GENDER, AGRICULTURE AND CLIMATE CHANGE IN MALAWI

Summary

- Agriculture is essential to the Malawian economy and is a key livelihood activity – but it is vulnerable to climate change.
- Gender inequality results from different gender roles – what we deem appropriate behaviour for men and women in society.
- Both men and women have key roles to play in agriculture, and understanding gender differences can enable better design and targeting of interventions that reduce vulnerability to climate change and contribute to gender equality.
- Key activities to support gender-equitable climate-smart agriculture include:
    - Sex-disaggregated data collection to identify and monitor gender differences
    - Provision of targeted climate services.
- Recognition of gender differences can enable more equitable outcomes from current agricultural policy, including:
    - Climate-smart agriculture
    - The model village approach
    - Irrigation.

Why gender matters

As in many other countries, in Malawi men have typically been prioritised over women, leading to a situation of gender inequality. Gender inequality in Malawi is underpinned by different levels of education, access to resources (such as land) and economic dependence. Gender roles are defined within society and intersect with other social identifiers, such as age, religion and ethnicity, and reflect what is deemed appropriate behaviour for men and women. Gender relations stem from the interplay between women's and men's roles in society. Roles and relations are social constructs and thus can, and do, change. Given that patriarchy predominates, women have typically held a less privileged position relative to men, and thus attempts at gender equality typically involve concerted efforts in favour of women's empowerment. Particularly in rural areas gender inequality is reinforced by social norms. Acceptance of male authority over women is taught both implicitly and explicitly through various institutions, including in homes, many schools, churches and community gatherings[i].

Whilst gender inequality is evident in many spheres, it is particularly important to address within agriculture, since this is such a dominant sector in the Malawian economy. Addressing gender inequality in agriculture requires that support interventions, such as climate services, answer the particular (and often different) needs of men and women farmers.

Agriculture and climate change

The agricultural sector currently accounts for about 42% of Malawi's GDP. Whilst tobacco, tea and sugar are important cash crops, about 80% of the country's food (primarily maize) is produced by smallholder farmers. Smallholder production is characterised by low levels of inputs on small plots (with over 75% cultivating less than one hectare) and low outputs. Livestock production is small relative to crops, and consists mainly of subsistence grazing of sheep, cattle, goats, poultry and pigs[ii].

The high reliance on natural resources makes Malawi particularly vulnerable to climate change. The country is experiencing more frequent extreme events, with floods in 2015 and a major El Niño-related drought in the 2015-16 season. Alongside humanitarian implications, these are having adverse economic impacts, with Malawi losing on average 1.7% of its GDP due to the combined effect of both hazards[iii]. Small scale farmers in the flood-prone Southern region are most directly affected, although the resultant increase in food prices means that urban and non-farm households are also implicated. Incremental change in temperatures and rainfall also has economic impacts. Chikwawa district, in the Southern region, is expected to require around $55 million over 5 years to enable adaptation of the maize sector[iv].

Gender and agriculture

Women play a key role in agriculture in Malawi, producing 70% of food that is consumed locally[v]. However, land rights and rules mean that only a third of agricultural holdings in Malawi are held by women (and this is still higher than in many African countries). More often than not, women's access to land is through the family head, who is typically a man. Thus although they perform 50–70% of all agricultural tasks, women rarely have control over the land or the yields. Female-managed plots are, on average, 12% smaller than those of their male counterparts and 25% less productive as a result of differing levels of knowledge and access to inputs for improving farming efficiency[vi].

In addition to land, women's role in agriculture is typically constrained by a combination of four key factors: lower education levels, lesser control over natural resources, reduced labour availability (due to gender roles which govern their role in caretaking) and minimal access to financial resources. Together this limits their knowledge of improved production practices, access to farm inputs (including fertilisers and improved seeds) and labour-saving technologies (such as ploughing machinery), and the ability to practice more labour-intensive farming methods. These differences also have the potential to be exacerbated by climate change. Malawi's agriculture is largely rain fed, particularly among smallholders, and the country is at critical risk of water stress[vii]. Water security is essential for agriculture in a changing climate, but women typically have lower levels of access to men in water technologies, such as irrigation. The result is differing levels of productivity of men and women farmers.

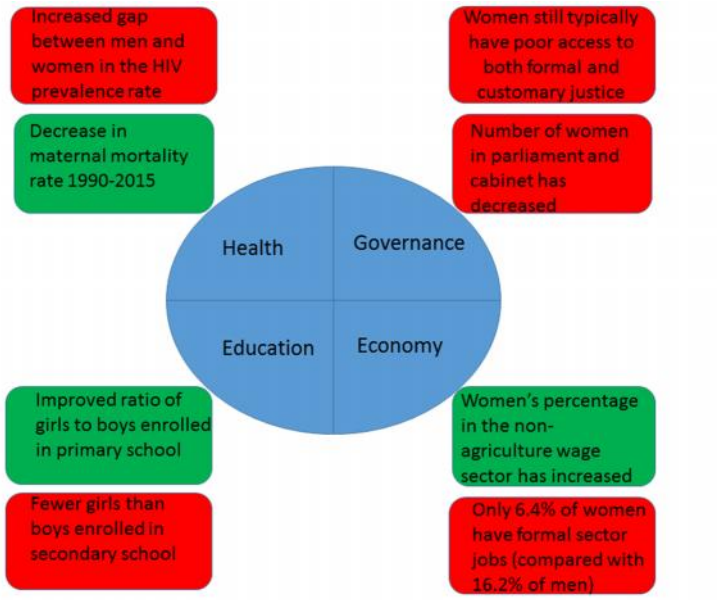
The Farm Input Subsidy Programme (FISP) is Malawi's biggest programme of agricultural support. It provides seed and fertiliser to poor farmers targeted by community leaders. Evidence has shown that FISP improves productivity for both men and women recipients[viii]. In fact, the likelihood of adoption of modern maize is higher for women within the FISP[ix], likely because they are assured the receipt of fertiliser as an input which they might otherwise not be able to afford. However, despite the longevity of this programme its interventions have not been targeted at the different needs of men and women farmers. As a result there remains a persistent gender gap in productivity. Closing this gender gap could enable a 7.3% increase in crop production, lift as many as 230,000 Malawians out of poverty, and has the potential to contribute $100 million to GDP[x].

Awareness of the gender differences is also essential to identify and address gender differences in vulnerability to climate change. The combination of natural resource dependence and gendered differences in assets and resources means that women are typically more vulnerable than men to climate change. However, the reality is more nuanced. There are differences from place to place, and understanding the gender context is necessary to determine the specific nature of men's and women's vulnerabilities. A study in Mulanje, for example, highlighted differences in women's vulnerability depending on whether they were part of a male-headed or female-headed household. The same study also showed that place of residence was more correlated with differences in vulnerability than gender[xi]. An understanding of the contextual specificities of gendered vulnerability is therefore essential to effectively target gender-equitable agricultural support to adapt to climate change.

Box: Commitments towards achieving gender equality in Malawi

The Constitution of the Republic of Malawi (1994) enshrines an equality clause, as well as special rights of women; and the Gender Equality Act (2013) came into force in 2014. The country is a signatory to major international commitments to achieving gender equality, including the Convention on the Elimination of Discrimination Against Women (CEDAW), the Beijing Declaration and Platform for Action, and the SADC Protocol on Gender and Development. In implementing these agreements, progress has been made. Although Malawi did not fully attain the target for the third Millennium Development Goal (on Promotion of Gender Equality and Women Empowerment), progress was made on the ratio of girls to boys enrolled in primary school. In reviewing progress after 20 years of the Beijing Declaration, women's percentage in non-agriculture wage employment has also increased.

Figure: Selected examples of progress (in green) and ongoing challenges (in red) in achieving gender equality in various spheres[xii]



Promoting gender-equitable climate-smart agriculture

Understanding gender differences

A major challenge to gender-equitable climate-smart agriculture is the invisibility of women in farming due to the lack of sex-disaggregated data and research into gender differences in current resource use, farming practices and aspirations[xiii]. A study of 15 sites across West Africa, East Africa and south Asia shows that women tend to have a broader conception of food security that goes beyond production[xiv]. Interventions that focus solely on production therefore potentially benefit men relative to women. A better understanding of the role of gender in the agricultural sector could illuminate how best to increase production, reduce poverty, improve food security, and transform gender relations towards a situation of equality[xv].

Enabling such a shift requires gender sensitivity within the institutions and organisations that support agricultural development in Malawi. Some donor organisations have begun analysing their support to agricultural development to determine the extent of gender sensitivity in approach, and to highlight any gender differences in outcome[xvi]. Awareness of the need to both train women as extension workers, and to integrate gender into the broader curriculum for agricultural extension has long been recognised in Malawi[xvii]. However the Ministry of Agriculture, Irrigation and Water Development faces broader challenges of recruiting sufficient numbers into the extension service, despite incentives for training.

Gender differences need to be taken into account in the planning and design of agricultural interventions to support production in the context of a changing climate. It is not enough to design a gender-blind intervention and then simply target women participants. Such an intervention may not be appropriate to the different farming practices that result from gender roles and relations in Malawi. As a result, although it may improve production it will do so in a way that benefits men relatively more than women, thereby reinforcing existing inequalities.

Instead interventions need to be designed based on an understanding of the gender roles and relations and what that means for agriculture - ensuring that technologies, extension and climate services are targeted to the different needs of men and women[xviii]. Because women farmers have different access to land, often grow different crops and have a broader conception of food security than men, targeting interventions to increase their productivity requires a gender sensitive approach to what is done and how[xix]. Such an approach may involve different types of support for men and women in order to achieve the desired outcome.

Climate services

Ensuring that agriculture is sustainable within the context of a changing climate requires that farmers are aware of potential weather and climate conditions in order to factor these into their planning. Various timeframes of information are important to inform agricultural decisions. Weather forecasts are useful for determining day to day activities, such as when to apply fertiliser. Seasonal forecasts can determine how much should be planted, and what crop/variety, in order to match anticipated conditions. Longer term climate information can inform strategic planning decisions, including within the Ministry of Agriculture, Irrigation and Water Development. Based on projected future conditions such planning may involve research and inputs to seed breeding and technological development – and the development of gender-responsive plans. In order that weather and climate information is useful and useable, it needs to arrive to the users – whether they are farmers or policy makers - in a timely fashion, and with appropriate interpretation. Matching information with such needs is the domain of "climate services"[xx].

Understanding the gender differences in farming patterns and practices is a key component of effectively targeting climate services. Currently farmers rely on indigenous knowledge and personal experience when deciding what to farm and when to plant. According to a recent study, crop farmers in Malawi have defined that useful weather information is forecasts of extreme events, onset of the rains, seasonal rainfall, daily weather and its linkages to pests and diseases; and that this information needs to be received in a timely manner to enable it to be used[xxi]. The agricultural advice that would be most useful includes information about cropping patterns. The preferred communication channels are visits from extension agents, radio messages and SMS by cell phones. Critically, however, women were significantly less able to use the advice relative to men. This reflects their lesser control over agricultural assets and access to land.

Box: Improving weather information for farmers: the Global Framework for Climate Services

The Global Framework for Climate Services has been working in Zomba and Balaka districts, in partnership with WFP and the Department for Climate Change and Meteorological Services and the Department of Agricultural Extension Services, to improve the availability of farmer-friendly weather information. Trainers have been trained in Participatory Integrated Climate Services for Agriculture (PICSA) approach. This couples climate, crop, livestock and livelihood information with tools that farmers can use to decide the best options for them[xxii]. Weather information and interpretations for use in farming is disseminated by extension officers, SMS and radio shows, including on Zodiak. The evaluation at the end of the project, in 2016, will hopefully show how this initiative has benefited women and men.

Both the UMFULA project and the Global Framework for Climate Services (GFCS) are supporting the Department of Climate Change and Meteorological Services to improve the provision of climate services. Recognising that

climate services access is very low among women, but that their preferred communication channels are extension officers and SMS, GFCS has been working to facilitate development of these mechanisms.

Climate-smart agriculture

Whilst offering significant protection against drought, climate-smart agricultural practices often involve greater labour input for weeding. This responsibility often falls on women, even though they are also subject to time constraints of family duties. Further investigating limits of women to accessing basic agricultural technology is a prerequisite to determining whether, and how, climate-smart agriculture can benefit both men and women[xxiii]. It may be that ensuring preferential availability to women of labour-saving weeding devices may ensure that the benefits of climate-smart agriculture can accrue to both men and women farmers.

Model village approach

In the model village approach, extension workers support visioning of the future and then working to support this goal in both the short and long term. Taking a gender-sensitive approaches means ensuring that both men and women are able to participate and have their voices heard in the visioning. That may require that extension workers modify the timings and locations of their support exercises to suit the gender roles that determine the different time availability of men and women throughout the day. Identifying the gender differences in needs of men and women farmers to meet their future visions is a prerequisite to the introductive of gender-responsive measures that will also contribute to attainment of gender equality.

Irrigation

To date, less than 20% of Malawi's irrigation potential (estimated at 400,000 hectares) has been developed, and only a third of that is under smallholder production[xxiv]. Given existing water stress and growing pressure on water resources, any attempts to increase irrigation need to take into account future water availability. The UMFULA project[xxv] will be modelling water availability in the Lower Shire basin in the context of a changing climate in order to inform sustainable decisions around water allocations and most effective use[xxvi]. Providing relevant technologies are available, targeting women with information is likely to lead to an uptake their use[xxvii].

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