China, People's Republic of: Shanxi Integrated Agricultural Development Project

**Project Name**: Shanxi Integrated Agricultural Development Project

**Project Number**: 38662-013

**Country**: China, People's Republic of

**Project Status**: Closed

**Project Type / Modality of Assistance**: Grant

**Source of Funding / Amount**:
- Grant 0188-PRC: Climate Change Adaptation Through Groundwater Management
  - Multi-Donor Trust Fund under the Water Financing Partnership Facility: US$ 500,000.00
  - Gender and Development Cooperation Fund: US$ 195,000.00
- Loan 2607-PRC: Shanxi Integrated Agricultural Development Project
  - Ordinary capital resources: US$ 100.00 million

**Strategic Agendas**: Environmentally sustainable growth, Inclusive economic growth

**Drivers of Change**: Partnerships, Private sector development

**Sector / Subsector**: Agriculture, natural resources and rural development - Agricultural production - Agro-industry, marketing, and trade - Livestock

**Gender Equity and Mainstreaming**: Gender equity

**Description**: The Project will provide credit and training to about 66,000 farm households in 26 counties of five municipalities in central and southern Shanxi. Of these, 11 are poverty counties and 12 are on the priority list for treatment of accelerated soil erosion in the PRC. The Project comprises four components: (i) transition to high-value farm production by adopting technologies and practices that ensure environmental sustainability and increase farm income; (ii) strengthening of farm-market linkages by supporting on-farm and industrial agroprocessing and marketing of high-value products; (iii) capacity-building and training of farmers, farmer associations, and technical support agencies to support high-value production and processing of farm products; and (iv) project management and support for efficient project implementation. To keep project implementation manageable, each participating county will take up two of the three activities in the first component—perennial crops, annual crops, and livestock. Structured criteria were used to select project counties, sites, and activities.

**Project Rationale and Linkage to Country/Regional Strategy**: Shanxi has only about 3.8 million hectares of dependable arable land of modest quality and productivity for its 23 million rural population. Low rainfall, high evaporation, frequent natural disasters, and soil erosion lead to instability in agricultural production. After about 30 years of reforms, the agricultural service system, farmers' technical capacity, and women's economic participation have improved. However, the extent of extensive and scattered small-scale agriculture has not changed significantly. Most farmers continue to practice traditional agriculture mainly growing wheat and maize that generate low incomes and require extensive use of water and agrochemicals. Similarly, the patterns of free-range livestock grazing and untreated disposal of animal waste adds to soil and water pollution. This agricultural system is unsustainable and damaging to the environment, and keeps most farmers in poverty. Most farmers also remain largely unorganized and cannot take full advantage of market and rural finance opportunities. In addition, women's participation remains marginal, and their social and economic rights are usually ignored.

One of the main constraints to converting traditional farming to high-value farming is access to formal credit. The agricultural lending institutions have (i) limited range of products, (ii) inadequate experience with long-term lending, and (iii) weak capacity to assess credit risk. These constraints, coupled with the absence of market-led interest rates, lead to market failure, and the inability of agro-enterprises and farmers to access formal financial services.

The Project will address these constraints and provide financing for high-value farming, agroprocessing, product quality and safety, environmentally sustainable farm practices by adopting water-saving irrigation techniques, microfinance to poor women, and improved capacity of farmers and TSAs. These initiatives are consistent with the Government's 11th Five-Year Plan (2006-2010) and ADB's PRC country partnership strategy, 2008-2010.

**Impact**: Rural poverty reduced and a sustainable agriculture sector developed in 26 counties of Shanxi.

**Project Outcome**

**Description of Outcome**: Sustainable and higher farm productivity and increased income in the project counties.
The project has promoted rapid development of animal and agriculture farming with modern facilities which significantly increased the farmers' income. In Q4 2015, a total of 28.4124 million RMB was invested to the project, covering 599 farmer households in 12 counties. The components includes: 3D, civil work for 397 animal farms in amount of 19.3083 million RMB (7.877 million RMB for swine, 5.4063 million RMB for cattle, 6.9257 million RMB for sheep, minus 0.9066 million RMB for chicken); 3F, crop and tree plantation of asparagus, nut and fruit trees, and fast-growing poplars in 0.33 hectares on investment of 14.4 thousand RMB (for walnuts); 3G, 6 arched sheds in amount of 95.4 thousand RMB; 3H, 194 green houses, prickly ash seedlings and dryland farm on investment of 7.3717 million RMB. Other expenditures included 50 thousand RMB for capacity building and training, 0.6865 million RMB for project management, and 0.8304 million RMB for demonstration area infrastructure and others.

**Implementation Progress**

**Description of Project Outputs**

- Increased productivity and production of perennial crops
- Increased productivity and production of annual crops
- Increased livestock productivity and production by adopting appropriate rearing and waste management measures and technologies
- Expanded on-farm processing capacity
- Training and equipment provided to demonstrate water-saving techniques

**Status of Implementation Progress (Outputs, Activities, and Issues)**

As of Q4 2015, the weighted progress of the project reached 91.96%.

- Annual crops: A total of 7.4671 million RMB was invested on 200 farmer households in this quarter. Cumulatively, a total of 255.4396 million RMB was invested on 9,344 farmer households in two categories - arched sheds & sunlight greenhouses. The quality all fit the criteria defined in the feasibility report, readily usable for growing vegetables in accordance with the managerial techniques and the agricultural standards for each subproject. The implementation satisfies the technical criteria for crop plantation, good breeds and appropriate management under the project. The civil work was in good quality with proper environmental controls. The farmers saw significant increase in income and women’s participation was over 65%. The project management and monitoring are all satisfactory.

- Perennial crops: A total of 14.4 thousand RMB was invested on 0.33 hectares of land for 1 farmer households in this quarter. Cumulatively, a total of 327.1197 million RMB was invested on 6971.88 hectares of land for 20,943 farmer households, covering walnut, jujube, crispy pear, apple, prickly ash seedlings, Chinese herbal plants, asparagus and fast-growing poplars. The output amounts to 262.92 million RMB. The civil work satisfies the quality criteria defined in the feasibility report and fits the good practice in the industrial sector. The facilities are readily usable for growing fruit trees in accordance with the managerial techniques and the agricultural standards for each subproject. The implementation satisfies the technical criteria for fruit tree plantation and the appropriate management under the project. The civil work is in good quality with proper environmental controls. The farmers saw significant increase in income and women’s participation was over 45%.

- Animal Farming: A total of 19.3083 million RMB was invested on 397 farmer households in this quarter. Cumulatively, a total of 603.4396 million RMB was invested for 9,209 households. The yields amounted to 12.55 million animals with the output value of 1,309.779 million RMB. The civil work satisfies the quality criteria defined in the feasibility report, fits the good practice in the industrial sector, and meets the technical standards for animal farming. The activity disseminated the concentrated animal farming technologies, featured by high technical contents, proper management practices and good breeds in accordance with the requirements under the project. The civil work is in good quality with proper controls for animal wastes in accordance with environmental protection standards. The farmers saw significant increase in income and women’s participation was over 65%.

- Improvement of agro-products quality: Cumulatively the investment amounted to 10.1039 million RMB on the following activities: 19 production bases with quality certifications (7 for organic vegetables, 1 for prickly ash seedlings, 1 for swine farming, 1 for meat sheep, 1 for meat chicken, 4 for organic walnuts, 1 for millet crop, 2 for crispy pear, and 1 for jujube plantation), which cover the agrarian field in 196,400 mu. At present, a total 60 kinds of agricultural products were issued with quality certifications. Meanwhile the training programs and surveys with 2,600 persons/time on GAP production technology, product quality monitoring, product certification, GAP criteria, proper use of pesticides and fertilizers, water-conserving irrigation, associations of crop production and animal farming, and the farmer households linkages, etc.

- Geographical Location

  - Daning Xian, Fenxi Xian, Hongyang Xian, Houma Shi, Jiaocheng Xian, Jiaokou Xian, Jishan Xian, Licheng Xian, Linyi Xian, Lishi District, Liulin Xian, Pingshun Xian, Pingyao Xian, Qi Xian, Taigu Xian, Wangxian Xian, Wenshui Xian, Xi Xian, Xiangfen Xian, Yanzhou Xian, Yonghe Xian, Yongji Shi, Yuci Qu, Zhongyang Xian

**Safeguard Categories**

- Environment: B
- Involuntary Resettlement: C
- Indigenous Peoples: C

**Summary of Environmental and Social Aspects**

- **Environmental Aspects**

  The Project will generate significant environmental benefits by helping farmers to adopt modern technologies and practices. The expansion of high-value perennial and annual crops and fruit tree plantation and the appropriate management under the project. The civil work is in good quality with proper environmental controls. The farmers saw significant increase in income and women’s participation was over 65%.

  Due to increased fruit-tree production, net annual pesticide use will increase by about 5.4 tons. Other potential adverse environmental impacts may stem from increased generation of agricultural waste and construction of cold storage and processing capacity for five greenenterprises. The increase in waste production will be mitigated by adopting adequate treatment and disposal procedures. Construction impacts will be mitigated by applying a code of practice for all construction works, as outlined in the environmental management plan.

  During project preparation, initial environmental examination and summary initial environmental examination reports were prepared in accordance with the PRC regulations and ADB guidelines. A summary of findings and recommendations of expected benefits and impacts are presented in Appendix 15. The summary initial environmental examination is in Supplementary Appendix K. Due diligence review of environmental management practices by the participating 24 agro-enterprises was also undertaken (Supplementary Appendix L). The review shows that the agro-enterprises comply with all national regulations and apply adequate environmental management procedures acceptable to ADB.

- **Involuntary Resettlement**

  The Project will not require land acquisition or involuntary resettlement. The expansion of production systems and agroprocessing will be on existing land.

- **Indigenous Peoples**

  The Project will not affect minorities.

- **Stakeholder Communication, Participation, and Consultation**

  The Project will ensure stakeholder C&P (consultation and participation) in its activities through a series of workshops and meetings throughout its implementation. Farmers and farmer associations will receive training on group mobilization, organization, management, and marketing skills to enhance their capacity to participate in project implementation.

**Business Opportunities**
Consulting Services

The Project will provide 120 person-months of national consulting services for project management and training. SPG will finance and engage five individual consultants to (i) introduce ChinaGAP to promote best practices in product quality and safety; (ii) build capacity of farmers and their associations to adopt improved production and marketing practices; (iii) train TSAs in gender development, monitoring of soil and water quality, safe disposal of animal waste, and environmental impact assessment; and (iv) support the PMO and PIUs to undertake and prepare project monitoring and supervision, bidding and procurement documents, midterm review, and a project completion report. Specific consulting inputs are outlined in Appendix 13. To implement WFPF activities, three individual consultants will be engaged for 25 person-months (one international [water resources specialist, 5 person-months] and two national [irrigation specialist 12 person-months and hydrogeologist 8 person-months]). To implement GDCF activities, a local non-government organization will be engaged following the single-source selection procedure (Appendix 8). A national individual consultant will be engaged for 2.5 person-months to monitor and evaluate GDCF activities. All recruitment financed under the WFPF and GDCF grants will be carried out in accordance with ADB’s Guidelines on the Use of Consultants (2007, as amended from time to time).

Procurement

Of the $100.0 million loan, about $98.7 million will be disbursed in cash as farm credit to farmers and agro-enterprises. The remaining $1.3 million will be used to procure office and farm equipment, vehicles, and to conduct workshops and training by the PMO and PIUs. The detailed procurement plan is in Appendix 12. All procurement of goods and works will be carried out in accordance with ADB’s Procurement Guidelines (2007, as amended from time to time). Contracts for works estimated to exceed or equal $10.0 million and those for goods estimated to exceed or equal $1.0 million will be procured using international competitive bidding procedures. Contracts for works estimated to cost less than $10.0 million but more than or equal to $200,000, and contracts for goods estimated to cost less than $1.0 million but more than or equal to $100,000 will be procured through national competitive bidding procedures in accordance with the PRC Tendering and Bidding Law (1999), subject to modifications agreed with ADB. Contracts for works estimated to cost less than $200,000 and for goods estimated to cost less than $100,000 will be procured using shopping procedures. All procurements and expenditures by farmers and agro-enterprises undertaken or incurred using the subloans will be supported with receipts provided to the PIUs and kept on the PIU and/or PMO record for audit. The relevant sections of ADB’s Anti-Corruption Policy (1998, as amended to date) will be included in all procurement documents and contracts.

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 Mr. Liu Guicuan
 No. 343 Yingze Street, Taiyuan, Shanxi Province, 030001

Grant 0188-PRC

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Grant Utilization

Cumulative Contract Awards
Cumulative Disbursements
Loan 2607-PRC

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