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Deutsches Institut für Entwicklungspolitik | German Development Institute

Lessons from a Resilient Perspective on Conservation Agriculture Adaptation Practices in Kenya

UNFCCC COP17 Side-event:
Adapting NRM in Africa: lessons learnt, ways forward and the 'sustainable land management programme'

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Structure

1. **Introduction**
2. **Research findings**
3. **Lessons learned & Policy implications**
4. **Outlook**

Problem & Main Research Question

- **Problem**: How to maintain agricultural production under increasing climate variability and extreme events
- **Question**: How can the resilience of African agriculture and the dependent livelihoods to climate change be strengthened?


Resilient Agriculture and Livelihoods

- Agriculture is resilient

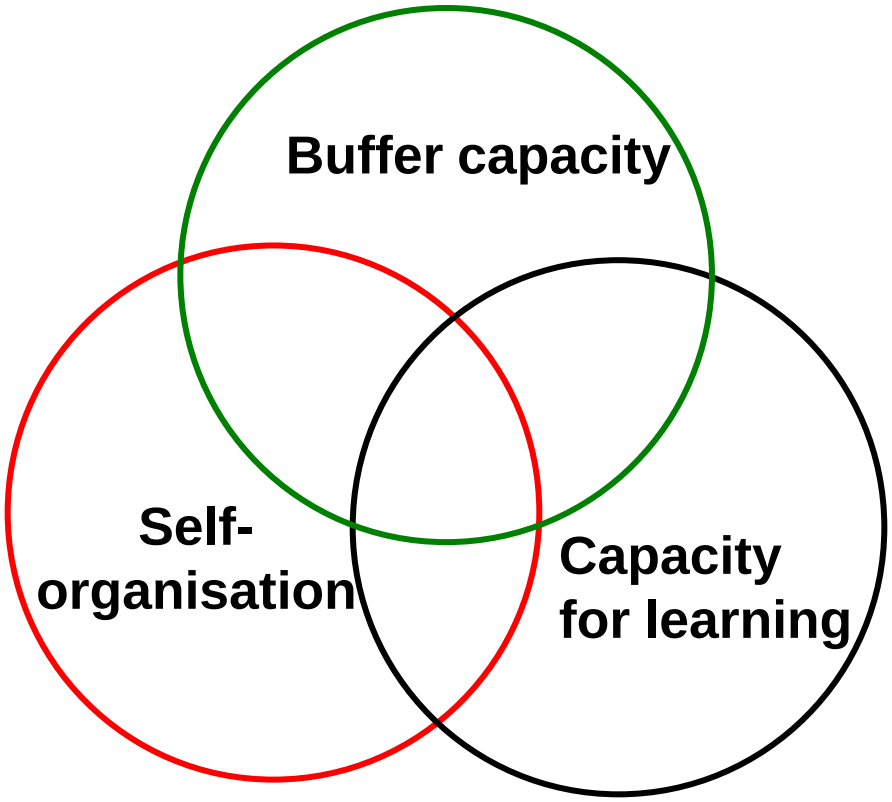
  if it can continue to maintain its key functions when subject to natural variability, extreme events and climatic change processes (adapted from Moench 2005).

Three Components/Features of Resilience

- **The buffer capacity** - the amount of change the system can undergo and still retain the same structure, function, identity, and feedbacks on function and structure. Used for social actors, it refers to **the ability to cope and adjust**.

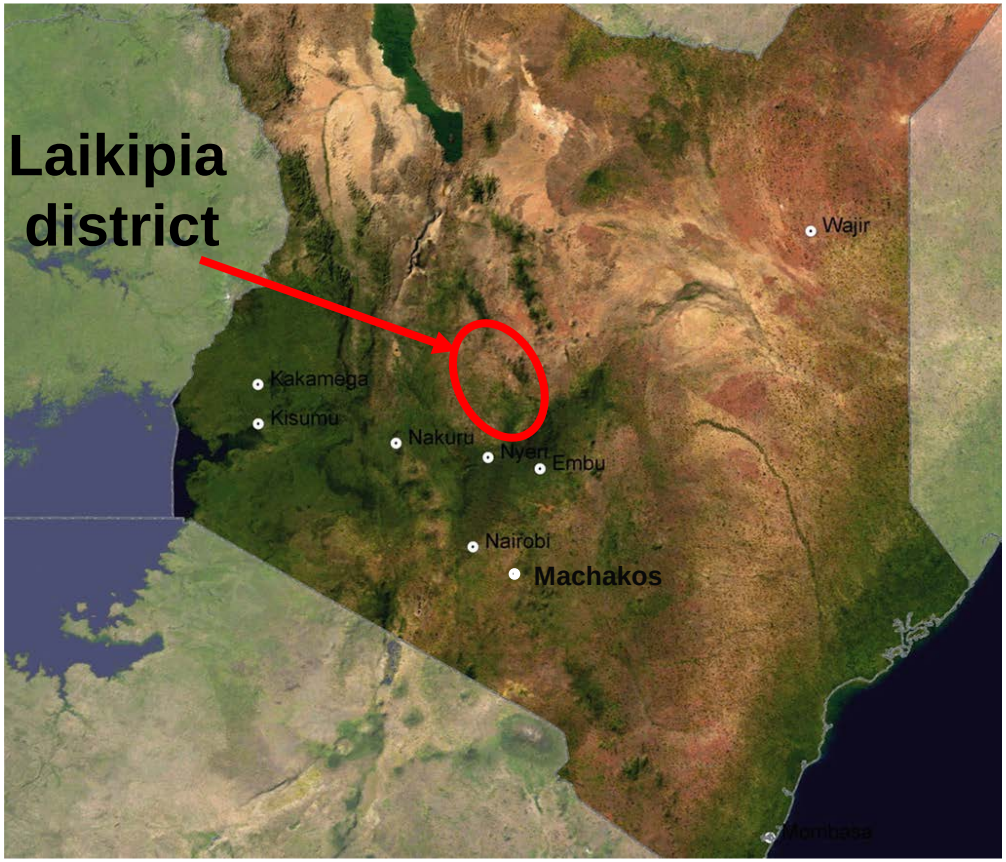
- **Self-organisation** as opposed to lack of organization or organization forced by external factors. The degree to which a network can direct its own actions and outcomes.

- **Capacity for learning** and adaptation, as in adaptive management.



A resilient adaptation contributes to these features in the short and long-term.

Studies Conducted in Kenya on Resilient Adaptation



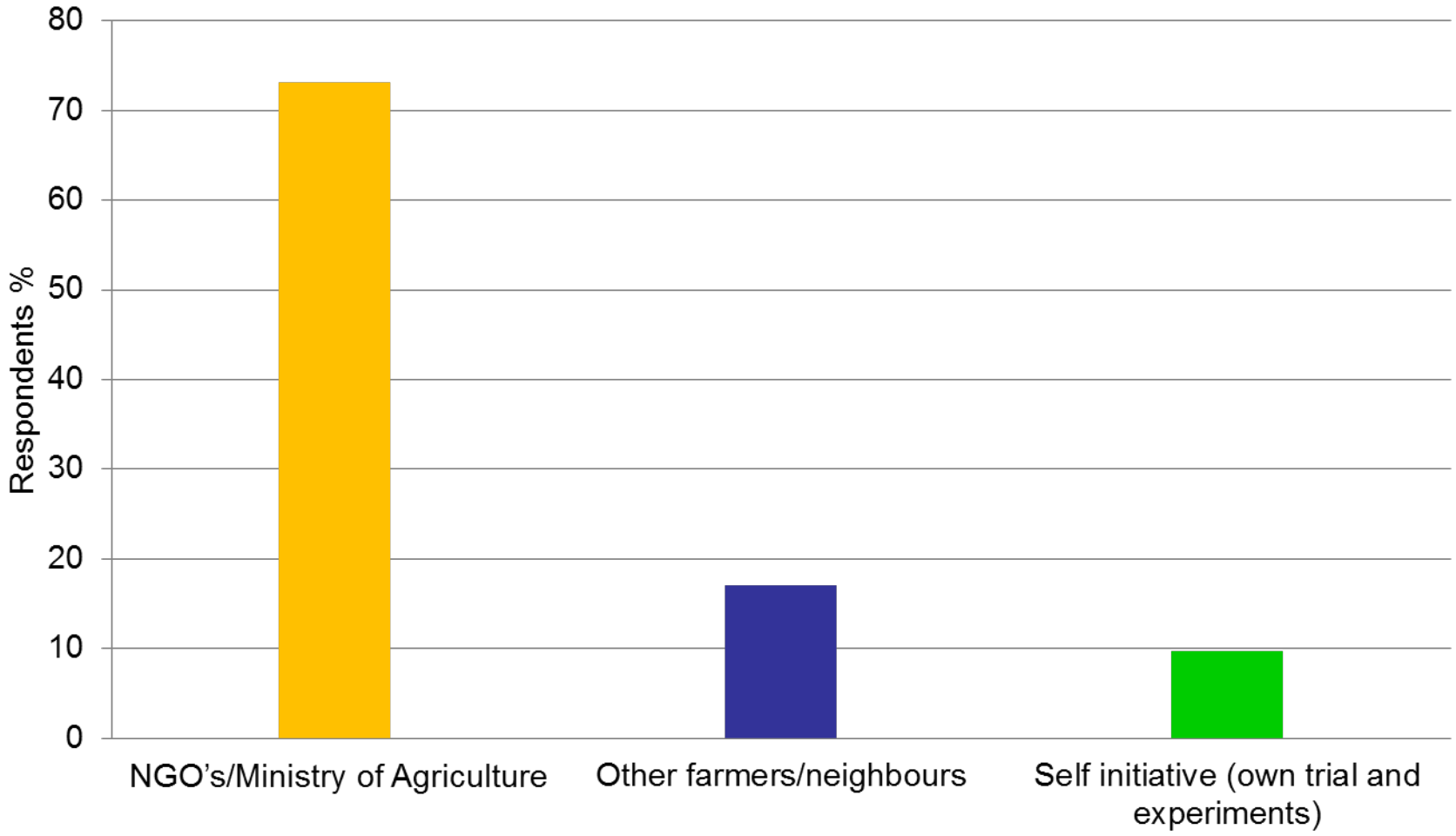
- Laikipia District – 41 CA farmers
- Kenya - Various discussions in Min. of Agriculture, GTZ/MoA Projekt, Extension officers / Researchers

How Conservation Agriculture contributes to Resilience

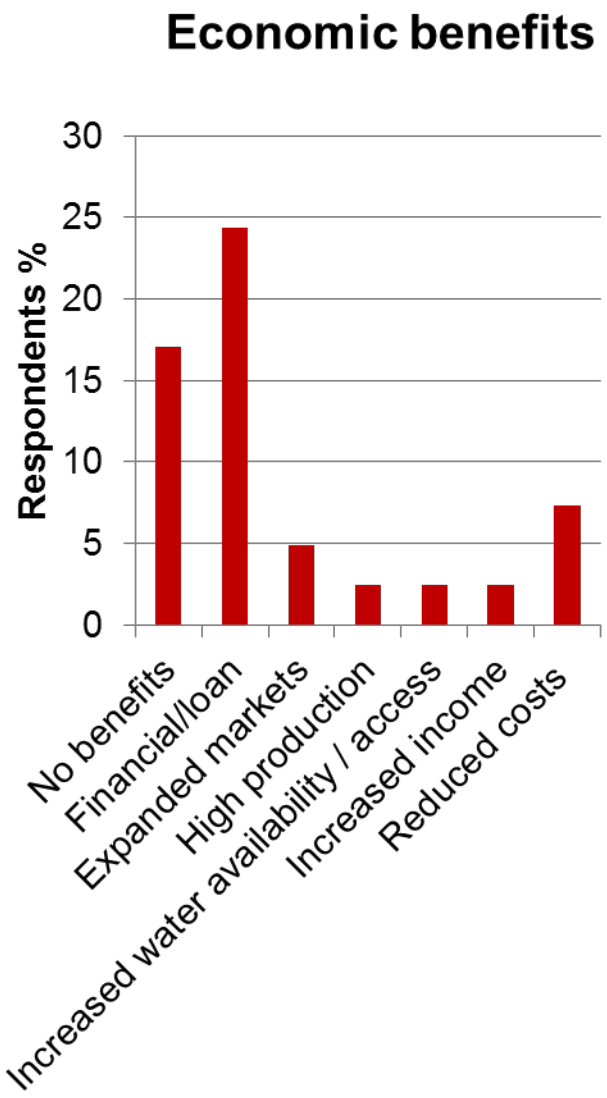
- Conserves soil moisture / reduces evaporation
- Adoption of rainwater harvesting
- Achieved food security despite drought
- Increased income
- Limitations – herbicides use

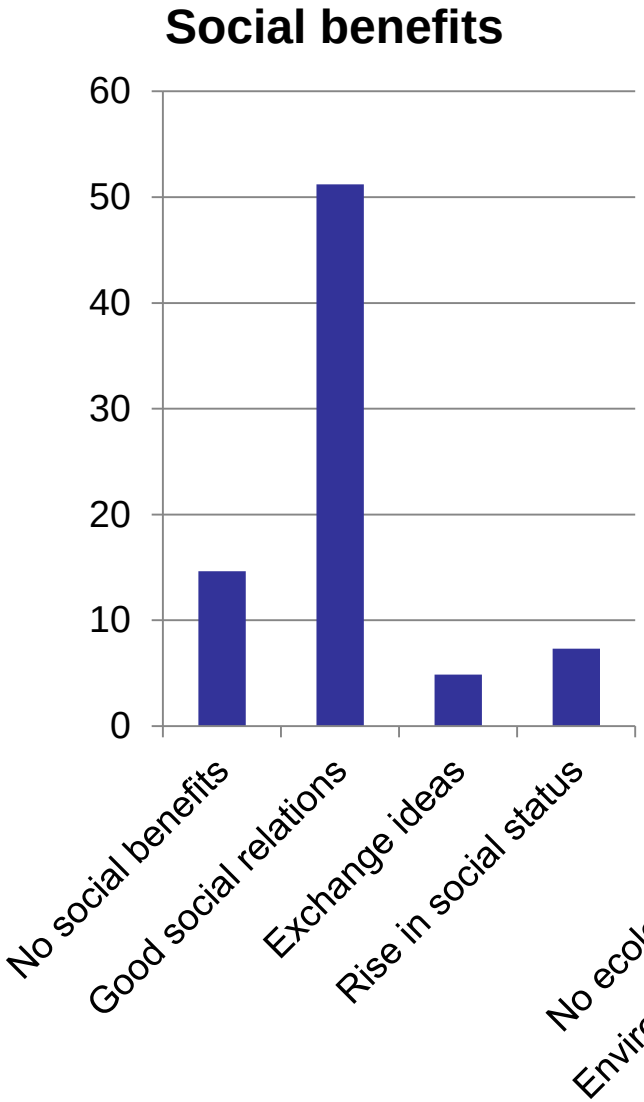


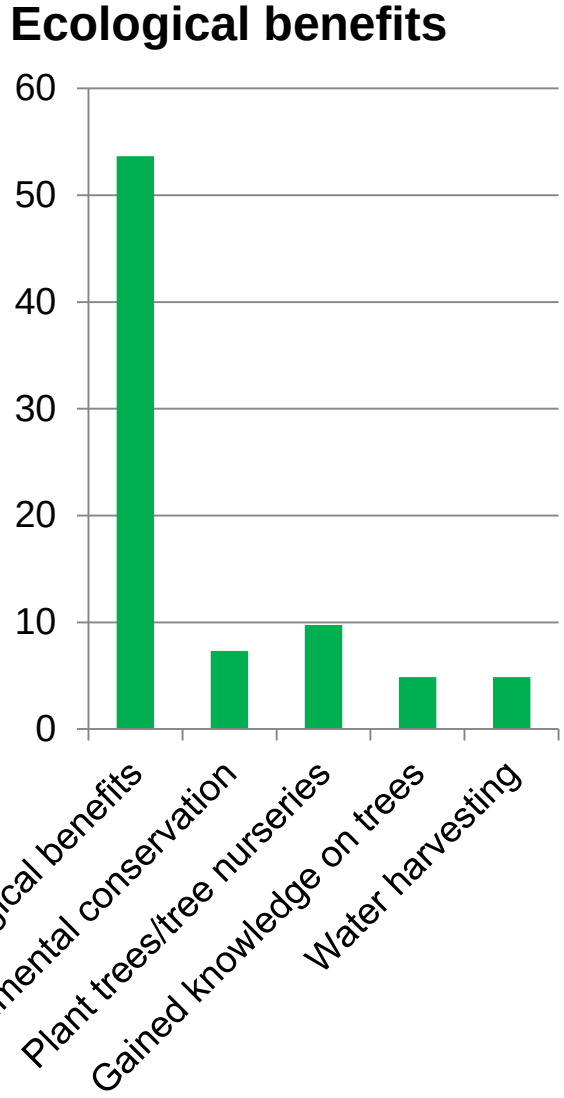
Self-initiative in Starting Conservation Agriculture



Self-Organisation: Benefits of Membership in Groups/Networks







Lessons Learned and Policy Implications

- **Reduced direct weather (drought) impacts**
- **Increased farm production**
- **Environmental & human health concerns**
- **Exposed market limitations**
- **Decline in job opportunities – implications of adaptation measures with the rural economy**
- **Development actors' constellation - critical**
- **Reaching the poor still a challenge**

Outlook - Further Research Questions

- How can adaptation of the very poor within a development context be effectively addressed?
  - Vulnerability Analysis / Vulnerability Profiles
- How can a balance be achieved between improving individual resilience (system component) and improving the resilience of the rural economy (system)?
- How much does an adaptation still contribute to resilience in 5, 10, 15 years?
  - Long-term observation and analysis
- Further studies needed to examine system-wide effects

Thank you for your Attention!

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