Linking agricultural adaptation strategies and food security: evidence from West Africa

S. Douxchamps, M.T. Van Wijk, S. Silvestri, A.S. Moussa, C. Quiros, N.Y.B. Ndour, S. Buah, L. Somé, M. Herrero, P. Kristjanson, M. Ouedraogo, P.K. Thornton, P. Van Asten, R. Zougmoré, M.C. Rufino

context

- low adaptive capacity and high exposure to natural and anthropogenic threats
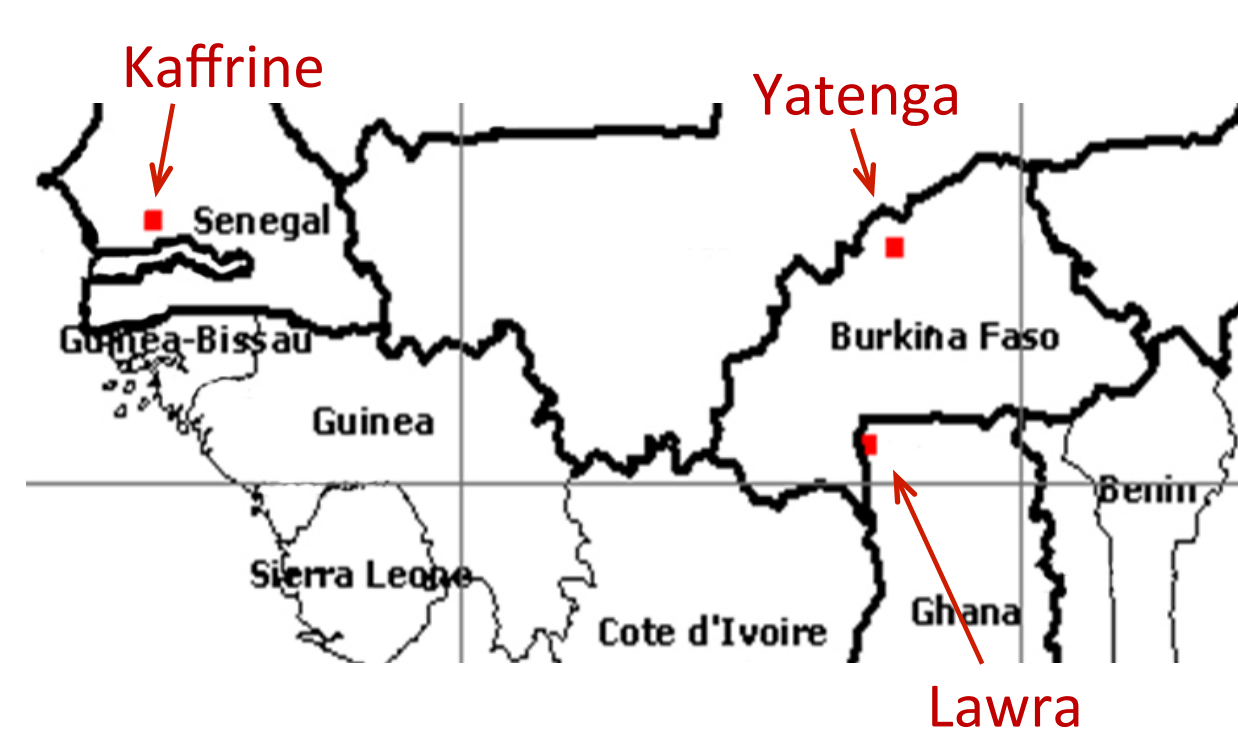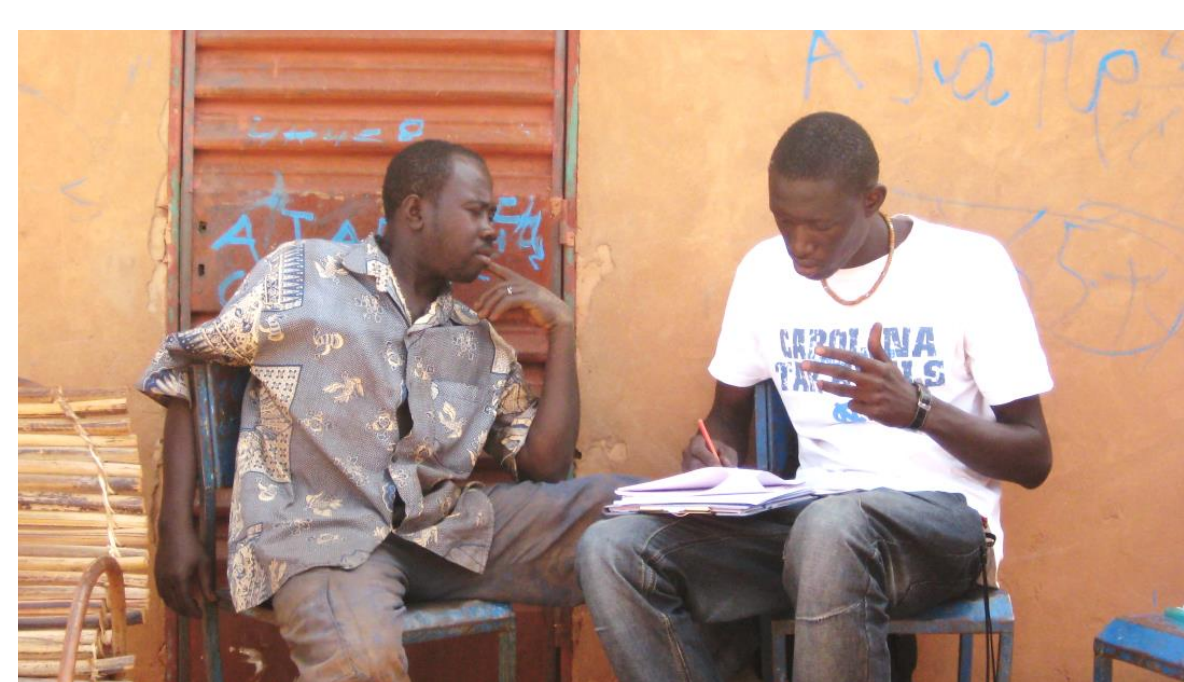- adaptation strategies are widely promoted, their impact on food security is unknown.

aims

- to define food secure and food insecure household profiles
- to assess the current levels of adoption of adaptation strategies at household level and identify the drivers of adoption
- to assess the impact of adaptation strategies on household level food security and land productivity

methods

- household survey: 200 households per site, 3 sites
- 'IMPACTlite' survey methodology and questionnaire

Kaffrine   Yatenga
Senegal   Burkina Faso
Guinea-Bissau   Benin
Guinea
Sierra Leone   Ghana
Cote d'Ivoire   Lawra

https://cgspace.cgiar.org/handle/10568/10203
http://data.ilri.org/portal/dataset?q=IMPACT+Lite

adaptation strategies

- soil and water conservation
- agroforestry
- small ruminants
- crop diversity
- dry season vegetable production
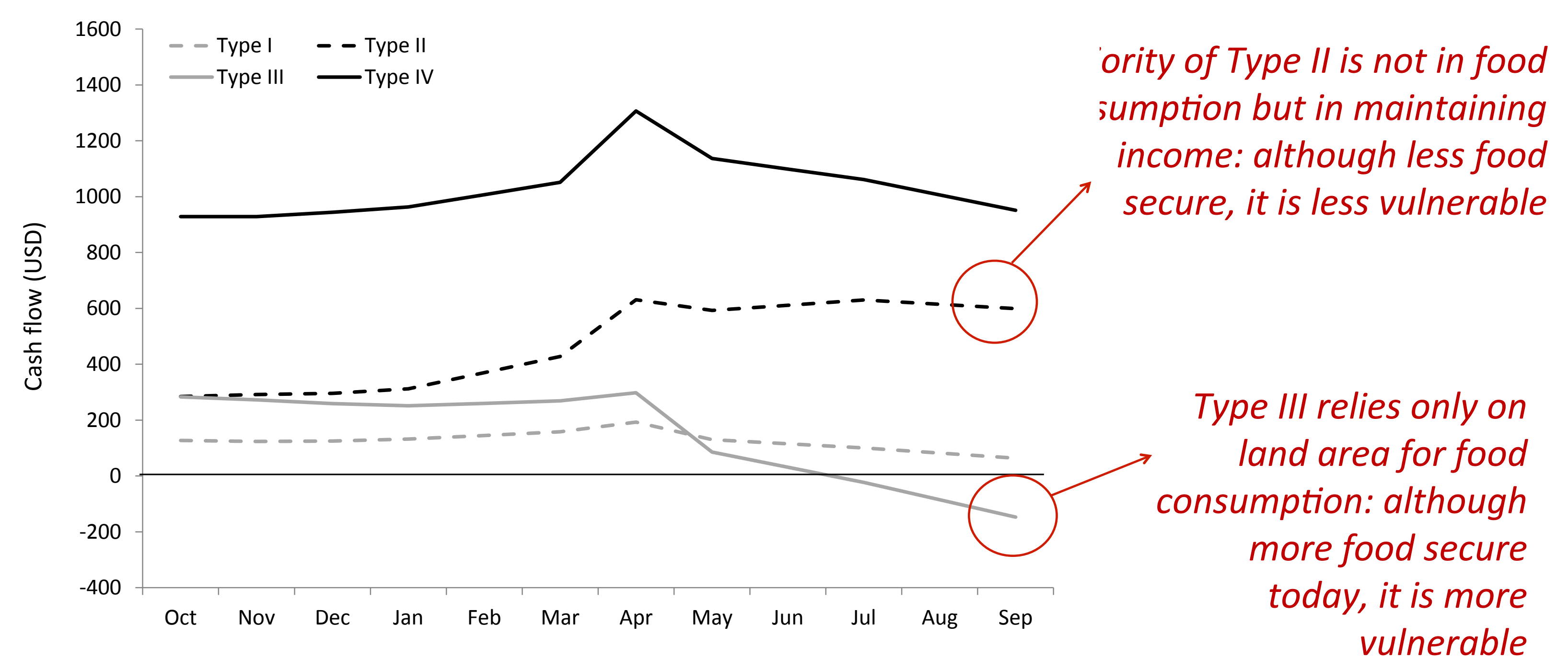- improved crop varieties
- mineral fertilizer

results

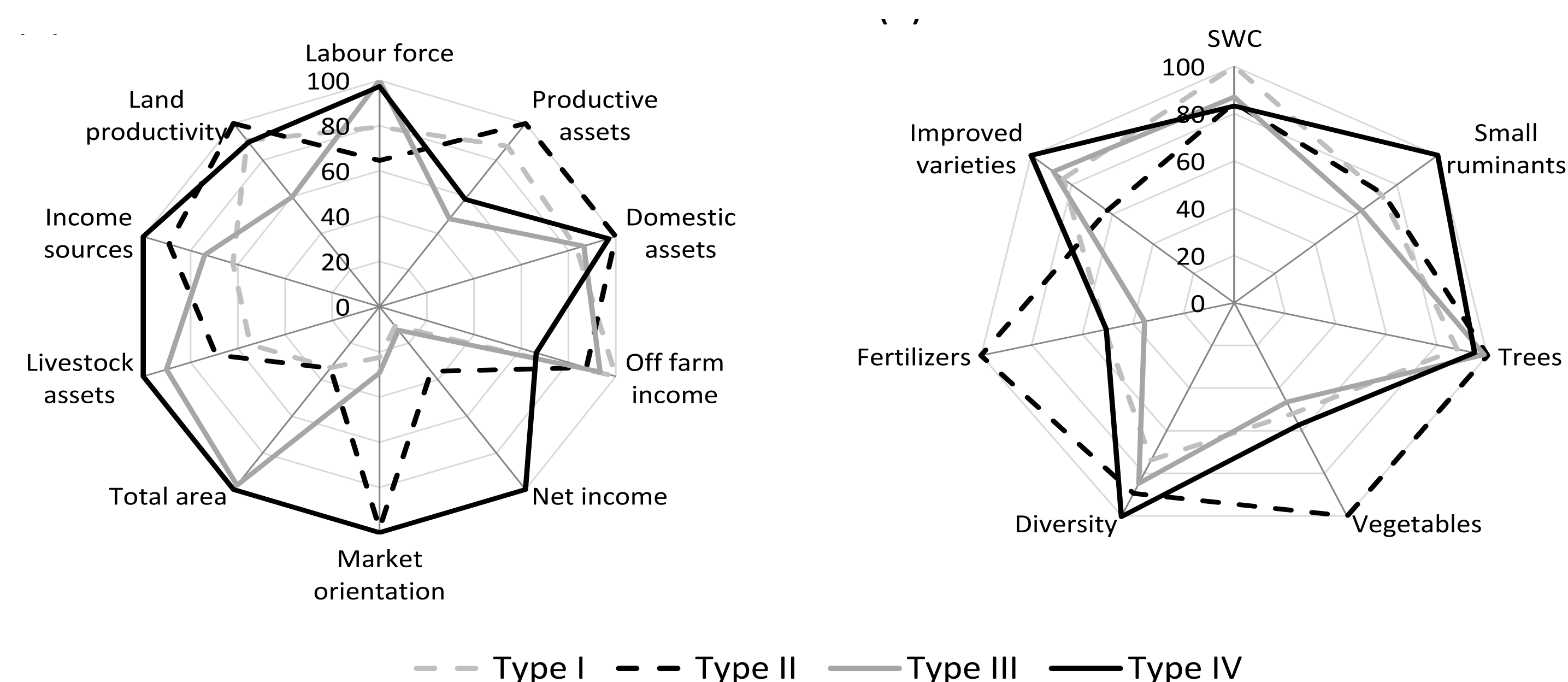- as land area per capita ↓, ↑ food security = ↑ land productivity

- four household types:

	I Subsistence	II Diversified	III Extensive	IV Intensified
Food security	26 %	34 %	55 %	60 %
Land area per cap.	small	small	large	large
Market orientation	low	high	low	high

- contrasting coping strategies for contrasting types:

...ority of Type II is not in food ...sumption but in maintaining income: although less food secure, it is less vulnerable

Type III relies only on land area for food consumption: although more food secure today, it is more vulnerable

- characteristics and intensity of practice of adaptation strategies:

- adoption of adaptation strategies can improve the food security status of some household types, but not all:

Type II and IV meet their food needs by increasing their intensity of practice

even when doubling their practices, Type I and III cannot become food secure
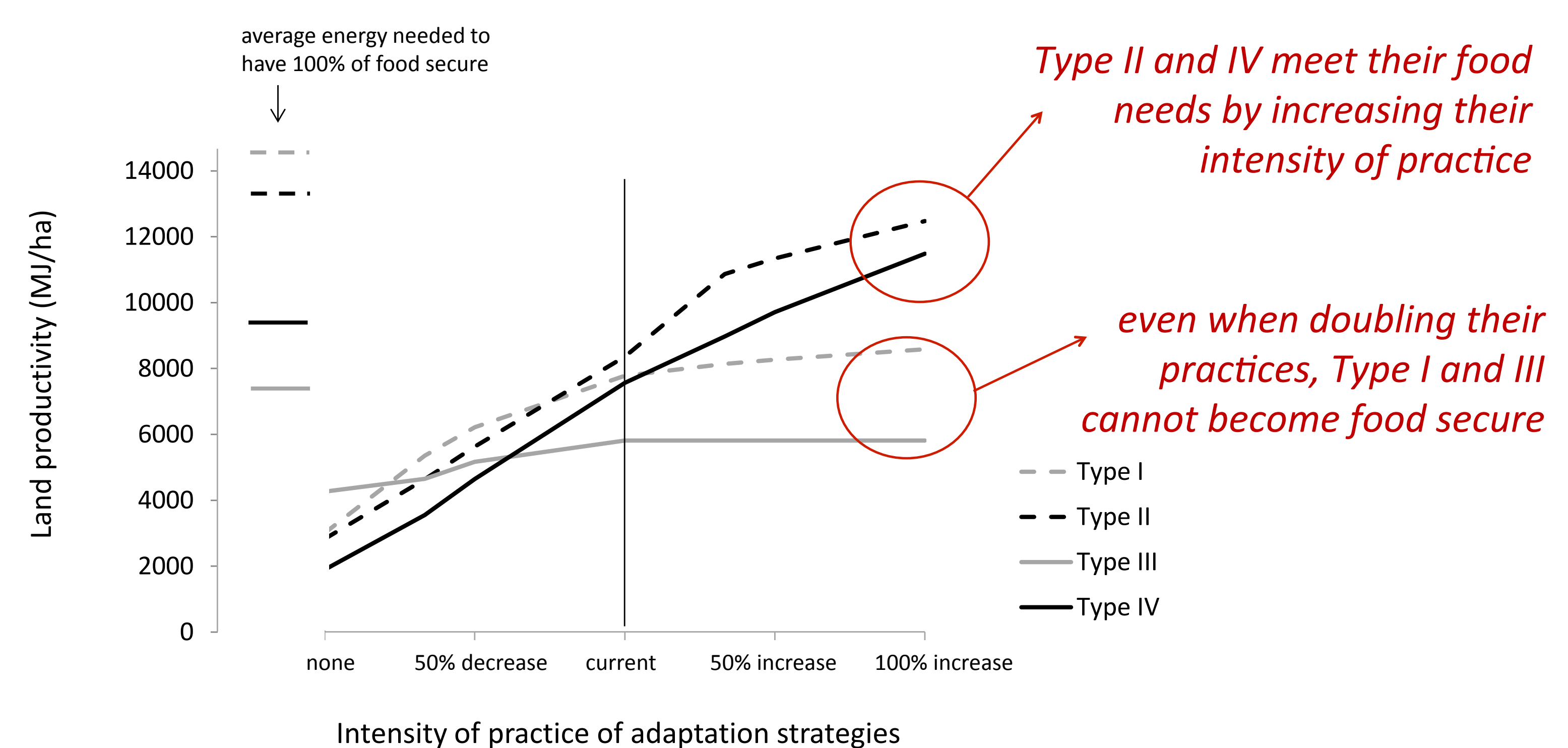
conclusions

- no one-size-fits-all solutions: different farm types = different 'climate-smart' adaptation strategies
- farm typology = a good entry point to analyse which practices should be targeted to which type of farmers
- quantification of the effect of adaptation strategies on household food security → scale out practices to reduce vulnerability