Project Helps Farmers Adapt to Climate Change in China

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About 380,000 rural households in six Chinese provinces are benefiting from a project that helps build sustainable and climate-smart agriculture. The project is funded by the World Bank and the Government of China, with additional technical expertise from the Investment Centre of the Food and Agriculture Organization (FAO) of the United Nations.

The \$313.14 million <u>Integrated Modern Agriculture Development</u> (IMAD) Project, the largest World Bank- supported project of its kind in China, combines complementary investments in infrastructure, on-farm technologies, and institutional support by improving irrigation systems, boosting climate-smart agricultural practices, building the capacity of water-user associations and farmers' cooperatives, and strengthening project management.

In the last two years, the project has helped improve infrastructure for 236,000 mu (38,880 acres) of farmland across 33 counties and districts in the provinces of Gansu, Hunan, Jiangxi, and Liaoning, plus the Xinjiang Uygur Autonomous Region and Chongqing Municipality. Investments in irrigation have included aqueducts, drip irrigation, and improved drainage systems, to name just a few. Before these investments, the irrigation and drainage in many project areas were inconsistent and unreliable. Financial support and trainings have also been provided to water user associations, like the Gifu Water User Association in Hengdong, to build capacity for local watershed management and village-led operations and maintenance. Farmers' cooperatives, like the Citrus and the Kiwi Producers' Cooperatives in Kaixian, have received funding and training to improve their organizational capacity. IMAD project support has also been used to pave new access roads to enable mechanization and ease farmers' transportation of products year-round, reduce the use of pesticides by promoting alternatives such as solar-powered insecticidal lamps, and introduce new varieties of crops that are better adapted to extreme weather like droughts or floods.

The project is being implemented in response to China making it a priority to develop resiliency to climate change. The government has supported climate change mitigation and adaptation efforts at the national and international levels. President Xi Jinping recently signed the Paris Climate Agreement and vowed to reduce greenhouse gas emissions.

The project builds on three generations of Irrigated Agriculture Intensification Loan projects in China and a related Mainstreaming Climate Change Adaptation in Irrigated Agriculture Project financed by the Global Environment Facility. It supports the integration of irrigation and drainage investments with agricultural modernization, agro-ecological management, and rural infrastructure and institution building, recognizing that agricultural investments are best when tailored to current and projected future local agro-climatic conditions.

One particularly innovative investment has been the development of an experimental "micro meteorological station" established in a rice paddy in the Yushui district. The weather stations, supported by multi-sectoral cooperation, now provide real-time information via text messages on meteorological conditions and agricultural advice relevant to farmers, especially for seeding and harvesting. The investment in Yushui district was coupled with demonstrating new, high-yield, climate-resilient crop varieties and infrastructure improvements.

The climate-smart project helps Chinese farmers become more resilient to climate change and maximize the impacts of investments in sustainable and climate smart agricultural practices under diverse conditions across China.