The supporting branding campaign is successful in creating premium value differentiation for Mongolian agriculture products. • The project supply chains have a demonstration effect and attract more agriculture producers to the supply chains and more agricultural enterprises to the project model. **Risks** • Some enterprises fail in their export achievements and have a negative impact on the Mongolian brand. • Some domestic enterprises "free-ride" on the brand and dilute the brand with bad quality products.
Outcome Fifteen Mongolian enterprises have improved quality, premium value Mongolian agriculture products available in select niche markets, and replicable process developed for brand development and management	Deliveries by at least 50% of the funded enterprises in partnership with premium value buyers by December 2010 and by all 15 enterprises by December 2011	Project performance monitoring system; project management office reports, and reports of reviews by ADB	**Assumptions** • Enterprises develop long-term partnerships with suppliers. • Enterprises make the right contacts with international buyers. • The supporting TA creates brand awareness outside Mongolia. **Risks** • The enterprises have inadequate capacity to operate their new machinery or manage their expanded supply chains and, hence, fail to execute orders.

Design Summary	Performance Targets and/or Indicators	Data Sources and/or Reporting Mechanisms	Assumptions and Risks
			• Participants in the value chains do not fully understand the nature of the demand from niche markets. • Severe weather impacts production.
Outputs Value chains able to deliver unique premium value products to niche markets Fully defined process and institutional arrangements for collaborative brand development and management developed and demonstrated (TA output)	Supply chains of 15 enterprises supported by adequate public infrastructure are capable of meeting quality and reliability standards that allow them to deliver products to identified premium-value niche markets by December 2011 Details of the brand framework, business proposals, and institutional framework ready by March 2009 Brand partnership agreements between at least three Mongolian enterprises and international brands by June 2009 At least three model brands launched by June 2010	Project performance monitoring system; project management unit reports, market surveys, and reports of reviews by ADB	**Assumptions** • The investment plans prepared by the PPTA are realistic and sound. • The consultative process accurately identifies public investments that support value chains. • The supporting TA creates brand awareness among participants in the value chain. **Risks** • The enterprises do not have adequate capacity to implement their investment plans. • The procurement processes are delayed. • The contractors experience delivery delays. • Enterprises misuse the funds. • Public investments are not sufficiently coordinated and responsive to private investments.
Activities with Milestones			**Inputs**
1. Value-Chain Development 1.1 Project management unit established by October 2008. 1.2 Investment plans finalized for all enterprises by June 2008. 1.3 Assessments by commercial banks completed, lending terms finalized, and individual credit lines set up by August 2008. 1.4 Contractual and procurement arrangements finalized by October 2008. 1.5 At least 60% of investments completed by December 2009. 1.6 All investments completed by December 2011. 2. Rural Infrastructure and Services Development 2.1 Project management unit established by October 2008. 2.2 Consultants recruited by November 2008. 2.3 All consultative decision processes completed by June 2009.			• Asian Development Bank (ADF Grant): $14.72 million • Government: $1.41 million • Commercial banks: $11.00 million • Enterprises: $20.37 million

Activities with Milestones	
2.4 Contractual and procurement arrangements finalized by September 2009. 2.5 All investments completed by December 2011. 3. Technical Assistance for Agricultural Marketing and Brand Development 3.1 Project management unit established by October 2008. 3.2 Hypothetical brand case developed by October 2008. 3.3 Internal and external surveys completed by December 2008. 3.4 Initial batch of enterprises selected by January 2009. 3.5 Brand proposals and brand packs ready by March 2009. 3.6 At least three partnerships brokered and deals concluded by June 2009. 3.7 At least three collaborative brands defined by October 2009. 3.8 At least three brands launched by June 2010.	

ADB = Asian Development Bank, ADF = Asian Development Fund, TA = technical assistance.

AGRIBUSINESS SUBSECTOR ANALYSIS[1]

1. A key characteristic of manufacturing in Mongolia is the wide range of industries dependent upon agricultural raw materials. These include meat processing, dairy, leather tannery, leather footwear and products, fur garments, cashmere processing and garment manufacturing, camel hair processing and garment production, wool carpets and blankets, felt shoes and other felt products, and fruit and wild berry products. As many agroprocessing enterprises collapsed with the transition to a market-based economy, current production is only a fraction of what it was (except for cashmere). Nevertheless, livestock raw materials still form the basis for almost all the textile industry and a significant proportion of the food and garment industries. Domestic agribusiness enterprises face keen competition from manufacturers from the People's Republic of China (PRC) with their surplus capacity, economies of scale, and strong government support. The PRC traders buy significant quantities of Mongolia's livestock products (mainly fibers and hides). In addition, domestic manufacturers face a worsening situation with respect to the quality of raw materials; this affects their processing efficiency and marketing of end products. The progressive decline in the quality of Mongolian livestock raw material is due to the rapid buildup of numbers when quality is sacrificed for quantity resulting in coarser cashmere and wool fibers, and blemished skins. These have contributed to the dramatic decline in most agriculture-based industries and serious underutilization of industrial capacity.

2. **Cashmere.** The demand for classic cashmere garments remains high in the luxury segments of European, American, and Japanese markets even though the temporarily higher demand for them created by fashion designers during the early 2000s may have peaked. Mongolia is the second largest producer of raw cashmere accounting for 25% of world production compared with the PRC's 70%. Mongolian production increased from an estimated 1,000 tons of raw cashmere in 1990 to 3,000 tons in 2000. The enterprises involved in cashmere processing and garment manufacturing have sophisticated dehairing, spinning, dyeing, weaving, and knitting equipment; some was upgraded in recent years. The industry comprises three types of companies each with their own characteristics, markets, and opportunities. First are the primary processing plants with varying degrees of foreign ownership (Europe, Japan, PRC, Republic of Korea, and United States). These joint ventures were established following the ban on raw cashmere exports in 1993 which was subsequently lifted in 1996. They buy raw cashmere from herders, and scour and process it into dehaired cashmere for export to the PRC and Europe (as dehaired cashmere), and Japan (as tops). The second group comprises integrated processors and garment manufacturers that have their own raw material procurement network (contract buyers) and scouring, dehairing, spinning, dyeing, and automated knitting and weaving manufacturing capacity. The state-owned Gobi Corporation and private Buyan Company XXK belong to this group. They export dehaired cashmere and garments depending on the relative prices on international markets. The third group comprises local and foreign companies that produce knitted cashmere garments from hand-knitting machines using imported yarn (from the PRC or Italy) for the quota-free United States market. The gross industrial output from the manufacture of textiles and apparel (dominated by cashmere) was MNT100 billion in 2005.

3. **Carpets and Other Wool Products.** Mongolia produces large quantities of coarse wool, some of which is discarded in the countryside due to the poor transport infrastructure (high transport costs) and limited demand. Ninety-four percent of Mongolia's clip comprises coarse fibers (suitable only for carpets, blankets, felt footwear, and insulating products), 4% is semi-coarse, and only 1% is fine or semi-fine and suitable for garment production. Three major carpet

[1] This appendix is based on ADB. 2004. *Mongolia: Agriculture Sector Strategy Study.* Manila.

producers and one blanket producer have been privatized, two in Ulaanbaatar and one in Erdenet. Their combined production capacity for scouring, spinning, knitting, and felt making is far in excess of current production (UB Carpets XXK is operating at 60% capacity and is anxious to increase production if the raw material is available). However, the production technology for carpet manufacturing is outdated and inflexible. Similarly, felt and felt boot production is operating at about 10% of plant capacity.

4. **Meat and Small Goods.** One of the challenges for the slaughtering and meat processing industries in Mongolia, as in other countries, is the seasonality of supply—although this is more pronounced in Mongolia. From October to December, abattoirs operate at maximum capacity, some even doing shift work to handle the seasonal flush. With little out of season production, these facilities remain inoperative for the remainder of the year with only their freezers being used to store meat and carcasses. The situation is made more complex as about 70%–80% of animals destined for domestic consumption are slaughtered outdoors. The Government is concerned about the hygiene of meat produced in this manner and is seeking to direct a greater proportion of the kill through abattoirs with established hygiene standards and where trace-back mechanisms can be introduced to monitor disease. Mongolian meat has been very competitive at $0.6–$0.8/kilogram of beef (2004), half the price in the PRC and one third of the price in the Russian Federation. More recently, as supply shortages have become apparent from increased domestic consumption, meat prices have increased dramatically ($2.50/kilogram for beef and slightly less for mutton) to the extent that the Government has chosen to introduce measures to stabilize meat prices at affordable levels for urban consumers. The industrial output of food products in 2005 was MNT93 billion.

5. Four of the 26 slaughterhouses were established in 2002 with about 25% being licensed as export meat works. Historically, Mongolia has been a significant exporter of mutton and beef but with the current domestic demand from increased urbanization and changing consumption patterns associated with higher incomes, the domestic market is more attractive and quantities exported declined to near zero in 2005 and 2006. Russian demand declined dramatically after transition due to the lower purchasing power of its population, and it imposed a 20% duty on unprocessed meat and a 40% duty on processed meat products such as sausages and salami. With the outbreak of foot and mouth disease in 2002, the Russian Federation and other markets have been virtually closed although such action probably had little impact on the meat industry in view of domestic developments.

6. **Dairy Products.** The Mongolian population has traditionally enjoyed a high per capita consumption of milk comparable to that of developed countries due to its high livestock population and traditional dietary practices. Following the collapse of the domestic dairy industry due to hasty privatization, the large domestic demand for milk and dairy products such as cheese and ice cream in urban centers has been met largely from imports. Liquid milk imports have increased five fold in recent years; however, due to the high price, milk consumption is only half of that in 1990. Domestic production of fresh milk is highly seasonal and marketable surpluses are usually generated for a short period of the year. Milk factories have substituted fresh supplies by reconstituting imported milk powder, some of which is coming in to Mongolia under grant assistance. Some liquid consumption is met from small dairy plants using domestically produced milk—pasteurized and unpasteurized—the latter being sold in markets and on the street in unhygienic conditions and posing considerable health hazards. Small-scale dairy processing plants produce a range of dairy produce including yogurt, cheese, and other traditional Mongolian dairy products supplying the urban centers and rural urban populations.

7. Before 1990, the largest dairy plant operating in Ulaanbaatar produced 40 million liters of milk a year, supplied mainly by state-owned dairy farms in the city outskirts via a network of collection points and holding centers along a sealed road to the central northern region. After privatization of the national cattle herd, this collection system collapsed along with the state-run farms. The highly subsidized intensive dairy farms also failed without coal to keep the animals warm and feed to maintain their production. The previously government-owned *Suu* plant is now operating at 1% capacity. The use of domestically produced milk by processors based on small-scale producers surrounding the urban centers has increased slightly and private collection and cooling centers have been reestablished but the proportion of total consumption remains low.

8. **Leather Products.** Most Mongolian hides and skins are exported to the PRC either raw or as semiprocessed wet blue hides. The domestic demand for leather jackets, boots, and other products is now supplied by imports from as far as the Republic of Korea and Turkey whose products enjoy virtually duty-free access to the Mongolian market. Mongolian hides and skins are very competitively priced, almost half the price of those in the PRC, although some price differential is due to the generally smaller size of animals in Mongolia, their lighter skins, and quality aspects (blemishes from ectoparasites). The PRC traders are regular visitors to rural areas where they wander at will in search of hides. Since 1990, some 48 small- and medium-sized companies have been established for mainly primary processing (24) but also for processing fur (4), and leather and tannery products (10). These processors face difficulties in procuring raw materials because their access to capital at reasonable interest rates coincides with the peak buying period for livestock, and plants are run well below their capacity. For example, the processing plant at Buligaar was recently upgraded with Italian machinery under a government-to-government loan. The company has a large debt and management difficulties, and even closed down in 1997 for 4 years but reopened in 2001. It is still operating at 10% capacity.

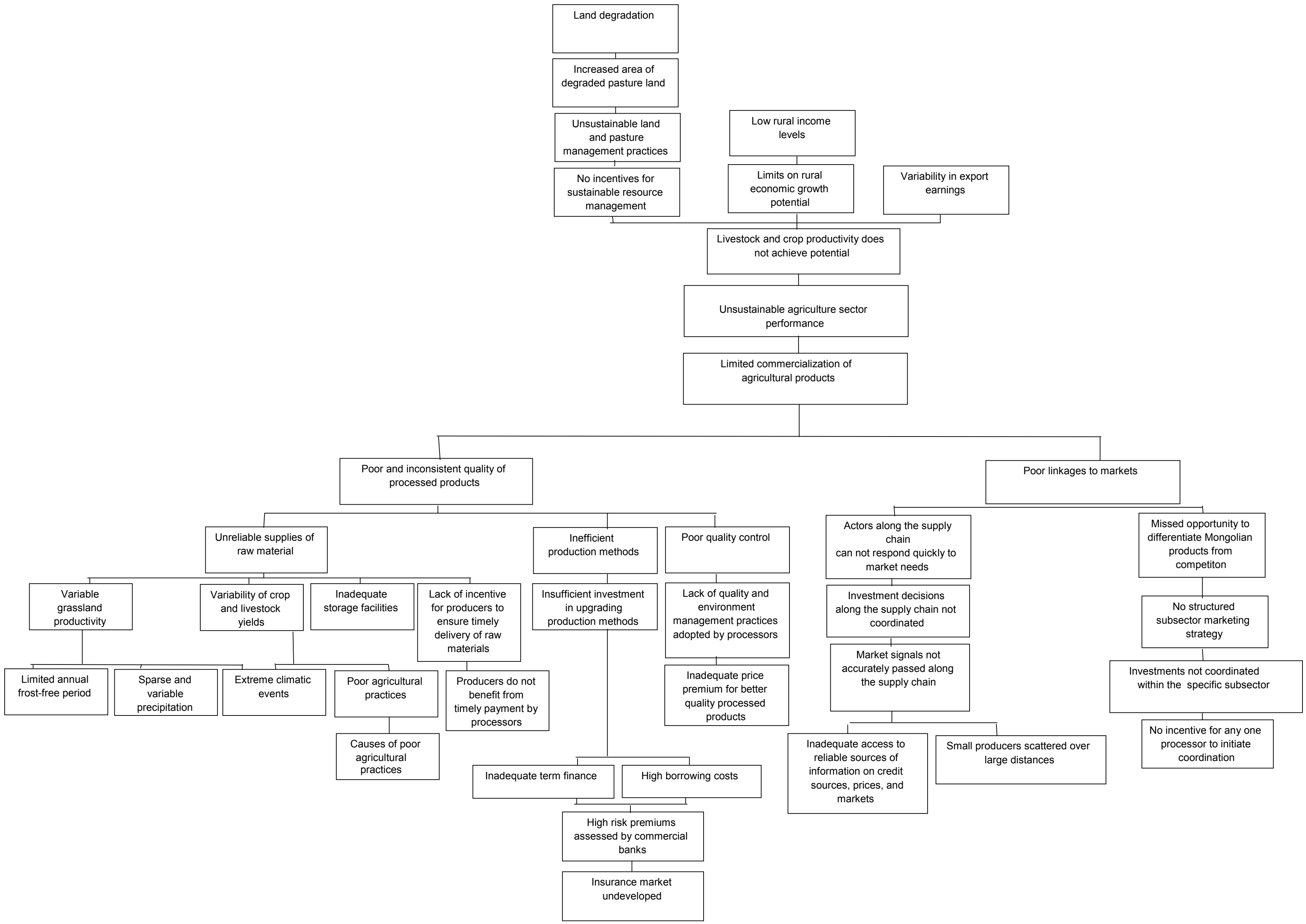
MAJOR EXTERNAL ASSISTANCE TO THE AGRICULTURE SECTOR
(2000–2007)

Funding Source and Title	Amount		Years of Implementation
	Grant	Loan ($ million)	
Asian Development Bank			
1. Agriculture Sector Development Project		10.00	2002–2007
2. Agriculture Sector Development Program		7.00	2002–2006
3. Agriculture Sector Strategy Study	$350,000		2004–2007
Food and Agriculture Organization			
1. Improved Cereal Production Technology	$352,000		2000–2002
2. Pasture Risk Management	$282,000		2001–2002
3. Diagnostic Technology Improvement in Animal Diseases	$1.0 million		1997–2002
4. Processing and Distribution of Animal Products	Study		1999–2000
5. Supply Dairy Products Project	$1.9 million		2004–2007
UNDP, Government of the Netherlands, and GEF			
1. Sustainable Grassland Management	$2.9 million		2003–2007
European Union and TACIS			
1. Integrated Crop and Livestock Production	€2.9 million		2002–2004
2. Development of Agricultural Services	€3.4 million		2004–2006
Danish International Development Assistance			
1. Strengthening of Dairy Production	DK2.9 million		1995–1997
2. Restructuring of Dairy Sector	DK4.8 million		1997–1998
World Bank			
1. Sustainable Livelihood Project 1		18.70	2002–2007
2. Sustainable Livelihood Project 2		33.00	2007–2012
3. Index-Based Livestock Insurance Project		7.75	2005–2010
Deutsche Gesellschaft für Technische Zusammenarbeit			
1. Privatization of Veterinary Services Phase 1	DM3.5 million		1999–2005
2. Privatization of Veterinary Services Phase 2	DM3.0 million		
3. Sustainable Management of Natural Resources	€5.3 million		2002–2007
4. Improving the Management of Cooperatives Project			

Funding Source and Title	Amount Grant	Loan ($ million)	Years of Implementation
United States Agency For International Development			
1. Strengthening Participation and Institutional Capacities in Enterprise and Market Development in Rural Areas, Agriculture Cooperative Development International Volunteers Overseas For Cooperative Assistance	$1.2 million		1998–2001
2. Gobi Regional Economic Growth Initiative	$10.0 million		1999–2004 2004–2008
United States Department of Agriculture			
1. Herder Livelihood Diversification Project	$4.0 million		2004–2007
Swiss Agency for Development and Cooperation			
1. Green-Gold Pasture Ecosystem Management Project	$3.7 million		2004–2008
Swedish International Development Agency			
1. Rural Development and Environment Education Program	$117,300		2004–2007

DK = Danish kroner, DM = deutsche mark, GEF = Global Environment Facility, UNDP = United Nations Development Programme, TACIS = Technical Aid to the Commonwealth of Independent States.
Sources: Various agencies.

PROBLEM AND CONSTRAINTS ANALYSIS



Source: Asian Development Bank.

SUMMARY OF VALUE-CHAIN DEVELOPMENT INVESTMENT PLANS

1. Planned investments in an improved supply chain include the following.

2. **Veterinary Services.** Although nominal veterinary services are provided in all regions of Mongolia, the extremely high parasitic damage on animal skins; decreasing quality of fibers such as cashmere, camel wool, and sheep wool; and regular disease outbreaks including hoof and mouth, anthrax, and bubonic plague clearly indicate that the current system is not effective in protecting animal health and in delivering the quality raw materials required by processors. Planned investments include provision of dipping baths and other rural infrastructure for removal of ectoparasites, regular provision of anthelmintics to reduce endoparasites, training for herders in basic veterinary care and monitoring, provision of basic drugs for regular administration by herders, and regular professional herd inspections to ensure early disease detection. All the companies that will invest in this area are specialists with an interest in a particular species or particular raw material. However, they recognize that their investment in improved veterinary services will have to be made over very wide geographic areas and across all species within the area in order to be effective.

3. **Breed Improvement, Breeding Programs, and Introduction of Improved Genetics.** Many animal breeds in Mongolia are mixed largely as a result of repeated Soviet experiments in crossbreeding over 50 years. Very few of these experiments were successful. For instance, crossbreeding native Mongolian goats with Russian Don goats produced more fiber but at a severe cost of increasing coarseness with the result that much Mongolian cashmere has difficulty being competitive internationally with a current average 16.5 micron thickness versus an international standard of 14.5 micron. The same is true with many herbal resources; for instance, the Soviet cross-breeding of seabuckthorn improved harsh weather tolerance marginally but resulted in plants with lower oil and nutrient yields and significantly shortened their productive life in some cases down to 15 years compared with the 25–30 productive years of the naturally occurring plant. Companies interested in investing in animal-origin raw materials are planning breed improvement programs to develop groups of premier breeding animals with characteristics as close as possible to the original native breeds. They will then provide these breeding animals to herders who will use them to breed improved genetics into the herd over several generations. Although the companies will benefit from their investment in being able to obtain better quality raw materials, the greatest good from these programs will be public as the companies will have little or no control over the spread of the improved genetics. Companies interested in sustainable exploitation of herbal resources, particularly seabuckthorn, recognize the need to invest in improved genetics to ensure long-term sustainability of the resources and international-standard quantity and quality of oils, juices, and pulps.

4. **Incentive Payments.** Companies have developed plans to provide incentives to herders and farmers for the delivery of improved quality raw materials. Agricultural supply chains in Mongolia have for many years been marked by a lack of price–quality differentiation largely as a result of aggressive competition for raw materials from the People's Republic of China. While providing incentives to herders to deliver improved quality is an obvious strategy, processing companies already burdened by high costs and, with very short buying seasons that increase the pressure on working capital, have been unable to introduce sustainable programs. In particular, without the other elements of supply chain investment noted in this appendix (particularly veterinary service improvement and improvement of breeding and genetics), such programs would produce little or nothing in terms of higher quality but would certainly increase the cost of raw material. The introduction of sustainable incentive programs will mean that all herders and other suppliers, whether in the company initial target areas or not, will be able to

benefit from making investments themselves targeted to improve raw material quality. In addition to monetary incentives, the participating companies all recognize that the current informality and uncertainty of the supply chain is a major disincentive to herders and farmers making any independent investments and improvements. The majority of companies are, therefore, committed to working with a more formal contracting structure.

5. **Training.** Companies plan to invest in ongoing training programs for quality improvement, breeding, and horticultural and veterinary care. Many farmers and herders in Mongolia are inexperienced largely because, until the transition, many were white-collar workers who took to herding or farming only when the economy collapsed and herding became a necessity for survival. This lack of experience, knowledge, and preparedness of many herders and farmers has been amply demonstrated in recent years by a series of *dzuds* (large-scale deaths of livestock during a harsh winter due to lack of fodder preparation, winter shelter, etc.), the destruction of some significant natural herbal resources with continued use of destructive harvest techniques (i.e., seabuckthorn in Durbuljin *soum*, Zavkhan *aimag*), low yields in almost all animal husbandry and herbal resource sectors, and the general low quality of raw materials in the supply chain. To be effective, training for better veterinary or horticultural care will, like veterinary services, have to be applied widely and cover many more people than the immediate suppliers to a particular company to ensure that the current situation of extreme variability in both quality and quantity of raw material supply does not continue.

6. **Rural Infrastructure.** Companies plan to invest in improving or developing rural infrastructure. Following the transition to a market-based economy, much of the rural infrastructure including wells, warehouses, sorting sheds, slaughterhouses, and intermediate processing facilities were abandoned or fell into disrepair as no money was available and, more importantly, no one had responsibility for their upkeep. In responding to this Project, several companies have prepared plans to improve existing rural infrastructure and facilities or build new ones that will allow proper storage, preservation, procurement, semiprocessing, and transporting of their raw or semiprocessed materials more efficiently and with less risk of damage or loss. This focus by companies on the development of rural infrastructure will begin to change the current excessive concentration on Ulaanbaatar's markets as a source of most raw materials used by processors. The current situation results from the lack of rural infrastructure and facilities for storage, sorting, etc. The result is that people in the countryside are very much at the mercy of those with both money and transport, overwhelmingly the large city-based "changers." The provision of even simple facilities for sorting and grading, pressing and baling, preservation, frozen storage of plant resources, and others will make a huge difference to many rural residents who will be able to take advantage of these services (and the incentive schemes described earlier) to improve their earnings or develop new earning streams.

7. **Cooperative Development.** Companies plan to invest in development of supply cooperatives; most companies plan to promote this informally. To solve specific problems in particular subsectors where supply variability is particularly acute, two companies plan to invest in assisting the development and maintenance of supply cooperatives. The companies will fund set up and provision of offices and basic services such as electricity, computerization, stock and accounting systems, and training. When established, the cooperative will be contracted to supply the company against set quality and quantity criteria. At the same time, the cooperatives will be free to develop additional income streams with other processors using their excess production and the same office, technology, and techniques provided by the original company responsible for the set up. In addition to these formal plans to establish cooperatives, several of the other companies will encourage suppliers to organize in this way assisted by the incentive schemes and/or more formal contracts that they plan to introduce.

ELIGIBILITY CRITERIA FOR RURAL INFRASTRUCTURE AND SUPPORT SERVICE INVESTMENTS

1. **Investments.** The rural infrastructure and support services development component will finance public investments identified as priorities in the Agriculture Sector Strategy Study and that either have positive impacts on supply chains of project enterprises or the potential to spur increased efficiency of the chains. Investments will focus on three priority areas identified in the Agriculture Sector Strategy Study: (i) development of livestock testing and veterinary extension centers, (ii) support to agricultural producer marketing cooperatives, and (iii) development of fodder supply and storage. Local participation in the selection of investments will be ensured through participatory procedures. Where available, the Project will make use of existing herder cooperatives, local councils, or other institutions with local participation (e.g., nongovernment organizations) to ensure local stakeholder input in identifying investments. The Ministry of Food and Agriculture (MoFA) will lead the preparation of subprojects.

2. **Selection Criteria.** For interventions financed through the rural infrastructure and support services development component, proposal selection for financing will be based on the following criteria:

- (i) identified as a priority investment in the Agriculture Sector Strategy;
- (ii) located in geographic areas supported under the value-chain development component;
- (iii) directly supports the supply chains developed under the Project or has the potential to positively impact the project supply chains;
- (iv) improves quality and reliability along the supply chain or enhances value addition in primary agricultural production;
- (v) provides benefits to other stakeholders and the community as a whole; able to address the needs and constraints identified by female stakeholders;
- (vi) provides for greater delivery of public goods (e.g., improve the environment);
- (vii) has demonstration effects for other supply chains or the community;
- (viii) provides an economic net present value of 12% or higher based on preliminary cost–benefit analysis of the proposed investment; and
- (ix) is fully compliant with the *Involuntary Resettlement Policy* (1995) of the Asian Development Bank (ADB) in case it is triggered.

3. The costs for any single investment in a locality will be targeted at $80,000 as a starting point. The maximum investment for any single investment in a locality will be $200,000 without specific authorization to exceed this limit from the project advisory board established to oversee implementation of the project preparatory technical assistance.

4. **Selection Process.** The location, scale, and precise type of infrastructure across the four types defined (paras. 2–3) will be determined in consultation with localities where agribusinesses supported by credit lines under the value-chain development component obtain raw material or intermediate inputs. Detailed proposals will be demand driven with subproject components identified by stakeholders through herder and farmer cooperatives, local councils, and other existing institutions for local participation and representation. The localities will be advised by technical experts from MoFA. MoFA will lead the technical preparation of subprojects through its operating network.

5. The selection procedure for investments under rural infrastructure and support services development component will proceed as follows.

(i) The *soums* or *bags* (lower jurisdictions) from which the agribusinesses receiving lines of credit under component 1 are identified.
(ii) Under the coordination and supervision of a panel of experts convened by MoFA, stakeholders from the identified localities (i.e., farmers, ranchers, agribusinesses receiving credit lines under the value-chain development component, and other residents of the locality) discuss investment priorities for the locality across the four broad areas targeted for investments.
(iii) The MoFA panel in cooperation with the concerned locality develops concept notes outlining the infrastructure proposed for development in the locality. The concept notes are made available for review and comment by stakeholders. At the same time, designated staff in the project management unit (PMU) undertake preliminary review of the concept's compliance with Government and ADB requirements, particularly with environmental and social safeguards. When necessary, due to the nature of the infrastructure proposed, environmental impact assessment reports and resettlement plans will be prepared. Any proposals that appear likely to involve category A environmental impacts will be excluded from further consideration. Any proposals that trigger ADB's *Involuntary Resettlement Policy* will be subject to further actions to ensure compliance with the Policy.
(iv) Upon clearance of the infrastructure investment proposal from the stakeholder and PMU review, a detailed investment proposal is developed that specifies the engineering, capital, operating expenses, staffing, and other requirements of the proposed infrastructure subproject.
(v) Final detailed subproject proposals undergo a final round of stakeholder review and input, and remaining issues regarding the subproject are incorporated into the final design. The subproject is then cleared by MoFA steering panel.
(vi) Funds are allocated to begin construction and operation of the proposed investment, and goods and services required to execute the subproject are secured in accordance with ADB and government procurement requirements. Implementation of the investment will be in accordance with plans and standard safeguards proceeds as per ADB standards.

6. Proposals will have to be demand driven. PMU at MoFA will identify *aimags* (provinces) and *soums* for the rural infrastructure and support services development component based on the approved investment proposals and prepare an information package for dissemination to rural communities. The information packages will include data on the overall project objectives, expected outcomes, project implementation procedures and structure, selected enterprises, and basics of bankable proposals. It will include detailed information on the component including procedures for selecting local proposals and implementing, monitoring, and evaluating these proposals. PMU will conduct training of trainers for the staff of the *aimag* agriculture offices to ensure complete concurrence and standardized local implementation of the component. In turn, *aimag* agriculture offices will organize training for local trainers and facilitators for consultations and workshops among the local communities in the *bags* and *soums*. The local trainers will be used as agents for ensuring local input into investment proposal preparation. PMU will disseminate information packages on procedures for the selection of proposals for community-based supply chain infrastructure and support services and call for local proposals. To increase exposure of rural communities to the benefits of the component, information dissemination will be organized in selected *aimags* and *soums* through (i) official channels of *aimag*, *soum*, and

bag administrations; (ii) local newspapers, television, and radio; and (iii) nongovernment organizations and formal and informal business networks (cooperatives and partnerships). The local rural communities will prepare investment proposal ideas with the assistance of the local trainers. Where available, the World Bank-funded livelihood project councils or other local organizations and nongovernment organizations will be responsible for initial screening and selection of the proposal ideas to be developed into a community-based supply chain subproject proposal. The series of training sessions led by the locally trained trainers and facilitators with a particular focus on project proposal writing will be provided to the communities with the selected proposal ideas. The final subproject proposals will be submitted to PMU at MoFA for final selection and funding.

GENDER ACTION PLAN

Activities	Indicators and Targets	Responsibility
A. General Activities		
1. Recruit social development specialist consultant to be based at PMUs	• Social development specialist consultant recruited	MOF, MoFA, and PMUs in consultation with the gender specialist at MNRM of ADB
2. Undertake gender awareness and capacity development training at project onset for staff of MOF and MoFA, Executing Agencies, and PMUs	• Gender sensitization training on gender aspects related to agricultural production, food security, and sustainable rural development sessions held	
3. Carry out annual consultation with MOF, MoFA, and PMUs on implementation of the Project's gender action plan	• Annual capacity development training and consultations held	
B. Component-Specific Activities		
Component 1. Credit Line for Value-Chain Development		
1. Define gender-relevant indicators to be included in the monitoring criteria for project investment plans	• At least 50% of agricultural enterprises adopt a corporate code of business conduct and ethics incorporating socially inclusive and/or gender sensitive provisions • Equal employment opportunities • Equal wages for work of equal value • Representation of women in managerial, technical, and administrative positions	MOF, MoFA, and PMUs in consultation with the gender specialist at the MNRM
2. Build capacity for managing the Project's agricultural enterprises for greater social and gender responsiveness of their organization and market development policies, strategies, and programs		MOF, MoFA, and PMUs in consultation with selected agricultural enterprises
3. Carry out annual assessment of social and gender performance of selected agriculture enterprises based on a set of indicators agreed upon at project onset, report on practices affecting local communities (i.e., code of conduct, unfair competition and market practices, dumping and price manipulations), and suggest corrective measures	• Independent assessment submitted annually • Corrective action plan submitted • Task included in terms of reference for monitoring and evaluation consultant	
4. Select best agriculture company and local council that practice socially inclusive and gender-responsive approaches in supply chain development and carry out lateral learning training for representatives of other agricultural enterprises, women's businesses, nongovernment organizations, and relevant *aimag* stakeholders	50% of participants in lateral learning training are women.	

Activities	Indicators and Targets	Responsibility
Component 2. Rural Infrastructure and Services Development		
1. Carry out community consultations in selected *soums* in the project area (Bayankhongor, Hovd, Selenge, and Sukhbaatar *aimags)* on the impact and outcome of the Project and on modalities adopted to ensure local communities' involvement in project design, implementation, and monitoring and evaluation	• Women make up 50% of participants in local community consultations for investment selection and implementation. • Women make up 30% of informal herder groups and/or local community councils or other local organizations and/or nongovernment organizations used as agents for investment selection and implementation.	MOF, MoFA, and PMUs in consultation with the gender specialist at the MNRM
2. Carry out community-based consultations in selected *soums* in the project area to identify priority investments for community-based supply chain-related infrastructure and support services [i.e., development of livestock testing and veterinary extension centers, wells and accompanying water management infrastructure, support to agricultural producer (herder) marketing cooperatives, and development of fodder supply and storage facilities]		
3. Support women's self-help groups and agribusinesses, and female producers through social mobilization to enhance the productivity of their enterprises and their ability to access the supply chain in selected *soums* in the project area[a]	Eligibility criteria for rural infrastructure and support service investments include demonstrated ability to address the needs and constraints identified by female stakeholders (i.e., self-help groups, producers, and agribusinesses) during local stakeholder consultations	
4. Develop a strategy to promote women producers' access to value-chain development in consultation with the Project's supply-chain development specialist	Strategy developed by supply chain consultant and adopted by agriculture enterprises	

Component 3. Project Management		
1. Maintain a project-specific, sex-disaggregated database and provide annual review and consultations on the social, gender, and participatory aspects and impacts of the Project	• Sex-disaggregated indicators are identified for collection during the Project. • Sex-disaggregated baseline information available	MOF, MoFA, and PMUs
2. Ensure the collection of sex-disaggregated, end-line data and information	• Sex-disaggregated end-line information available	
3. Provide recommendations to improve the design of future ADB loans in agriculture with the focus on gender and development issues	• Number of recommendations to the Government and ADB	

ADB = Asian Development Bank, MNRM = Mongolia Resident Mission; MoFA = Ministry of Food and Agriculture, MOF = Ministry of Finance, PMU = project management unit.

[a] Skills development training will include basic decision-making and problem-solving skills; technical and vocational skills in agriculture; land and water management; planning and management skills; social, interpersonal, and communication skills; negotiation and facilitation skills; critical thinking (necessary for fostering innovation and change); food preservation and processing skills; marketing skills; leadership, business, income-generating, and entrepreneurial skills; awareness about social, political, and legal aspects related to agricultural production, food security, and sustainable rural development.

Source: ADB estimates.

DETAILED COST ESTIMATES

Table A8.1: Project Components by Financiers
($'000)

Item	Government of Mongolia		ADB-ADF		Commercial Banks		Enterprises		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
1. Value-chain development	0.0	0.0	11,000.0	26.2	11,000.0	26.2	20,013.9	47.6	42,013.9	88.5
2. Rural infrastructure and services development	359.8	13.9	2,220.2	86.1	0.0	0.0	0.0	0.0	2,580.1	5.4
3. Project management	1,053.6	36.3	1,499.7	51.6	0.0	0.0	351.7	12.1	2,905.0	6.1
Total Project Cost	**1,413.4**	**3.0**	**14,720.0**	**31.0**	**11,000.0**	**23.2**	**20,365.6**	**42.8**	**47,499.0**	**100.0**

ADB = Asian Development Bank, ADF = Asian Development Fund.
Source: ADB estimates.

Table A8.2: Expenditure Accounts by Financiers
($'000)

Item	Government of Mongolia		ADB-ADF		Commercial Banks		Enterprises		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Investment Costs										
Salaries	732.1	100.0	0.0	0.0	0.0	0.0	0.0	0.0	732.1	1.5
Training	63.2	10.0	569.1	90.0	0.0	0.0	0.0	0.0	632.3	1.3
Consulting services	298.8	15.0	1,341.4	67.3	0.0	0.0	351.7	17.7	1,991.9	4.2
Civil works	46.4	15.0	263.5	85.0	0.0	0.0	0.0	0.0	309.9	0.7
Equipment and vehicles	246.4	15.0	1,396.0	85.0	0.0	0.0	0.0	0.0	1642.4	3.5
Materials	26.5	15.0	149.9	85.0	0.0	0.0	0.0	0.0	176.4	0.4
Value-chain development loans	0.0	0.0	11,000.0	26.2	11,000.0	26.2	20,013.9	47.6	42,013.9	88.5
Total Project Cost	**1,413.4**	**3.0**	**14,720.0**	**31.0**	**11,000.0**	**23.2**	**20,365.6**	**42.8**	**47,499.0**	**100.0**

ADB = Asian Development Bank, ADF = Asian Development Fund.
Source: ADB estimates.

PROJECT IMPLEMENTATION SCHEDULE

Activity	Year 1	Year 2	Year 3	Year 4
Value-Chain Development				
Assessments by commercial banks				
Documentation and individual credit lines set up				
Contractual/procurement arrangements finalized				
Training				
Investment Implementation				
Rural Infrastructure and Services Development				
Consultative decision processes				
Contractual/procurement arrangements				
Investment implementation				
Project Management				
PMUs established				
Recruitment of consultants				
Establish PPMS				
Start-up workshops and seminars				
Project implementation and monitoring				

PMU = project management unit, PPMS = project performance management system.
Source: Asian Development Bank estimates.

PROCUREMENT PLAN

Table A10.1: Project Information

Country	Mongolia
Name of Recipient	Mongolia
Project Name	Agriculture and Rural Development
Loan or Technical Assistance Reference	Tbd
Date of Effectiveness	Tbd
Amount $ (total from all financiers):	$14.72 million
Of Which Committed, $	Tbd
Executing Agency	Ministry of Food and Agriculture, and Ministry of Finance
Approval Date of Original Procurement Plan	Tbd
Approval of Most Recent Procurement Plan	Tbd
Publication for Local Advertisement[a]	Tbd
Period Covered by this Plan	2008–2013

[a] General procurement notice, invitations to prequalify and bid, calls for expressions of interest.

Table A10.2: Procurement Thresholds for Goods and Related Services, Works and Supply, and Installation

Procurement Method	Estimated Contract Value ($)
ICB civil works	Above $1,000,000
ICB goods	Above $500,000
NCB civil works	Less than $1,000,000
NCB goods	Less than $500,000
Shopping works	Below $100,000
Shopping goods	Below $100,000
Loans to financial intermediaries[a]	

ICB = international competitive bidding, NCB = national competitive bidding.

[a] Procurement is undertaken by the respective beneficiaries in accordance with established private sector or commercial practices acceptable to the Asian Development Bank. International competitive bidding is the most appropriate for the purchase of large single items or in cases where large quantities of like goods can be grouped together for bulk purchasing.

Table A10.3: Procurement Thresholds for Consultant Services

Procurement Method	To be used
Quality- and Cost-Based Selection	For consultant services

A. Procurement by Project Enterprises

1. Procurement will be in accordance with established commercial procedures acceptable to the recipient and the Asian Development Bank (ADB). To be acceptable, the enterprises will (i) demonstrate that procedures are appropriate in the circumstances; (ii) ensure that goods and services financed using project funds are purchased with consideration to economy and efficiency at a reasonable price, given time of delivery, quality, and efficiency; and (iii) ensure that goods and services to be financed by project funds are procured from ADB member countries.

B. National Competitive Bidding

2. The recipient's standard procurement procedures are subject to the following modifications. The procedures to be followed for national competitive bidding (NCB) will be those set forth in the Public Procurement Law of Mongolia of 1 December 2005 effective since

1 February 2006, as amended (amendment 1 dated 6 February 2007), (hereinafter referred to as the Law) with the clarifications and modifications described in the following paragraphs required for compliance with the provisions of ADB's *Procurement Guidelines* (2007, as amended from time to time).

(i) **Applicable procurement procedure.** Bidding shall be conducted in accordance with the open bidding procedure as defined in the Public Procurement Law of Mongolia, chapter 2, subject to the provisions stated in para. ii (c).

(ii) **Participation in bidding and preferences.** (a) Government-owned enterprises in Mongolia shall be eligible to participate in bidding only if they can establish that they are legally and financially autonomous, operate under commercial law, and are not a dependent agency of either the procuring entity or the project executing or implementing agency. (b) Prospective bidders shall be permitted to request bidding documents either in person or by mail upon submission of a written application. Bidding documents shall be sold to anyone who is willing to pay the required fee for the bidding documents, and no other conditions shall be imposed on the sale of the bidding documents. The bidding documents shall be delivered at the prospective bidders' preference, either by hand or by mail or courier, provided that the bidder is willing to pay the mail or courier delivery charges which should be specified in the bid invitation. Each bidder shall be allowed to purchase only one set of the bidding documents for a given tender. No limitations shall be imposed on any bidder as to the number of tenders in which it may participate during a given time period. But the bidder's qualification (financial and technical capabilities) for award of contract(s) shall be assessed on the basis of its capacity to meet the aggregated qualifying requirements for the award of contracts for which it has submitted the lowest evaluated, substantially responsive bids. (c) Interested foreign bidders from eligible countries shall be allowed to participate without being required to associate or form joint ventures with local bidders. Foreign bidders shall be eligible to participate in bidding under the same conditions as local bidders. Mongolian bidders and goods manufactured in Mongolia shall be given no preference over foreign bidders and goods manufactured outside Mongolia either in the bidding process or in the evaluation of bids. (d) Prior registration shall not be a requirement for any bidder to participate in bidding. (e) Prequalification of contractors shall not be required except in the case of large or complex works and with the prior written concurrence of ADB.

(iii) **Advertising.** Invitations to bid shall be advertised in the Mongolian national language in at least one widely circulated national daily newspaper and freely accessible, nationally known website in accordance with Article 21.1 of the Law on Procurement. Bidding of NCB contracts estimated at (a) $500,000 or more for goods and related services; and (b) $1,000,000 or more for civil works shall be advertised concurrently with the general procurement notices on ADB's website.

(iv) **Standard bidding document.** Standard bidding documents acceptable to ADB shall be used. The bidding documents shall provide clear instructions on how bids should be submitted, how prices should be offered, and the place and time for submission and opening of bids. Bidders shall be allowed to submit bids by hand, mail, or courier.

(v) **Qualification criteria and evaluation criteria.** (a) Qualification criteria shall be clearly specified in the bidding documents, and all criteria so specified, shall be used to determine whether a bidder is qualified. The evaluation of the bidder's qualifications should be conducted separately from the technical and commercial evaluation of the bid. When postqualification is applied, the assessment of bidders' qualifications shall be carried out only after the preliminary and detailed evaluation of bids has been completed by the Executing and/or Implementing Agency and, in doing so, the qualifications of the bidder who has submitted the lowest evaluated, substantially responsive bid shall be assessed first. The evaluation of a bidder's qualifications shall only take into account the bidder's capacity and resources to perform the contract, in particular, its experience and past performance on similar contracts; capabilities with respect to personnel, equipment, and construction or manufacturing facilities; and financial position. In carrying out the postqualification assessment, the Executing and/or Implementing Agency shall exercise reasonable judgment in requesting, in writing, from a bidder only missing factual or historical supporting information related to the bidder's qualifications and shall provide a reasonable time period (that is, a minimum of 7 days) to the bidder to provide a response. (b) Evaluation criteria to be used in the evaluation of bids shall be clearly specified in the bidding documents, and evaluation criteria other than price shall be quantified in monetary terms. All evaluation criteria so specified shall be taken into account in bid evaluation. Merit points shall not be used in bid evaluation.

(vi) **Bid opening, evaluation, and award of contract.** (a) Bids shall be opened in public immediately upon the stipulated deadline for submission of bids. Bidders' representatives and project beneficiaries from the concerned local community shall be allowed to attend. The name of the bidder and total amount of each bid including discounts shall be read aloud and recorded in the bid opening record (BOR). Bids received after the deadline for bid submission shall be rejected and returned to the bidders unopened. Immediately after completion of the bid opening proceedings, a copy of BOR shall be posted at a prominent location, accessible to the public, outside the office of the concerned procuring entity, and shall be retained at the same location until the award of contract has been notified. A copy of BOR shall be promptly provided to all bidders who submitted bids. (b) All bids shall not be rejected or new bids invited without ADB's prior written concurrence. (c) No bid shall be rejected merely on the basis of a comparison with the owner's estimated cost or budget ceiling without ADB's prior written concurrence. (d) A bid containing material deviations from or reservations to the terms, conditions, or specifications of the bidding documents shall be rejected as not substantially responsive. A bidder shall not be permitted to withdraw material deviations or reservations once bids have been opened. Bidders shall not be eliminated from detailed evaluation on the basis of nonmaterial, minor deviations, or reservations. (e) The evaluation of bids shall be done in strict adherence to the criteria specified in the bidding documents, and contracts shall be awarded to the qualified bidder offering the lowest evaluated and substantially responsive bid. (f) Bidders shall be requested to extend the validity of their bids only under exceptional circumstances and, in all such cases, the Executing and/or Implementing Agency shall obtain ADB approval for the extension of the bid validity period in a timely manner, and subsequently, communicate such request for extension of the validity period of the bids in writing to all bidders before the date of expiry of their bids. Bidders shall have the

right to refuse to grant such an extension of the validity of their bids without forfeiting their bid securities. Bidders agreeing to extend the validity date of their bids shall also extend the validity period of their bid securities. (g) In the case of contracts of more than 18 months' duration, the bidding documents and the resultant contract shall provide for price adjustment based on a formula acceptable to ADB which shall be disclosed to the bidders in the bidding documents. (h) If a bidder that submitted the lowest evaluated bid refuses to accept the arithmetical corrections made by the Executing and/or Implementing Agency during the evaluation of its bid, its bid shall be disqualified and its bid security shall be forfeited. (i) A bidder shall not be required, as a condition for award, to undertake obligations not specified in the bidding documents or otherwise to modify its bid as originally submitted. (j) There shall be no postbidding negotiations with the lowest evaluated bidder or any other bidder. No bidder shall be required, as a condition for the award of contract, to change the bid price or otherwise materially alter the bid after it has been submitted. (k) A bidder declared ineligible by ADB, based on a determination by ADB that the bidder has engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing an ADB-financed contract, shall be ineligible to be awarded an ADB-financed contract during the period of time determined by ADB.

(vii) **Inspections of accounts and records.** Bidding documents and contracts under NCB procedures financed by ADB shall include a provision requiring suppliers and contractors to permit ADB to inspect their accounts and records relating to the bid submission and the performance of the contract by the supplier and/or contractor, as the case may be, and to have them audited by auditors appointed by ADB, if so required by ADB.

(viii) **Complaints by bidders and handling of complaints.** Bidders' complaints shall be handled in accordance with the procedures set out in the Public Procurement Law of Mongolia, chapter 7.

(ix) **Disclosure of decisions on contract awards.** At the same time that notification on award of contract is given to the successful bidder, the results of the bid evaluation shall be published in a local newspaper or well-known, freely accessible website identifying the bid and lot numbers and providing information on (a) name of each bidder who submitted a bid; (b) bid prices as read out at bid opening; (c) name of bidders whose bids were rejected and the reasons for their rejection; and (d) name of the winning bidder, the price it offered, and the duration and summary scope of the contract awarded. The procuring entity, Executing and/or Implementing Agency shall respond in writing to unsuccessful bidders who seek explanations on the grounds on which their bids were not selected.

(x) **ADB member country restrictions.** Bidders must be nationals of member countries of ADB, and offered goods and works must be produced in and supplied from ADB member countries.

Table A10.4: Proposed Indicative Contract Packages

Description	Number of Contracts	Cost Estimate per Contract	Aggregated Total Cost Estimate	Mode of Procurement	Expected Date of Advertisement	Prior Review	Responsible Agency
A. Civil Works							
1. Veterinary Services Center[a]	5	20,000	100,000	Shopping		Yes[b]	PMU
B. Equipment							PMU
1. Veterinary Center	1	275,000	275,000	NCB		Yes	PMU
2. Marketing Cooperative[c]	3	83,300	250,000	Shopping		No	PMU
3. Fodder Production and Storage Facility	1	42,500	42,500	Shopping		No	PMU
4. Trucks	1	30,000	30,000	Shopping		No	PMU
5. Computers, Printer, and Photocopy Equipment	1	7,500	7,500	Shopping		No	PMU
6. Stocking Herd	1	50,000	50,000	Shopping		No	PMU
C. Consulting Services							
1. PMU Consultants	2	868,000	868,000	QCBS (80:20) Simplified technical proposal		Yes	PMU
Total of Indicative Contract Packages			**1,623,000**				

NCB = national competitive bidding, PMU = project management unit, QCBS = quality- and cost-based system.

[a] Establishment of five veterinary services centers and testing laboratories are proposed.

[b] For NCB, the first draft English language version of the procurement documents should be submitted for Asian Development Bank (ADB) review and approval regardless of the estimated contract amount. ADB-approved procurement documents should be used as a model for all NCB procurement financed by ADB for the Project, and need not be subjected to further review. ADB will review the bid evaluation report and award of contract on a postreview basis. For shopping, ADB will normally review the award of contract on a postreview basis.

[c] Three marketing cooperatives for each of wool and cashmere, dairy, and meat are proposed under the Project.

Source: ADB estimates.

TECHNICAL ASSISTANCE FOR AGRICULTURAL MARKETING AND BRAND DEVELOPMENT

1. The proposed technical assistance (TA) will be directed to capitalizing on opportunities in niche markets to develop a premium brand for Mongolian agriculture products. The brand development will be primarily aimed at developing partnerships between Mongolian enterprises and external premium brands to develop a virtual vertically integrated value chain. The long-term ambition could be to provide an opportunity for Mongolian enterprises to develop their own indigenous consumer brands for the export market. A number of high-end brands (i) want to stay away from price discounted goods, and (ii) would be interested in building the idea of Mongolia as a premium and/or exclusive product source.[1] Enterprises selected for funding through the Project have inherent elements of performance, process, and origin to varying degrees. The TA will draw on and combine these to provide a platform for creating credible and compelling brands.

A. Impact and Outcome

2. The TA will contribute to realizing the impact of the Project—agriculture and rural growth that sustains premium value differentiation for Mongolian products. The outcome will be the creation of a process for brand development and management that is sustainable and replicable by the institutions charged with managing that process, while providing a demonstration effect with two leading enterprises and involving other enterprises in the longer-term process.

B. Outputs

3. The TA outputs will be a brand framework, content of business proposals, and an institutional framework for sustained brand management and development including a business plan for a brand management agency.

C. Terms of Reference for Consulting Services

4. An international branding firm will be recruited through a lump-sum contract.[2] Services are expected to be provided by a team of two senior consultants supported by a team of up to five junior consultants and researchers altogether providing approximately 40 person-months of inputs including 6 person-months in Mongolia. The selection of consultants will follow the Asian Development Bank's (ADB) *Guidelines on the Use of Consultants* (2007, as amended from time to time) and other arrangements for the recruitment of domestic consultants acceptable to ADB.

5. The consultants will undertake the following tasks:
   (i) develop a brand framework;
   (ii) catalogue the supporting technical issues;
   (iii) using two enterprises, develop guidelines for enterprises preparing for brand development;
   (iv) develop the generic material and content for business to business proposals by Mongolian enterprises;

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[1] For example, Loro Piana and Dunhill have developing Mongolia as a premium source of products. Furthermore, companies such as Burberry and Diesel are known for developing strong links with suppliers to improve their information technology and production capabilities.
[2] International branding companies do not operate against personnel schedules and specified individual inputs. They operate as entities that commit to deliverables. Therefore a lump sum remuneration contract to provide the defined TA outputs for the brand development component is proposed as the contracting method for consultants.

(v) make proposals for two enterprises and develop generic guidelines;
(vi) facilitate partnership agreements and use these deals to develop guidelines for other enterprises;
(vii) facilitate the implementation of the partnership agreements;
(viii) help the external enterprises define the brand based upon actual product development and feed this back into the proposals developed earlier;
(ix) provide advice to the partners and their point agencies on the use of the brand; and
(x) assist in the launch of the product brand.

6. The consultants will maintain a continuous strand of collated lessons to be used to refine the process for subsequent enterprises and feed it back into the generic process and proposal.

D. Cost Estimates

7. The estimated TA cost is $2.20 million equivalent, of which $2.00 million equivalent will be financed on a grant basis by the Japan Special Fund, funded by the Government of Japan. The cost estimates are in Table A11.

Table A11: Cost Estimates and Financing Plan
($'000)

Item	Total Cost
A. Asian Development Bank Financing[a]	
1. Consultants	
a. Remuneration and Per Diem	1,183.0
b. International and Local Travel	140.0
c. Reports and Communication	175.0
2. Equipment	15.0
3. Training, Seminars, Conferences, and Workshops	200.0
4. Surveys and Study Tours	175.0
5. Contingencies	112.0
Subtotal (A)	**2,000.0**
B. Government Financing	
1. Remuneration and Per Diem of Counterpart Staff	117.0
2. Transport	25.0
3. Surveys and Documents	35.0
4. Contingencies	23.0
Subtotal (B)	**200.0**
Total	**2,200.0**

a Financed by the Japan Special Fund, funded by the Government of Japan.
Source: Asian Development Bank estimates.

ECONOMIC ANALYSIS

A. Expected Impacts

1. The Project will spur growth and increased profitability of Mongolia's agriculture sector through technical and financial assistance to leading Mongolian agroenterprises and by developing or upgrading public infrastructure used by primary producers of the raw materials demanded by these agroenterprises. Infrastructure is broadly defined to include physical infrastructure as well as technical assistance (TA), support service, and capacity building. Higher growth and profits of agroenterprises will, in turn, enable primary producers (particularly livestock producers) to receive higher prices for their outputs. Through this, poverty will be reduced among rural households that depend on agriculture and livestock-raising activities for their livelihood. High agroenterprise revenues are expected to benefit the economy as a whole through increased employment and higher wages at agroenterprises.

2. Mongolian agriculture has few comparative advantages on international markets based on price and quality due to its geographic conditions (i.e., mostly semi-arid grasslands with short growing seasons), low economies of scale, and relatively high transport to most global markets. Accordingly, a focus on the few areas of comparative advantage (e.g., extensive livestock production) and development of market niches is crucial in moving the sector forward. Building on areas of comparative advantage and development of market niches require investments in upgrading private enterprises engaged in key agricultural supply chains and in the public infrastructure that supports primary producers engaged in these supply chains.

3. The Project will develop niche markets that provide price premiums for Mongolian agro exports through a branding campaign and initiatives to improve the quality and reliability of products. Credit lines to agroenterprises for value-chain development and investments in public infrastructure where enterprises secure raw materials are the principal mechanisms for achieving these outcomes. Public and private capital needs to be developed to move Mongolian agro industry forward. Investments in new physical and institutional infrastructure are an essential complement to the credit lines provided and the brand development efforts as enabling public infrastructure will create the conditions that foster greater production efficiency and benefit sharing by primary agricultural and livestock producers.

B. Results of Financial and Economic Analysis

4. The financial and economic analyses are based on separate indicative investments for the value-chain development investments and the grants for supporting public infrastructure. Enterprises with indicative investments under the value-chain development component (component 1) of the Project operate in fruits and berries processing, meat processing, tannery and production of leather goods, and herbal medicine. The 15 enterprises targeted for support include firms producing cashmere and wool, dairy products, and vegetable processing. All these enterprises serve both national and export markets. Indicative investments related to the rural infrastructure and services development component (component 2) involve three types of investments: (i) development of livestock testing and veterinary extension centers, (ii) support to agricultural producer (herder) marketing cooperatives, and (iii) development of fodder supply and storage. Detailed descriptions are available in Supplementary Appendix I.

5. Because the precise mix and scale of investments in agroenterprises and localities will not be determined until implementation, analyses are carried out only for separate indicative investments, and no effort is made to try to sum returns across proposed components or to

arrive at overall internal rates of return. Furthermore, the long-term benefits of fostering greater value addition in supply chains by improving the business environment and supporting infrastructure for private enterprises in the agriculture sector and developing niche markets for their products with price premiums cannot be quantified with an adequate degree of precision and, hence, are excluded from the analysis. However, ample evidence indicates that investments will improve the quantity and quality of agroprocessed goods produced by the firms and through this, generate additional wealth for the economy. In the case of the support to localities to develop targeted types of infrastructure related to supply chain development, analysis faces a similar problem in that final determination of the precise type of infrastructure to be supported will be decided based on the inputs of local communities and technical experts. These characteristics of the Project make assessment of its economic and financial returns indicative and problematic to aggregate across investments.

6. In accordance with the Asian Development Bank's *Guidelines for the Economic Analysis of Projects* (1997), the representative subproject analysis is based on the investment budget model with breakdowns on revenue and cost by the investment inputs and outputs, and projected cash flows over 20 years. Prices are in 2008 constant year prices assuming an annual inflation rate of 6% (the approximate historical average in Mongolia during the past 4 years). Sensitivity analysis of the risk of a shorter economic life of the Project was completed. All expenditures, revenues, benefits, and costs are incremental and expressed in dollars. The exchange rate applied in calculations between foreign and domestic currency relies on the mid-2007 exchange of MNT1,165 per $1.00.

7. The analytical framework relies on the following assumptions and specifications:

(i) All prices, benefits, and costs were adjusted to early 2008 constant values using the gross domestic product deflator for all local currency benefits and costs, and the G-5 manufacturer's unit value index for all foreign exchange.
(ii) A discount rate of 12% was used to calculate the net present value and was used as a cutoff point for the economic internal rate of return.
(iii) Project benefits and costs used in the financial analysis were adjusted to prices used in the economic analysis by deducting taxes and duties and by applying item-specific conversion factors (i.e., for items whose economic value differed from observed market values as in the case of public goods or goods with associated positive or negative externalities or nontraded goods) to local currency costs. All prices are valued in early 2008 constant prices.

8. An incremental benefit analysis approach is applied to demonstrate potential improvements in the performance of farming and herding households and other major participants in the agricultural value chain by determining whether (i) transactions costs are reduced in terms of lowered losses due to decline of product quality during processing and shipment, transport costs and delivery time required, and marketing costs associated with movement of goods from the primary producer to final consumer; and/or (ii) revenues, employment opportunities, value addition in product processing, and total production are increased due to the Project. Quantifiable benefits under the agroenterprise credit line (component 1) are likely to accrue from the subprojects financed by the rural infrastructure and services development component (component 2) of the Project, as well as benefits based on the credit line alone. The indicative credit lines and subprojects analyzed are presented in Tables A12.1 and A12.2.

Table A12.1: Subproject Appraisal Results: Value Chain Development Investments

Indicative Project Component	Product	Indicative Capital Investment ($ million)	FIRR (%)	Projected Incremental Cash Flow without Investment	with Investment	Net
1. A	Meat processing	2.84	24.19	432,000	747,000	315,000
2. B	Leather processing and manufacture	2.56	34.90	345,000	547,000	202,000
3. C	Herbal medicines	2.05	21.17	355,000	476,000	122,000
4. D	Fruit and berry processing	2.90	20.66	140,000	726,000	586,000

FIRR = financial internal rate of return.
Source: Asian Development Bank estimates.

9. Table A12.2 summarizes subproject appraisal results for indicative investments under component 2. These are derived from tables available as supplementary appendixes. One set of tables presents the results of the cost–benefit analysis for the Project while the second set of tables presents the basis for the estimated increase in household net revenue resulting from each of the indicative investments proposed under component 2. Increases in net revenues across the three types of indicative investments in economic terms varied only slightly (by less than 1 percentage point) from the calculated changes in financial net revenues. The financial internal rates of return for the three types of indicative investments ranged between 15.56 and 16.73 while the economic internal rates of return were generally higher ranging between 17.33% and 21.68%.

Table A12.2: Subproject Appraisal Results: Rural Infrastructure Grants ($)

Indicative Project Component	Type of Subproject	Indicative Capital Investment	Financial IRR (%)	Financial NPV[a]	Economic IRR (%)	Economic NPV[a]
1. Livestock testing/veterinary care center		136,581	16.33	36,808	21.68	84,083
2. Producer marketing cooperative		78,685	16.73	18,180	17.33	20,662
3. Fodder production and storage facility		85,419	15.56	6,438	19.78	14,466

IRR = internal rate of return, NPV = net present value.
[a] A discount rate of 12% was used to calculate NPV and as a cutoff point for the economic IRR.
Source: Asian Development Bank estimates.

SUMMARY POVERTY REDUCTION AND SOCIAL STRATEGY

Country/Project Title: Mongolia: Agriculture and Rural Development Project

Lending/Financing Modality:	Loan	Department/ Division:	East Asia Department/ Mongolia Resident Mission

I. POVERTY ANALYSIS AND STRATEGY

A. Linkages to the National Poverty Reduction Strategy and Country Partnership Strategy

The agriculture sector is important to growth and poverty reduction in Mongolia. Agriculture accounted for 20% of gross domestic product (GDP), 40% of employment, 14% of export earnings, and 25% of GDP growth in 2007. Livestock production, which accounts for 80% of agricultural output, is an important source of income, jobs, food security, and savings for rural households. The country had 40 million head of livestock in 2007, and the number continues to increase with the higher domestic demand for meat and other products of animal origin and increasing demand for raw materials from the People's Republic of China. But productivity is low and production risky. Little value is added with less than 10% of production processed beyond the most basic stage. The country mostly exports raw fibers and animal carcasses. Growth has come mostly from higher livestock numbers and brought associated problems of desertification, pollution, and breed dilution. The results are a stagnant rural economy, low and uncertain rural incomes, and threats to the environment. Market orientation, efficiency, and sustainability of agriculture and rural development are objectives of the country strategy and program.[a] Coordinated development of agriculture value chains is in line with the Asian Development Bank's (ADB) strategy for Mongolia. ADB's strategy targets increased market orientation. The ADB-funded Agriculture Sector Development Project[b] has laid the foundation for production improvements by building up rural infrastructure and support services, inducing changes in production methods and planning, and changing mindsets of producers from centralist approaches to increased business awareness. However, achievements need to be channeled toward greater market orientation by aligning production with specific supply chains and markets.

B. Poverty Analysis — **Targeting Classification:** General intervention

1. Key Issues

Low agriculture growth will put overall growth at risk. Low and unstable agricultural incomes and limited rural income opportunities are a cause of poverty and vulnerability. Agriculture accounts for a fifth of GDP. Agricultural and agroprocessed exports account for about a fourth of foreign exchange earnings. Agriculture is the source of employment for almost half of the labor force and the most important source of household income in rural areas. The rural population comprises 43% of Mongolia's 2.5 million population. In 2003, rural poverty was estimated to be 43%. The natural calamities of 2000–2001 demonstrate the vulnerability of the livelihoods of poor herder households to natural shocks. Vulnerability also manifests in the form of noticeable seasonal consumption variations that reflect agricultural production cycles. Agriculture and rural development, therefore, is crucial in broadening and sustaining growth and providing opportunities for the poor who have not yet benefited from the transition to a market-based economy.

Two main groups were identified based on assets and vulnerability: herders and changers; more than 40% are poor. Herd size is the major distinguishing factor between the three groups of herders. The bulk of households with 100 or fewer head of livestock are poor. Those in the second group, considered middle class, own 100 to 500. Those in the third, wealthy herder households, have more than 500 livestock. The first consists of families that were in poverty following the transition and moved to herding because of lack of alternative income opportunities. Most were rural nonfarm agricultural workers or industrial or periurban workers. They rear small herds on common areas near urban areas, and their stationary herd management is a major source of land degradation. The poor herders do not have basic infrastructure for herding (i.e., fences, winter shelters, wells), their children tend to drop out from school, and they live in extended families. The second group has more herding experience but is vulnerable to bad weather and changes in demand. They do not have basic infrastructure for herding (i.e., winter shelters, wells), transportation to move around, and equipment for hay making. The third group has access to winter shelters and owns wells and fences; their problems are related to limited pasture for herding and limited access to low interest lending. The bulk of agricultural raw materials producers have small herds and have difficulty establishing stable trading relations with changers and processors. Collaborative arrangements between these herders could substantially improve their income. For all these groups, improved marketing and distribution, improved access to market information, and availability of risk-sharing arrangements would provide important income-increasing advantages. The changers are grouped into small, medium, and wealthy changers. The small changers are those with a subsistence income, without a source for running a business or space for storing cashmere. The medium changers have enough income for living and small savings. They buy cashmere using two sources: (i) their own savings, and (ii) money from wealthy changers. Few of them have their

own facility to store cashmere. Wealthy changers have their own funding to buy cashmere, their own storage, and access to bank loans. The major portion of the small and medium changers is made up of single women with children. The Project identifies a third special group of families as poor. They originated from workers families of the former state farms and engaged in crop production: wheat, potatoes, or other vegetables. This group is specific to *aimags* of the Khangai region. Many of those families have only subsistence production on small amounts of land and few cows for milking. Although they have more diversified income sources, they still face many constraints such as limited pasture, lack of equipment for hay making, and inability to compete with imported crops. Additional income opportunities may be created for them as some project proposals are targeted with investment to create berry bush plantations in that region. Enterprise selection should pay careful attention to proposals of enterprises for developing local basic agriculture raw material processing (A Japan Fund for Poverty Reduction [JFPR] project is envisaged with a view to supplement the Project by addressing some of the problems of poor herders and changers. Activities may include training for herders (setting up groups or cooperatives among herders), mitigation measures for smaller changers including business reorientation, and provision of lower interest rate loans to herders and changers.

2. Design Features

During project implementation, a participatory approach will be adopted to enable different stakeholders to be represented at the project steering committee and other project structures. To increase the exposure of the rural poor and vulnerable groups such as women and remote herders to the benefits of the Project, special care will be given to enhance their participation through intense dissemination activities and a focused awareness campaign by the project management units (PMUs).

II. SOCIAL ANALYSIS AND STRATEGY

A. Findings of Social Analysis

The Project is categorized as category C for involuntary resettlement. It will not require any land acquisition or demolition of fixed assets for its implementation. PMUs will monitor investments and, if adverse involuntary resettlement impacts are associated with project investments, further disbursements to the enterprise involved or the relevant rural infrastructure investment will be subject to compliance with ADB's *Involuntary Resettlement Policy* (1995). The Project is categorized as category B for indigenous peoples impact. It will have no adverse impact on indigenous peoples. The JFPR project is being designed to address issues related to socially disadvantaged groups, will specifically take into account issues of ethnic minorities and ensure that ethnic minorities benefit from the Project, and will not have any adverse impact on them.

B. Consultation and Participation

A participatory process was adopted during project design to understand the needs and constraints of stakeholders. Five stakeholder groups were identified and consulted during project preparation. Primary stakeholders include herders and changers; secondary stakeholders include staff from the local governor's office, representatives of nongovernment organizations, and local residents. Consultation consisted of an extensive participatory rural appraisal conducted in Bayankhongor, Hovd, Selenge, and Sukhbaatar *aimags*. During each of the field trips, participatory workshops were organized to identify stakeholders' interests, understand linkages between the major project participants, and develop a participation strategy during project preparation and implementation.

What level of consultation and participation (C&P) is envisaged during the project implementation and monitoring?

☐ Information sharing ☐ Consultation ☒ Collaborative decision making ☐ Empowerment

Was a C&P plan prepared? ☐ Yes ☒ No

No C&P plan was prepared; PMU will develop it with assistance from the social and gender specialist consultant during the first year.

C. Gender and Development

1. Key Issues

Women entrepreneurs are involved in micro agricultural processing, and preparation and trading of agricultural raw materials. Women experience higher rates of poverty and unemployment in rural areas, and persistent gender wage gaps. Their business is usually of an informal nature. Women comprise nearly half of the economically active population, 54% of those in informal sector, 70% of service providers, 69% of retail traders, and 62% of food manufacturers; and yet 70% are referred to as unpaid family workers. Only 1/3 of entrepreneurs are female, and the share increases as the size of the enterprise decreases. In addition, they are involved in household production which contributed 47% of household income in 2006 (compared to 36.8% in 2003). In cashmere, the only industry studied from a gender perspective, women participate on a par with men but men dominate in sales. Therefore, rural women constitute a critical target for any sustainable intervention aimed at strengthening and/or developing viable supply chains and markets. Promoting women's entrepreneurship will contribute to improving raw material quality and certainty of supply, and reduce rural poverty, in particular gender income disparities.

2. Key Actions

Measures included in the design to promote gender equality and women's empowerment—access to and use of relevant services, resources, assets, or opportunities and participation in decision-making process:

☒ Gender plan ☐ Other actions/measures ☐ No action/measure

The strategy to promote gender equality and women's empowerment within the design and implementation of the Project will adopt a dual approach outlined in the project-specific gender action plan. This will involve (i) encouraging agricultural enterprises to adopt socially and gender-responsive policies, strategies, and programs; and reflect them in the value-chain development; and (ii) facilitating informed participation of women and women's groups in the identification, selection, and implementation of rural infrastructure and support services development projects. One international and two full-time national social development consultants with demonstrated experience in gender and development and women's economic empowerment will be engaged under the Project. They will work directly with PMUs at the Ministry of Finance and Ministry of Food and Agriculture. The Project will establish and maintain a sex-disaggregated database and promote annual consultations with relevant stakeholders and local communities to monitor its social, gender, participatory, and related impacts.

III. SOCIAL SAFEGUARD ISSUES AND OTHER SOCIAL RISKS

Issue	Significant/ Limited/ No Impact	Strategy to Address Issue	Plan or Other Measures Included in Design
Involuntary Resettlement	No Impact	No land acquisition or demolition of fixed assets is expected due to implementation of the Project. The Project will not likely require any resettlement.	☐ Full Plan ☐ Short Plan ☐ Resettlement Framework ☒ No Action
Indigenous Peoples	Limited	The Project is not likely to have any adverse or significant impact on indigenous people. Associated JFPR projects are being proposed to increase the access of especially disadvantaged communities to project benefits and mitigate negative impacts on indigenous groups.	☐ Plan ☐ Other Action ☐ Indigenous Peoples Framework ☒ No Action
Labor ☒ Employment opportunities ☐ Labor retrenchment ☐ Core labor standards	Limited	The Project is expected to increase employment opportunities. All enterprises will be required to comply with national labor legislation.	☐ Plan ☐ Other Action ☒ No Action
Affordability	Limited	Chain captains working directly with the herders will result in downsizing of changers, especially smaller ones. Furthermore, the investment proposals tend to work with the herders who have capacity to supply substantial volume of raw material resulting in exclusion of poor and mid-size herders from the project activities. JFPR projects should be designed to implement mitigation plans for these groups.	☒ Action ☐ No Action
Other Risks and/or Vulnerabilities ☐HIV/AIDS ☐Human trafficking ☐Others			☐ Plan ☐ Other Action ☒ No Action

IV. MONITORING AND EVALUATION

Are social indicators included in the design and monitoring framework to facilitate monitoring of social development activities and/or social impacts during project implementation? ☒ Yes ☐ No

A project performance management system will be developed to include various indicators including increases in farm incomes, reduced poverty, and gender and social development.

[a] ADB. 2005. *Mongolia: Country Strategy and Program 2006–2008*. Manila.

[b] ADB. 2000. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to Mongolia for the Agriculture Sector Development Project.* Manila.

ENVIRONMENTAL ASSESSMENT

1. An initial environmental examination (IEE) was conducted taking into consideration the nature of the project components and the range of possible specific interventions proposed. Due to the potentially extensive and varied scope of the Project, the assessment was not carried out on a specific site but rather on the type of intervention, potential impacts, and broad corresponding mitigation measures. At the time of preparation of the IEE, the individual supply chain investment subprojects and rural infrastructure investments of the Project had not been selected. Individual sample IEEs of representative value-chain investment plans likely to be financed under the Project were prepared. The summary IEE and four IEEs of representative subprojects are included as Supplementary Appendix H.

2. For the Asian Development Bank (ADB) environmental assessment purposes, the overall Project is categorized as B and the rural investments of the second component as C.

A. Description of the Project

3. The Project has three components: (i) value-chain development, (ii) rural infrastructure and services development, and (iii) project management. Environmental assessment was carried out for the first two components.

1. Component 1: Value-Chain Development

4. This component will develop value chains to deliver premium value products to niche markets. A competitive process was established under the project preparatory technical assistance (TA) to select bankable proposals. Through the credit line, funding is expected to be provided to 15 selected agroindustrial enterprises at the top of the supply chain in the wool and cashmere, leather, meat, and fruit and herb industries. The selected enterprises will use the investment to carry out a range of activities that will strengthen the quality and reliability of the supply of inputs to their operations and improve their own production processes. Examples of the bankable proposals of four representative enterprises are presented in Appendix 5 and Supplementary Appendix B. The requests for external financing range from $1.45 million to $1.71 million per enterprise. The enterprises featured in Appendix 5 and Supplementary Appendix C record an annual turnover of $1.5 million–$2.0 million and employ between 70 and 200 people. Based on the proposals of these enterprises, possible project activities include investing in improved technology processing equipment to produce higher value, purer extracts of seabuckthorn; investing in improved genetics; training and increasing sources of supply of seabuckthorn; expanding and developing an existing meat processing and canning facility; providing training for herders and farmers in improved husbandry, quality standards, and veterinary care; investing in new or upgraded production facilities for leather processing; providing veterinary services to herders; and improving processing technology for an existing herbal medicine business based on the highly valued Mongolian indigenous herbs.

2. Component 2: Rural Infrastructure and Services Development

5. Rural infrastructure and services development investments will support the value chains of the agroenterprises selected under component 1, and build upon investment priorities identified in the ADB-funded Agriculture Sector Strategy Study. Infrastructure investments will be targeted to four priority areas identified in the Agriculture Sector Strategy Study and by the Ministry of Food and Agriculture (MoFA) as being underserved in current government and international aid-financed programs: (i) development of livestock testing and veterinary

extension centers, (ii) establishment of new wells and accompanying water management infrastructure, (iii) support to agricultural producer (herder) marketing cooperatives, and (iv) development of fodder supply and storage facilities to foster fodder market development. The scope and nature of the indicative investments are based on similar investments undertaken under the ADB-supported Agriculture Sector Development Program. Actual selection of the investments will be coordinated and supervised by MoFA agriculture and livestock experts and the project working group. Where available, informal herder groups like those established under the Agriculture Sector Development Program, local community councils established under the World Bank's Sustainable Livelihoods Project, or other local organizations and nongovernment organizations will be used as agents for local input into investment selection and implementation.

B. Description of the Environment

6. **Physical Resources.** Mongolia's elevated continental position in northern Asia between the People's Republic of China and the Russian Federation gives it a climate of warm summers and extremely cold winters. Altitude ranges from 518 meters to 4,374 meters. Rainfall is low at about 200 millimeters per year in the capital and less in the south of the country, and falls mainly in summer. The country is subject to drought, strong winds, dust storms, and severe winters.

7. Soils of the grasslands are fragile with overgrazing and cultivation of unsuitable land leading to extensive land degradation due mainly to wind erosion of the valuable topsoil when the protective vegetation cover is reduced. This causes desertification as well as dust and sand storms. Mongolia is well endowed with minerals which are the country's main export.

8. The failure of many wells in grazing areas has led to the reduction in the area available for grazing and intensification of grazing with consequent increased land degradation on many areas with a water supply. The Tuul River at Ulaanbaatar is heavily polluted by existing industries and urban wastewater with inadequate treatment in industrial wastewater treatment plants and the city central wastewater treatment plant. The leather processing industry is identified as a problem because of the discharge of waste chromium used in tanning processes.

9. **Ecological Resources.** The country is on an elevated plateau mainly of undulating grasslands with some forests and mountains. The grasslands are extensively grazed by domestic animals where water is available. Mongolia has a wide variety of wildlife species, and fishes are abundant in rivers and lakes. The country has more than 10 million hectares of forest or about 7% of the country area; this is currently subject to over-exploitation and fire damage. More than 20 million hectares or over 13% of the country are in protected areas.

C. Forecasting Environmental Impacts and Mitigation Measures

10. The Project is expected to result in an overall increase in efficiency, productivity, and profitability in the agriculture sector and raise the economic return in the sector through improved quality and access to markets. Environmental and health benefits will accrue from improving practices and equipment, including reduced waste, and moving to safer usage of chemicals and other inputs. In addition, the technical assistance (TA) will be provided to create premium value differentiation of agriculture products. The output of the TA will be brand awareness among key stakeholders through a brand development initiative. The TA will first identify a premium brand image for Mongolian agriculture and, on the basis of this brand image, provide expert advice to agricultural enterprises and participants in value chains on investments

to realize the premium value. Brand development will provide a market incentive for the agricultural industry to progress to a more sustainable basis.

1. Component 1: Value-Chain Development

11. The Project will strengthen the supply chains in four subsectors: leather, wool and cashmere, meat, and fruits and herbs. Bankable proposals were prepared for four subprojects; these are the most advanced in their planning and most likely to be funded under the Project. Environmental assessments were completed for these as representative proposals. Individual IEE reports are attached to the summary IEE in Supplementary Appendix H. They include detailed tables identifying potential environmental impacts for each subproject activity, and required mitigation and enhancement measures. The four proposals are Mongol Shevro (leather), Khatan Suikh Impex (meat), Monos Pharma (pharmaceutical factory and plantation), and Uvs Khuns (seabuckthorn plantation and processing). A summary of the specific potential environmental impacts based on the four IEEs follows.

12. **Leather Subsector.** The leather factory has existing pollution issues relating to wastewater containing chromium and other contaminants. Increased pollution as a result of increased production is partially offset in the proposal by equipment upgrades to reduce water and chemical use per unit of production. Mitigation measures are proposed to reduce pollution by at least the same amount as the additional pollution caused by the increased production. This is to be achieved by requiring a specialist cleaner production assessment as part of the detailed design and equipment selection. The supply chain activities may encourage herders to increase their herd size, thus, adding to the existing unsustainable pasture use and land degradation. As a mitigation measure for this, the training and awareness-raising proposed by the company to undertake with herders will include awareness of the benefits of maintaining a smaller healthier herd and improving returns by focusing on quality, not quantity.

13. **Meat Subsector.** No significant negative impact is identified as a result of increased production as the process is relatively benign producing little solid waste and wastewater which is disposed of to the sewerage system after pretreatment to reduce fat and oil content. The number of livestock around the *aimag* centers will increase with corresponding land degradation and waste issues. However, this will be more than offset by the benefits of reduced livestock numbers in the Ulaanbaatar area.

14. **Pharmaceutical Subsector.** The proposed factory is expected to have little significant environmental impact. This is due to the location of the plant in an area adjacent to existing industry with no vegetation or habitat conservation issues, the relatively small scale of the operation, and the low amount of waste produced. The plant will be a small modern facility designed and operated to a high degree of cleanliness required by good manufacturing practice standards. This will be complemented by consultancy and training for establishing good management practices and quality management systems in accordance with World Health Organization standards. The impact of the proposed plantation cannot be fully assessed at this stage as the sites have not been selected. However, an analysis is presented of the typical impacts to be expected together with exclusion criteria for site selection to ensure that environmentally sensitive areas are avoided and suitable mitigation measures incorporated. Site selection and development should follow these criteria and mitigation measures.

15. **Seabuckthorn Plantation and Processing.** The proposed factory upgrade is expected to have little significant environmental impact. The plant will be a small modern facility designed and operated to the high standard of cleanliness required for the target market. The impact of

the proposed plantation area is expected to be low as (i) this was the site of a former irrigation area with water supply infrastructure already in place, (ii) water use will be a small proportion of the available resource, (iii) the area has little existing vegetation, (iv) no environmentally sensitive areas will be affected, (v) the site is well drained, (vi) no chemicals are to be used, and (vii) little waste will be produced. With the incorporation of mitigation measures based on general good practice, no significant or unacceptable environmental impacts are anticipated. For all subprojects under this component, Government approval is required through the Ministry of Nature and Environment (MNE) before the project proceeds. Khan Bank will ensure that required approvals are in place before issuing the loan. The environment specialist within the project management unit (PMU) will ensure that all environmental actions and mitigation measures are implemented, review the process to ensure that government processes have operated correctly, and monitor project performance throughout implementation.

2. Component 2: Rural Infrastructure and Services Development

16. The environmental assessment of this component is based on a review of similar infrastructure investments carried out under the Agriculture Sector Development Program and a review of potential sites for project investments. The scale and nature of activities in the rural infrastructure and services development component are such that no significant environmental impact is expected; this component is categorized as C under the ADB environmental assessment criteria.

17. During project implementation, PMU environment specialist will review the selected investments to ensure that they do not differ significantly from those anticipated during the project preparatory TA in terms of type, scale, and environmental sensitivity of location. In addition, PMU will be guided by an exclusion list that states that project activities not be located in environmentally sensitive locations including protected areas or their buffer zones; or cultural heritage sites, wetlands, sensitive habitats, or areas with significant biodiversity. The Project will not fund (i) major civil works including major earthworks, dams, irrigation or drainage works; (ii) major land clearance; (iii) activities producing significant liquid, gaseous, or solid wastes; (iv) activities involving displacement or relocation of people or effects on livelihoods, influx of workers, intensification of land use with significant environmental degradation, roads, or significant heavy vehicle traffic, forestry or extractive industry (quarries); or (v) any activities that would warrant classification as category A or B under ADB environmental requirements.

18. The summary of impacts and mitigation measures proposed is as follows:

(i) **Develop livestock testing and veterinary extension centers.** The program will have a generally positive benefit in improving the health of livestock and quality of animal products. Improved animal health will result in improved resource use efficiency in terms of the amount of land, feed, and other inputs required per unit of product with corresponding reduction in land degradation. Improving the quality of skins and fibers will result in reduced wastage due to damaged materials. Some potential for minor impacts is associated with disposal of waste. As a safeguard measure, training will be provided on safe handling of supplies and waste disposal. Veterinary laboratories will be required to have a specialist incinerator meeting international standards for veterinary medical waste.

(ii) **Support herder marketing cooperatives.** Due largely to their small scale and spread over the project areas, none of these investments is expected to have any significant negative environmental impact. A positive benefit will be improved

ability of herders to add value and improve the quality of their produce, improve their linkage to the market, and improve the efficiency of production. By increasing the return to herders per animal, these activities will reduce the need for herders to simply maximize their herd size, thus, contributing to improved sustainability. It will provide support to herders located in more remote parts of the country reducing the incentive for a larger number of animals to be located near the main centers, and reducing this current source of land degradation in these areas. Waste from veterinary supplies will be returned to the *aimag* veterinary center, if possible, for disposal in a purpose built incinerator in coordination with the veterinary centers subcomponent.

(iii) **Develop fodder supply and storage facilities to foster fodder market development.** Given the scale and nature of these activities, no significant negative environmental impact is expected. Fodder production will reduce pressure on grazing land by providing secure feed for winter and spring when feed is most scarce. Construction activity is budgeted at $92,000 which, when spread across the project areas, will only be for minor building works from which no significant environmental impacts are expected. Cultivation, if any, should be on a small scale but still may result in soil erosion. As a safeguard for this, cultivation will be planned on land with soil of low erosion potential, and employ soil conservation techniques including minimum tillage cultivation techniques. Sites selected for cultivation will be flat with established wind breaks against prevailing winds; they will not be located adjacent to waterways. These aspects will be included in a training program together with safe use of fertilizers; herbicides; and pesticides, if these are used.

D. Institutional Requirements and Environmental Monitoring Plan

19. As the selection of individual subprojects to be financed under components 1 and 2 is not yet finalized, appropriate procedures and capacity must be in place to ensure that ADB environmental requirements are met during implementation.

20. The institutional and monitoring arrangements for the environmental aspects will be integrated with that for implementation of the entire Project. A separate PMU is to be established for each of the value-chain development and rural infrastructure and services development components in the Ministry of Finance and MoFA. A national environment specialist will be appointed to PMUs to ensure compliance with ADB environmental requirements as part of project monitoring and evaluation. Additional local specialists should be involved in developing training and extension programs such as in sustainable pasture management, industrial pollution control, and cleaner production. An international environment specialist could be involved for a few weeks per year to provide guidance in establishing the Project and conducting regular reviews.

1. Component 1: Value-Chain Development

21. The following environmental assessment and review procedure for environmental assessment and approval of subprojects under the value-chain development component is based on MNE procedures and ADB guidelines:

(i) The advisory board selects investment proposals.
(ii) Selected companies are advised of the process including the requirement to comply with government and ADB requirements.
(iii) PMU environment specialist categorizes the selected proposals according to ADB environmental requirements and provides recommendations to ADB for decision: (a) category A activities will not be funded, (b) category B activities will require environmental assessment in accordance with ADB (IEE) and government requirements, and (c) category C activities will require no further environmental assessment under ADB requirements (but may still require assessment under government requirements).
(iv) Companies refer their proposals to MNE for initial assessment in parallel with preparing a detailed proposal. The MNE process is as follows: (a) An MNE expert carries out initial assessment and makes a recommendation to the MNE committee to be completed within 12 days. (b) The MNE committee determines whether (1) no further assessment is needed but may impose conditions, or (2) detailed environmental assessment is needed. (c) If detailed environmental assessment is needed, then the company arranges for this to be carried out by a consultant licensed for this. (d) MNE reviews the detailed environmental assessment and may request further information. (e) MNE approves with or without conditions, or rejects.
(v) PMU environment specialist refers the subproject to ADB for review and approval at the following points together with recommendations: (a) categorization according to ADB environmental requirements, (b) MNE initial assessment, (c) detailed environmental assessment, and (d) MNE approval.
(vi) The commercial bank confirms that approvals are in place and that PMU has no objection before granting the loan.

22. During implementation, companies should monitor and regularly report on the implementation of environmental requirements and outcomes as part of the overall reporting to Khan Bank and ADB. The companies will be required to report any environmental incidents, accidents, complaints, litigation, regulatory notices, or fines in their operation to PMU, Khan Bank, and MNE as soon as possible. Corrective actions will be developed and agreed upon between the company and State Specialized Inspection Agency or other applicable agency. This will be referred to PMU environment specialist and Khan Bank for review and concurrence. Khan Bank will report any environmental incidents that it becomes aware of to PMU and a similar procedure initiated. The environment specialist within PMU will be responsible for overseeing and reviewing this monitoring to ensure that it is satisfactorily carried out.

2. Component 2: Rural Infrastructure and Services Development

23. These investments are confirmed as category C; therefore no formal procedure of approval is needed. However, the environment specialist within PMU will be responsible for overseeing and reviewing the component to ensure that it is satisfactorily carried out with no significant deviations from the original scope and nature of investments, and that the exclusion list is respected.

E. Public Consultation and Information Disclosure

24. Major project-related documents have been accessible through the website of ADB's Mongolia Resident Mission in both English and Mongolian through out the project preparatory TA. Numerous consultations were held with industry, government officials, nongovernment

organizations, herders, traders, suppliers, and others. For the IEE, meetings were held with MoFA, MNE, State Specialized Inspection Agency, Khan Bank, World Bank Sustainable Livelihoods Project, Mongolian Cleaner Production and Energy Efficiency Center, University of Mongolia tannery research project, and representative enterprises in each major subsector to be supported by the Project. Local (*soum*) officials and community groups were consulted in group meetings in the field. All parties consulted are in favor of the Project. In terms of environmental impacts, the main concerns raised are on the need for sustainable pasture management and a sustainable harvesting system, and for upgrading equipment and processes used in the leather industry. One of the potential areas of investment, the seabuckthorn investment proposal, was seen to be in a position to bring positive environmental change as it can be used to control or reduce soil erosion.

F. Conclusion

25. The Project will have overall environmental benefits and no major negative impacts. A full environmental impact assessment under ADB guidelines is not required. Notwithstanding, two issues associated with existing problems of industrial pollution and land degradation require particular attention; appropriate mitigating measures have been designed.