Food & Business Knowledge Platform

NWO

Factsheet final findings Applied Research Fund Call 2

Unravelling the potential of Farmer led Irrigation Development in Mozambique (FAID)

Summary

This ARF project studied farmer-led innovation processes in irrigation and agriculture in Mozambique. This form of irrigation is poorly understood, even though its contribution to economic development, food security and poverty alleviation is expected to be substantial. The project focused on the Beira Agricultural Growth Corridor (BAGC), in Central Mozambique, earmarked by the national government and donors for public and private investments in irrigation and the agribusiness sector.
The key research question of the project was: What can professionals and policy makers learn from the processes and actors that drive the expansion of the informal small-scale irrigation sector in the BAGC in Mozambique; and what are the implications of these lessons for the design of new intervention strategies in irrigated agriculture – how can local innovation processes and entrepreneurship in agriculture be supported in the BAGC?
The project adopted a mixed methods approach, qualitative research by means of three area case studies in Manica and Sofala Provinces and in-depth interviews with key actors in the field, and quantitative research through a survey, mapping of the irrigated area by the application of Remote Sensing data and GIS analysis. The project work is practically finished, the focus is now on writing up the project results in publications.

Research findings

The main research findings of the project are as follows:

- In the BAGC, farmers are very active in taking the initiative in expanding and improving practices of irrigated agriculture, especially for horticulture production. This is happening in a wide variety of landscapes: in the hills, fertile valleys and alluvial plains.
- Mapping of areas under farmer-led irrigation development by means of Remote Sensing imagery and GIS analysis is more problematic than expected due to the heterogeneity of the production forms.
- The rate of water use by farmers is increasing, but as such that limits are not yet reached. Bigger areas could be irrigated but not by large-scale commercial farms because the water comes from many small streams, which is a comparative advantage for smallholders.
- Gender relations matter in farmer-led irrigation development. Both men and women farmers are actively involved in irrigated agriculture. They often cultivate separate plots, but inequities in access to land and water (continue to) exist.
- Policymakers and agricultural professionals continue to underestimate the actual scale and potential of farmer-led irrigation development. It remains “invisible”, disqualifying it as a form of development, perceiving it as a backward, inefficient and primitive form of agriculture. The challenge is to change this view.

Outcomes achieved

Professionals in the irrigation sector in the BAGC are now more aware about the nature and scale of farmer-led irrigation development in Mozambique. Notably, engineers and technicians of the Instituto Nacional de Irrigação (INIR), and agriculturalists of the Department of Agriculture envision to collect data on this type of irrigation development.
NGOs like iTC (Iniciativa para Terras Communitáris/Community Land Initiative) now have a clear understanding of the role of irrigation in mapping community land in Mozambique and how water

use in relation to farmer-led irrigation development might (or might not) lead to potential conflicts among community members, and/or between farmers and government officials in the registration of land use rights (so called DUATs).

Project messages to

A) Actors from private sector:

- Farmer-led irrigation development is strongly commercially oriented and market-driven. Private sector actors (mainly traders) can have an important role in acting as providers of credit and agricultural inputs and facilitating the sale of produce.

B) Civil society and practitioners' organizations:

- Interventions in irrigation and agriculture, focussing on the implementation of infrastructure and the registration of land rights, do not always produce equitable results. Civil society and NGOs can have an important role in community participation and keeping track of potential undesirable outcomes of interventions.

C) Policy makers:

- Limits of water use by farmers are not yet reached and bigger areas could be irrigated by allowing the use of water from many small streams. Large-scale infrastructure development for irrigation is therefore not necessarily the solution; nor should be the regulation of water use a direct priority for the government.

Knowledge products

- Article: Chris de Bont; Janwillem Liebrand; Gert Jan Veldwisch and Philip Woodhouse. 2019. Modernization and African farmer-led irrigation development: Ideology, policies and practices. Water Alternatives, 12 (1): 107-128.
- Article: Liebrand, Janwillem. 2019. The politics of research on farmer-managed irrigation systems in Asia: Some reflections for Africa. Water Alternatives, 12 (1): 129-145.
- Film (12 minutes): Farmer-led irrigation development in Africa, example from Mozambique. YouTube, 2019.
- Infographic: Farmer-led irrigation development (FLID). YouTube, 2019.

Knowledge networks

SAFI – an international research network on farmer-led irrigation development has been initiated. The launch of the network took place on 15-16 March 2019 in Arusha, Tanzania. The network is hosted by the Nelson Mandela African Institute of Science and Technology, WISE Futures. Email address of the network: safi-network@nm-aist.ac.tz
The network comprises more than 50 professionals, from across Africa: Tanzania, Kenya, Mozambique, South Africa, Zimbabwe, Malawi, Zambia, Rwanda, Uganda, Central African Republic, Ethiopia, Ghana, Cameroon, Burkina Faso, Sudan and Algeria.

Knowledge co-creation

In the process of research, Resilience BV, Wageningen University and the Instituto Superior Politécnico de Manica jointly defined the problem of the under-recognition of farmer-led irrigation development in Mozambique. This triggered momentum among professionals involved in irrigation, and Resilience BV was approached by iTC to do additional consultancy studies on the role of irrigation and water use in community land mapping interventions.
The collaboration between partners and the process of joint learning among professionals culminated in the launch of a new international research network: SAFI (which means 'good' in Swahili – farmer-led irrigation development is 'good').

Consortium Partners

- Resiliência Moçambique Lda/ Resilience BV
- Wageningen University – Water Resources Management Group
- Instituto Superior Politécnico de Manica - ISPM

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Project website

F&BKP Research Project page