



Leveraging social protection programmes to advance climate-smart agriculture in Malawi

Extreme weather events, such as droughts and floods, are becoming more frequent as a result of climate change, and farmers are vulnerable to them. In Malawi, where agriculture contributes 80 percent of foreign exchange earning¹ and employs the vast majority of the population, recurrent droughts and floods are undermining progress toward national poverty reduction, economic growth, and food security objectives.

The promotion of climate-smart agricultural (CSA) practices, which help to sustain productivity and improve resilience in the context of a changing climate, is high on the policy agenda in Malawi. CSA practices promoted in Malawi include use of soil and water conservation structures, agroforestry, minimum soil disturbance, organic fertilizers, adoption of improved seeds, and intercropping of legumes with cereal, among many others. The National Agricultural Policy, the National Agricultural Investment Plan, and the priority actions for adaptation and mitigation articulated in the Nationally Determined Contribution document for Malawi all prioritize the promotion of these CSA practices to reduce the climate vulnerability of farmers and the economy.

Despite high-level political commitment to promoting CSA practices, adoption by farmers remains limited. Indeed, this is a major challenge confronting the CSA agenda throughout Africa, where levels of sustained adoption by farmers is low and widespread partial or temporary adoption is common. The lack of sustained adoption of CSA practices is due in large part to the upfront costs of adopting many CSA practices, and the risks associated with delayed and uncertain benefits from the practices. These challenges are particularly acute given the high risk aversion of most semi-subsistence farmers and limited access they have to formal risk management tools.

¹ Kachulu, M., Rasche, L., Schnieder, U. & Chinene, V. 2018. Tobacco substitutability and its effect on producer revenue and foreign exchange earnings under smallholder agriculture in Malawi. *African Journal of Agricultural and Resource Economics*, 13(4): 331–344.

KEY MESSAGES

- ▶ Promoting climate-smart agriculture (CSA) practices is central to Malawi's agriculture policy agenda, however adoption of CSA practices by farmers is low.
- ▶ Participation in social protection programmes significantly increases the probability of adopting CSA practices and sustaining adoption over time.
- ▶ Policy options that link social protection to the promotion of CSA practices is a viable option for enhancing CSA adoption.

In order to build resilience to a changing climate, it is essential to identify policies that are effective at helping Malawian farmers overcome the barriers to adopting CSA practices.

Social protection programmes can ease climate-smart agriculture adoption barriers

Social protection programmes are becoming increasingly widespread in Africa. It is estimated that 25 percent of people in African countries are covered by some form of social protection.² Social protection programmes are increasingly seen as a mechanism for reducing household vulnerability to climate risks. Through the transfer of cash or in-kind resources to vulnerable households, social protection programme can help to smoothen household consumption and reduce the likelihood of households relying on negative coping strategies, such as asset liquidation and reductions in food consumption, when extreme weather events hit.

² See World Bank. 2015. *The State of the Social Safety Nets 2015*. Washington, DC.

Social protection programmes can also indirectly reduce vulnerability to a changing climate by easing the constraints to adopting CSA practices by small farms. This can occur along two pathways. First, through regular transfers of cash or in-kind resources, social protection programmes can reduce credit and liquidity constraints faced by poor rural households, and thus improve their capacity to invest in improved farm practices. Second, social protection programmes can help ease the constraints associated with opportunity costs and risks of adopting new farm practices. This is particularly important for many CSA practices, which may not produce immediate production benefits (and can even contribute to short-term reductions in yield) or which produce benefits that are unobservable under normal weather conditions.

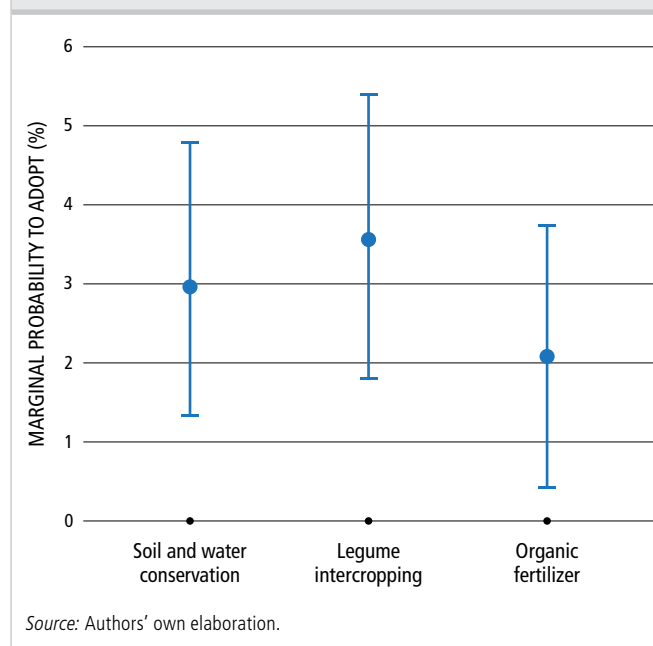
In Malawi, public works programmes (PWP) are the most widespread form of social protection. Overall, Malawi ranks fourth among all low- and middle-income countries in terms of population coverage by PWPs. The largest of these programmes is the Malawi Social Action Fund (MASAF), which seeks to develop community assets, including roads, reforestation, and irrigation infrastructure, by providing short-term labour-intensive employment for able-bodied individuals outside of the agricultural season. The programme provides 48 days of paid labour to participants at local casual rates.

Empirical analysis of farm households in Malawi shows that participation in MASAF eases constraints to the adoption of CSA practices and supports farmers to sustain their adoption over multiple years. Drawing on three waves of nationally representative panel household survey data from 2009–10, 2012–13, and 2015–16, and controlling for confounding factors through a multivariate probit model, analysis shows that farmers who participated in MASAF had a statistically significantly higher probability of building soil and water conservation structures, adopting maize and legume intercropped systems, and using organic fertilizers, such as compost and manure than non-participants (Figure 1). Moreover, MASAF participants were significantly more likely to sustain adoption in consecutive survey years than non-participants.

Developing multi-sectoral strategies to enhance climate-smart agriculture adoption

The positive impact of MASAF on CSA adoption highlights the importance of coordination across sectors in order to effectively respond to the challenges posed by climate change. For many farmers, the risks and costs of moving away from well-known, conventional farming practices are simply too great.

FIGURE 1. Model estimates showing that MASAF significantly increases the probability of adopting CSA practices



Targeting of resource poor, yet able-bodied households with a predictable source of income helps to relax these constraints and enable farmers to adopt resilient practices. The effect of social protection programmes on the uptake of CSA practices is likely to be even greater if governments adopt more programmatic approaches to tackle both issues simultaneously, such as, for example:

1. Bundling participation in social protection with extension advice on CSA practices – which creates long term sustainability.
2. Developing public work programmes based on skills that are transferable to farmers, such as building erosion control systems or planting agroforestry tree.
3. Varying the social protection payment conditional on the adoption and duration of adoption CSA practices.

Through a multi-sectoral strategy to CSA promotion, policy-makers in Malawi and elsewhere can better achieve their objectives of fostering economic growth, reducing poverty, and enhancing food security in the context of a rapidly changing climate.