

# Implementing a social-ecological landscape approach for wetland management

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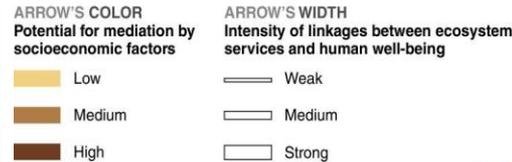
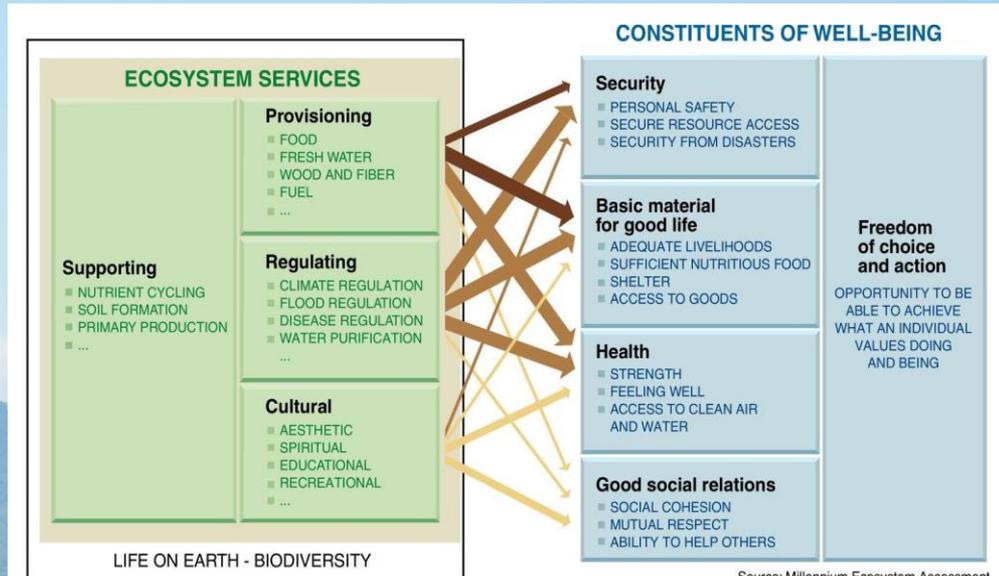


## Key themes

- Wetlands as natural infrastructure but also integrated social-ecological systems
- Food, water and environmental security is rooted in this
- Local-level focus - capacity building for landscape management
- Landscape 'mindset' and practical interventions
- Recent experiences in Malawi

# Wetlands in Africa

- Tensions between development & conservation
- Critical role of wetlands in peoples' livelihood security
- But shocks and pressures
- How do you sustain multiple benefits? Win-Win outcomes?
- Build green infrastructure?



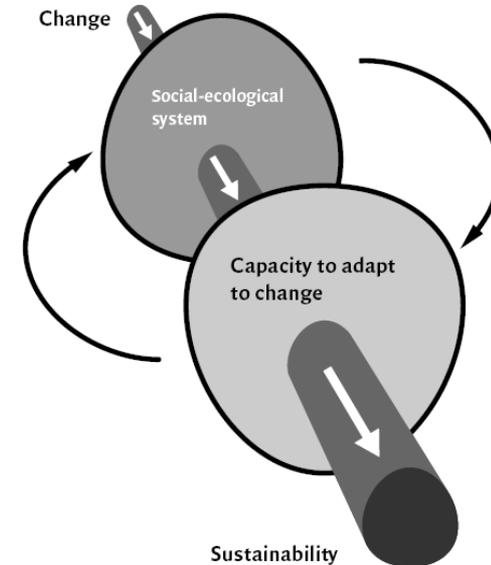
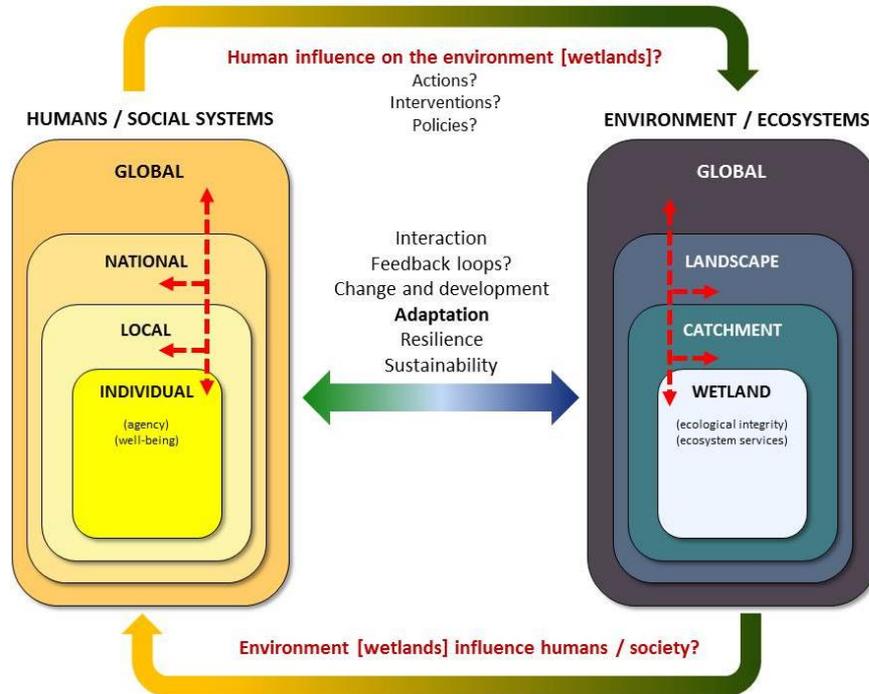
- Previous research

# Sustainable wetland management is about ...

- Conceptualising wetlands as **social-ecological systems** at various scales

*“There are no natural systems without people, nor social systems without nature. Social and ecological systems are **truly interdependent and constantly co-evolving**...across spatial and temporal scales.”*

(Stockholm Resilience Centre, 2014)



- In practice??

# Implementing a ‘Functional Landscape Approach’ in Malawi (and beyond)

## ■ 2005 – 2008 ‘Striking a Balance’ Project

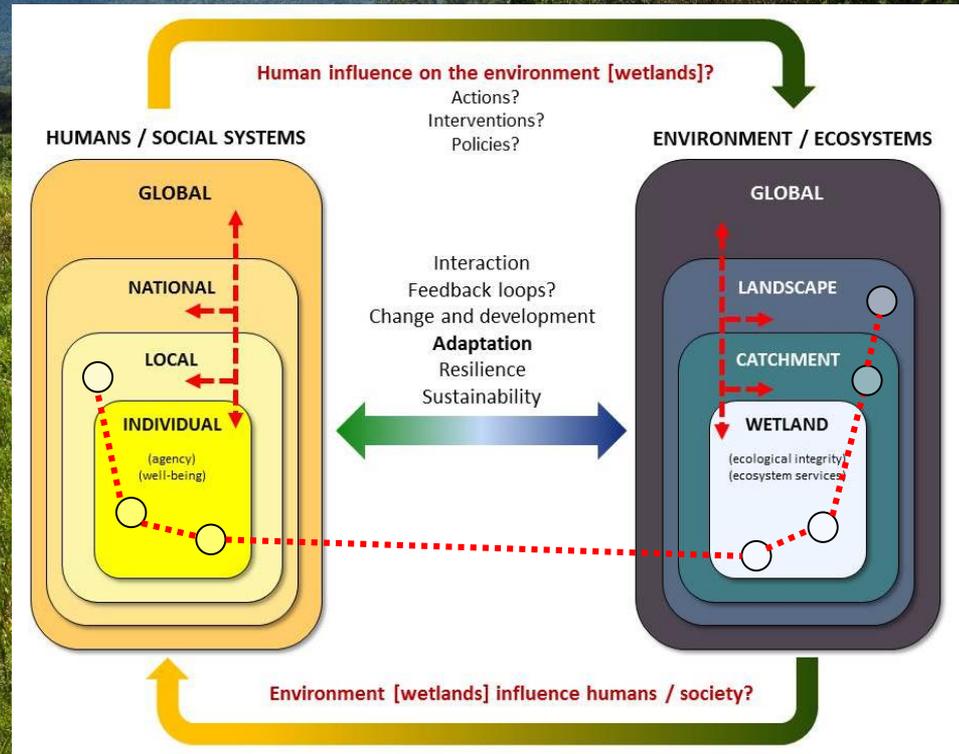
- *“reduce poverty among wetland-dependent communities through implementing a **functional landscape** and **multiple-use** approach”*
- **Develop and test strategies + practices** for the sustainable management of wetlands (*dambos*);
- **Influence policy-making** so that it recognise the links between poverty reduction and sustainable wetland use

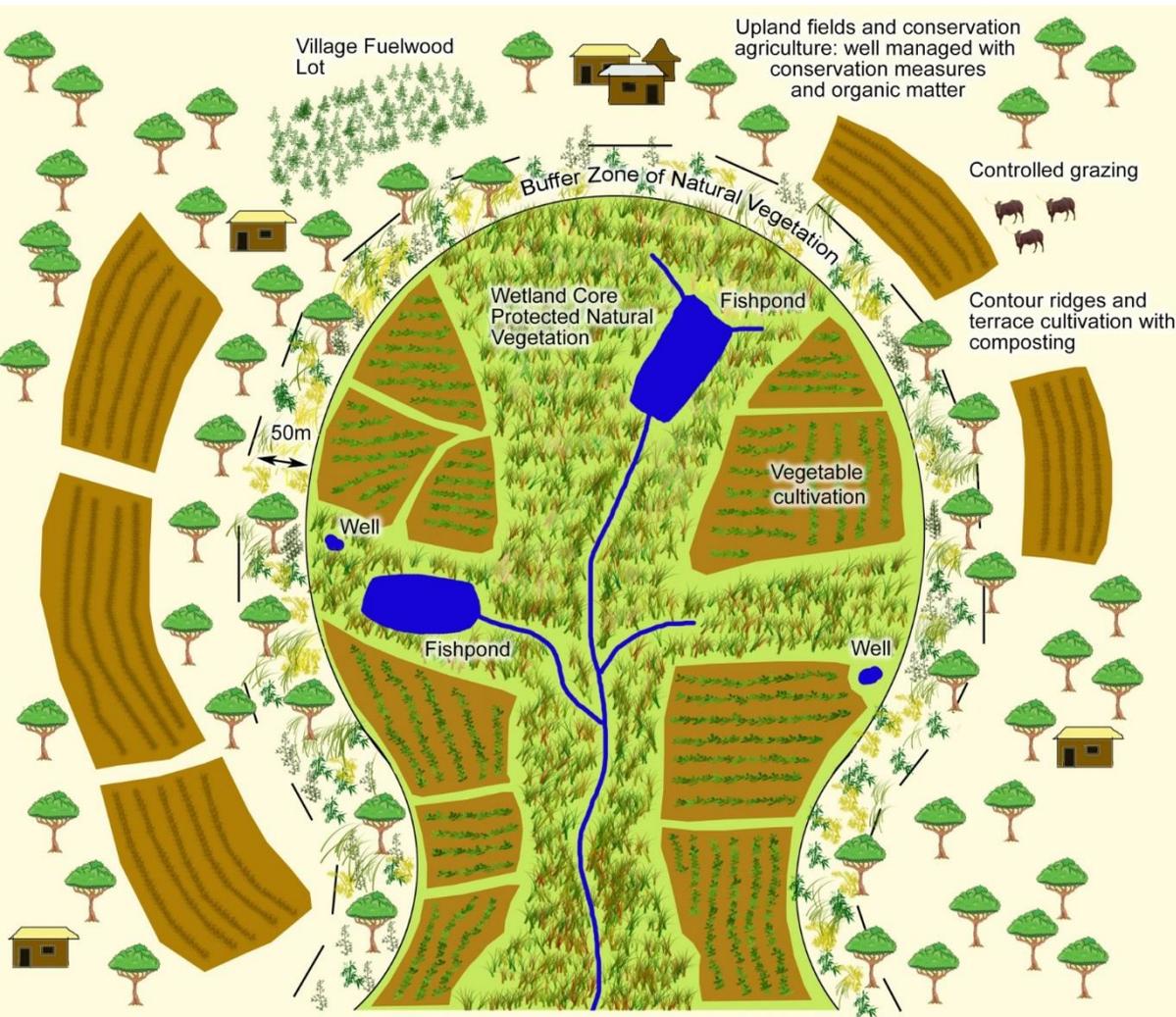
## ■ 2014 – 2018 Kankhulukulu Catchment Project

- Testing the process of implementation (adaptive co-management)
- Monitoring social-ecological change (impacts)

# The Functional Landscape Approach (FLA)...

- recognises the **functional connections** across the landscape, between different **landscape units**
- identifying green infrastructure components
- areas for enhancement

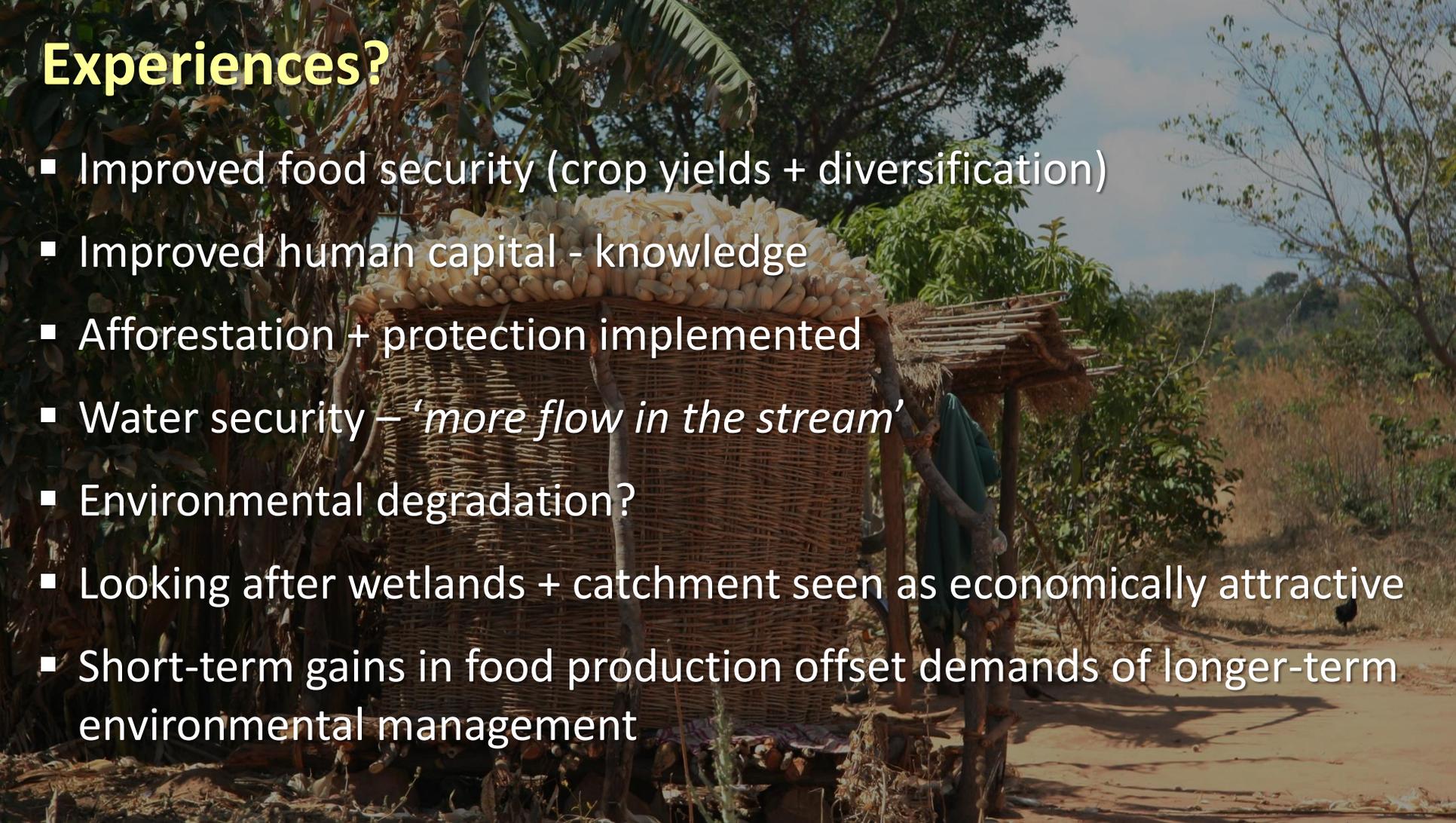




- Baseline research
- Community consultation
- **Local knowledge**
- Catchment and Wetland practical interventions
- Village bank
- **Village Natural Resource Management Committees**
- Byelaw development
- Community Agricultural Workers
- Farmer-farmer extension
- Monitoring + evaluation

# Experiences?

- Improved food security (crop yields + diversification)
- Improved human capital - knowledge
- Afforestation + protection implemented
- Water security – *'more flow in the stream'*
- Environmental degradation?
- Looking after wetlands + catchment seen as economically attractive
- Short-term gains in food production offset demands of longer-term environmental management



- Successful FLA measures continue to be implemented



*“...we are able to control runoff and there is now more water in the soil.”*

*“...we learn from each other and exchange ideas”*

*“Previously most of the food ran out in December but now it lasts until February.”*

*“With the money from selling crops we have been able to buy cell phones, radios, kitchen utensils and pay school fees.”*

*“We are cultivating dambos but not in the centre. We are not grazing cows in the dambo anymore. Water is being conserved...”*

# Institutionalised sustainability, adaptation + resilience?

- Byelaws functioning and penalties implemented
- Some issues in SAB project

*“Since the introduction of the government subsidy for seed and fertiliser, fewer people are interested in participating in MALEZA club activities. People think there is no point in contributing if you already have the benefits of seed and fertiliser.”*

*“...not interested in following the byelaws”*

*“...now people are not co-operating as much with each other... they are not seeing instant benefits.”*

*“We need to get support from the village headman to make the byelaws stronger...”*

- Better experiences in Kankhulukulu – ownership and participation
- Institutionalised ecosystem service (natural capital) monitoring



# Conclusions

- Effective balance of environment + development outcomes
- Social-ecological FLA approach was attractive to communities
- Issues of inclusivity - all users / stakeholders?
- Critical importance of traditional institutions
- ... and support from government ('enabling' environment)
- Must have institutional sustainability
- *Dambos* becoming more attractive → more pressure → more need for adaptive and resilient institutions?
- FLA as a **menu of options** for wetland managers
- Overall enhancement of social-ecological green infrastructure