

From Afterthought to Forefront: Transforming Agricultural Resilience through Co-Designed Socio-Technical Innovations

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INTRODUCTION

- Most current socio-technical innovation bundling (STIB) approaches addressing climate change challenge in agri-food systems are designed in unsystematic manner. They lack deliberate efforts that combine social, technical, and technological innovations in an effective way.
- The perspectives of diverse groups, such as women, youth, or marginalized communities, are rarely considered during bundling or are treated as an afterthought, resulting in inequitable outcomes.
- While bundling of innovations is recognized as critical to enhancing agri-food resilience, there is limited systematic evidence on their effectiveness in different contexts.
- RESEARCH QUESTION:** Why socio-technical innovation bundling? What are the processes and the effects on productivity, empowerment, and resilience

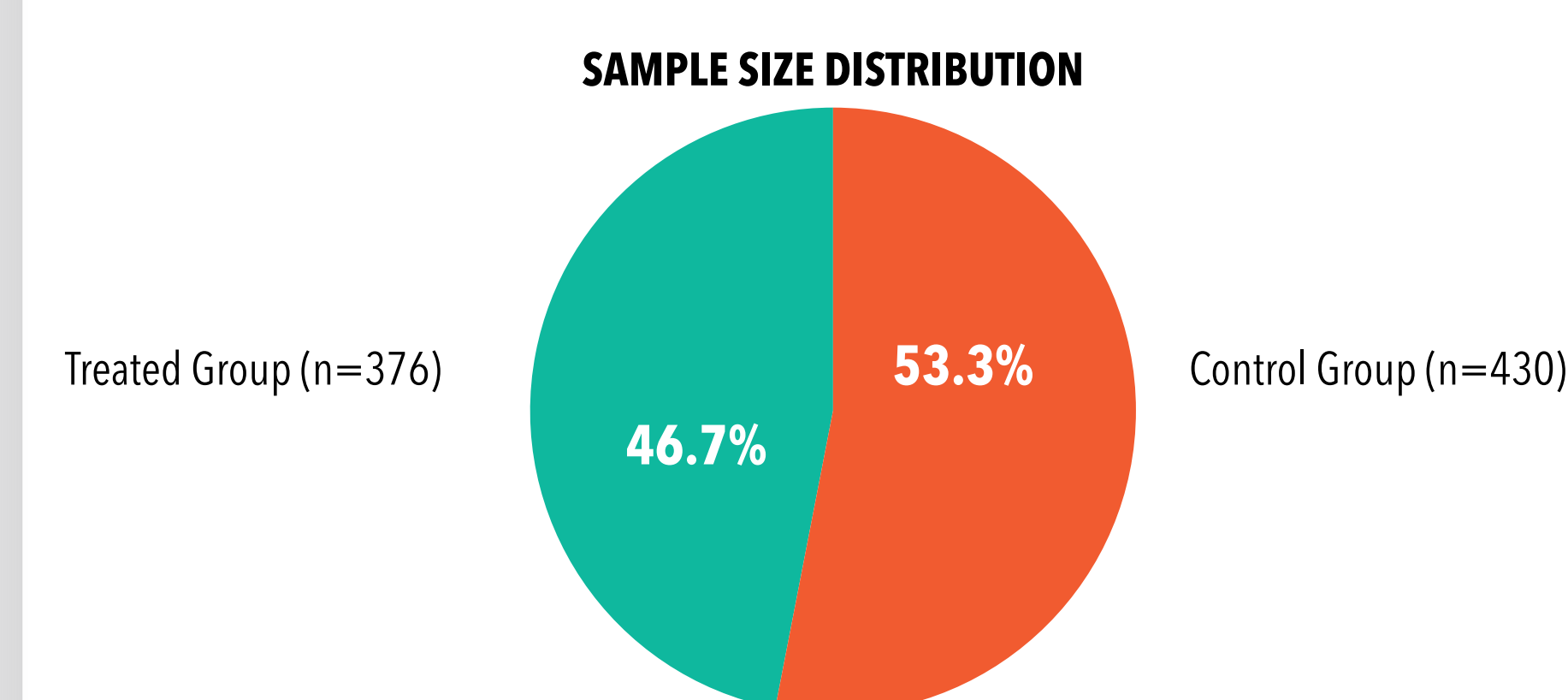
HIGHLIGHTS

- Co-designed socio-technical innovation bundles enhance farmers' climate resilience capacity.
- Users of innovation bundles achieve higher productivity during prolonged droughts.
- Community involvement in designing agricultural solutions is key to building resilience.



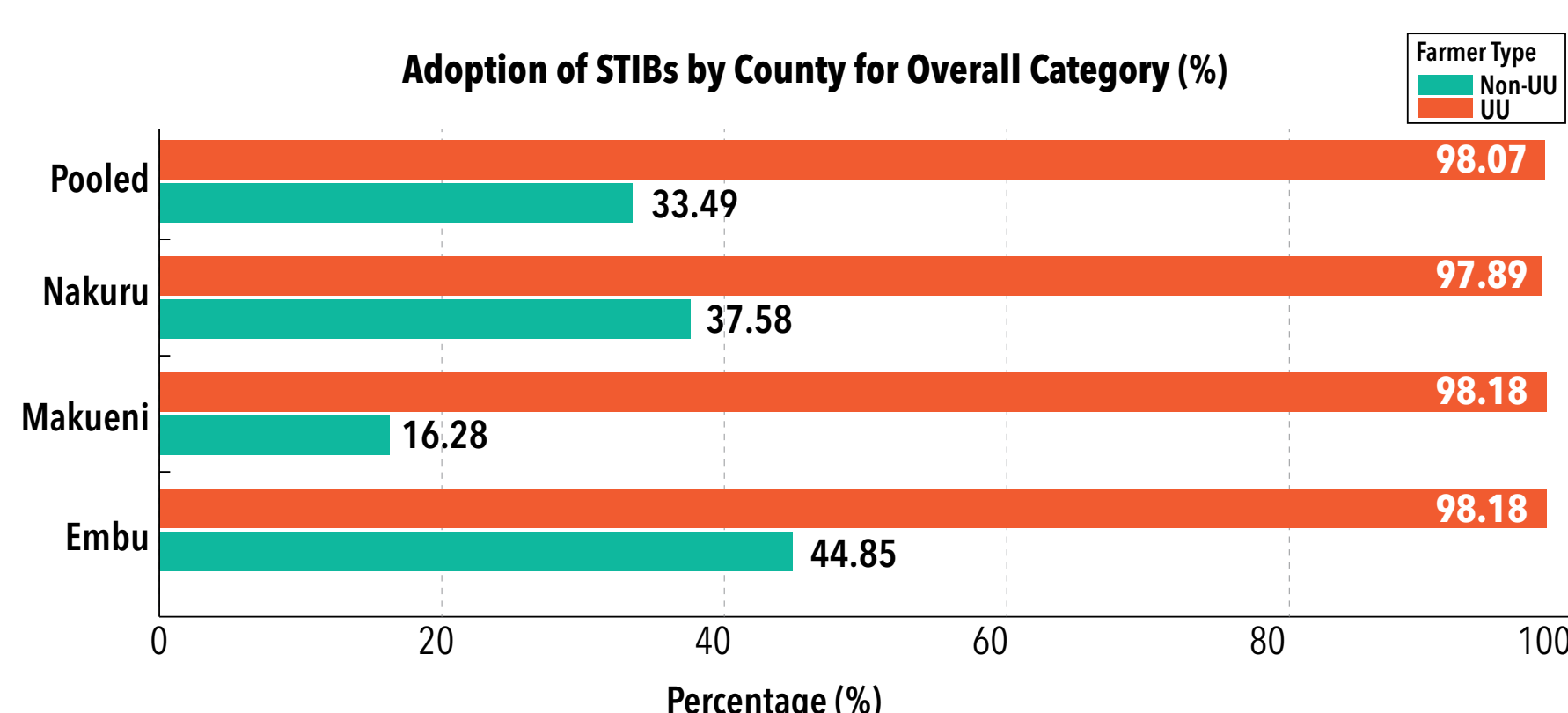
METHODS

- Field study – October- November 2023 in three counties in Kenya.
- Quasi-experiment design (treated – participants in CGIAR HER+ and Ukama Ustawi (UU) initiatives; Control group (non-beneficiaries)) in Kenya
- Sample size (N=806)

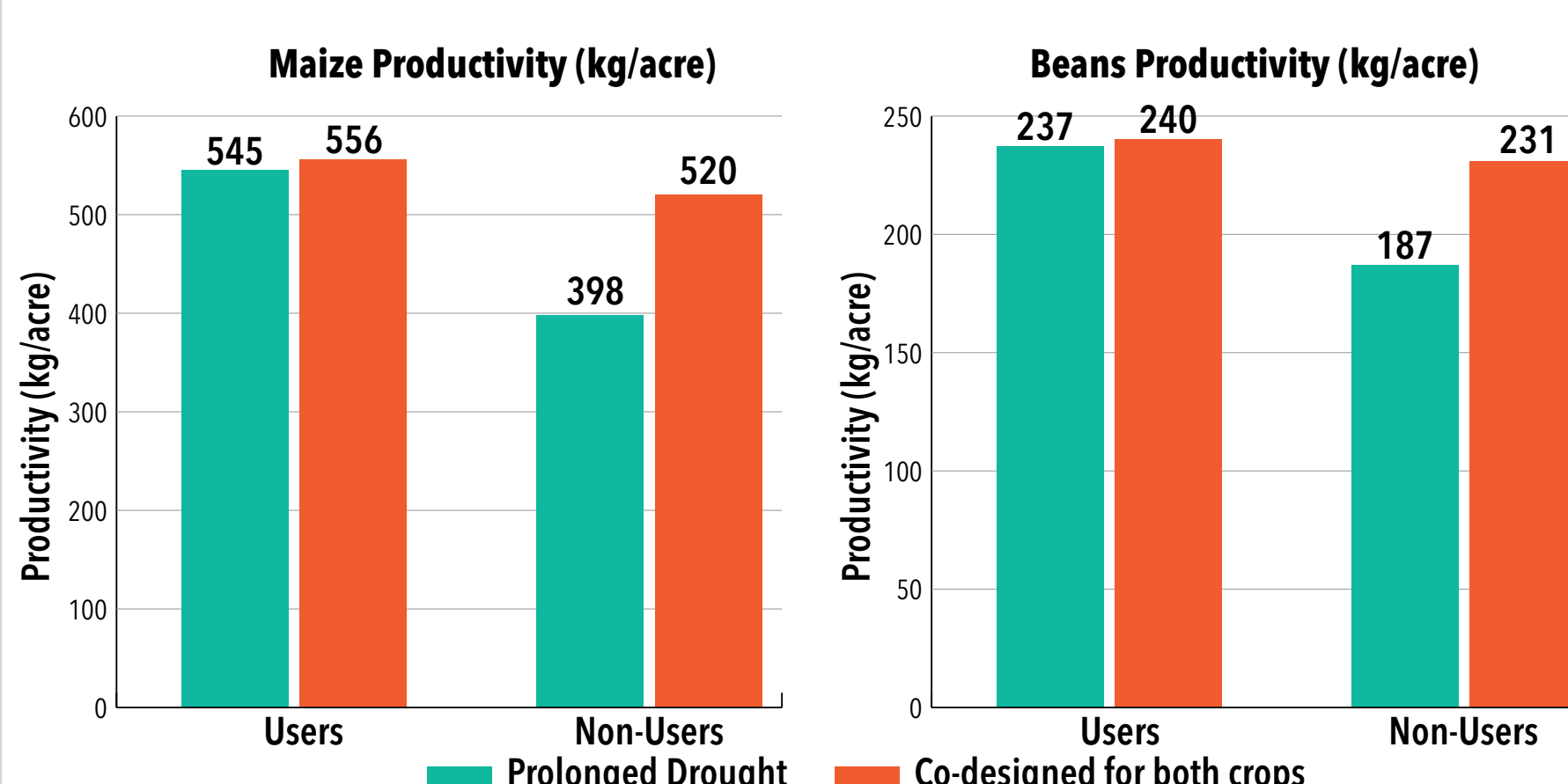


RESULTS

- Participants in research initiatives had higher STIBs adoption rates.
- No significant variations in STIBs adoption rates by region and gender
- Low adoption rates and significant differences by region and gender.



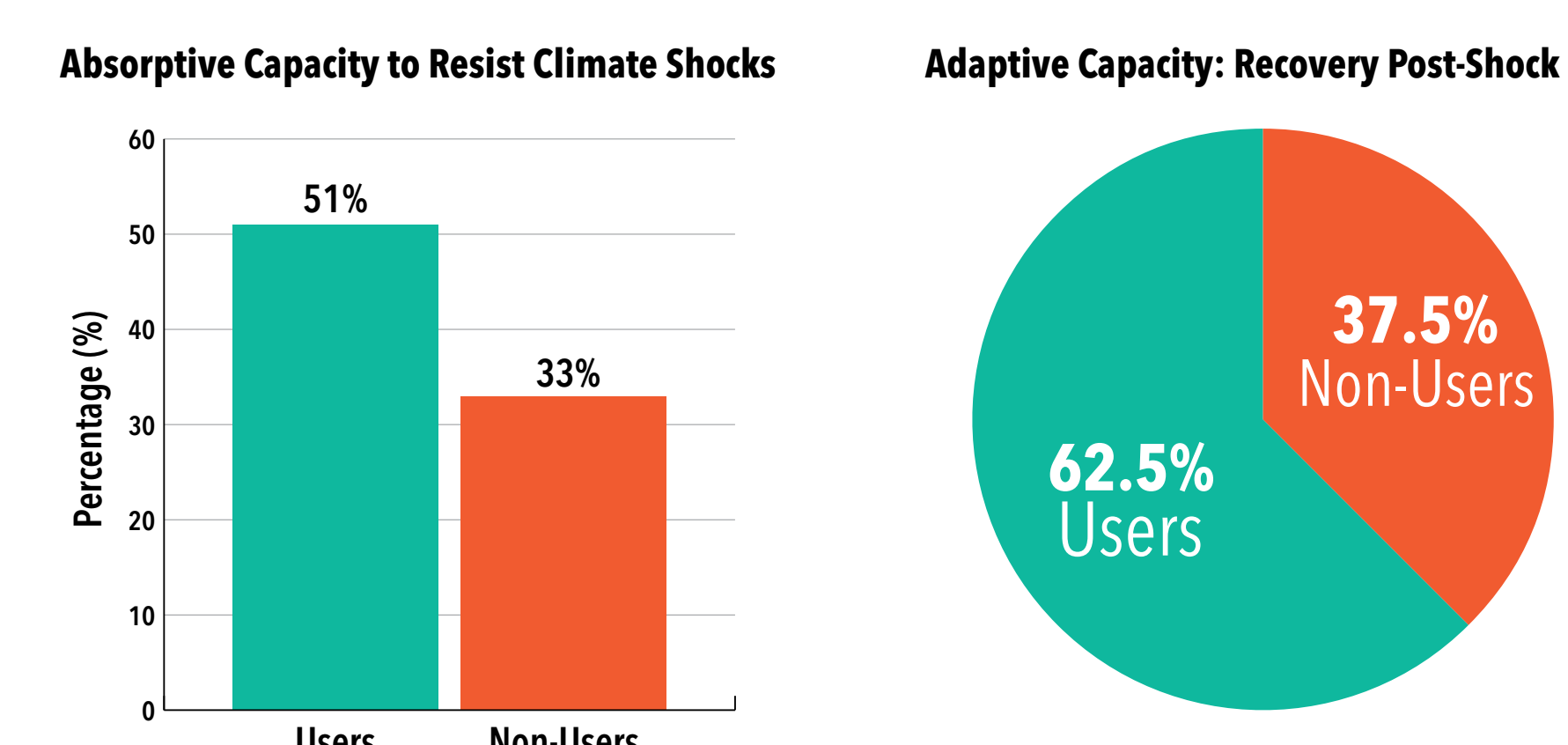
RESULTS



- Significant differences in agricultural output were reported, with users demonstrating higher productivity in maize (545 kg/acre vs. 398 kg/acre) and beans (237 kg/acre vs 187 kg/acre) when they experienced prolonged droughts.

RESULTS

- 51% of STIBs users vs. to 33% of non-users had moderate to very high absorptive capacity.
- STIB users had higher adaptive capacity than non-users. 15% of users and 9% recovering speedily (within a month) post-shock.



CONCLUSION

- Co-designing and integrating STIBs into agricultural programs are critical for agri-food systems transformations
- Prioritize co-designing socio-technical solutions with communities to enhance climate resilience, productivity, and livelihoods.



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