



Integrating Diverse Epistemologies

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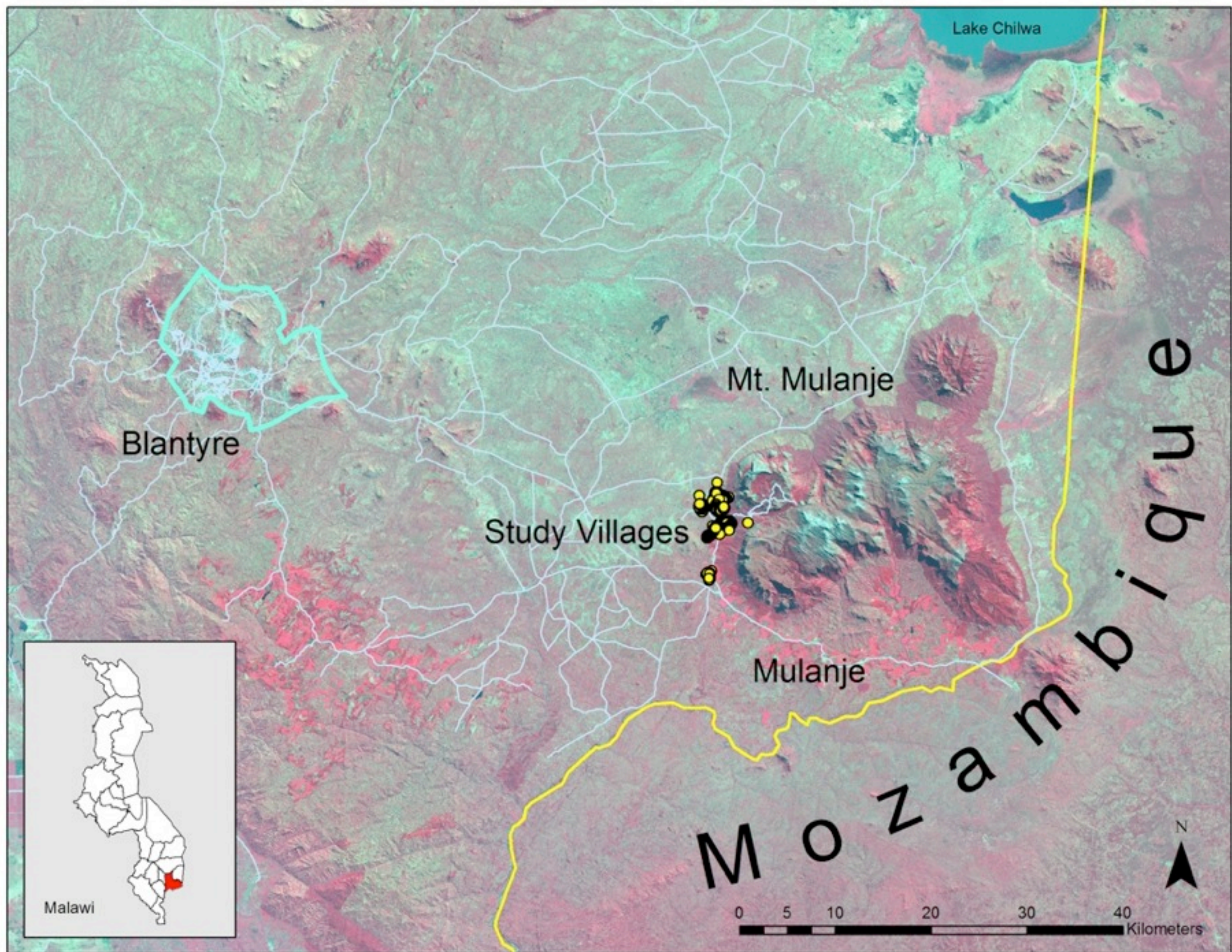


Premise of the Study

- Purpose: To examine how people in a predominantly subsistence, rain-fed agrarian society might adapt to climate change
- Location: Southern Malawi
- Problem: Understanding adaptation is not as easy as simply asking “what will you do if the climate changes”
- Methods: Development of climate scenarios, household interviews, mapping, GPS, qualitative surveys, language testing

Study Design

- We have undertaken extensive work in this area since 2008 to understand livelihoods and land use patterns.
- This part of the research focuses on the impact of anticipated climate changes.
- We surveyed 200 households with a quantitative instrument.
- Conducted in-depth focus group discussions.



Methods: Backcasting

- We developed a climate profile for the past 20 years.
- We then asked respondents “how did you cope with the weather in 1992” (a dry year) and 2001 (a wet year).
- Respondents were next asked “what would you do if 1992 or 2001 happened more frequently in the future”?
- We also asked about the intervening factors.

October through March Rainfall (mm/day)

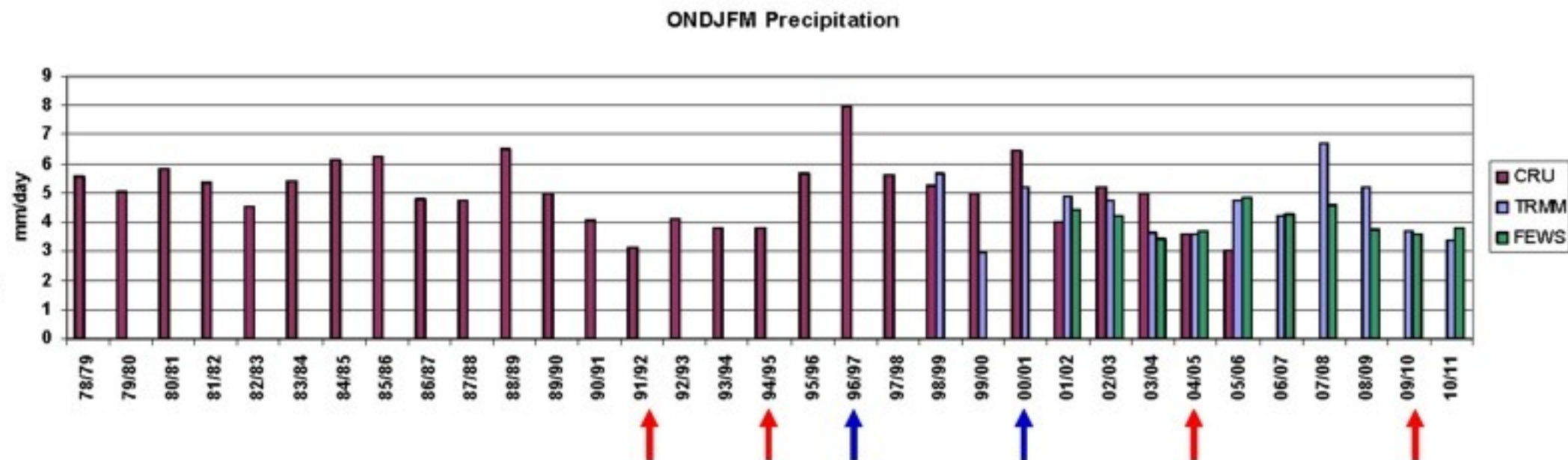
Ned consulted these data as well as general literature on impacts to identify wet (blue arrows) and dry (red arrows) years that brought negative impacts.

Means

CRU: 5.03 mm/day

TRMM: 4.51 mm/day

NOAA FEWS: 4.06 mm/day



1991-1992 drought was a 25 year drought event

2001 famine associated with flooding in Feb/Mar 2001

1997 floods – during mid to late February

Flooding – occurs about every other year

Droughts – less frequent

Preliminary Findings

- Households will draw upon previous coping mechanisms in the future.
- For wet years (no flooding), 60.7% of households indicated that they would diversify out of maize to take advantage of the additional rainfall.
- Only 33% of respondents said there was enough land to physically expand production.
- For overly wet years (with flooding), households reported that they would replant and seek *ganyu* labor (labor exchanges) or look for wage employment.

Preliminary Findings

- For overly dry years, households indicated they would attempt to irrigate, seek off-farm employment, *ganyu* labor and sell firewood/charcoal.
- Were overly dry years to persist, the majority would not migrate out of the area, either intra-rural migration (no= 60.2%) or to major urban areas (no = 55.2%).
- This contradicts the IPCC for sthn. Africa.

Challenges

- This was a pilot study...we weren't able to pursue specific topics at the level of depth we would have wished.
- Translating both the language and meaning is fraught with difficulties.
- Many of our direct questions did not have the same meaning nor was there a way to directly query specific concepts about the future.
- The range of responses is limited, which limits statistical tests for relationships (lack of variation).