

The adaptation-development spectrum in dryland East Africa: mapping risks and responses

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based on work with Poshendra Satyal, Mohammed Assen, Laura Camfield, Jennifer Leavy and Daniel McGahey from the ASSAR East Africa team

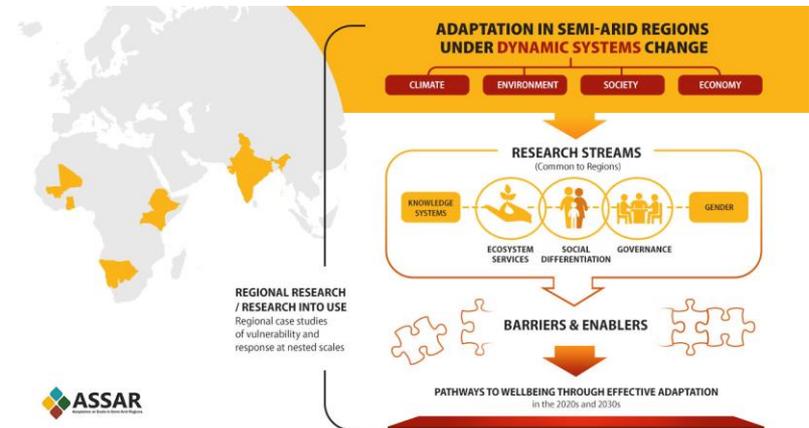


How can we characterise current responses to climate-related social-ecological risks in East Africa, and what implications does this have for climate change adaptation?



Methodology

- ❖ regional literature review – risks, vulnerability and responses
- ❖ c260 publications screened
- ❖ wide range of themes and sectors (e.g. agriculture, environment/resource management, disaster risk reduction, development, infrastructure, water, health, communication)
- ❖ focus especially here on activities linked (in the literature) with adaptation
- ❖ reviewed in relation to ASSAR conceptual framework

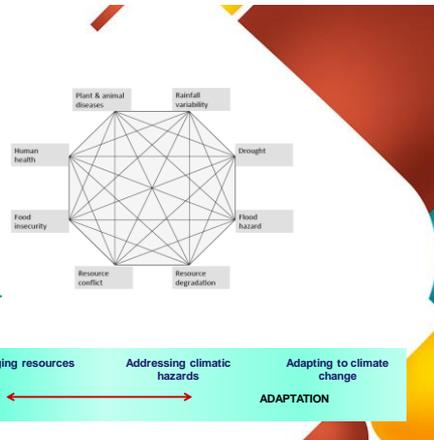


Inter-disciplinary and integrated approach:

views climate as one of a web of socio-environmental risks associated with climate variability and change in the East African drylands

.... and

views response to these risks as a spectrum of development-adaptation activities



Analysing responses

Response field	Applied especially to the following risks...
Ecosystem protection	Flood hazards, Resource degradation, Food insecurity
Pastoralism support	Rainfall variability, Drought, Resource degradation, Resource conflict, Food insecurity
Crop production	Rainfall variability, Drought, Resource degradation, Food insecurity
Water management	Rainfall variability, Drought, Resource degradation, Resource conflict, Food insecurity, Human health, Plant/animal diseases
Disaster risk management	Drought, Flood hazards, Food insecurity, Human health
Climate information services	Rainfall variability, Drought, Flood hazards
Knowledge & skills development	Rainfall variability, Drought, Human health, Plant/animal diseases
Livelihood diversification	Rainfall variability, Drought, Food insecurity
Social safety nets	Drought, Flood hazards, Resource degradation, Food insecurity, Human health
Gender focussed approaches	Rainfall variability, Resource degradation, Food insecurity, Human health
Relocation and migration	Drought, Flood hazards, Resource conflict
Risk sharing	Drought, Flood hazards, Plant/animal diseases

Response fields include within them...

- ◆ narrowly sectoral activities & broader measures supporting livelihoods and wellbeing
- ◆ strategic measures to reduce vulnerability & shorter-term coping measures

Underlines that adaptation cannot readily be viewed in isolation from wider societal and environmental concerns

- ◆ dynamics of culture, gender, knowledge, power, livelihood assets, entitlements, participation and governance – all are key facets of human development that can reinforce or undermine attempts to strengthen resilience across society



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Some reflections

- ❖ **Water security and its impact on food and income security – dominant risk = development and resource management issue?**
- ❖ **Sustainability/equity issues of responses ('maladaptation')**
 - ❖ unintended consequences – e.g. inequitable access, increased water dependency
 - ❖ left side sustainability issues/Right side equity issues? – not so simple as this
- ❖ **Transformation? A flexible/contested term**
 - ❖ drivers - environmental, socio-environmental, social concern - exposure, social vulnerability, root causes
 - ❖ types of change - innovation, expansion, reorganisation, reorientation



Possible examples of transformational change?

Activity	Type	Transformational in form?
Development and introduction of new crops and varieties	INNOVATION (Expansion)	Could be seen as an adaptive adjustment to existing crops or existing farming practices and therefore incremental only (even if genetic modification is involved)
Hybrid approaches to climate information and forecasting	EXPANSION (Innovation)	Improvement of climate services so that they are more appropriate, useful and accessible is essentially an incremental change? The more transformational element would be recognition of the value of non-scientific forms of knowledge and their use.
Integrated approaches to water management	REORGANISATION (Reorientation)	Could be seen as transformational if this represents a radical and successful departure from previous, narrowly-sectoral or competitive approaches to water resource access.
Women's livelihood/credit and mainstreaming initiatives	REORIENTATION	Can be transformational if it entails a new shift in focus that recognises and builds on the differential needs and capacities of women.
Resettlement of pastoralists	REORGANISATION	Inherently transformational?? in it represents a fundamental shift in the settlement place, pattern and lifestyles of the target population.

Ongoing research in East Africa

- ❖ Understanding existing responses important not just in terms of generating a baseline of current response modes, but also because progress in adaptation can conceivably come through the reinforcement of pre-existing adaptability.
- ❖ But that may well not be (or should be) enough
- ❖ In essence, we need to understand actions in the present in order to explore the utility, equity and sustainability of actions for the future



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