



Examining gender disparities in the adaptation of climate change mitigation strategies at plot level in Malawi

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Key messages

- In the absence of drought, male plot managers are more likely than female plot managers to adopt erosion control strategies.
- Policy outcomes cannot be realized without equitable access to production capital for male and female plot managers.

Does the absence of a gender component in agricultural policy affect women-owned farms during drought?

As Malawi braces itself for the uncertainties posed by climate change, a team of local PEP researchers has studied the effect of the gender of farm managers on the adoption of strategies to control soil erosion and enhance crop productivity in times of drought. The research findings highlight the need to revise policies to be more mindful of gender issues.

There is ample evidence to show a significant gender disparity in access to, and the utilization of, agricultural resources. According to Gumucio et al. (2020), the biggest factors that influence resource use and decision-making are the socio-cultural norms that dictate the division of labour between men and women.

In order to align gender-sensitive interventions to mitigate the impact of climate shocks, particularly droughts, this study considered the gender dimension in the adoption of coping strategies and its impact on crop productivity. The study placed a specific emphasis on soil erosion control strategies.

The results indicate that male farm managers are more likely to adopt soil erosion control strategies than female managers, but only in the absence of drought. The study found no gender-based differences in the relationship between the adoption of erosion control strategies and maize productivity.

Methodology

The research team investigated whether the adoption of soil erosion control strategies differs between male and female plot managers. In addition, it explored whether drought mediates the gendered adoption of such strategies. By depicting strategy adoption, the research interrogated the way in which the choice of adoption relates to maize productivity.

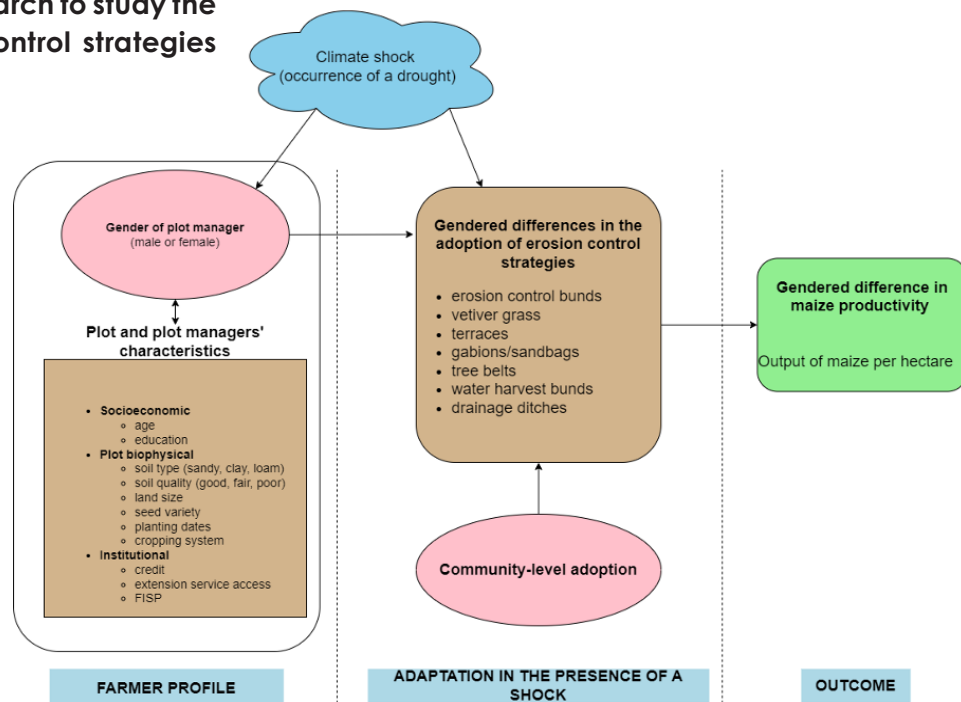
The team utilized plot-level data, combining information from two main sources. The first source was nationally representative data from the Integrated Household Panel Survey (IHPS), which was conducted by the Malawi National Statistical Office across three waves in 2013, 2016 and 2019. The second source was data from the Climate Research Unit (CRU).

Policy options

The research team explored three policy options.

- 1. Going beyond equal resource-sharing to close the gender productivity gap.** The research showed that productivity was lower for female farm managers than for male managers. This disparity may be the result of differences in access to assets, technologies and labour productivity. The research recommends that efforts to close the gender productivity gap should involve not only equal access to resources, but also the empowerment of women to achieve comparable productivity outcomes.
- 2. Making the gender productivity gap a policy priority.** Although Malawi's gender policy mentions the need to prioritize "women in agriculture, food security and nutrition," it lacks a transformative approach to enhance their decision-making and negotiation skills. The policy should address the gender norms and power relations that hinder women from utilizing and benefiting from resources they can access.
- 3. Ensuring greater investment in research to study the conditions under which erosion control strategies enhance agricultural productivity.**

Little research has been conducted in Malawi on adoption strategies, resulting in limited information to inform policy. Most studies have been conducted using nationally representative secondary data, and lack an examination of the "how" aspect for variables that appear significant.



Key findings

	Option 1	Option 2	Option 3
Evaluation criteria	Going beyond equal resource sharing to close the gender productivity gap	Making the gender productivity gap a policy priority	Ensuring greater investment in research to study the conditions under which soil erosion control strategies enhance crop productivity
Efficiency	Yes	No	Yes
Effectiveness	Yes	No	Yes
Equity	Yes	Yes	Yes
Political feasibility	Yes	Yes	Yes
Administrative feasibility/costs	No	No	Yes
Relevance	Yes	Yes	Yes
Sustainability		Yes	Yes

Source: Authors' analysis.

Policy implications

Option one: Going beyond equal resource sharing to close the gender productivity gap.

We suggest advocacy and support by government and other stakeholders for interventions that promote both gender equality and equity – not just equality – and the monitoring of their implementation. These interventions should focus on addressing resource utilization beyond just access.

The interventions should take into consideration factors such as the age and education of the household head and the time available to the plot manager for better targeting.

A profitable solution could be to encourage agricultural practices that are more sustainable, less time-consuming, and cheaper than current practices, and to ensure that these are accessible for plots managed and owned by women.

Option 3: Ensuring greater investment in research to study the conditions under which soil erosion control strategies enhance crop productivity

We suggest greater investment in research on soil erosion control strategies. There is an opportunity to invest more in research that investigates the precise conditions for successful strategies, with a focus on local needs.

Option two: Making the gender productivity gap a policy priority.

We suggest the use of gender-transformative approaches in policies and programmes. Malawi's current gender policy has placed too much emphasis on mainstreaming and not enough on transformation. As a result it fails to address gender differences that impact productivity and land quality.

To be effective, this policy option needs to address gender norms and power relations that restrict women from utilizing and benefiting from resources. For example, local leaders must enforce women's land rights in patrilineal communities. Decisions about soil erosion strategies adoption are highly dependent on land rights.



Photo: T. Samson/CIMMYT

Policy recommendations and roadmap

Induce gender-focused adoption of erosion control strategies with improved extension targeting that is complemented by improved land rights for women.

- Farmers prefer options that increase yields under all rainfall conditions, and legume intercropping appears to be one of the few options that achieves this.
- This is particularly important for farmers in areas that are highly vulnerable to both droughts and floods, such as those living in the Southern Region in Malawi.

The results indicate that gender-based differences in the adoption of erosion control strategies only occur when there is no drought. In addition, the adoption of these strategies has no impact on maize productivity and does not show any gender disparities in relation to this particular aspect. However, without the implementation of erosion control strategies and without taking into account factors such as plot quality and farmers' attributes, the yields of male plot managers tend to be higher than those of their female counterparts.

Women in all communities have limited decision-making power over erosion control strategies, harvests and other related matters. This gender gap can be exacerbated by their limited access to production capital, such as extension services and good quality land. Achieving policy outcomes requires equal access to production capital for both male and female plot managers.

The research team concludes that enforcing equality can enable most soil conservation programmes to contribute to greater gender equality. To support these outcomes, the team proposes a roadmap.

1. Strengthen the research system for better interventions

Despite the vulnerability of Malawi's soil to the impacts of climate change, there has been limited research on the topic as it relates to farming. The government can invest in training programmes through Malawi's Land Resources Conservation Department (LRCD) to improve the monitoring of soil loss and the use of environmental resources throughout the country. This will inform the advice given to farmers and help to improve their crop productivity.

2. Improve gender-specific policies

Most policies in Malawi are implemented in a linked manner, making it crucial for these policies to address gender-related needs in an effective way. Addressing the unequal allocation of resources to farmers can help to reduce differences in production, leading to enhanced productivity. To achieve this, a policy strategy should be established to ensure equal access to production capital for male and female plot managers. Plot managers and owners should be the primary focus of policies that aim to increase the adoption of erosion control strategies, particularly in times when there is no drought.

References

Climate Research Unit (CRU) (<https://crudata.uea.ac.uk/cru/data/hrg/>).

Gumucio, T., Hansen, J., Huyer, S., and Huysen, T. (2019). Gender-responsive rural climate services: a review of the literature. *Climate and Development*, 12:3, 241-254, DOI:10.1080/17565529.2019.1613216

To find out more about the scientific research methods and findings, read the full [PEP working paper](#). This policy brief summarizes the results and conclusions from analysis conducted as part of the PEP project [PMMA-20554](#), supported under the initiative *Climate change in Africa: Impact and responses for women and girls*.



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This work was carried out with financial and technical support from the Partnership for Economic Policy (PEP), with funding from the Government of Canada through Global Affairs Canada ([GAC](#)).

The views and opinions expressed in this publication are those of the authors and do not necessarily reflect those of PEP.