

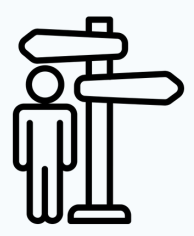
Scaling Rangeland Restoration Fairly: Investigating socially differentiated access, adoption and benefits in South Africa.

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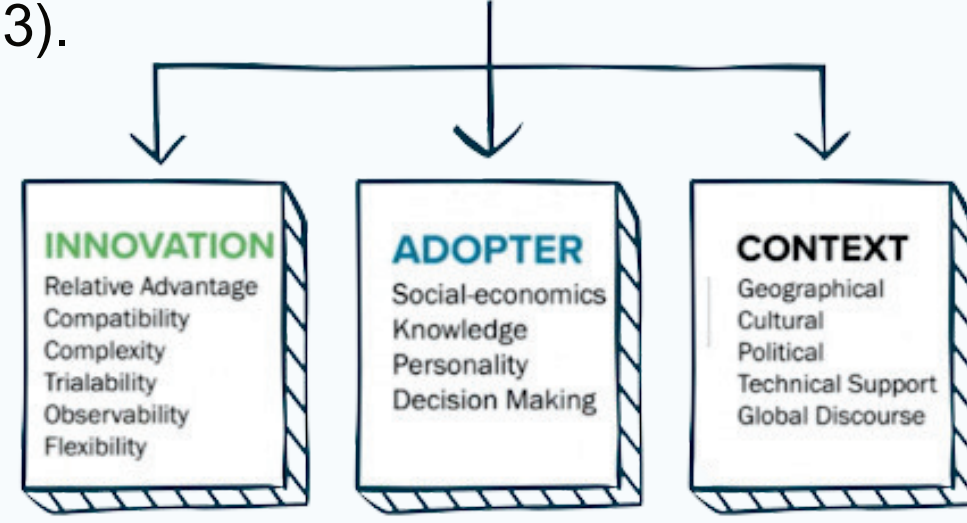
1. THEORETICAL BACKGROUND

Conservation initiatives are being “scaled-up” globally in response to anthropogenic threats like climate change and biodiversity loss. Whilst these initiatives aim to keep pace with changing landscapes, they must also be socially just and durable (1, 2).

Diffusion of Innovations Theory tells us that **certain characteristics** of a system allow new practices to spread (3).



This informs decisions about how to target conservation initiatives to increase uptake and foster rapid expansion (4).



However, the theory does not account for **power dynamics** that influence who has access to conservation initiatives and how the costs and benefits are distributed (5). **There is a risk that conservation initiatives deepen inequalities by failing to account for power**, excluding and/or harming groups of people in the pursuit of scaling (6, 7).



3. PROBLEM STATEMENT

There is still a need to explore the links between **power** and **scaling**:

- How does the adoption process in Herding 4 Health shape socially-differentiated access, adoption, and benefits?
- To what extent is adoption influenced by actor identity markers?
- Is Herding 4 Health generating a positive social impact, and how is this influenced by adopter characteristics?

4. AIMS, OBJECTIVES & RESEARCH PHASES

Mixed Methods Phase One

Mixed Methods Phase Two

Aim 1. To understand how access, adoption, and benefits are socially-differentiated through the H4H adoption process.

Obj 1. Map the adoption and non-adoption process, including roles, activities, and decision-making spaces.

Obj 2. Understand individuals' experiences along the social-axes where access and benefits are differentiated.

Obj 3. Identify a locally-relevant list of benefits, and variables influencing adoption and access.

Methods: Document review, key-informant interviews and focus group discussions with key stakeholder groups.

Aim 2. To test hypothetical associations between adopter and innovation variables and their influence over adoption.

Obj 1. Build hypothetical model (incl. composite variables and covariates) based on phase one.

Obj 2. Design, pilot, and deploy a household survey in one H4H landscape (n = 300).

Obj 3. Investigate the strength of relationships between variables using path analysis.

Methods: A household survey and hierarchical Bayesian structural equation modelling (SEM) analysis. SEMs can estimate complex relationships among variables, but require a large sample and limited number of variables. This approach will be dependent on phase one results.

Aim 3. To evaluate the social impacts of H4H, exploring the relationships with actor characteristics.

Option 1: Co-design household survey with partner (Meat Naturally) focused on social outcomes in the uMzimvubu Landscape (Fig 3).

Option 2: Integrate impact questions into aim 2 household survey to quantify impacts, with either randomised or matched households (13).

Option 3: Explore phase one data to build a conceptual model.

At each stage, results will be shared for validation and community input, culminating in a H4H workshop (2026).

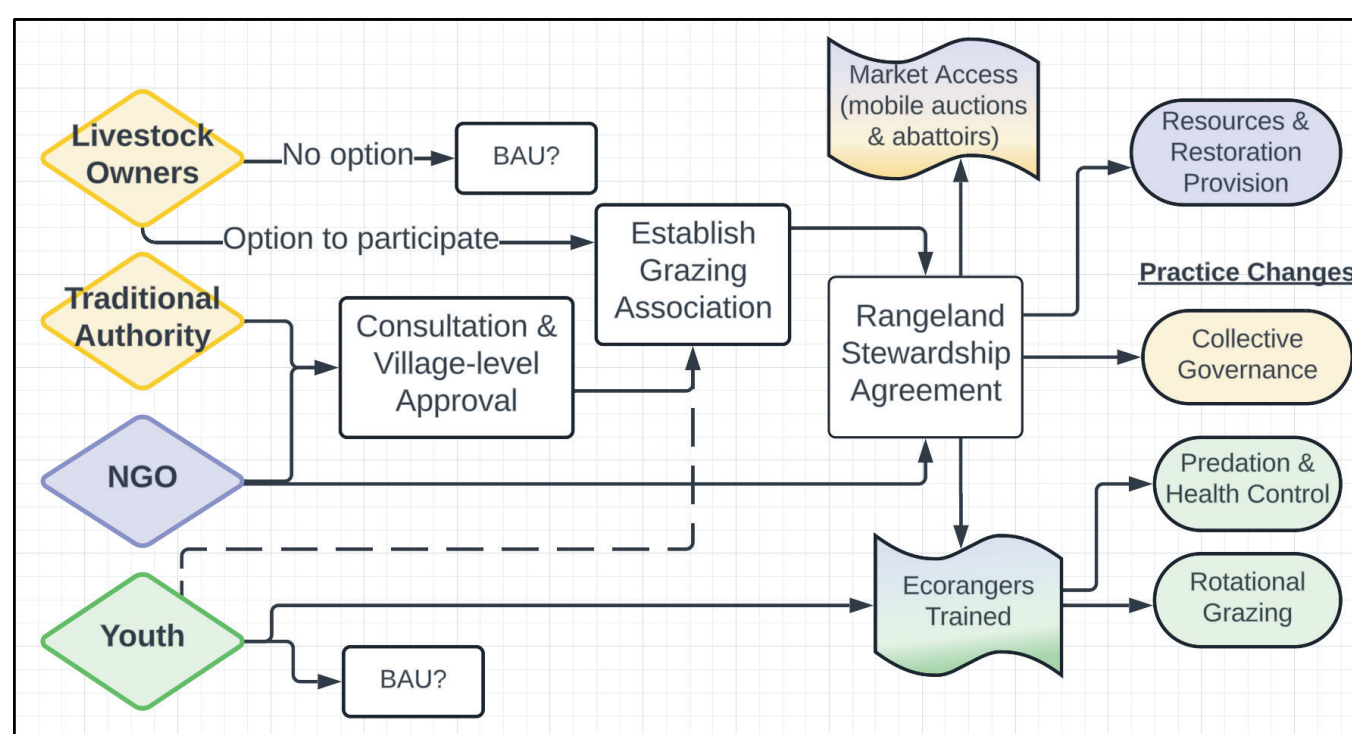


Figure 1. Draft stakeholder-differentiated adoption process (based on document review).

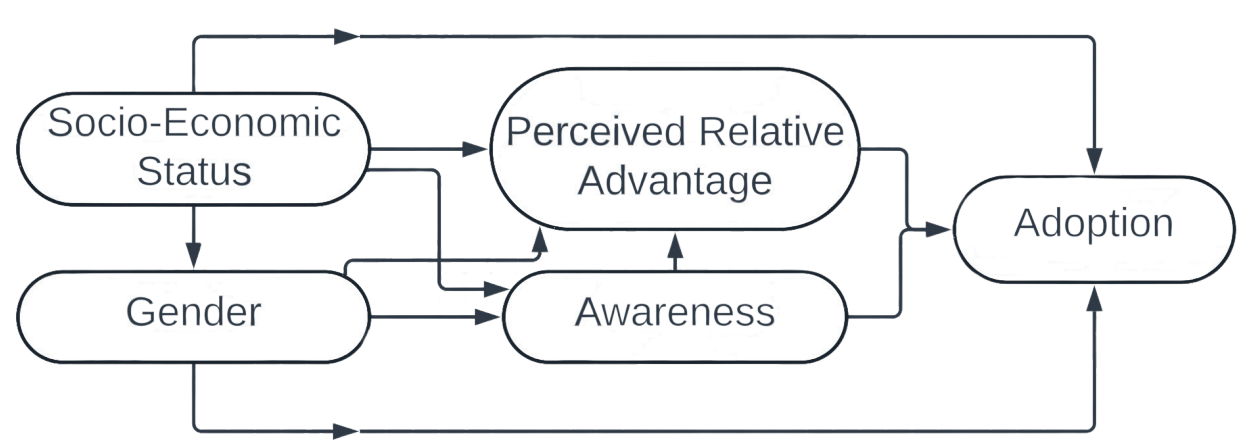


Figure 2. Theory-based Structural Equation Model to test the relationship between adopter & innovation variables and their influence over adoption.

5. PROJECT IMPLICATIONS

This research project will:

1. Situate actor-based power within scaling, quantifying the relationships between adopter and innovation factors and exploring the equity implications.
2. Provide evidence to inform the development of equitable scaling strategies across Southern Africa, including tool and policy development in Herding 4 Health.



2. RANGELAND CASE STUDY

In South Africa, rangeland degradation is felt acutely by rural farming communities, where the increasing intensity of droughts intersects with persistent historical injustices (8, 9).

Evidence suggests that farming practices like rotational livestock grazing, invasive removal, and collective governance could help to restore rangelands (10, 11). Conservation initiatives are promoting this by facilitating access to **medical resources** and **new economic opportunities**, like meat and carbon markets.

Scaling could restore the wealth, health and resilience of thousands of agro-pastoralists, however, individual community members have different opportunities according to their identity - meaning people are impacted differently (12).

Herding 4 Health (H4H) is an innovative livestock management model where farmers agree to new practices in exchange for benefits through NGO and enterprise agreements.



SAMPLE SITES

Villages will be selected based on adoption, logistics, and partner recommendations.

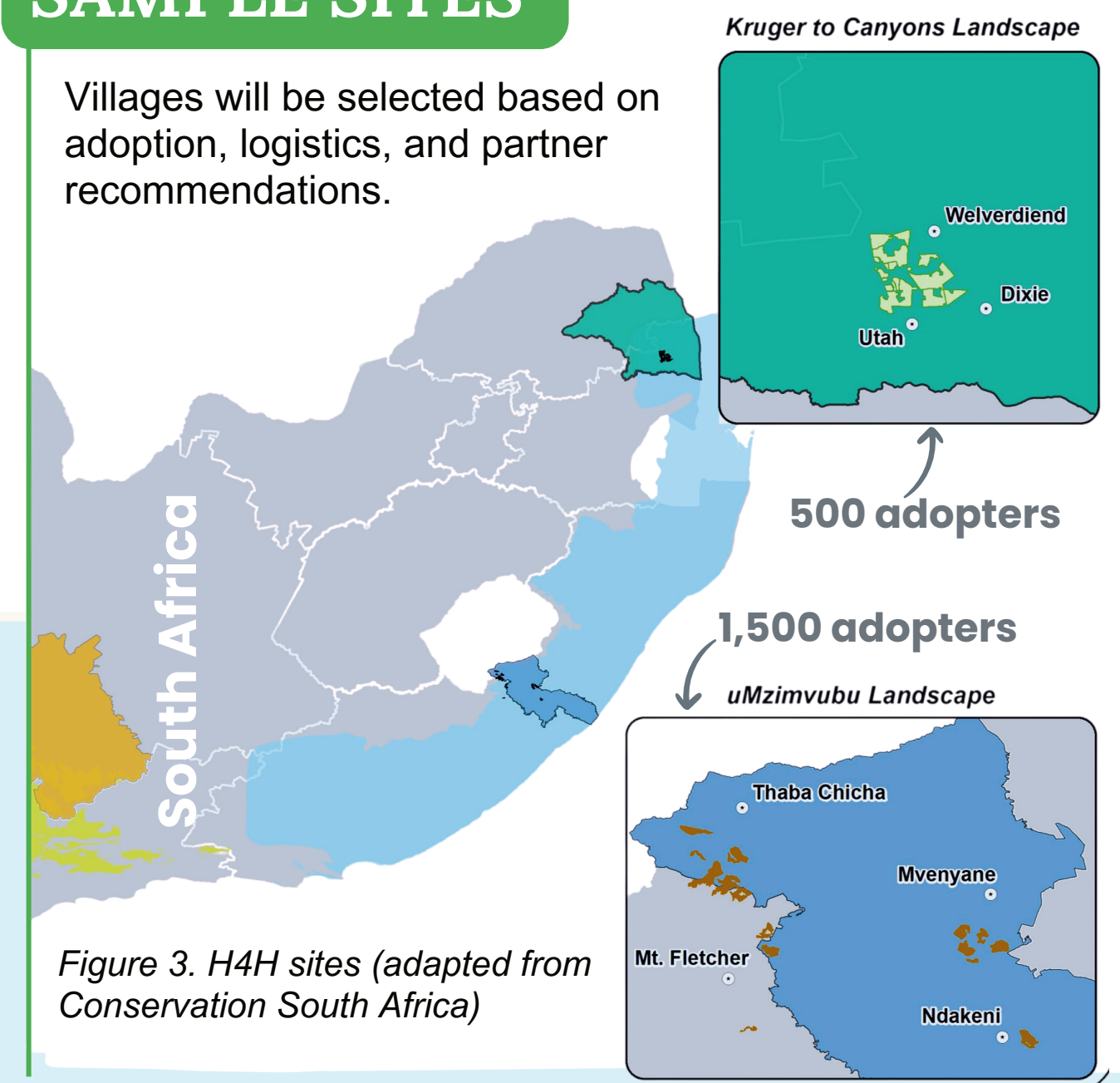


Figure 3. H4H sites (adapted from Conservation South Africa)

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