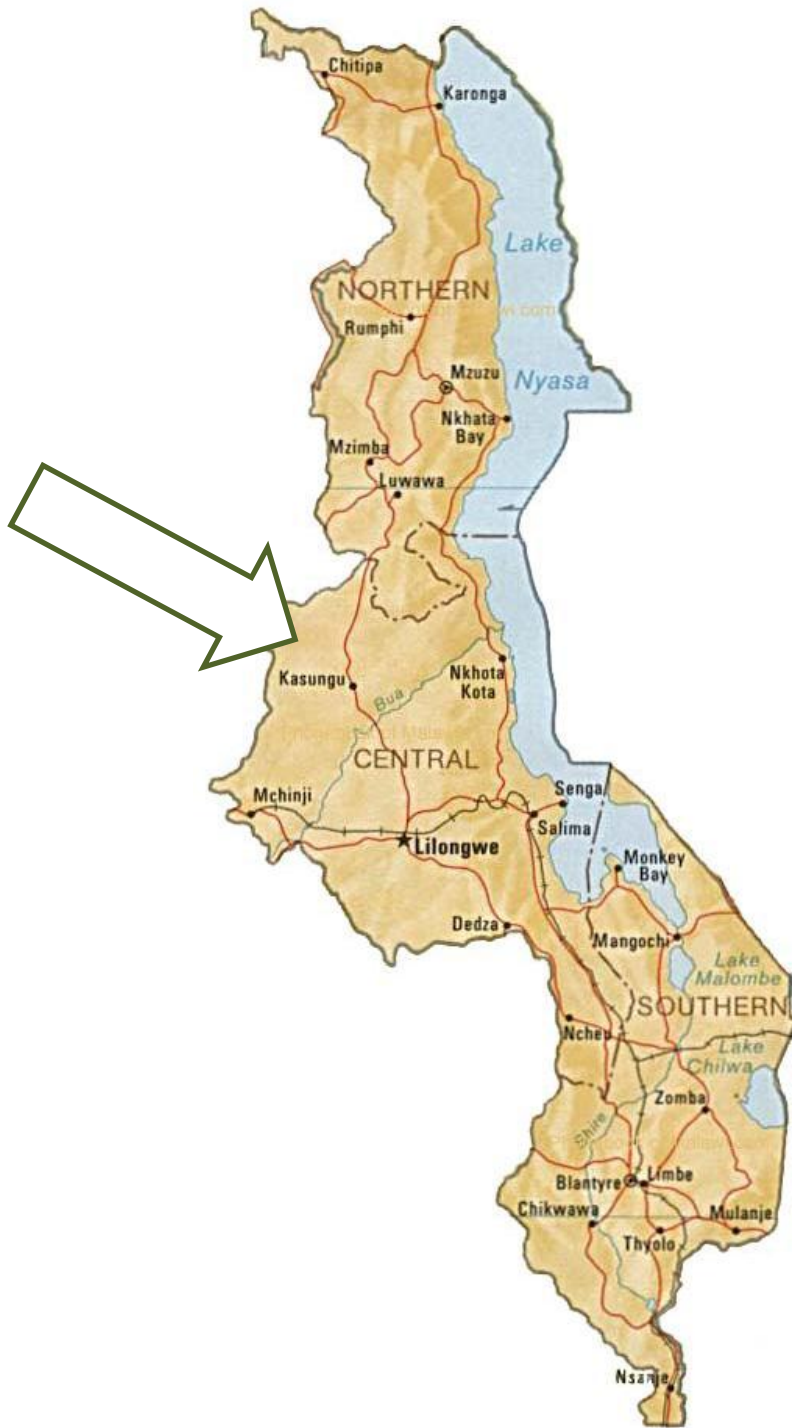


Assessing the Farming Landscape for Agroecology Education and Climate Change Adaptation in Rural Malawi



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Bishop's University
NESTVAL 2016
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MALAWI:

The “warm heart of Africa”

- Poorest country in the world
- Population = 16 Million
- 1/100 size of Canada
- GDP per capita = \$300/year
- Low life expectancy
- High infant mortality
- HIV/AIDS
- Malaria

October 16th is World Food Day and this year's theme is **"Climate is changing. Food and agriculture must too,"** ...farmers are facing higher temperatures, increased frequency of extreme weather events, and changing rainfall patterns. Climate change is expected to lead to declining crop productivity and threats to food security. Maize productivity is projected to decrease by 3.8 percent, based on global climate model predictions. **Adapting to these changes by investing in and adopting innovative farming methods will be critical to farmers' livelihoods and their ability to meet the needs of growing communities,** according to the U.N. Food and Agriculture Organization (FAO).

Magnifico
Marcello

Dr. B



Dry, degraded landscape

Transformative Praxis Malawi

A Project of Transformative Praxis

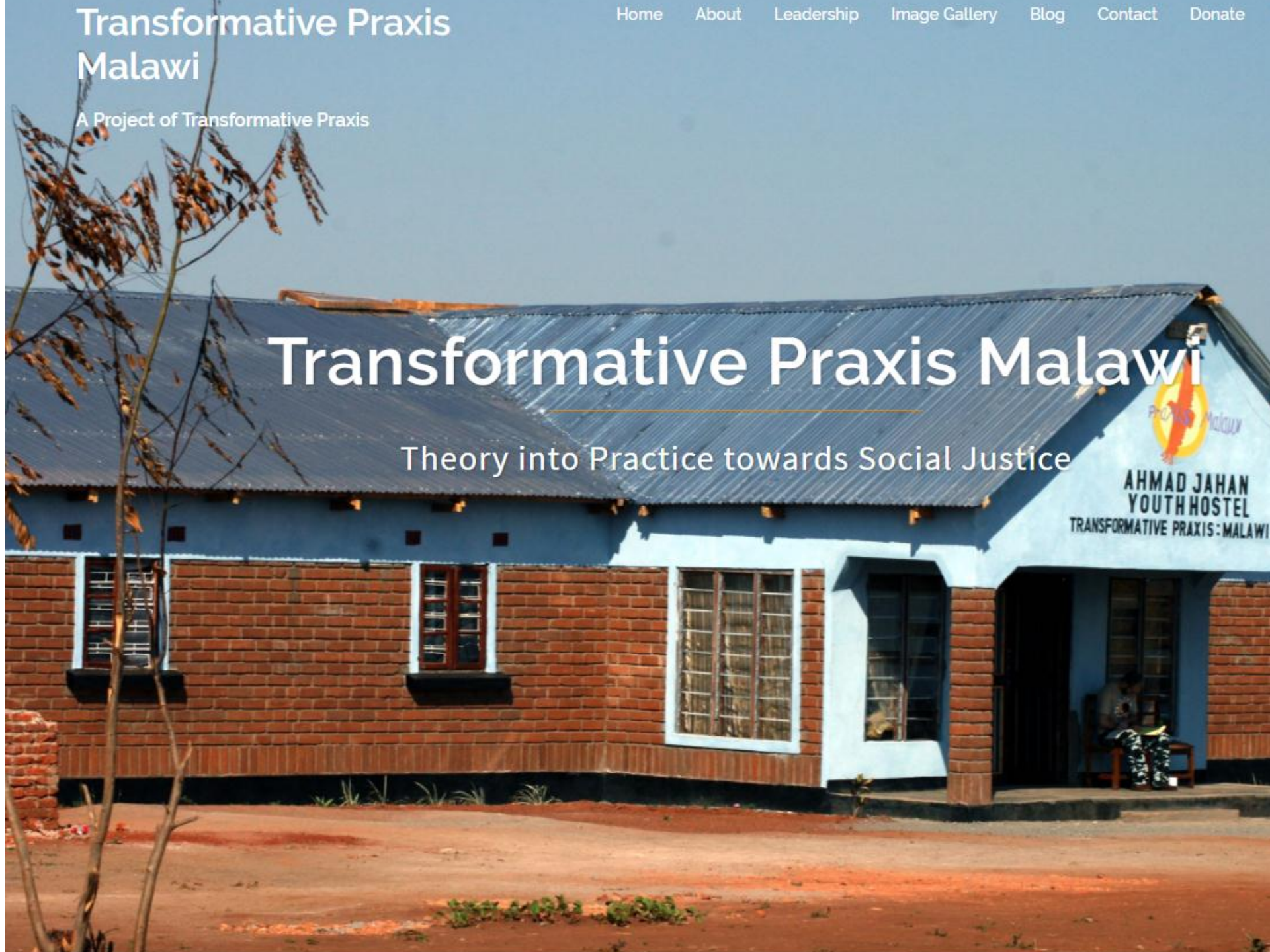
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Transformative Praxis Malawi

Theory into Practice towards Social Justice



**AHMAD JAHAN
YOUTH HOSTEL**
TRANSFORMATIVE PRAXIS: MALAWI



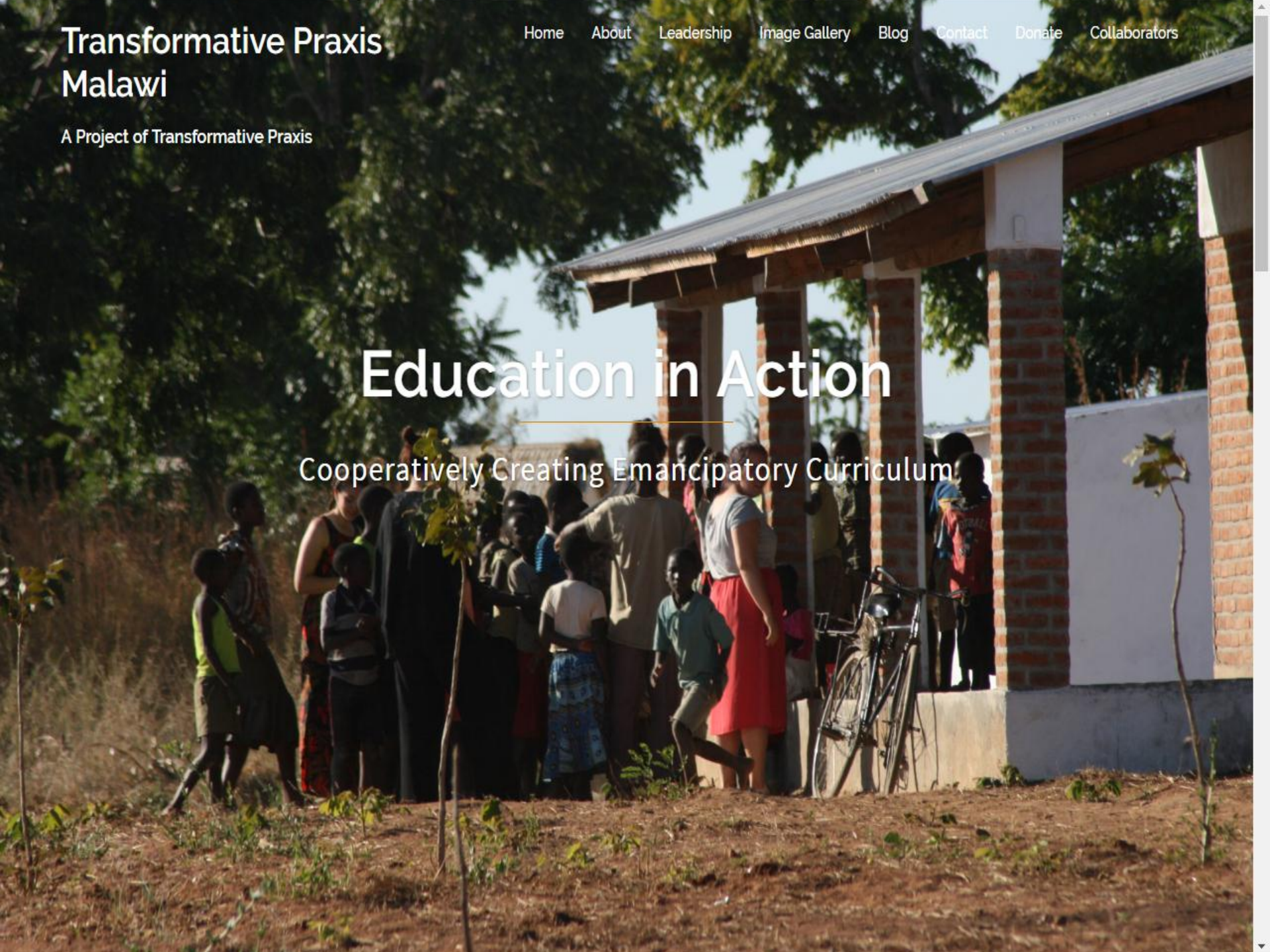
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A Project of Transformative Praxis

Education in Action

Cooperatively Creating Emancipatory Curriculum



Step 1: Mapping the boundaries of the 90-hectare property

TMP campus

Maize crops



Bwanali village



Chief Bwanali
and Marcello
determining the
location of the
boundary, on a
cold June day!



Step 2: Rapid assessment of farming landscape for vulnerability to drought

Farming plot



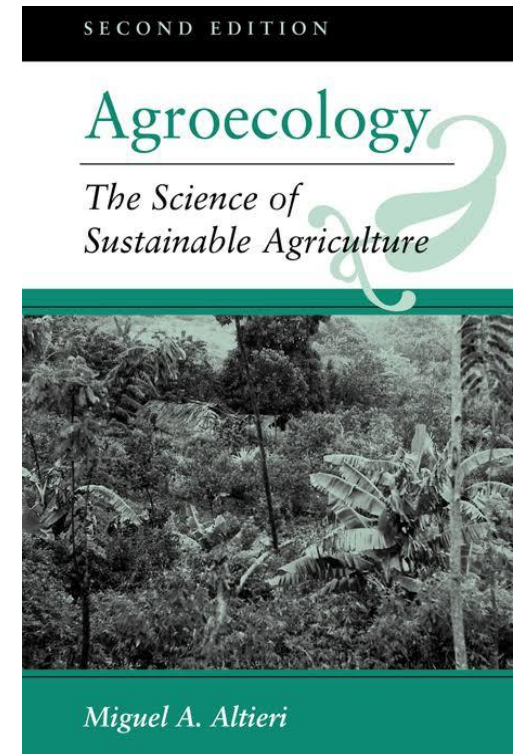
Step 3: Interviews with key community leaders – response capacity

TOOLKIT FOR THE DESIGN, MANAGEMENT AND ASSESSMENT OF RESILIENT FARMING SYSTEMS

Developed by **Miguel Altieri** and his team (Univ of California, Berkeley), applied in developing countries

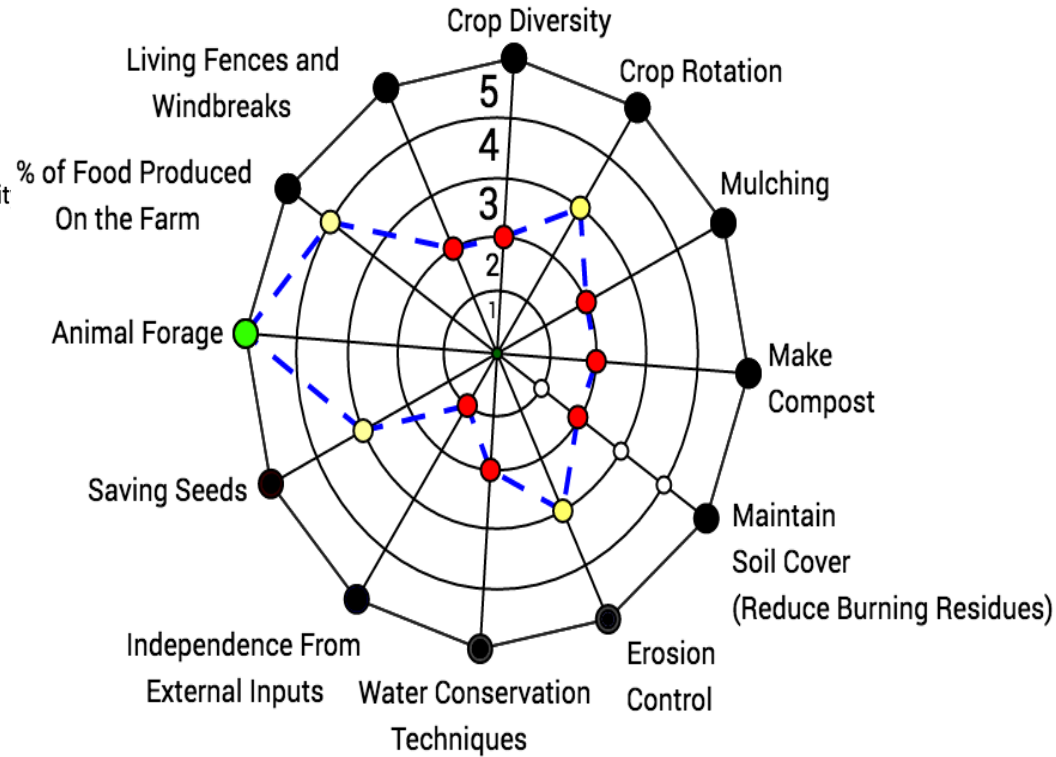
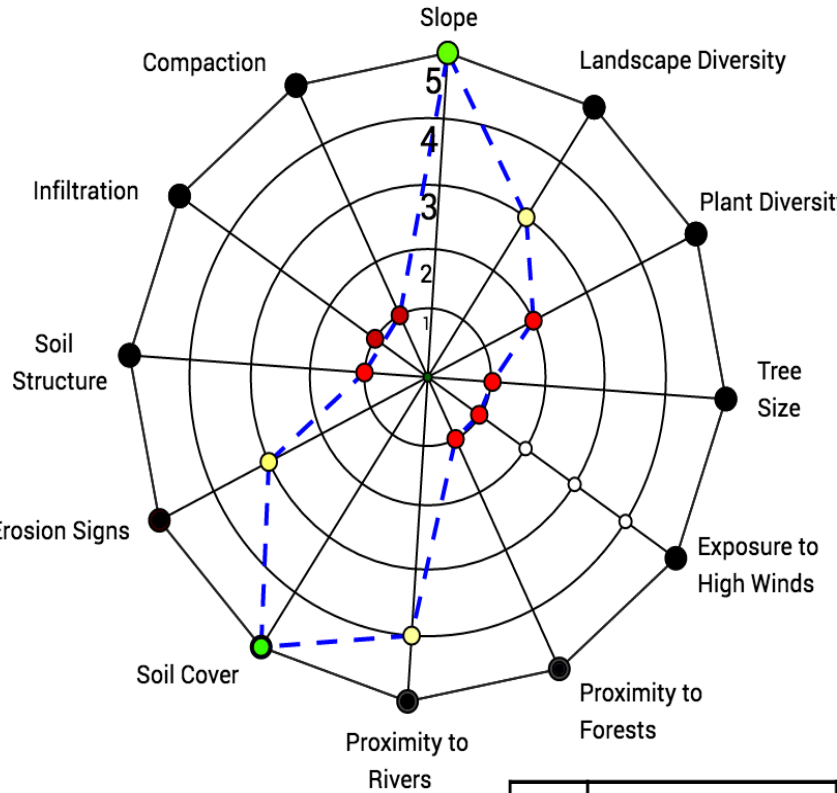
Toolkit is used to:

- Conduct **rapid agroecological assessment** of farms and their levels of vulnerability
- Initiate a **process of conversion** to enhance response capacity and improve resiliency
- **Monitor** the trajectory of the farms under conversion after climatic events such as rains storms and droughts



Landscape Resilience and Vulnerability to Climate Change

Capacity of Local Farmers to Adapt to Climate Change (especially drought)



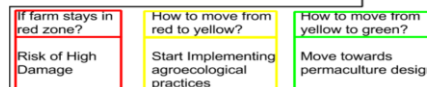
Colour	Situation	Action	Numerical Value
Green	High resilience or Low vulnerability	Vigilance: maintain the level of management/conservation	5
Yellow	Medium resilience or vulnerability	Caution: Must do something to improve current practices	3-4
Red	Low resilience or High vulnerability	Risk: Transform practices to improve farm conditions	1-2

Source:
Based on:
1. Visual assessment of the Transformative Praxis Malawi (TPM) landscape (90 hectares) and surrounding farming plots

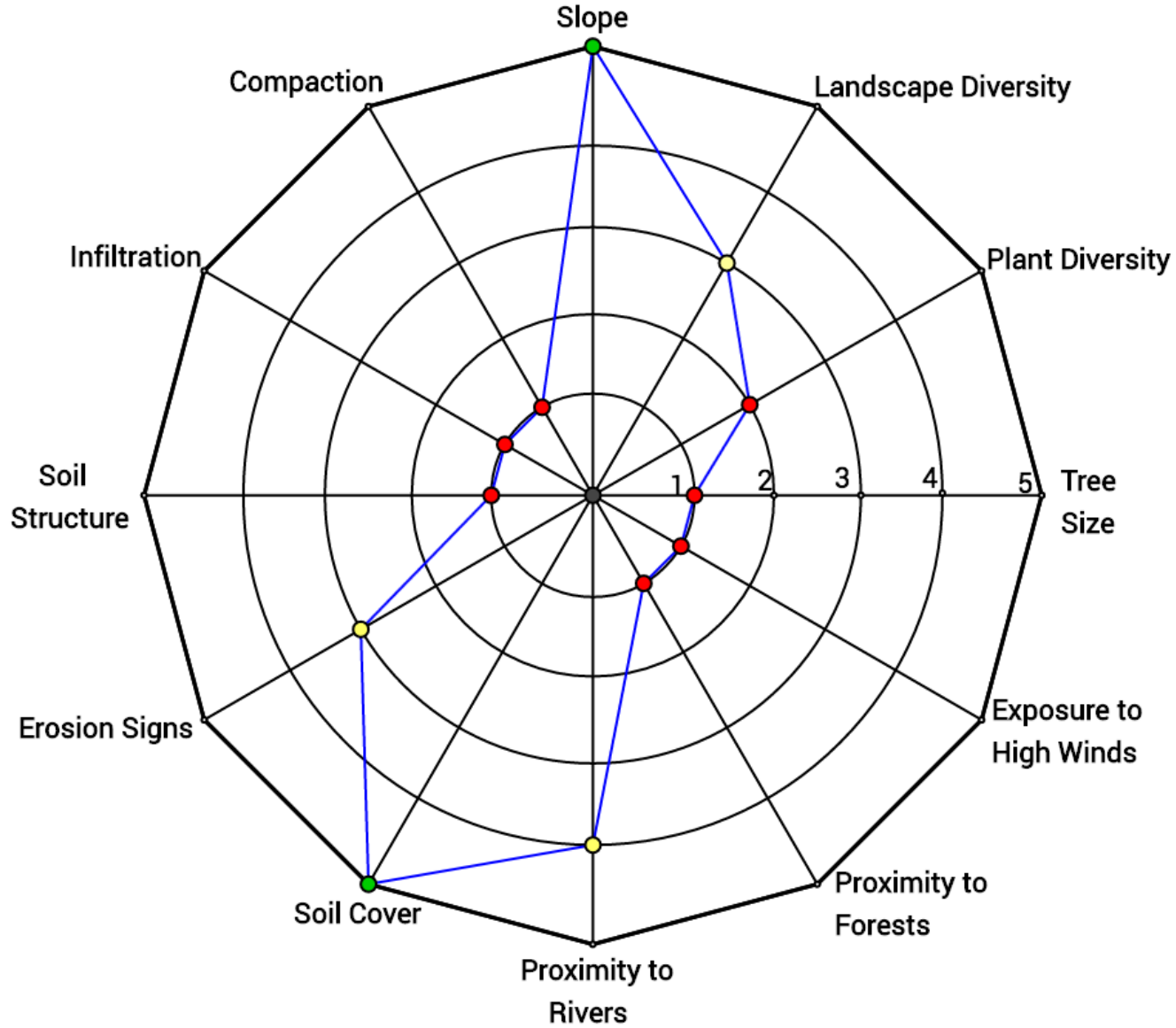
2. Interviews with selected community leaders

Performed by: Dr. Darren Bardati and Marcello Glo (research assistant) on June 13 to 17, 2016.

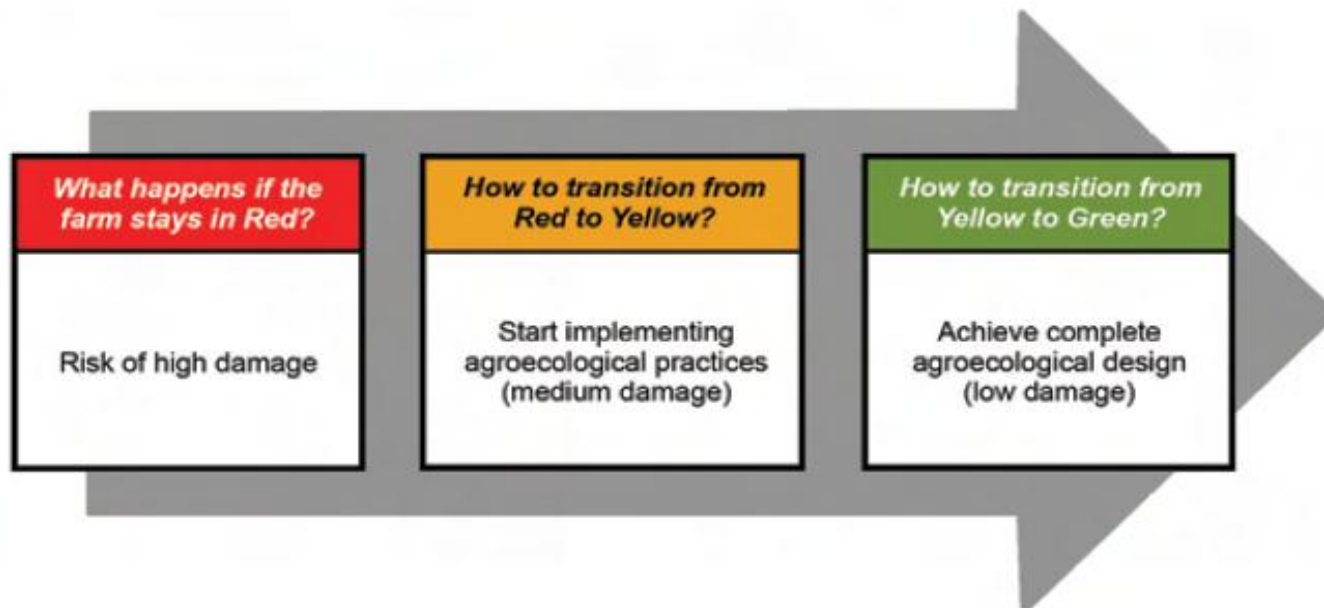
Adapted from: Altieri, M. et al. (2015). "Didactic toolkit for the design, management and assessment of resilient farming systems". Third World Network, Sociedad Científica Latinoamericana de Agroecología (SOCLA). Berkeley, California.



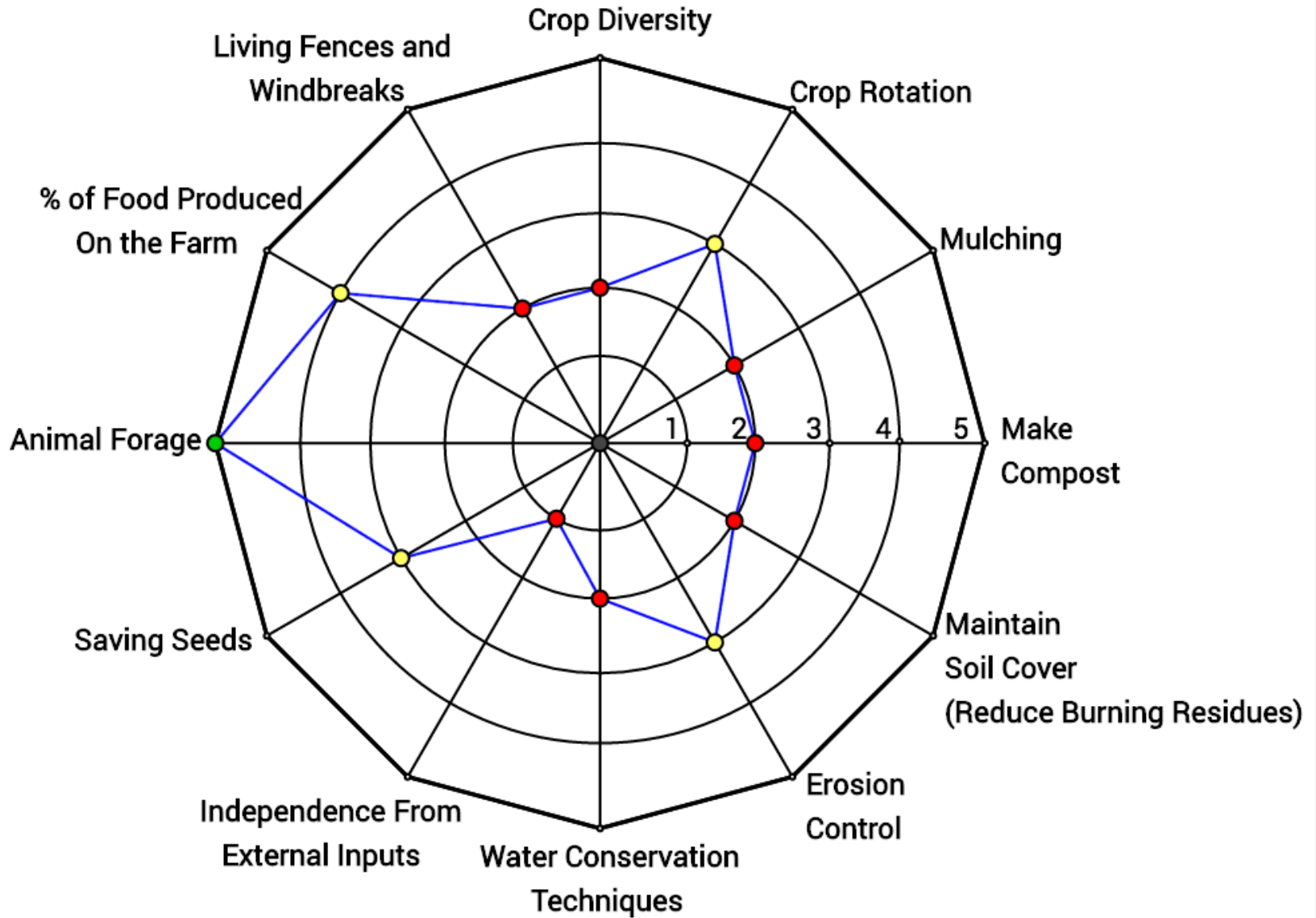
Landscape Resilience and Vulnerability to Drought



Color	Situation	Action	Numerical Value
Green	Low vulnerability or high resilience	Maintain the level of management / conservation (Vigilance)	5
Yellow	Medium vulnerability	Must do something to improve (Caution)	3 – 4
Red	High vulnerability	Must do much to improve (Risk)	1 – 2



Capacity of Local Farmers to Adapt to Drought



Interviews: Key Community Leaders

- *“in past 10 years, the changes have been drastic”*
- *“in the past, we didn’t need fertilizers, soils used to be richer”*
- *“it’s hard for Malawians to adapt because of our dependency on Maize and the fertilizers”*
- *“I used to play in the river in June, now the river is dry”*

Where the river
use to flow



USING THE RESULTS

by Malawian collaborators

- To communicate how to improve land management practices
- To build curriculum – raising literacy, breaking the cycle of dependency and poverty



- To build adaptive capacity & local empowerment over food/farming choices

Thank you!



Acknowledgement: Funding for a portion of the expenses of this research were provided by the Multi-Scale Climate and Environmental Change Research Cluster at Bishop's University