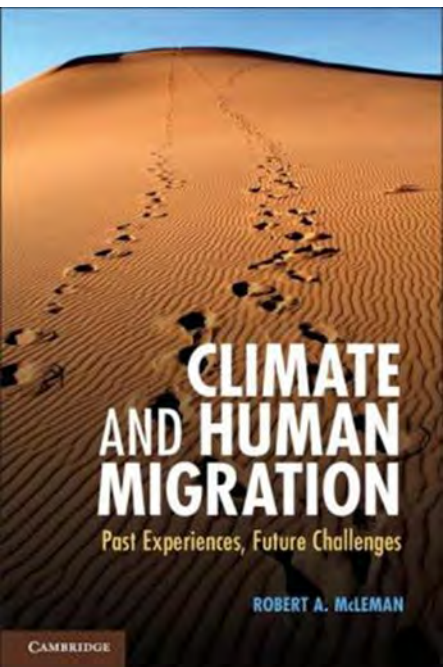
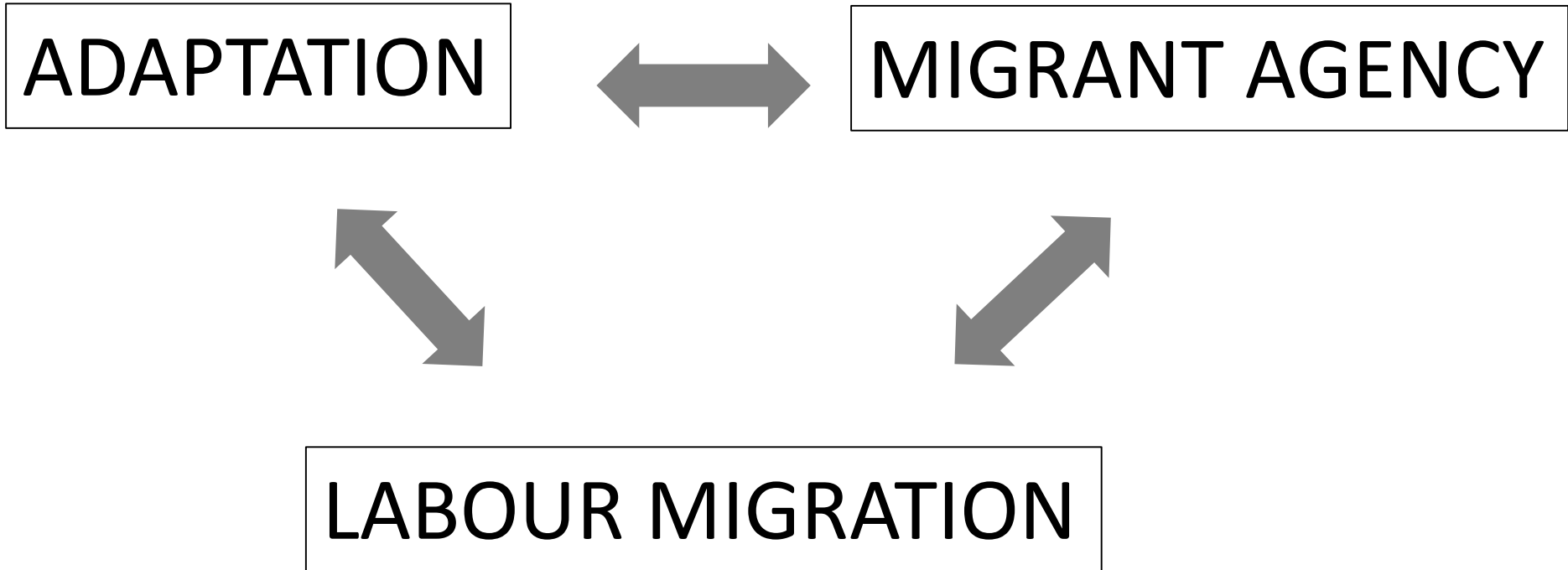


# UN DESA meeting Climate, migration, conflict & the SDGs

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# Thresholds

Popul Environ  
<https://doi.org/10.1007/s11111-017-0290-2>



CrossMark

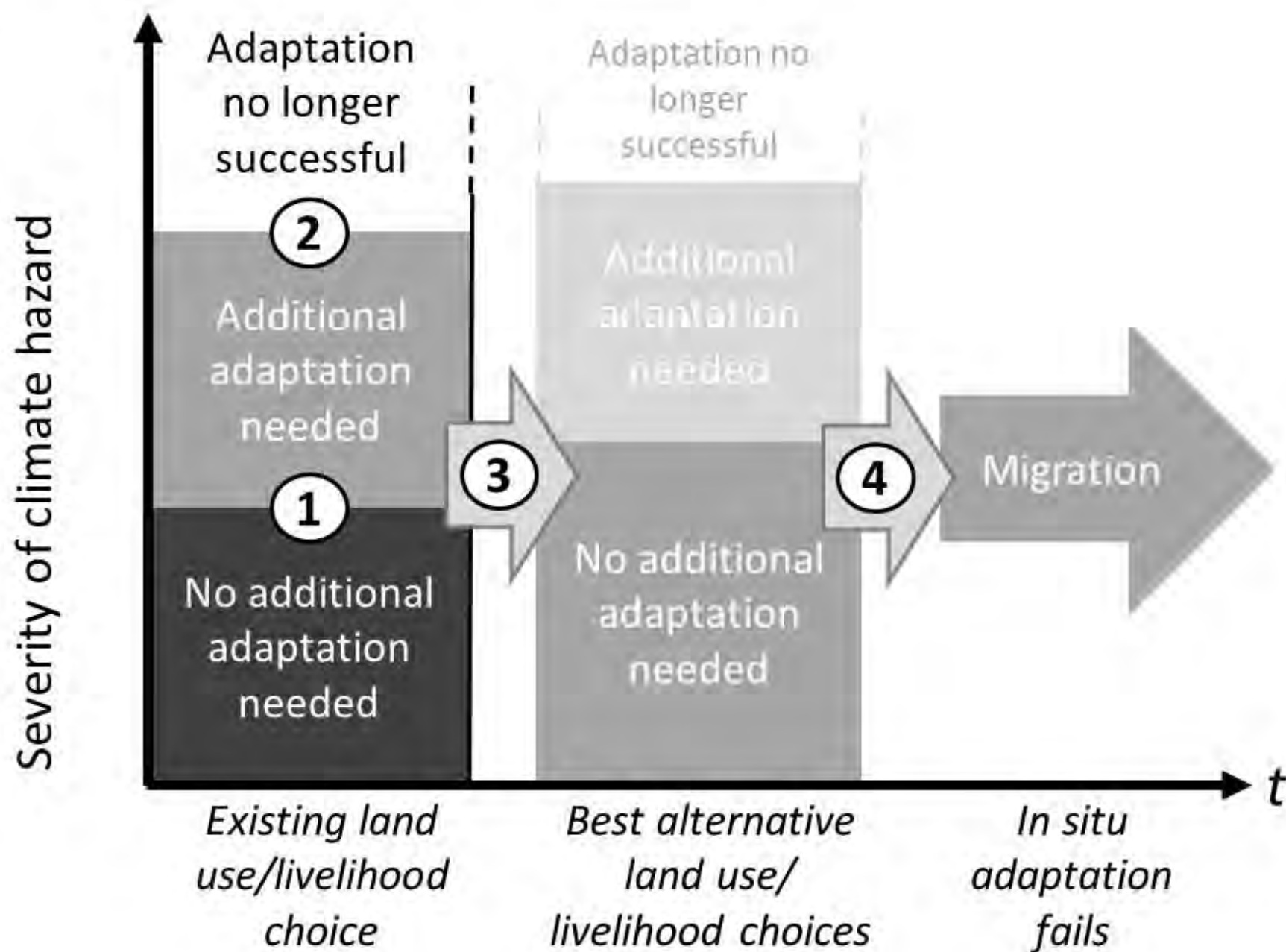
ORIGINAL PAPER

## Thresholds in climate migration

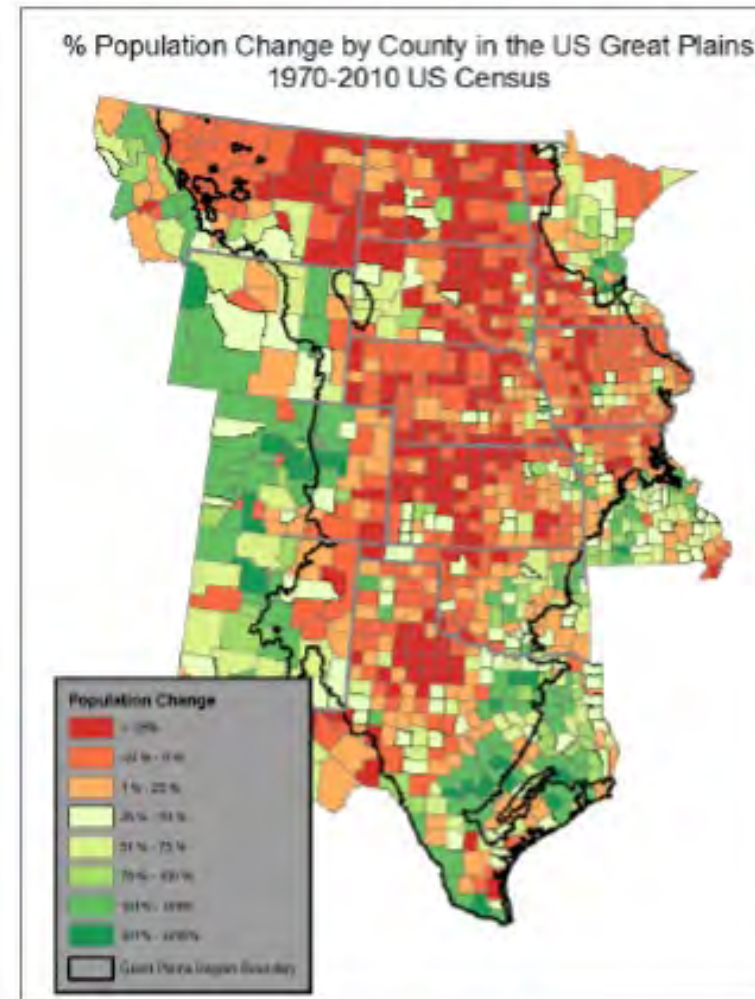
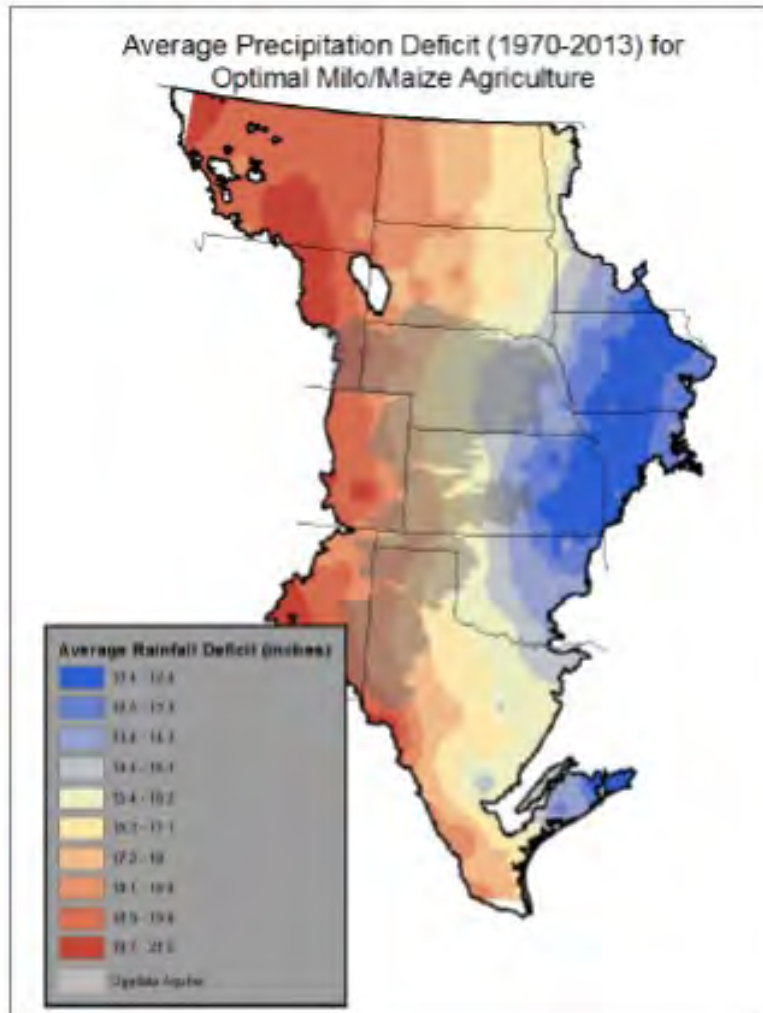
Robert McLeman<sup>1</sup>

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**Abstract** Migration in response to climatic hazards or changes in climatic conditions can unfold in a variety of ways, ranging from barely observable, incremental changes in pre-existing migration flows to abrupt, non-linear population movements. The adoption of migration instead of in situ adaptation responses, and the high degree of variability in potential migration outcomes, in part reflects the presence of thresholds or tipping points within the processes of human-environment interaction through which climate adaptation and migration take place. This article reviews and makes linkages between existing research in climate adaptation, migration system dynamics, residential preferences, and risk perception to identify and explore the functioning and importance of thresholds. Parochial examples from the author's published research on climate adaptation and migration in rural North America are used to illustrate. Six types of thresholds in response to climate hazards are identified: (1) Adaptation becomes necessary; (2) Adaptation becomes ineffective; (3) Substantive changes in land use/livelihoods become necessary; (4) In situ adaptation fails, migration ensues; (5) Migration rates become non-linear; and (6) Migration rates cease to be non-linear. Movement across thresholds is driven by context-specific characteristics of climate



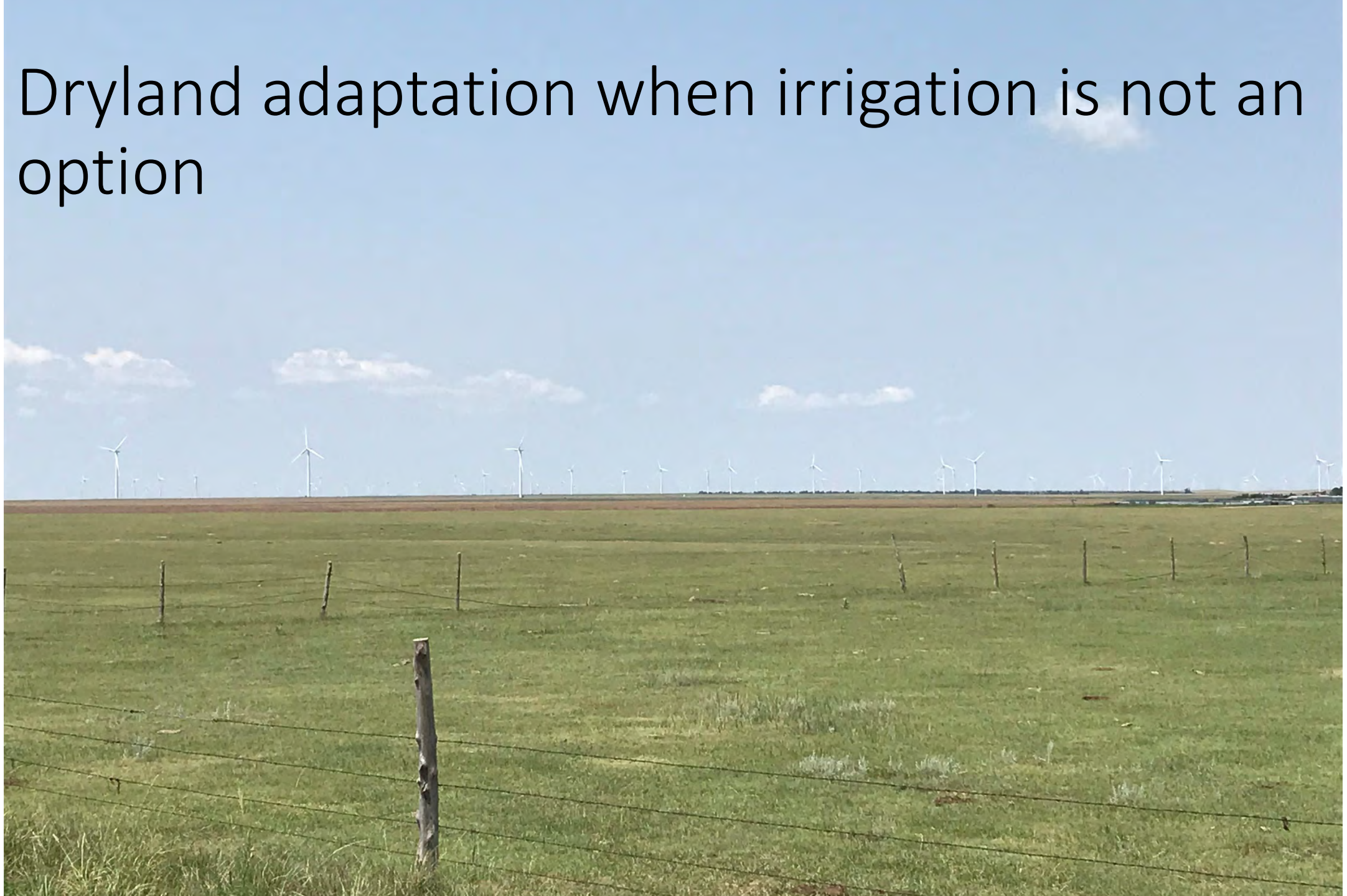
# Climate 'signal' in rural population change in western North America



# Irrigation as adaptation



# Dryland adaptation when irrigation is not an option



# Dryland adaptation when irrigation is not an option



# Rural depopulation impacts



# Rural depopulation impacts



# Hardening of borders



# So what for SDG?

- Labour migration = very useful form of household adaptation: can we facilitate? 'Migration with dignity'
- Harder borders = 1 less adaptation option
- Can we identify adaptation thresholds? Context specific (NAPAs?)