



Water

Transforming smallholder irrigation into profitable and self-sustaining systems in southern Africa

Overview

Most government-run irrigation systems in Africa have failed or are significantly under-performing, for a complex array of reasons. However, agricultural innovation platforms, when combined with soil moisture and solute measuring and monitoring, have significantly increased farm productivity and incomes, making the irrigation schemes more self-sustaining.

This research project will test how best to spread those findings beyond individual irrigation schemes to many other irrigation schemes and countries.



KEY FACTS

ACIAR Project No. LWR/2016/137

Duration: June 2017 to June 2022 (5 years)

Target areas: South Africa, Mozambique, Tanzania, Zimbabwe

Budget: A\$3,850,000

Project Leader

Dr Jamie Pittock, The Australian National University

Key partners

- University of South Australia
- CSIRO Land and Water
- Food, Agriculture and Natural Resources Policy Analysis Network, South Africa
- Ministry of Agriculture and Security, Mozambique
- Ardhi University, Tanzania
- International Crop Research Institute for the Semi-Arid Tropics, Zimbabwe

ACIAR Research Program Manager

Dr Robyn Johnston

Objective

The project aims to improve farmer livelihoods, equity and community management in smallholder irrigation schemes in southern Africa.

The objectives are to:

- Determine how the package of agricultural innovation platforms and simple tools for water management can be scaled up and out.
- Identify which institutions lead to inequity among farmers in water supply and financial benefit from irrigation schemes, and how this inequity can be reduced.
- Develop irrigation policy options for governments and multilateral agencies, so that smallholder-managed schemes can be more profitable, equitable and self-sustaining.

Expected scientific results

- Develop more profitable and self-sustaining irrigation communities as a result of individual and social learning, and institutional and technological change.
- Develop systems to enable farmers to share their new knowledge with other farmers in adjacent irrigation schemes, and ways to help government agencies move from directing farmer learning to facilitating farmer self-learning.
- Increase efficient use of water and fertilisers resulting in higher crop yields.
- Assess methods to instil in district and national institutions the capacity to implement agricultural innovation platforms for broader scale out and up.
- Combine technical and institutional interventions for greater impacts and assessment of why multiple interventions are more successful.
- Assess who is benefiting most from the labour savings, increased production and better access to crop processing facilities and markets to inform practices for equitable, pro-poor irrigation development.

Expected impact/outcomes

- Increase efficient water use, leading to expansion of irrigated cropping sector.
- Change farmers' mindsets from subsistence to market-oriented practices so they choose more profitable crops with more reliable markets.
- Improve access to cheaper and higher quality farming inputs.
- Reduce social conflicts and more effective farmer organisations.
- Reduce irrigation labour, enabling more time for other livelihood activities.
- Increase demand on governments to support the irrigation sector's needs.
- Facilitate agricultural innovation platforms, and the development of district-scale agricultural service providers and markets supported by extension staff.
- Inclusion of project findings by governments to provide answers on how best to meet their key irrigation policy targets.
- Develop private sector partnerships leading to more vibrant local economies, as all value chain stakeholders benefit from increases in agro-economic activities.

