

Water Smart Agriculture in East Africa

*Genesis of an
approach*

Dr Alan Nicol



Outline

1. The challenge(s)
2. Emerging ideas
3. Shaping a 'systems approach'
4. Future steps



1. The challenge(s)

'Big water'80+ per cent of water used; and it matters for 'small' water use too

Rural transitions: population, communications, transport, gender, youth, education, employment...

High natural variability, rising demand, therefore trade offs

Water, food and energy links... synergies (e.g. diesel pumps)

From subsistence to commercial? Establish market linkages; value / supply chains

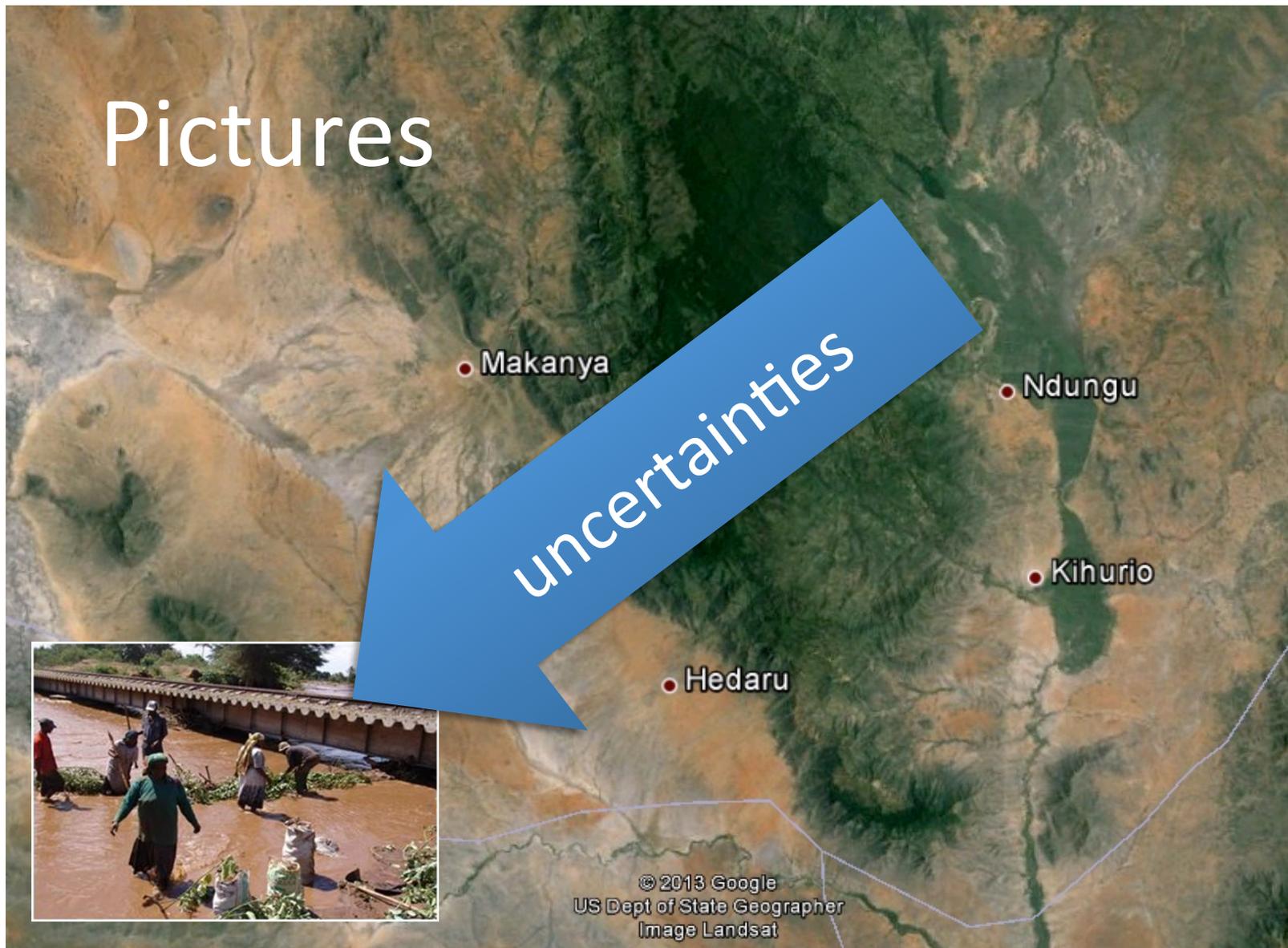


Numbers

- 9 billion people by 2050 (Uganda more than doubling to 100 million (from 40m, 2015))
 - Shifts in diets changing demand for resources
 - Overall production needs to grow by 70% globally
- Most food is consumed in the country where it is produced (still); but what will happen?
- 450 million smallholders comprise 85% of the world's farms
 - Women farmers are a large proportion
 - Who would remain a farmer amid high uncertainty and risk?



Pictures



2. Emerging ideas

- August 2013, regional meeting in Morogoro
- 30+ officials, researchers and civil society from Ethiopia, Tanzania and Uganda
- Launch regional Charter on Water for Smallholder Farmers (Global Water Initiative, East Africa)
 - http://www.gwieastafrica.org/media/GWI_RegionalCharter.pdf
- Early 2014 – Water Smart Agriculture idea emerges as a ‘hook’ for tackling investments more effectively



...co-constructing a sourcebook

- Idea taken forward in second regional meeting, May 2014, Addis Ababa
- High stakeholder engagement
 - researchers, officials (water and agriculture), media, civil society
- Shaping contents of a sourcebook, leading to writeshops
- Compiling resources, focus on practical thinking – chapters emerged on:
 - Building resilience
 - Sustaining landscapes
 - Managing water
 - Conserving soils
 - Addressing learning and complexity
- <https://wle.cgiar.org/cgspace/resource/10568-64962>
- <http://www.gwieastafrica.org/good-articles-come-at-a-cost/>

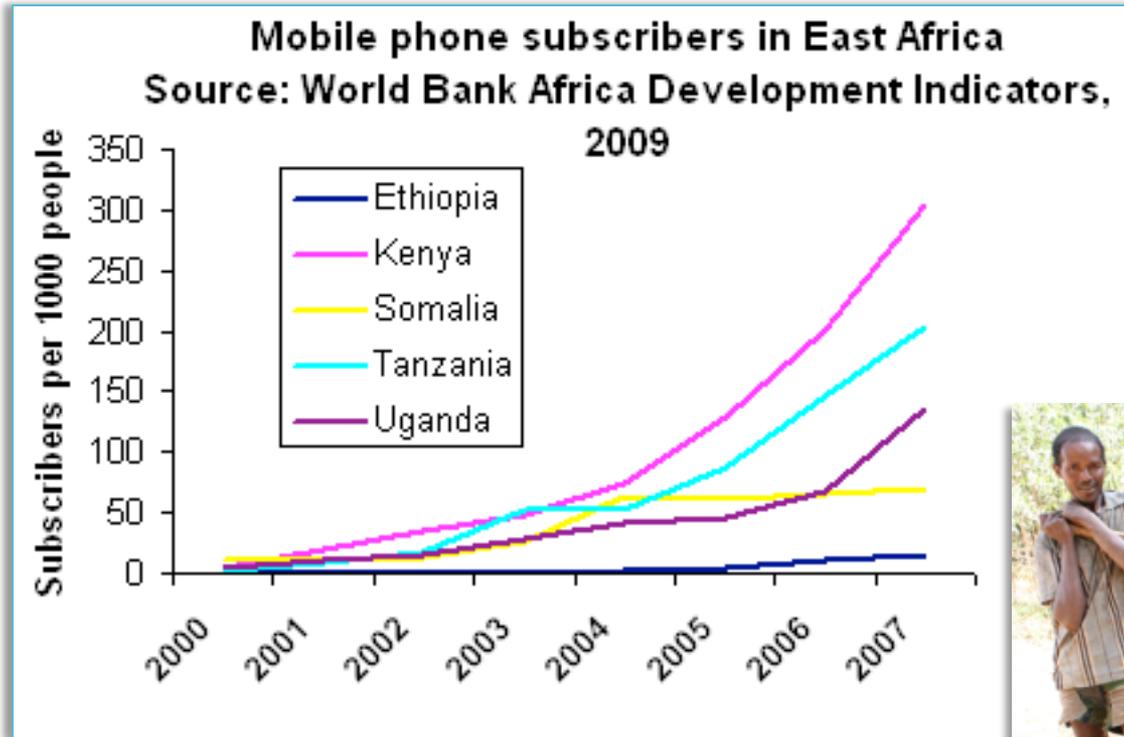


...building on thinking

- Climate Smart Agriculture
- Sustainable Intensification
- Agro-ecological approaches
- Bringing 'water' into rural agricultural debates
 - Markets – what to grow and market?
 - Soils – how to optimize and support?
 - Rainfall – how to maximize use
 - Irrigation – how to use efficiently



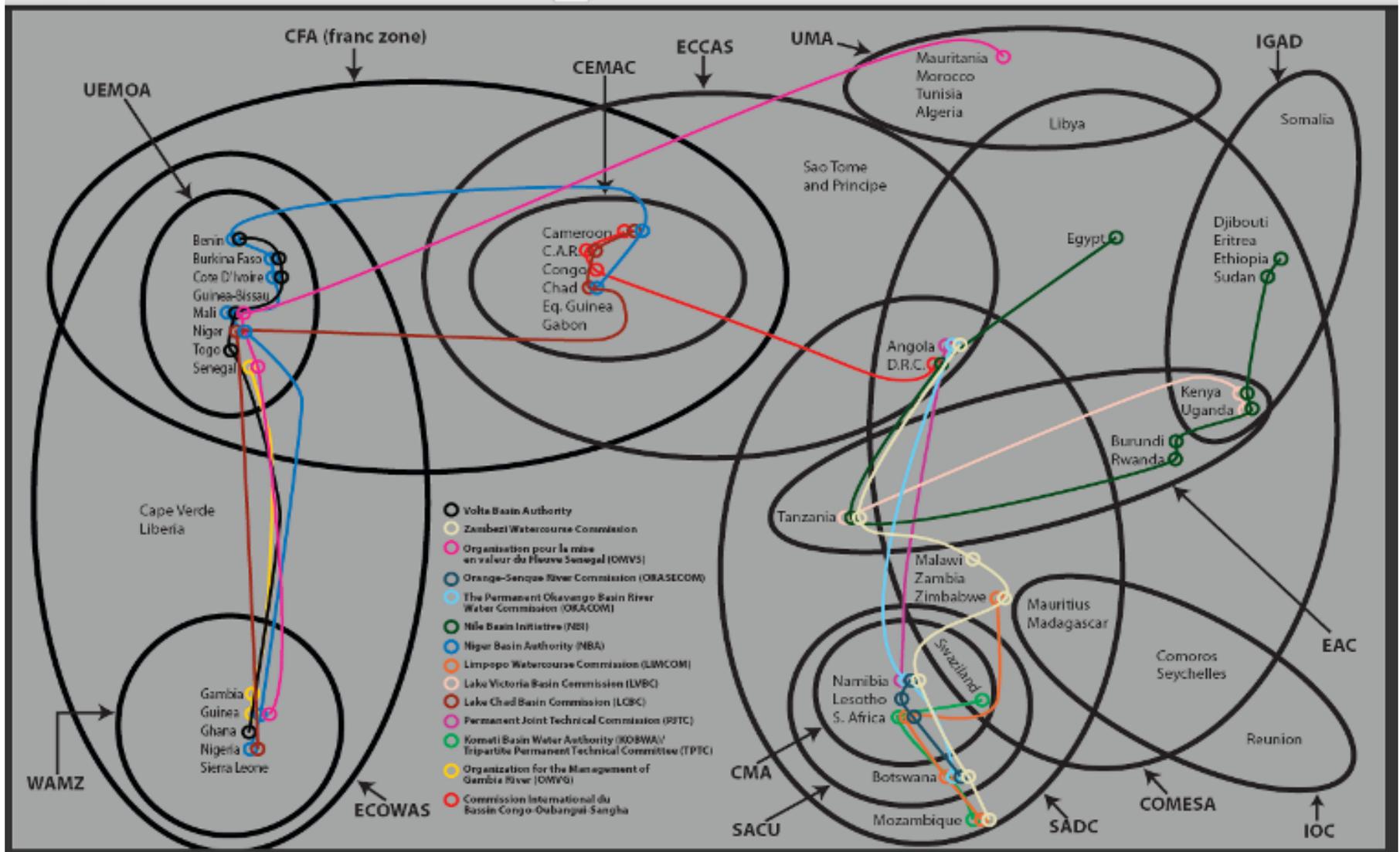
...awareness of rapid change



3. Shaping a 'systems approach'

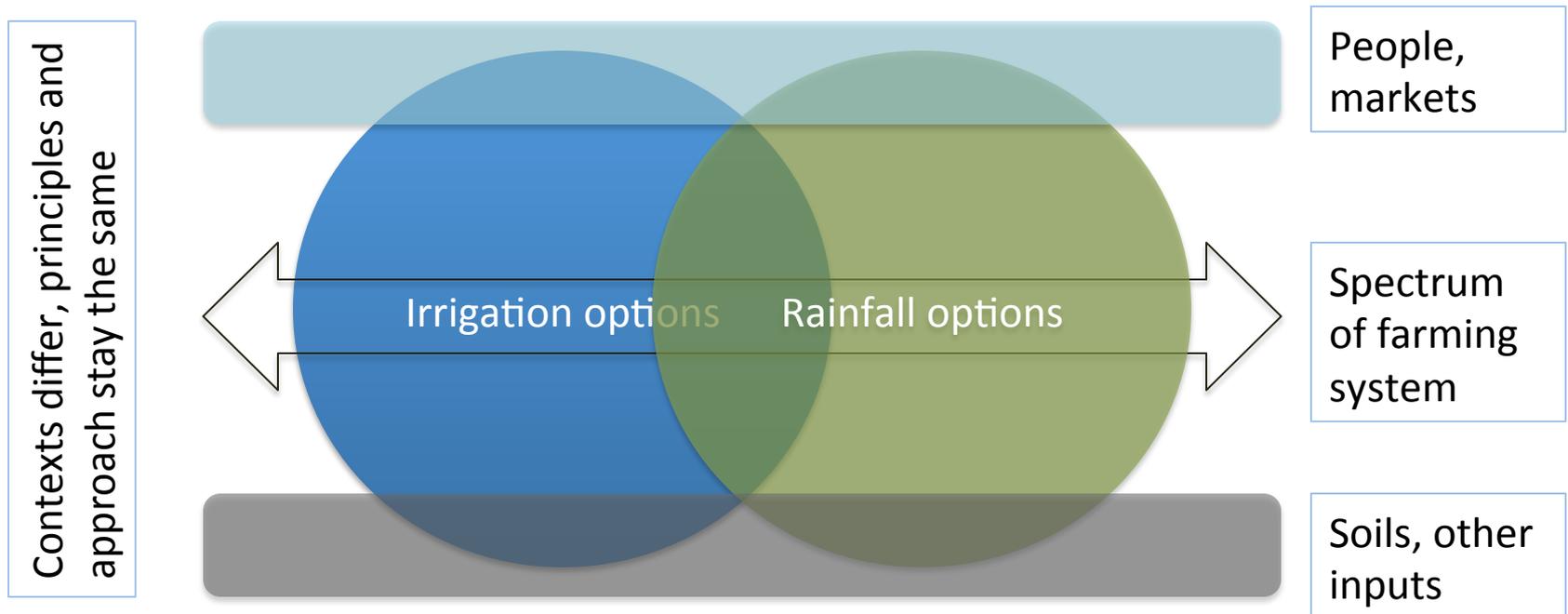
- What key technologies and practices can enhance water management and use in smallholder agriculture?
- What are the best ways of ensuring their uptake and sustainable use at local, national and regional scales?
- Also, the bigger picture...





Building a structured WaSA model

At its simplest, Water Smart Agriculture is an approach to farming that balances water availability, access and use across a range of water source options and according to principles of socio-economic, environmental and technical sustainability. It seeks to maximize returns whilst protecting environmental flows and ensuring equality of access within farming systems.



...emerging principles

1. Maximizing outcomes that are owned locally
2. Ensuring sustainability of resources
3. Transitioning to prosperity
4. Building in learning and sharing



4. Future steps

- Build on the idea and encourage uptake
 - In policy, programmes and (action) research
- Continue to learn, share, adapt and adopt
- Strengthen links to CSA and resilience debates
- Focus on SDGs and vehicle to achievement
- Establish networks and alliances

