China, People's Republic of: Dryland Sustainable Agriculture Project

**Project Name:** Dryland Sustainable Agriculture Project  
**Project Number:** 38301-013  
**Country:** China, People's Republic of  
**Project Status:** Closed  
**Project Type / Modality of Assistance:** Grant
Loan  
**Source of Funding / Amount:** Loan 2474-PRC: Dryland Sustainable Agriculture Project
Ordinary capital resources
US$ 83.00 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

**Gender Equity and Mainstreaming**

**Description**

The Project will improve dryland farming in Gansu, Henan, and Shandong provinces, and is located in the transition zone from the northeastern to the central western plains along the middle reaches of the Yellow River. The Project will benefit about 600,000 farm households and improve the production capacity of about 120,000 hectares (ha) in 27 counties, cities, and districts. The Project will adopt a farm-to-market, value-chain approach that creates value for poor farmers, local agroenterprises, and consumers. It will introduce high-value horticulture crops and improved crop and livestock management, farm technologies, and cultivation practices. Organic fertilizers and agrochemicals will be more effectively used and the quality of farm produce improved through support services provided by participating private agroenterprises. These include soil-testing facilities, agricultural extension and technology transfer centers, organic fertilizer facilities, machinery service centers, seed production centers, agricultural produce information centers, product-testing centers, and expanded horticulture markets.

The Project will develop about 29 partnerships between private agroenterprises and farmers using contract farming arrangements to strengthen farm productivity, and food production and processing capacity to take advantage of growing domestic and international markets. Sustainable production and processing partnerships according to the dragon-head concept will be used to develop crops and other outputs that are processed and marketed by the enterprise. The dragon-head agribusiness structure is a successful, vertically integrated enterprise model that has demonstrated the capacity to contract with a large number of farmers to improve rural incomes through value-chain linkages and efficiencies, access to higher-value markets, and employment opportunities. The agroenterprises were selected using strict selection criteria and due diligence assessment of financial, economic, environmental, and social factors. They will be provided with long-term financing to expand their food processing and marketing operations.

Farmers will diversify and modify their existing traditional cultivation of low-yielding and low-value food crops to higher-yielding and highvalue crops. Their partnerships with profitable and expanding agroenterprises will ensure them higher prices for their outputs, premium prices for quality, and a guaranteed price at harvest time. Farmers’ average income will increase by an estimated 15%-25% as a result of the Project.

Technological improvements include (i) adopting high-yielding varieties and improved animal breeds; conservation agriculture techniques such as returning crop residues to the soil, minimum tillage, and soil conservation measures; water-harvesting techniques such as storage tanks, lined wells, and small check dams; and water-saving technologies such as drip irrigation, sprinklers, and pipes; (ii) minimizing the use of chemical fertilizers and replacing them with organic fertilizers, and minimizing the use of pesticides and herbicides; (iii) reducing postharvest losses with the use of advanced postharvest and processing equipment; (iv) intercropping within tree crops; and (v) upgrading vegetable greenhouses and vineyards.

Local government support services will work with enterprises and farmers to expand environment-friendly farming and processing practices. Local governments will provide project management that will support improved provincial and county project implementation, monitoring, evaluation, and national project coordination. The Executing Agency, the Ministry of Agriculture (MOA), the three provincial project management offices (PMOs), and the county PMOs were extensively involved in project preparation, including applying the criteria for selecting the agroenterprises and partnerships with farmers. These institutions will receive training to continue applying the criteria and financial administration, and to effectively monitor the performance of the agroenterprises and local government support services, and the delivery of financial and economic benefits to farmers. Training will also be provided on imprest account management, project implementation, and project performance management.

The expected impact of the Project will be reduced rural poverty in the project area of Gansu, Henan, and Shandong provinces with increased incomes and livelihood opportunities from the sustainable use of land and water resources. The expected outcome is increased agricultural productivity through the adoption of sustainable farming practices in the project area to support higher-value, on-farm and postharvest activities.
Most of the population in the project area depend on agriculture, and are poor and vulnerable. All of the farms are very small, averaging about 0.28 ha. The average rural household income is only two thirds of the national average. About 60% of household income in the project area is from farming, and rural unemployment and underemployment are significant. Farmers have limited access to markets and technology to diversify into higher-value crops. Over the years, poor farming practices have accelerated land and water resources degradation. As a result, farm productivity poses a threat to the environment including land and other natural resources. Sustainable farming is under threat with ever-decreasing water resources. This has caused declining soil fertility and productivity, increasing farm input costs, and decreasing farm incomes. The correlation between land degradation and the incidence of poverty is strong. Implementation of simple water and land conservation practices can improve fertility and stop land degradation. Sustainable farming practices need to be strengthened and support provided for undertaking higher value on-farm and off-farm activities, increasing agricultural productivity and farm incomes, and reducing poverty by linking farmers to local agcroenterprises.

In the project area, all of the participating enterprises have already established effective relationships with smallholder farmers. The contract farming approach has been successfully adopted and has helped farmers secure cheaper inputs and produce higher-quality products at premium prices. In this business model, an enterprise links with a production base of contracted farmers (either direct or through agents) and farmer associations. The Project has strong commitment from the stakeholders to introduce sustainable farming practices including the use of contract farming through local enterprises, to adopt a farm-to-market, value-chain approach; and to strengthen agriculture extension services. It also has a wider demonstration and replication impact within and to other provinces to address rural development issues including sharing experiences and improving the adoption of lessons. This approach is fully consistent with the PRC’s 11th Five-Year Plan to promote conservation agriculture, crop diversification, use of improved crop varieties, and soil and water conservation. Overall, the Project will promote sustainable farming practices and technologies to address land degradation and reduce poverty.

Impact
Reduced rural poverty in Gansu, Henan, and Shandong provinces from sustainable use of land and water resources.

Project Outcome
Increased agricultural productivity through adoption of sustainable farming practices in the project area.

Progress Toward Outcome
The project’s closing date was extended to 31 December 2016 Across three project provinces has reached CNY1.18 billion, accounting for 77.63% of the total investment planned. At provincial level, the completed investment and the percent it accounts for in the planned investment are, respectively, CNY418.13 million and 67.57% for Henan, CNY190.05 million and 66.71% for Shandong, and CNY573 million and 94.87% for Tianshui city of Gansu. 25 partnerships have been established (Gansu 7, Henan 9, Shandong 9). Several project targets have been or well on the way to being achieved. e.g. a. About 532,100 farm households and processing workers benefiting directly. b. Two new extension and technology transfer centers established in Henan, and supporting appropriate farming systems. c. One organic fertilizer facility established in Henan. d. At least one expanded farm machinery plant and 30 service stations established in Henan. e. Two agricultural information centers operating in Henan and Shandong. f. One new agricultural product quality testing center established and operating in Henan. g. Two ongoing construction of expanded wholesale fruit and vegetable markets in Gansu and Henan. h. Three farmer associations have been expanded (Henan 2, Shandong 1). i. 40,867 participants have undergone training. j. one seed production center established and in operational in Shandong

The Spanish grant of $0.35 million was cancelled June 6, 2011 with mutual agreement.

Implementation Progress

Description of Project Outputs
Improved agroenterprise and farmer partnership and support services to farmers Enhanced public support to farmers and project management

Status of Implementation Progress (Outputs, Activities, and Issues)
From the approved minor change of the project, the partnership was reduced from 29 partnership to 27. 27 partnerships have been established. (Gansu 7, Henan 12, and Shandong 8). About 532,100 farmers and processing workers benefitting directly (Gansu 172,100, Henan 60,000 and Shandong 300,000). One established and two under construction. One completed in Shandong. One in Henan to be cancelled. Completed. To be constructed. Two are completed (Henan 1 and Shandong 1). One in Henan cancelled. Completed. Two in Gansu established with non-project funds; two (Gansu 1 and Henan 1) under construction by the project funds. Three farmer associations have been expanded (Henan 2, Shandong 1). 48,232 participants have undergone training.

Geographical Location
Anyang Xian, Boxing Xian, Changge Shi, Dancheng Xian, Gangu Xian, Gaomi Shi, Jiaozuo Shi, Linshu Xian, Linying Xian, Luoyang Shi, Luyi Xian, Maiji Qu, Qin'an Xian, Qingshui Xian, Qingzhou Shi, Qinzhou Qu, Ruzhou Shi, Shan Xian, Tancheng Xian, Wudi Xian, Wushan Xian, Xuchang Xian, Yishui Xian, Zhangjiachuan Huizu Zizhixian, Zhecheng Xian, Zhengzhou, Zhucheng Shi

Safeguard Categories

| Environment | B |
| Involuntary Resettlement | C |
| Indigenous Peoples | B |

Summary of Environmental and Social Aspects

Environmental Aspects
An environmental assessment was conducted in accordance with the PRC’s environmental impact assessment system as well as ADB’s Environment Policy (2002). Benefits to the environment will include (i) improved soil nutrition and quality; (ii) reduced water runoff, and wind and water erosion of soil; (iii) increased water retention in fragile soil; and (iv) reduced soil salinity. The possible adverse environmental impacts will be prevented or minimized to an acceptable level if the environmental management plan set out in the initial environmental examination and the Government’s environmental impact assessments (EIAs) are effectively implemented.

Involuntary Resettlement
The Project does not require any land acquisition or involuntary resettlement. All production expansion will be on existing farm and agcroenterprise land.

Indigenous Peoples
Limited impact. Only Gansu province has a Hui ethnic minority. Of the Gansu households that will enter contract farming through the Project, only about 1% are Hui. No Negative impact is expected as the Project aims to improve income of ethnic minority households. No adverse effect is expected on their livelihoods or cultural heritages and practices. In Zhangjiachuan county, the Project targets Hui as the main beneficiaries by selecting agcroenterprises owned by Hui.

Stakeholder Communication, Participation, and Consultation
During Project Design

The project design process used local experts to carry out multistakeholder, multisector analysis. Project consultation with stakeholders, beneficiaries, and directly affected people was undertaken during project design. A participatory and consultative methodology was adopted to under the social analysis and rural livelihood survey during the project preparatory technical assistance. It involved (i) a formal questionnaire survey of 180 households, (ii) discussions with project stakeholders, (iii) key informant interviews in rural communities, (iv) a series of stakeholder workshops with the provinces and the Ministry of Agriculture, (v) interviews with key government staff and non-government organizations, (vi) interviews with ethnic minorities, and (vii) interviews with women. Detailed discussions were maintained using both sector and cross-sector working groups that included the provincial project management offices (PMOs) and their expert groups, project implementing agencies and associated state-owned enterprises, design institutes, academics and safeguard agencies including environment and poverty reduction officials under the leadership of the PMOs. The work of the working groups was collectively discussed and reviewed through a series of stakeholder workshops.

During Project Implementation

Participation of stakeholders including beneficiaries will continue to be built through participatory planning and implementation processes. Equitable participation of women and the poor in decision-making and planning of agribusiness activities will be important to ensure successful project outcomes. For example agroenterprises will strengthen farmer groups and negotiate contractual arrangements with organizations, farmer agents and individuals. The PMOs will be responsible for ensuring enterprises target poor rural areas and prioritize employment of local people and women. The use of demonstrations linked to farmer associations, contract farming systems and outreach programs will adopt a highly participatory approach to rural livelihood improvement.

Business Opportunities

Consulting Services

The grant from the Government of Spain will provide $350,000 covering the costs of individual consultants comprising international and national experts. This will cover (i) the preparation and delivery of training (about 50 short courses) to farmers and agriculture technicians in the project area on participatory soil and water management, and sustainable agriculture (through international and domestic consultants); (ii) support to local institutions in Gansu, Henan, and Shandong to facilitate the adoption of sustainable agriculture in collaboration with the training course delivery; and (iii) training materials. The national and provincial governments will provide office and training facilities, domestic travel, counterpart agency support service staff, and materials and equipment to demonstrate sustainable agricultural technology. The provincial governments, agro-enterprises, and farmer communities will cover the costs of implementing sustainable agriculture action plans produced from the training.

Procurement

All recruitment will follow ADB’s Guidelines on the Use of Consultants (2007, as amended from time to time) by ADB and its Borrowers.

Responsible ADB Officer

Hinrichs, Jan F.

Responsible ADB Department

East Asia Department

Responsible ADB Division

Environment, Natural Resources & Agriculture Division, EARD

Executing Agencies

Gansu Provincial Government
No. 136 Jinning Road
Lanzhou City, Gansu Province
People’s Republic of China

Henan Provincial Government (HPG)
Planning & Econ. Commission of HenanProv
23, Weier Road, Zhengzhou
People’s Republic of China

Ministry of Agriculture and Rural Affairs
Mr. Tang Zhishao
zstang@agri.gov.cn
Ministry of Agriculture, Beijing, PRC

Shandong Provincial Government
People’s Republic of China

Timetable

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Loan 2474-PRC

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