

Water and gender

Empowering women and improving food security

A newly-completed Water Research Commission (WRC) study sought to develop a range of intervention strategies to build on the diverse aspirations and skills of rural women, particularly focusing on water and agriculture.

Background



Although South Africa is classified as a food-secure country, the situation is different when food security is measured at a household level. In 2011, it was found that 26% of the population had inadequate access to food, and 13.4% suffered from hunger. In the rural provinces of the country, where opportunities for wage labour employment are very low, rain-fed agricultural activities remain an important part of livelihoods, albeit small (around 10%).

An estimated 4 million black people are involved in agriculture at different levels, with women making up 60% of all those involved in farming. Smallholder farmers include those that grow food in home food gardens (about 200 000 ha nationally), small-scale irrigation farmers (100 000 ha), and people farming rain-fed fields outside of the homestead (about 2 million ha).

Given these significantly large numbers of people with

access to primary resources, it is believed that food production and related agricultural enterprise development at various smallholder scales offers the opportunity to address some of these pressing social and economic development challenges.

Research focus

This project set out to improve understanding of the constraints, challenges, opportunities and interventions required for empowerment of women to promote household food security and rural livelihoods through increased water productivity, with the focus on crop cultivation. The Eastern Cape, as the province with the highest unemployment rate (more than 40%), was the focus of this study.

Specific themes addressed in this research project include water use in farming; existing knowledge and skills gaps; gender roles, responsibilities and dynamics; institutional arrangements around land and water; the impact of water allocation reform policies; and farming constraints and aspirations.

The research concluded with recommendations for policies and strategies to achieve people-centred water use, food production, and rural development, with a particular focus on the empowerment of women.

Three villages were selected for the study, namely Lutengele (in the OR Tambo district), Sirhosheni (Amathole district), and Mbekweni (Chris Hani district). All of the sites are characterised by high poverty, high unemployment, and a high incidence of social grants. Food insecurity and hunger are prevalent, with up to 30% of people interviewed

indicating that they experienced more than 1 day in the previous 30 days without any food at all.

Roles and responsibilities of women

On average, 61% of the households in the villages surveyed were headed by women. Culture and tradition still dominate, however, and male family members still strongly influence decision-making. Middle-aged and elder married women and widows were found to have more decision-making autonomy than young single women, makotis (newly married) and divorcees, who must often acquiesce to male in-laws.

Women bear the triple burden of reproductive work, productive work and community roles, and have limited time available to expand their agricultural interests. Assets which are under a woman's control due to her domestic responsibilities (e.g. water-tanks, tools, fencing and sheds) have the positive effect of increasing her bargaining power within the homestead.

Time saved collecting water or performing agricultural tasks has a catalytic impact on women's lives and present an important development opportunity.

Programme planners intending to facilitate women's agency to increased food production need to focus on such empowering asset investments, in this case mainly agricultural water storage tanks in the homestead.

With regards to land tenure, land in the villages are still seen as a family entitlement, rather than an individual one. However, this perception in no way constrained women's aspirations to use productive land. On the contrary, there are both policies and acts of law that not only encourage women to use land, but encourage local leadership structures to give land to women as a constitutional imperative.

It was found that none of the female participants in the study aspired to having more land, and all of them stated that having land registered in their names would not make a difference to them.

Land use and cropping

Across the three sites more villagers interviewed spoke of different farming spaces, each with distinctly different crop-choices, levels of cropping intensity and water-use practices. In isiXhosa these spaces are differentiated by the terms *isitiya*, *igadhi* and *intsimi*.

The *isitiya* (about 100 to 1 000 m² in size), refers to the

intensively-cropped vegetable garden that is always watered. In turn, the *igadhi* (0.1 to 2 ha in size) is more extensively farmed and typically rain-fed but sometimes irrigated. Tenure of these spaces, which are both situated around the homestead, is never contested and is a family right. The third space, *intsimi* or *amasimi* (fields) is located away from the homestead boundary.

The study found that 87% of the villagers interviewed had access to an *isitiya*, 51% to an *igadhi* and 69% to an *intsimi*. Out of these households with access to arable land, 63% had cropped within their homestead and 44% had planted in their fields during the time of the study (2012-13).

A wide range of irrigated vegetables were grown in the *isitiya*, with the preference being cabbage, spinach, carrots, butternut, onion, potatoes, beans, peas and herbs. In the *igadhi* and *intsimi* maize was by far the dominant crop. The study showed that people were much more likely to cultivate food on small scale near their home than in more distant fields.

People had different aspirations with regards to agricultural production, with some being content to focus on their homestead gardens, with other showing an interest in ramping up their farming abilities. Yet others had no interest in extending their agricultural skills whatsoever for various reasons.

It is clear that no single pathway will respond to the diverse aspirations of smallholder farmers, and programmes must thus be tailored to these differing needs and aspirations.

Water resource availability and use

This study showed that village water resources are markedly underutilised. Total use of available mean annual runoff within the wider resource boundaries of the villages was estimated at less than 3% across the three villages.

The average water use was found to be 18 l/person/day – much less than the Free Basic Water requirement of 25 l/person/day. Per household, the average amount of water used for crop production is 3 224 l/month, equalling 51% of monthly household water consumption, with another 578 l or 9% being used for animal watering. Water for productive use thus dominates household water-consumption patterns.

When additional water had to be purchased (for building or celebrations, for example) it had to be done at an extreme cost (i.e. R500 to R2 000 per kilolitre depending on the village). Where people had more water available to them, for example, provision of raw water or additional water through

rainwater harvesting, they were able to increase animal and crop production.

Water was found to be one of numerous constraints limiting agriculture in fields, but in home gardens, increased water access was strongly associated with increased food production. In Mbekweni village, for example, an irrigation supply was available to the arable fields at no direct cost to farmers until late-2014, when this supply was cut off by the Department of Water and Sanitation.

However, until then, it was estimated that only 15% of the water available for irrigation was used. This was due to other critical constraints such as lack of fencing, financing, ploughing services, and profitability. However, these constraints were overcome by the same people within their *isitiya* (within the *umzi*), as evidenced by very high average cropping intensities.

Similarly, in Lutengele village, unused, high-value irrigable land alongside the uMzimvubu River contrasts sharply with high cropping intensities within the *isitiya*. Both of these situations lend strong support to the idea that water investments in homesteads with an interest in agriculture will result in increased food production within the homestead.

Recommended intervention strategies

A set of intervention strategies was developed to facilitate increased women's empowerment and to catalyse agricultural water use more widely, in order to achieve increased food production.

- Strategy 1: Initiate agricultural learning through knowledge networks
- Strategy 2: Develop homestead multiple use services (MUS) water-storage and supply systems
- Strategy 3: Application of water harvesting and conservation methods
- Strategy 4: Linkage to commercial seedling nursery or establishment of a local nursery
- Strategy 5: Local land administration system
- Strategy 6: Financed and trained mechanisation contractors as a business-venture
- Strategy 7: Value-chain mapping and optimisation for smallholders
- Strategy 8: Participative implementation at watershed scale to ensure cooperative governance in implementation and integrated water resources management

Further reading:

To obtain the report, *Empowerment of women through water use security, land use security and knowledge generation for improved household food security and sustainable livelihoods in selected areas of the Eastern Cape* (Report No. 2083/1/15) contact Publications at Tel: (012) 330-0340; Fax: (012) 331-2565; Email: orders@wrc.org.za or Visit: www.wrc.org.za to download a free copy.