SECTOR ASSESSMENT (SUMMARY):
AGRICULTURE, NATURAL RESOURCES, AND RURAL DEVELOPMENT

Sector Road Map

1. Sector Performance, Problems, and Opportunities

1. Agriculture. Agriculture accounted for 17.5% of the gross domestic product (GDP) and 30.0% of employment in 2013 and remains the backbone of the rural economy. The livestock subsector accounts for over 80% of agriculture sector output and is vulnerable to extreme climatic events, particularly dzuds (extreme winters). However, the long-term increase in herd size, with the absence of proper pasture and water resource management, have resulted in overgrazing, desertification, and poor livestock quality, which make development of the livestock sector unsustainable.

2. The crop subsector contributes about 20% to total agricultural output in Mongolia. With government support, Mongolia is self-sufficient in wheat and potatoes but relies on imports for most vegetables and fruits. Growing food safety concerns regarding inexpensive imports create an opportunity for local vegetable growers, but crop yields are very low. Extreme weather, inadequate rainfall, limited access to finance, low-quality seed materials, and outdated equipment and technology constrain crop production, and undermine food security.

3. Agriculture provides many opportunities for improved value addition and export. The sector provides raw materials for a variety of products such as meat, dairy, leather, animal fiber garments, and wild berry products. However, a small portion of agricultural production is processed domestically beyond the most basic stage. Recurrent outbreaks of transboundary animal diseases (TADs) in domestic and wild animals have caused harm to animal health and safety, serious threats to human health, and significant economic losses. Mongolia is vulnerable to trade restrictions related to animal diseases as animal product exports are an important revenue source for the country. Effective measures need to be adopted nationally and through regional cooperation to prevent the spread of TADs across borders. Cooperative efforts from agencies applying sanitary and phytosanitary measures at borders are a crucial part of integrated trade facilitation agendas. The agro-processing subsector faces keen competition from foreign competitors while Mongolian manufacturers have limited capacity in production, marketing, and quality assurance. Developing value chains for Mongolia’s unique agricultural resources and serving northeast Asian markets, however, creates significant potential for diversification of the economy and will contribute to increased employment, income generation, and inclusive growth.

4. Mongolia faces an urgent need to enhance economic competitiveness, modernize the economy, implement innovation policies, strengthen public–private collaboration, and develop competitive industries for goods and services at the national and regional level. Opportunities exist in pilot testing cluster development for selected agricultural subsectors to demonstrate

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1. These include foot and mouth disease, porcine reproductive and respiratory syndrome (also known as blue-ear pig disease), and highly pathogenic avian influenza.

2. M. Kawai. 2013. Financing Development Cooperation in Northeast Asia. Asian Development Bank Institute. The agriculture and manufacturing sectors are the first (370,000) and fourth largest (64,900) employers, which account for about 40% of the total employment. Based on the substantial share of agro-processing (57.4%), more than half of the employment in the manufacturing sector originates from agro-processing.
improved value chains, introduce international standards to enhance international competitiveness, and increase the productivity of small and medium-sized agro-enterprises.\textsuperscript{3}

5. **Natural resources.** The increasing degradation of natural resources and environmental pollution is jeopardizing the country’s future economic growth. In addition, water scarcity is a major constraint to sustainable development. Groundwater resources, accounting for 80% of water use in Mongolia, are limited and often withdrawn at rates that exceed recharge. Ulaanbaatar obtains about 98% of its water from groundwater. As of 2010, only 80% of the urban population and 30% of the rural population had access to clean drinking water. Improved management of groundwater is needed to meet current demand and ensure adequate water quality.

6. About 80% of Mongolian territory is classified as grassland. An estimated 70% of grasslands are impacted by desertification, primarily as a result of overgrazing, deforestation, and land conversion for agriculture, exacerbated by climate change. Logging and fires are the main drivers of deforestation. Regulations are poorly enforced, and most logging is illegal. Current extraction rates for construction, firewood, and fencing are about four times sustainable levels. Alternatives to firewood need to be found to meet increasing urban fuel demands for heating and cooking, as well as to reduce air pollution. To mitigate water resource degradation, desertification, and deforestation, the government needs to implement sustainable natural resources management plans as an integral part of the national development strategy. Ulaanbaatar ranks top among major cities in the world in terms of air pollution.

7. **Climate change.** Mongolia is already substantially impacted by climate change, with average mean temperature increases of over 2°C.\textsuperscript{4} Climate models indicate that temperatures will continue to rise, and more than 80% of the country’s territory is defined as highly vulnerable to climate extremes. Climate related disasters, including droughts, dzuds, and flashfloods, with high social and economic costs (particularly for herders) have doubled in frequency. In the livestock subsector, reduced pasture productivity and extreme cold temperatures lead to lower productivity and higher mortality rates. Measures to improve natural resources management and increase resilience to natural disasters are urgently required to ensure sustainable development and herders’ livelihoods. In 2006, Mongolia’s total net greenhouse gas (GHG) emissions were about 15.6 million tons of carbon dioxide (CO\textsubscript{2}) equivalent, which was low on a global but high on a per capita basis, and are growing. Peatland conversion and degradation are other likely important emission sources.\textsuperscript{5}

2. **Government’s Sector Strategy**

8. The National Development Strategy (NDS) identifies two priorities for the agriculture, natural resources, and rural development (ANR) sector: (i) halting imbalances in the ecosystem and implementing protective measures to create an environment for sustainable development; and (ii) actively developing export-oriented, private sector-led, high technology-driven

\textsuperscript{3} Economic clusters—geographic concentration of interconnected manufacturers, suppliers, and associated institutions in a particular field—are widely considered to increase the productivity and competitiveness of companies. Ministry of Economic Development, Mongolian Development Institute, Asian Development Bank. 2012. Study on Opportunities to Develop Four Clusters (Meat, Wool-Cashmere, Sea Buckthorn and Tourism) Aimed at Improving National Competitiveness of Mongolia. Ulaanbaatar.


\textsuperscript{5} In 2008, estimated emissions of up to 45 million tons per annum placed Mongolia as the 7th largest global emitter of CO\textsubscript{2} from degrading peatlands (H. Joosten. 2010. The Global Peatland CO2 Picture: Peatland status and drainage related emissions in all countries of the world. The Netherlands: Wetlands International.) It is unlikely that the emissions from degrading peatlands are counted in Mongolia’s total net GHG emissions.
manufacturing and services. The National Action Program on Climate Change identifies priorities for climate change responses without binding targets and is supplemented by several sector plans or strategies in areas such as renewable energy and climate change adaptation in the livestock subsector.

9. Following the change in government in 2012, the new government prepared the Government Platform, 2012–2016. Two out of the five priorities are related to the ANR sector: (i) developing the economy to provide decent job opportunities by reducing dependency on the mining sector in pursuit of a diversified economy, and (ii) offering an ecologically balanced safe environment with a green development policy to be integrated in economic and development policy. The government aims at economic diversification through various areas, including (i) wool, cashmere, and leather production; (ii) livestock husbandry, meat, and milk production; and (iii) food crop production for food security, and import substitution and export promotion. The government platform enhances major government programs in agriculture such as the National Mongolian Livestock Program, 2010–2015 for sustainable livestock development and the National Programme for Food Security, 2009–2020.

10. The government has taken major steps to improve the legal framework for management and environmental protection of Mongolia’s river basins. A new Water Law was enacted in 2012, and a new and consolidated Natural Resources Use Fee Law and Water Pollution Fees Law were approved in 2012. The Water Law authorizes the establishment of river basin authorities (RBAs). As of 2013, 18 RBAs had been established under the Ministry of Environment and Green Development (MEGD). These RBAs have the mandate to coordinate water management and environmental protection in the basins, and improve water security and water information management to support the government’s national water use planning. Tuul RBA is responsible for implementation of the completed integrated water management plan for the river basin, which includes Ulaanbaatar and is considered the most important river basin in Mongolia.

11. Mongolia continues to develop a comprehensive legal framework for conservation and protected areas management. Sustainable management of ecosystems and biodiversity remains a concern, and institutional responsibilities, and monitoring and enforcement procedures are inadequate. Lack of sufficient resources, efficient monitoring systems, and high-resolution remote-sensing technologies, and awareness of local government staff, also poses logistical problems for implementation in Mongolia, given the country’s dispersed population.

12. Mongolia has committed to the implementation of a National Action Program on Climate Change. With support from the Asian Development Bank (ADB), Mongolia is developing nationally appropriate mitigation actions (NAMAs) to provide a framework for sustainable development. NAMA activities in the grassland and livestock sectors will have significant co-benefits, including combating desertification, increasing rural incomes, adapting to climate change, and supporting green development goals.

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11 Developed through ADB administered Strengthening Carbon Financing for Regional Grassland Management in North East Asia regional technical assistance.
3. ADB Sector Experience and Assistance Program

13. ADB has provided support to the ANR sector through grants and technical assistance. The government has expressed strong commitment to continued cooperation with ADB in the sector. ADB assistance will cover agriculture value chain development; water security and information management; watershed and lake management; grassland management in cooperation with the People’s Republic of China (PRC); sustainable land management; natural resources and protected area management; climate change adaptation; the prevention and control of TADs and streamlining of sanitary and phytosanitary measures in Mongolia, the PRC and Central Asia Regional Economic Cooperation (CAREC) region; and rural livelihood improvement. ADB will continue to provide support to strengthen regional cooperation on environmental management (e.g., transboundary pollution control).

14. ADB will provide lending assistance to the ANR sector through the (i) Additional Financing for the Agriculture and Rural Development Project, (ii) Tuul River Improvement Project, and (iii) Agri-business Development Project. ADB will continue to provide nonlending assistance, including (i) Strengthening Carbon Financing for Regional Grassland Management in Northeast Asia, (ii) Joint Control of Transboundary Animal Diseases in the PRC and Mongolia; (iii) Promoting Cooperation in Sanitary and Phytosanitary Measures for CAREC; (iv) Sustainable Forest Management to Reduce GHG Emissions and Improve Livelihood of Local Communities; (v) Strategic Planning for Peatlands in Mongolia; (vi) Country Water Assessment; (vii) Khuuskul Lake Protection; (viii) Strengthening Capacity for Disaster Risk Management; and (ix) Guidelines and Good Practices for Environmental Management of Industrial Parks.


Problem Tree for Agriculture, Natural Resources, and Rural Development

Core problem

Degraded ecosystems and low productivity in the agriculture sector

Effects

Limited livelihood opportunities and poor quality of life

Reductions in ecosystem services and loss of biodiversity

Causes

Overexploited and polluted ecosystems (land, water, air, biodiversity)

Unsustainable agricultural practices and limited value addition

Climate change impacts and natural disasters

Lack of availability and application of relevant technology

Inappropriate use and disposal of inputs and outputs (water, waste, energy)

Poor natural resource and land use planning

Open access to resources

Limited awareness and capacity of natural resource users

Insufficient human and financial resources, resulting in poor enforcement of regulations

Poor institutional and legal framework, limited interministerial coordination, and ambiguous institutional mandates

Poorly developed value chains and market access

Low level of technology, systems, and quality control

Inadequate skills to meet rising demands

Limited access to credit

Insufficient infrastructure (e.g., water points, irrigation, storage)

Limited capacity of herders and farmers to adapt to and mitigate climate change

Changing distribution, composition, and area of ecosystems

Decreasing grassland, forest, and wetland productivity

Reduced precipitation and increasing temperatures

Increased adverse climatic events (winter storm and droughts)
## Sector Results Framework (Agriculture, Natural Resources, and Rural Development, 2014–2016)

<table>
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<tr>
<th>Country Sector Outcomes</th>
<th>Country Sector Outputs</th>
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<td><strong>Sector Outcomes with ADB Contribution</strong></td>
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<td><strong>Outputs with ADB Contribution</strong></td>
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<td>Increased productivity in agriculture sector in line with the national green development policy</td>
<td>By 2016: Value added of agro-processing increased by at least 30% (2012 baseline: MNT460 billion)</td>
<td>Agriculture value chain and natural resource management improved</td>
<td>By 2016: Management strengthened in three ecosystems, i.e., forests reserves, grasslands, and wetlands (2013 baseline: 0)</td>
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<td>At least 400,000 ha forest area and 200,000 ha grassland under improved natural resource management by 2016 (2009 baseline: 0)</td>
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<td>Volume of domestically processed wool increased from 90% in 2014 to 100% in 2016</td>
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**ADB** = Asian Development Bank, **ADF** = Asian Development Fund, **CDTA** = capacity development technical assistance, **GHG** = greenhouse gas, **ha** = hectare, **JFPR** = Japan Fund for Poverty Reduction, **OCR** = ordinary capital resources, **PPTA** = project preparatory technical assistance, **TBD** = to be determined.