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“Reconcile land system changes  
with planetary health”

## Impact of community seed banks on household food security outcomes and resilience in conflict affected regions in Ethiopia

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### Abstract

In the face of conflicts and seeds in access, that increases the loss of genetic resources and increasing food insecurity crises, Community Seed Banks (CSBs) have emerged as a transformative solution to bolster agricultural resilience and enhance seed security. This study examines the role of Seed Banks in improving seed security and food availability among smallholder farmers in Ethiopia, focusing on three districts in the Tigray and Amhara regions. Using primary data collected from 393 households, the study employs simple logit and multinomial logistic regression models, to explore the determinants of seed access and their impacts on food security outcomes in terms of quantity. The results reveal that proximity to CSBs significantly improves seed security and food availability in times of war, with Wakaye and Ayba Seed Banks outperforming others in promoting diverse cropping and nutrition. Key drivers of seed access from CSB include education, livestock production, and participation in training programs, while larger farms and co-operative membership also play notable roles. These findings underscore the potential of seed banks to address pressing food security issues in terms of food quantity in Ethiopia. Policy recommendations emphasise enhancing Seed bank operational capacity, integrating educational initiatives, and fostering sustainable farming practices to scale the impact of these grassroots interventions and support resilient food systems.

**Keywords:** Agricultural resilience, climate adaptation, community seed banks, conflicts, food access, smallholder farmers