



IMPACT BRIEF

©IFAD/Susan Beccio

China

Guangxi Integrated Agricultural Development Project (GIADP)

About the project

Objective. The Guangxi Integrated Agricultural Development Project (GIADP) was designed to raise the incomes of smallholder farmers in China. This effort involved developing community infrastructure, supporting agricultural production and marketing activities, and improving the rural environment.

Financing. The project had a total cost of US\$96.8 million. GIADP was jointly funded by IFAD, the Government of China, and beneficiaries' contributions.

Timing. The project began in January 2012 and was completed in March 2017. Implemented by the Guangxi Department of Agriculture, the project was carried out in 623 administrative villages (AVs) in 44 townships within eight counties across the Guangxi Zhuang Autonomous Region.

The project's theory of change

GIADP delivered project activities in three components through village implementation groups (VIGs) in each project AV. In the **community infrastructure development** component, the project paved community access roads, lined irrigation canals, and built safe drinking water stations. In the **agricultural production and marketing support** component, the project organized trainings to demonstrate best practices in crop production and livestock rearing. In the **rural environmental improvement** component, the project constructed biogas digester systems and improved sanitation facilities.

Through these activities, GIADP aimed to promote cultivation and increase productive capacity of niche cash crops and landrace livestock, increase access to better water management systems for agriculture, boost adoption of sustainable agricultural practices, reduce the transaction costs of accessing markets, raise output prices, and improve beneficiaries' production and market information.

Furthermore, the project facilitated greater **market linkages** among crop and livestock producers, cooperatives, agro-extension stations and traders. It invested in improving rural road conditions to ensure all-season access, built crop-processing facilities, facilitated value-chain support, and set up platforms to disseminate market information.

Project outreach and outputs

Determining the overall impact of the project requires first understanding whom the project reached and what outputs it generated.

Total beneficiaries: **1,339,189**

Female beneficiaries: **48%**

VIGs reached: **623**

Kilometers of roads paved: **647**

Kilometers of irrigation canals lined: **246**

Farmers trained on production and marketing practices: **44,157**

Biogas digester systems installed: **162**

Village sanitation facilities implemented: **33**

Project impact

As part of IFAD's Development Effectiveness Framework, GIADP has been subject to a rigorous impact assessment.

Data and methods

Estimating the impact of GIADP followed a mixed-method approach using quantitative and qualitative surveys. A valid counterfactual group was created using both statistical methods and expert validation with project staff to reconstruct the targeting process used by GIADP when the project was originally designed.

This effort resulted in the identification of a set of treatment and control AVs in all eight project counties where household and community surveys were conducted. In addition, household-level matching was performed to improve the quality of the counterfactual. This process resulted in the dataset used for analysis, which consisted of data collected from 892 treatment and 909 control households in 64 treatment and 55 control AVs.¹

Key impact estimates

Overall, GIADP shows some significant impacts in terms of crop production, savings, and asset ownership.



+19%
Fruit **crop yields**
per year



+29%
Value of fruit crop production
per year



+41%
Household **savings**



+11%
Durable assets

The project showed positive impacts on crop yields and value. In particular, the yields and value of fruit crop production in the treatment group were **19 per cent** and **29 per cent** higher than those of the control group. Impacts were particularly strong among those households that received agricultural support and infrastructure interventions in better-off counties, defined as the ones that had greater potential productive capacity to harness the benefits from the project.

In addition, GIADP tested an innovative approach that introduced a combination of agricultural support and rural environmental improvement interventions in a selected number of AVs. Findings showed that the households in treatment groups had higher vegetable yields and value from vegetable production than those in the control group – results consistent with qualitative evidence that households with access to this combination of interventions received higher prices for their vegetable produce.

Results also revealed positive effects on indicators of economic mobility, namely savings and durable assets. Household savings in the treatment group were **41 per cent** higher than those in the control group. Moreover, households in the treatment group had **11 per cent** higher durable assets than the control group (as measured by the value of the asset index). No positive significant impacts were observed on income-based indicators.

¹ In the case of large-scale household survey data, achieving representativeness may not always be a problem. However, most farm household survey data are unfit to be aggregated to subnational or national levels, which is necessary for an ex ante policy impact evaluation.

About the brief

This brief draws upon the findings of an IFAD-funded impact assessment of GIADP in China, which was prepared by Alessandra Garbero and Tisorn Songsermsawas.

The impact assessment report on GIADP is available upon request.

Contact

Alessandra Garbero
Senior Econometrician
Research and Impact Assessment Division
(RIA), IFAD
Email: a.garbero@ifad.org



International Fund for Agricultural Development
Via Paolo di Dono, 44 - 00142 Rome, Italy
Tel: +39 06 54591 - Fax: +39 06 5043463
Email: ifad@ifad.org
www.ifad.org

[facebook.com/ifad](https://www.facebook.com/ifad)
[instagram.com/ifadnews](https://www.instagram.com/ifadnews)
[linkedin.com/company/ifad](https://www.linkedin.com/company/ifad)
twitter.com/ifad
[youtube.com/user/ifadTV](https://www.youtube.com/user/ifadTV)

March 2019

Lessons learned

- Overall, findings suggest that GIADP was successful in **improving crop production**, in particular the production of fruit crops.
- GIADP offered agricultural training activities with a specific focus on promoting niche crops, which improved the yields and value of fruit crop production and led to **higher savings and asset accumulation** for project beneficiaries.
- The project's **impacts on savings were particularly strong for households that received both agricultural support and infrastructure development** interventions in **better-off counties**. In **less well-off counties**, those receiving both agricultural support and infrastructure development **experienced improvements only in asset ownership** (in particular durable assets).
- Findings from this impact assessment give evidence that providing **agricultural production and marketing interventions along with infrastructure interventions may lead to stronger impacts** on production and economic mobility outcomes.
- GIADP developed an **innovative approach** by delivering **agricultural support interventions along with interventions aimed at improving the rural environment**. Results show that households receiving this combination of interventions experienced higher yields and value of vegetable production, which are consistent with qualitative findings. These results might provide some evidence for scaling up this approach in similar contexts in the future.
- While evidence on the positive impacts of agricultural support and infrastructure interventions on production and marketing outcomes is encouraging, **additional research will be required to understand the mechanisms** through which improvements in production and market access may improve household welfare.
- Strong and positive impacts on assets among less well-off households that received both agricultural and infrastructure interventions raise a point of consideration when designing future rural development projects. Specifically, an **integrated approach covering both production and marketing aspects may be needed to specifically target those at the lower end of the income distribution**.

