What is the relation between variation in land tenure security on the use of sustainable inputs and farming techniques?

There is a positive relationship between tenure security and sustainable farming and long-term land investments in recent economic literature. Conservation agriculture, for instance, can reduce the losses associated with climate shocks, while irrigation systems allow farmers to cope with droughts, making input prices less volatile. We believe recent land titling efforts in Rwanda provide a very interesting case to study the impact of land security, land markets, and access to credit through collateral ownership on sustainable farming and productive long-term investments that allow farmers to adapt to climate change. We want to investigate the relationship between farmers with land tenure and the adoption of sustainable agriculture interventions, such as using less polluting fertilisers, irrigation, or fallowing.

Policy challenge

Rwanda has one of the highest population densities in Africa, leading to high farm density and small average farm size. Land conflicts and tenure insecurity are a natural consequence. In 2008, the Rwandan government initiated a comprehensive farm titling programme aiming to increase tenure security and therefore increasing land collateral values, raising investment, and allowing wider access to land through better functioning land markets.

This effort was accompanied by scientific evaluation studies using pilot rollouts and different forms of data collection to analyse the (short-term) impact of the titling. This includes a study by Ali, Deininger, and Goldstein (2014) who find improved land access, especially for married women, and increased investment, in particular with respect to conservation efforts.

Data

- Pilot ex-ante and ex-post data from Ali et al (2014), data from the Land Administration Support System (LAIS)
- Data from the National Land Use & Development Plan
- Real-time data to ministry of agriculture on production decisions made by farmers in the secondary rainy season (Season B) and in advance of the dry season (Season C) (IGC project)
- Agriculture Household Survey, National Agricultural Survey, Seasonal Agricultural Survey
- Further survey data sets, e.g. Abbot, Mugisha (2015)[1]; Muyombano, Espling, Pilesjo (2018)[2]

Stakeholders

- National Land Authority
- Ministry of Agriculture and Animal Resources

For further information or to discuss project generation, please contact the IGC Rwanda team at **rwanda@theigc.org**

[1] Land Tenure Regularisation Programme: Progress Report for Selected Indicators. Kigali: DfID

[2] Effects of land titling and registration on tenure security and agricultural investments: Case of Gataraga sector, Northern Rwanda. African Journal on Land Policy and Geospatial Sciences

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