


Pastoralism and Climate Change: Clarifying Research and Policy Agendas

(with particular reference to the Horn of Africa)


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Definitions

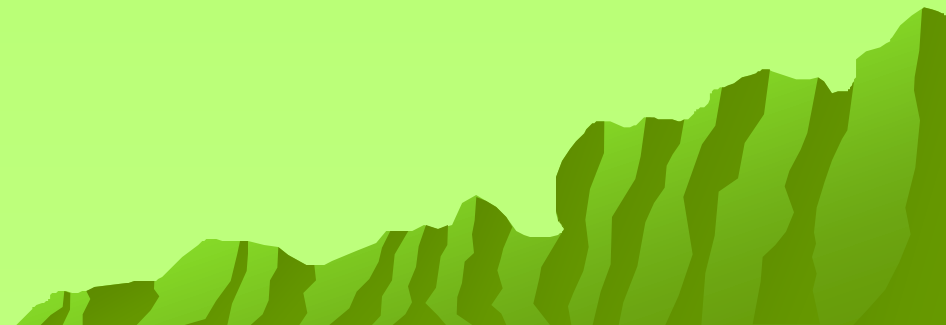
- ◆ Pastoralists are people who depend on livestock or the sale of livestock products for most of their income and consumption, where livestock is mainly grazed on communally-managed or open-access pastures, and where there is at least some propensity for households or individuals to move seasonally with livestock

Populations

- ◆ Intrinsic difficulties of collecting data on remote and mobile people
 - ◆ Estimates extremely sensitive to boundaries between pastoralism and extensive livestock production by farmers
 - ◆ International agencies use estimates of 100-200 million people worldwide
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Pastoralists in the Horn of Africa

Ethiopia	8 million
Sudan	8 million
Kenya	6 million
Somalia	6 million
Tanzania	2 million
Uganda	1 million



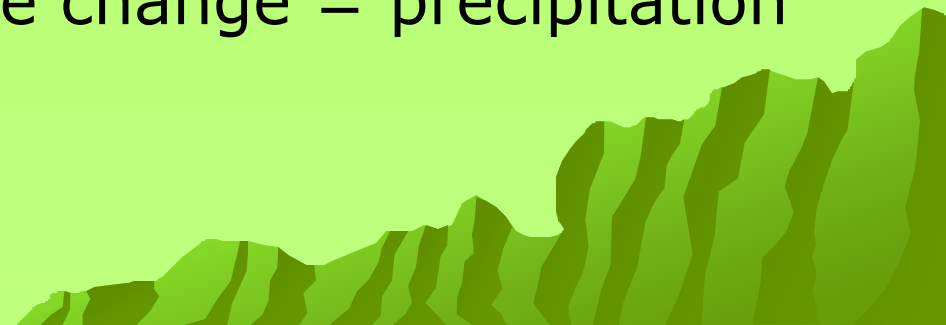
A Growing Understanding of Pastoralism

- ◆ A new understanding of pastoralism since the late 1980s:
 - Rational and sustainable in regions of low and variable rainfall
 - Its problems not intrinsic, but stemming from poor policy and poor governance
- ◆ This understanding accepted by researchers, NGOs, donors, less so by national governments
- ◆ But now challenged once more, for reasons including new perceptions of the impacts of climate change



Pastoralism and climate change: impacts and adaptation

- ◆ Growing discussion of CC impacts on pastoralists, and pastoralist adaptation to CC, by NGOs, researchers and the media.
- ◆ But characterised by:
 - Dichotomy between apocalypse and focus on intrinsic adaptive capacity
 - Oversimplified view of relation between climate change and drought
 - Narrow view of climate change = precipitation change



Apocalypse

- ◆ Media discussion, and some public documents by NGOs, portray pastoralists as “climate canaries”
- ◆ “the people most likely to be wiped out by devastating global warming” (*Observer* 12.11.2006)
- ◆ “They have long lived on the margins, a way of life that was manageable as long as the rains were regular. But with relentless drought the margins are coming close to being impossible” (Fergal Keane, BBC, 17.11.06)



Adapters *par excellence*

- “In this more dynamic climatic environment, the flexibility and mobility afforded by pastoralism may increasingly provide a means of providing security where other more sedentary models fail” (Nick Brooks, 2007)
- “There is general agreement that climate change is a process that most pastoralists should be able to cope with, [given] an enabling framework that reverses current trends [in access to resources] (Nori and Davies 2007, summarising e-conference with 70 participants)
- ◆ Policy implications are to pursue agendas on policy and rights– “get off their backs” – and on markets and services, that are already mapped out

Problems with both approaches

- ◆ Apocalyptic statements can be used to justify withdrawal of support for pastoralism
- ◆ Focus on intrinsic adaptive capacity – if enabled by good policy – can produce recommendations on governance, land tenure and markets that are crucial...
- ◆ ...but are not new, are not specific to discussions of climate change, and do not identify important knowledge gaps



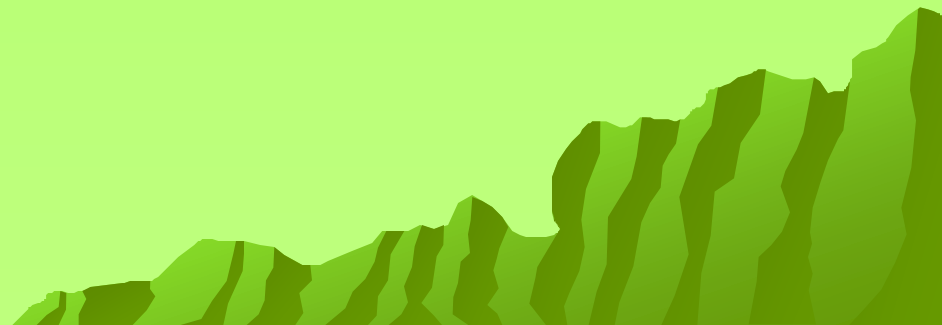
Climate Change and Drought

- ◆ Tendency of studies and public documents to:
 - uncritically assume increase in drought frequency and severity,
 - ascribe this to global climate change processes,
 - and to underplay longer-term projections of increased (but more variable) rainfall
- ◆ Does this matter?
- ◆ It depends on what question is asked



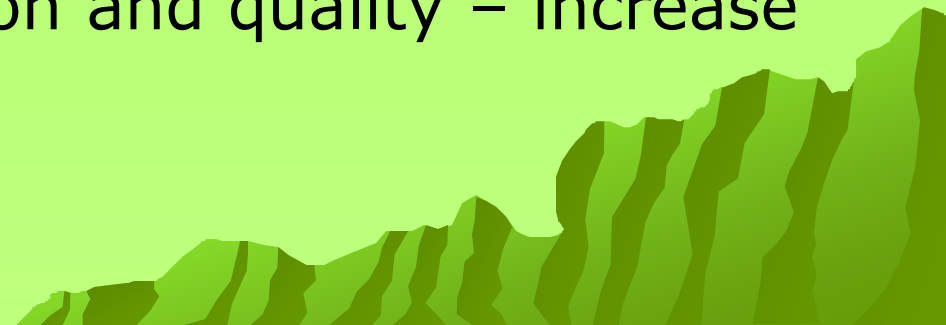
A narrow view of climate change impacts

- ◆ Reports concerned with changes in rainfall amounts, sometimes rainfall distribution or temperatures
- ◆ But potential CC impacts on pastoralism are broader spectrum, through livestock, range and non-pastoral employment, direct and indirect



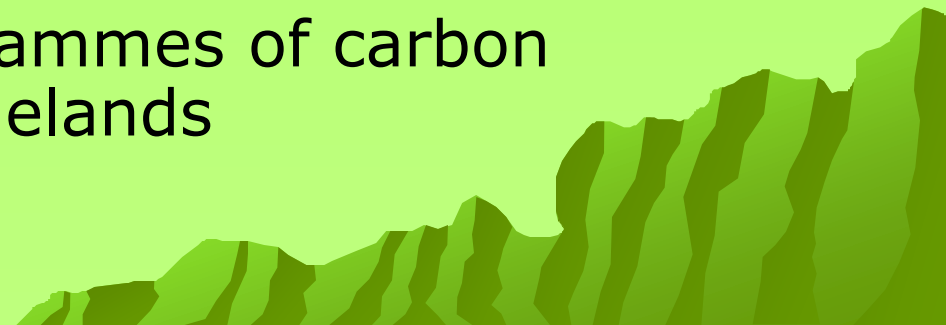
Towards a Broader View of Impacts (1)

- ◆ Impacts on livestock:
 - Heat stress
 - Increased water demand ⇒ changed herding patterns
 - Changed disease patterns e.g. Rift Valley Fever (Baylis and Githeko 2006)
- ◆ Impacts on rangeland:
 - Changes in primary production
 - Changes in composition and quality – increase in woody species?



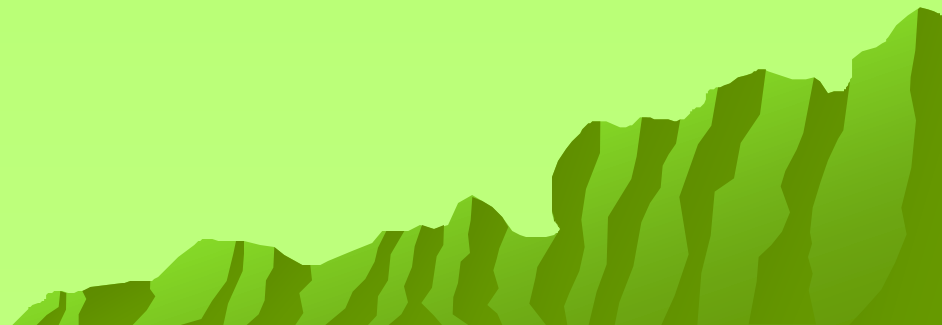
Towards a Broader View of Impacts (2)

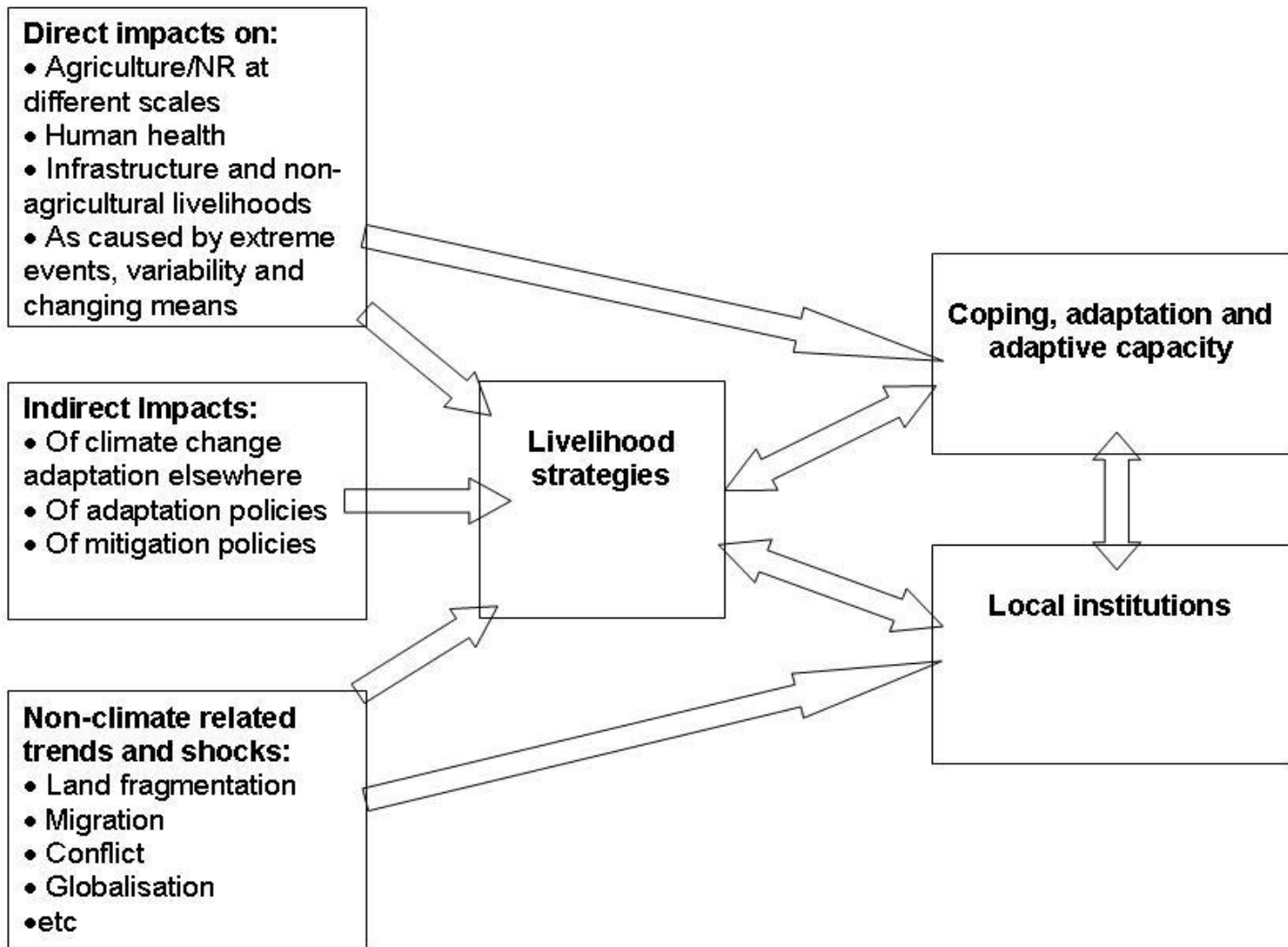
- ◆ Impacts on water supply
- ◆ Impacts on non-pastoral employment, e.g. tourism
- ◆ Impacts on human health
- ◆ Indirect impacts:
 - changes in grain availability from non-pastoral areas
 - policies to encourage biofuel production – sugarcane or jatropha
 - Potential future programmes of carbon sequestration on rangelands



Towards a Broader View of Impacts (3)

- ◆ Direct impacts on:
 - “normal” livelihood strategies, and
 - coping and adaptive capacity
- ◆ “Non-climate stressors” impact livelihoods directly and through institutions
- ◆ Multiple feedbacks






Limits to Adaptation


- ◆ Assumption of pastoral capacity to adapt to environmental change may be over-optimistic
- ◆ A non-climate example:
 - Invasion of riverine grazing areas by *Prosopis julliflora* has become a major livelihood problem throughout the Horn of Africa (Aboud et al. 2005, Bokreziou 2008)
 - Solutions for mobilising intensive labour and circumventing prohibitions on tree-cutting have not yet been found



Conclusions – Climate Change Research

- ◆ Move beyond victims vs. adapters dichotomy
 - ◆ Promote more nuanced discussion of relation of present drought cycles to climate change
 - ◆ Take broader view of impacts, including under-researched biophysical impacts on rangelands,
 - ◆ Understand the complexity of real-world pastoral production systems, and the consequent limits of modelling approaches.
 - ◆ Research and pilot the dissemination of climate information and information on climate impacts – with all their uncertainties - to pastoralists themselves and to a range of stakeholders, over various timescales
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Conclusions – Development Policy

- ◆ Assisting adaptation to climate change has strong overlap with existing good practice in pastoral development, but new needs will emerge as we understand climate impacts better
 - ◆ Address climate change ***and*** build pastoral livelihoods
 - ◆ Clarity, understanding and empowerment
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Thank you

