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

Sector Road Map

1. Sector Performance, Problems, and Opportunities

1. The People’s Republic of China (PRC) has a vast territory spanning five major climatic zones running from north to south, and has thousands of different species of crops and livestock under production. Agriculture has developed rapidly—grain production grew for 11 consecutive years, from 2004 to 2015—with more diversified agricultural production, and improved product quality. Contributing factors include better introduction of market mechanisms, participation of multiple private stakeholders, larger-scale production facilitated by land transfer practices, and increased application of equipment and advanced technologies. This has resulted in a substantial increase in farmers’ incomes.

2. However, the transition to modern agriculture has been unable to keep pace with the PRC’s rapid urbanization and industrialization. Natural disasters have become more severe and frequent because of climate change, and have severely impacted agriculture in the PRC because of weak agricultural infrastructure and facilities. The agriculture sector also faces challenges such as rising labor and input prices; increasing demand for safe, high-quality agricultural products; and constraints on environmental and land resources.

3. In the PRC, agriculture remains essential to economic growth and development, poverty reduction, and long-term employment and income-generating opportunities in rural areas, especially for segments of the population that do not migrate and remain engaged and dependent on agriculture. Improvements in transportation infrastructure, recent fast growth in e-commerce, and a strengthened logistic service network (especially in urban areas) provides new opportunities for agricultural development through better access to growing urban consumer markets. These changes are contributing to a paradigm shift in the way food is produced, processed, and sold. The increased demand for safe, higher-value, and differentiated agricultural products has created opportunities for farmers and agribusiness entrepreneurs to transform commodities into products for which there is consumer demand. The change in food retailing has led to (i) greater involvement by the private sector in agriculture; and (ii) a focus on developing and improving the quality, productivity, efficiency, and depth of agricultural value chains (AVCs).

4. A renewed and strengthened regulatory and policy framework supports the establishment of farmer cooperatives to overcome the structural challenges of small farm size and scattered production in rural areas. In addition, a vibrant private commercial enterprise sector can (i) reach out to farmers, (ii) provide new technology to increase productivity in underdeveloped areas, and (iii) assist in the marketing of agricultural products to downstream consumers. However, these opportunities remain largely untapped.

5. Modernization of the agriculture sector in Shanxi Province is less advanced than in other areas; the province was historically the center of the PRC’s coal industry, with an economy that was heavily dependent on coal. The contribution of the mining industry to Shanxi Province’s economy is declining, and agriculture is seen as a key sector to address rural development and poverty reduction. In 2016, the per capita disposable income of rural households ranked 23rd among 31 provinces and municipalities in the PRC. The land circulation rate was only 17% comparing to 33% nationwide. The ratio of output value of processed agricultural products to total output of agriculture is 1:1, well below the national average of 2.2:1. The majority of project counties are in poverty-stricken areas, and poor and low-income people comprise a significant
portion of the project beneficiaries. The poverty incidence of rural residents in the project area was 14.4%, compared with 9.6% in Shanxi as a whole, and 5.7% in the PRC.

6. The weak agriculture sector performance in the project area is caused by (i) fragmented, small-scale, and low productive primary production; (ii) homogeneous agricultural and food products with little premium; (iii) weak capacity of small- and medium-sized agribusiness companies in branding and marketing their products; (iv) farmers cooperatives’ weak capacity in providing services to their members, lack of sound governance, and limited productive assets; (v) underdevelopment of grading, processing, packing, storing, and marketing services; and (vi) lack of modern, professional agribusiness companies.

7. For the AVCs under development in Shanxi, the following issues should be urgently addressed:
   (i) **Planning for agricultural value chain development.** Improvements in the quality and production efficiency of agricultural products depends on the coordination of all AVC stakeholders. Optimization of a certain part of an AVC may not drive overall development. The lack of overall planning in an AVC development project is likely to cause a mismatch of capacity and funding, which may affect the efficiency of agricultural production.
   (ii) **Information interactions.** In AVCs, the efficiency and accuracy of information transmission from sales segments on market changes determines the profitability of upstream producers and processors, but this type of information interaction is often inaccurate or untimely.
   (iii) **Farmer’s positions.** Farmers, especially poor farmers who participate in AVCs, are usually in a weak position because of their low level of organization, and have minimal involvement in AVC development, contributing to uncertain cooperation among AVC stakeholders.

8. **Financing services.** The need for credit and financial services to develop more efficient agricultural production and robust AVCs is largely unmet in the project area. While loans for rural purposes are reported to be available from most banks, banks are not able to make credit accessible to most of the smallholder farmers, cooperatives, and small- and medium-sized agribusiness companies; or meet the increasing demand for a full range of loans of various sizes and terms suitable for farming cycles. Most farmer cooperatives do not have sound business and financial management records, making them unable to apply for bank loans to support their business expansion. Moreover, financial institutions lack capable staff and technical capacity to develop new products to better serve their rural clients.

2. **Government’s Sector Strategy**

9. The government’s overarching objective is to build a harmonious and moderately prosperous society through livelihood improvement, equitable urbanization and coordinated urban–rural development, and regionally balanced and environmentally sustainable growth. Transforming the agriculture sector is thus a top priority of the PRC government. The primary objectives are to (i) ensure an adequate supply of agricultural products, and (ii) raise farmers’ incomes to close the rural–urban gap and stimulate the rural economy. Policies to promote agricultural modernization will focus on improving the capacity, competitiveness, and resilience of agricultural production; supporting development of agribusiness and AVC systems; promoting investment in technology, human resources, and innovative management to upgrade the sector;

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1 Sixteen out of 18 project counties are classified under poverty-stricken areas; and comprise 6 national- and 6 county-level poor counties, and 4 old revolutionary counties. 10 out of the 17 counties are poverty counties.
and encouraging participation of private entities and partnerships between multiple stakeholders in the sector.

10. The PRC government’s 2016 State Council Decree No. 1 identified several approaches and tasks to accelerate agricultural modernization and promote ecological progress. They include (i) protecting farmland and upgrading, developing, or rehabilitating large- or medium-sized irrigation districts; and constructing on-farm infrastructure to strengthen agricultural production capacity; (ii) developing types of agriculture suited to local geographic conditions; (iii) setting up information platforms to trace and share quality and safety information on agricultural products; and (iv) promoting water-saving techniques, eco-friendly fertilizers and pesticides, and other pollution-mitigating measures. The government also emphasized the importance of investing in stronger application of information technologies, better pricing mechanisms for agricultural inputs and products, and insurance for agriculture, all of which contribute to better rural livelihoods.

11. The Outline for Development-Oriented Poverty Reduction for China’s Rural Areas (2011–2020), the most recent poverty reduction strategy, takes these challenges fully into account and provides a renewed direction for addressing rural poverty and stimulating rural development. It places substantial emphasis on a development approach to agricultural development and poverty reduction, and seeks to achieve a rural per capita income growth rate above the national average. Three elements characterize this renewed approach: (i) an emphasis on the AVC approach, (ii) the promotion of farmer associations and cooperatives, and (iii) the targeting of poverty counties and villages for priority assistance. The strategy envisages the use of the AVCs to capture the opportunities for poverty reduction that arise from the growing domestic urban market. It also emphasizes the complementary roles of the public and private sectors. The AVC approach seeks to ensure that broad numbers of small-scale and poor farmers participate in and benefit from market access. The outline encourages agro-industries to invest in economic activities of comparative advantage in the areas of major agricultural commodities, horticulture and specialty products, livestock, and rural tourism. The new strategy advocates direct enterprise and private sector investment in pro-poor AVC development.

12. The Shanxi Province’s Thirteenth Five-Year Plan for Modern Agricultural Development sets a goal to increase the per capita disposable income of rural households from CNY9,454 to CNY13,000 by 2020. It highlights the following development principles: (i) coordinated planning and scientific development to promote synchronized development of a production base, deep processing, and marketing and sales; (ii) consumption-driven, market-based restructuring of agriculture supply; (iii) moving from quantity growth to a balanced approach on both quality and quantity; (iv) technology-led and innovation-driven development; and (v) environmental protection to reduce nonpoint source pollution and reuse agricultural production waste.

3. **ADB Sector Experience and Assistance Program**

13. The Asian Development Bank (ADB) has developed a diverse and active portfolio in agriculture, natural resources, and rural development. It promoted environmental sustainability and climate resilience through projects supporting sustainable agricultural development; protection of biodiversity and ecosystems; integrated water resource management; irrigation, flood, and wetland management; and environmental and ecosystem protection. ADB assistance to the PRC agriculture sector has been effective in reducing poverty, decreasing income inequality

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and regional disparities, and promoting an environmentally sustainable and less carbon-intensive economy.

14. ADB has experience with AVCs, although prior to 2009 ADB support was generally not designed to explicitly support AVC development. ADB support for commercial agriculture has demonstrated the potential of the AVCs, and different elements are being incorporated into project designs to increase benefits for stakeholders. Nine criteria were identified by ADB as necessary for the successful development of pro-poor AVCs: (i) support for a policy, regulatory, and institutional framework that enables the AVCs to become stronger; (ii) creation of opportunities for increased private sector engagement, including through the formation of public–private partnerships for developing synergies; (iii) provision of access to credit for participants along the AVC; (iv) provision of rural infrastructure that reduces post-harvest losses and transport costs and shortens transit time while increasing overall rural mobility; (v) support for innovations and technology for developing competitive AVCs; (vi) provision of access to value-responsive markets; (vii) provision of access to timely information to improve bargaining power; (viii) establishment of organizations to reduce transaction costs; and (ix) inclusion of women, poor, and/or marginal groups into AVCs.4

15. In line with the goal and objective of the PRC, ADB will foster inclusive growth and improve rural livelihoods by helping to increase agricultural productivity, strengthen agricultural and rural infrastructure, promote application of information technologies, and expand financial services in rural areas.5 Support will be provided to develop AVCs, (e.g., linking agribusiness companies and local entrepreneurs with farmers through extension services); rehabilitate rural infrastructure; promote food safety and possibly food security; promote environmental sustainability and climate resilience; promote sustainable agribusiness by mitigating soil and water pollution; and broaden access to credits and markets. Agricultural transformation projects will be designed using a participatory approach to ensure that low-income rural farmers in environmentally fragile areas earn higher incomes through market-driven opportunities, resource-friendly management systems, support for rural finance, and effective institutional arrangements.

16. The proposed project builds on ADB’s experiences and lessons from previous projects, and knowledge generated from international and national best practice. The project design includes or supports (i) a value-chain approach to agriculture sector development, instead of simple investment in farmers or enterprises for productivity improvement or processing expansion; (ii) well-defined selection criteria and technical guidelines for subproject selection for inclusive AVC development; (iii) capacity building to improve the self-governance capacity in farmer cooperatives for stronger negotiation power with agribusiness companies and better access to financing support; and (iv) the facilitation of access of project agribusiness companies and AVC players to financing services, including value-chain financing.

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PROBLEM TREE

Persistent poverty and low-income population in rural areas of Shanxi Province

Lack of viable income-generating opportunities in rural areas of Shanxi Province

Low income generated from agriculture

Agriculture sector in Shanxi with low productivity and limited value addition

**Farmers (Primary Production)**
- Unfavorable agro-climatic condition (low precipitation) and limited arable land (only 20%)
- Fragmented, small-scale, low-value, and less productive production
- Dysfunctional farmers’ cooperatives (lack of cooperation for production efficiency improvement, initial processing, and farm gate price negotiation)
- Poor access to financing

**Agribusiness Companies (Processing, Storage, Wholesale, and Marketing)**
- Weak financial and business management capacity
- Homogenous agricultural and food products with little premium
- Substantial working capital requirement
- Unfavorable financing (only short term with high interests)

**Overall Agricultural Value Chain**
- Absence of agribusiness companies to coordinate for overall AVC efficiency and responsiveness to changes of market preference as an AVC leader
- Asymmetric market information among those involved in AVC (e.g., farmers and agribusiness companies)
- Lack of understanding on beneficial long-term business partnership among the AVC players

**Enabling Business Environment**
- Financial institutions’ unfamiliarity with financing opportunities and needs of agribusiness entities, cooperatives, and farmers
- Limited government support for food and agriculture sector due to the economic development policy skewed towards the coal industry
- Insufficient rural and agricultural infrastructure

Private sector investment in agriculture has indirect and small impact on bottom of pyramid

**Government-led dragonhead company model**
- Neither targets nor have substantial impacts on the bottom of pyramid
- Dragonhead companies do not have policy incentives to change their business models for higher impact on the bottom of pyramid
- Dragonhead companies are neither aware of a business model that is financially viable, yet generate higher impacts on the bottom of pyramid; nor capable of planning and implementing such a business model