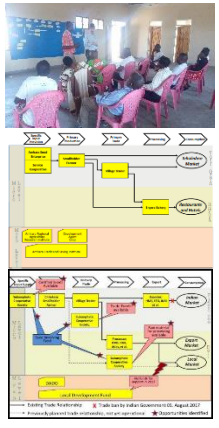
SMALLHOLDER RISK MANAGEMENT SOLUTIONS IN MALAWI AND ETHIOPIA

Research question and study design

The project addresses the research question: *What are the key risk factors for smallholders in participating in sustainable agricultural intensification, and what risk management strategies (RMS) can be put in place to manage them?* Specifically, the project focuses on increasing smallholders' access to inputs and participation in the development of commercial value chains. The objective of the project is to develop inclusive business models that reduce these systemic risks and that can be scaled-out to stimulate broad-based growth. **In Ethiopia** the project focuses on teff in the South Wollo Zone of Amhara Region. Teff is widely grown by smallholders, offers food and nutrition security, and provides a cash income as it is widely traded. **In Malawi**, the project focuses on pigeon pea in Phalombe District in the southern region. Pigeon pea can fetch good prices on the market, it is a highly nutritious and widely consumed crop in Southern Malawi, it fixes nitrogen in the soil and can be intercropped with maize.



Value Chain Studies

Two value chain studies were conducted in Ethiopia and in Malawi to investigate the key opportunities and constraints on current performance, to explore ways to improve coordination between the value chain actors, and to describe the characteristics of input markets and the various incentives for technology adoption. The Replicable Business Models were designed based on participatory workshops held at the Service Cooperatives to ensure that the models are inclusive of poor smallholder farmers, address systemic risks that hinder commercialisation, and provide an economic incentive to all actors in the value chain to cooperate in making it work.

Input Supply Surveys

The Input Supply Surveys explore the project's experience with the Replicable Business Models (RBM). The results **in Ethiopia** show that the criteria used by the participating cooperatives to select the farmers who received improved teff seed was socially inclusive, and that based on socio-economic indicators one-quarter of recipients could be classed as 'poor'. I**n Malawi** the surveys show high levels of social inclusion with 49% of the recipient households falling below the national poverty line, compared to 66% of households below the poverty line in Phalombe district. Both the utilisation and agronomic performance of the improved seed were neutral with regard to poverty score.

Social Inclusion

The Social Inclusion Surveys **in Ethiopia** interviewed, in addition to the participants, a control group of farmers who did not participate in the model to explore whether significant differences exist between participants and non-participants. The study finds that the model increased farmers' awareness and adoption of improved varieties, and increased teff production by 1 quintal per household (without increasing the area planted to teff or reducing the production of other cereals). The model also increased the share of households selling teff by 11% as well as the amount of teff used for home consumption by an average 0.9 quintals per household, the equivalent to two months' consumption. The study concludes that, although participation in the RBM was biased in some respects, as measured by national and international poverty lines, it was socially inclusive.

Experimental Games

Risk simulation games provide a diagnostic tool to evaluate the performance of the model and the wider potential for smallholder commercialisation. The games **in Ethiopia** captured farmers' decision-making for four rainfall scenarios and three levels of market prices. The game showed that variable rainfall had little impact on the levels of teff production or commercialisation and farmers will increase teff sales in response to higher prices. The games **in Malawi** explored the potential impact of commercialisation on women's income and models of income sharing within the household from growing pigeonpea. Perceptions on the gender division of labour and on women's control over decision making for pigeonpea did not differ significantly between husbands and wives, therefore commercialisation of pigeonpea is unlikely to disempower women.