## Pastoralism in East Africa: Land use and mobility challenges and opportunities

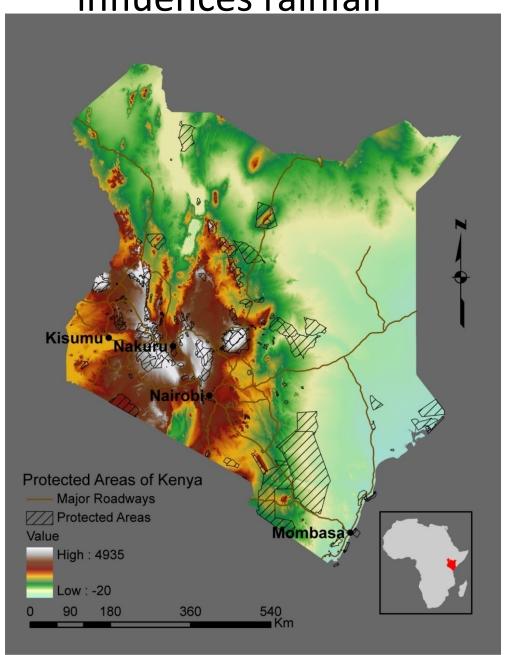
Food First,

9<sup>th</sup> June, 2011

The Hague, Netherlands

David K. Ole Nkedianye, PhD.

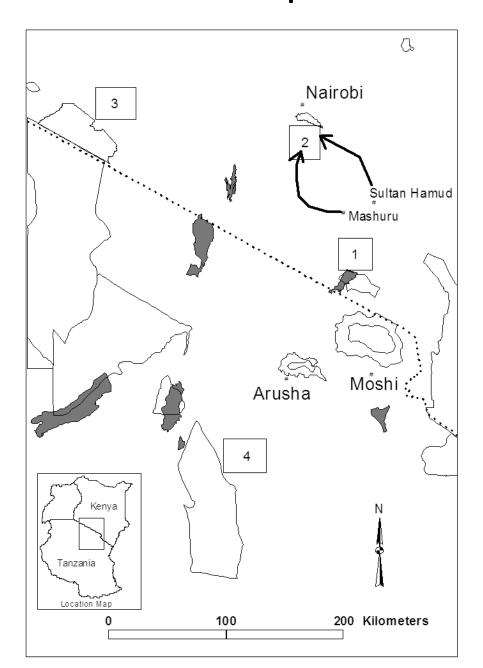
Highlands and lowlands in Kenya: relief influences rainfall



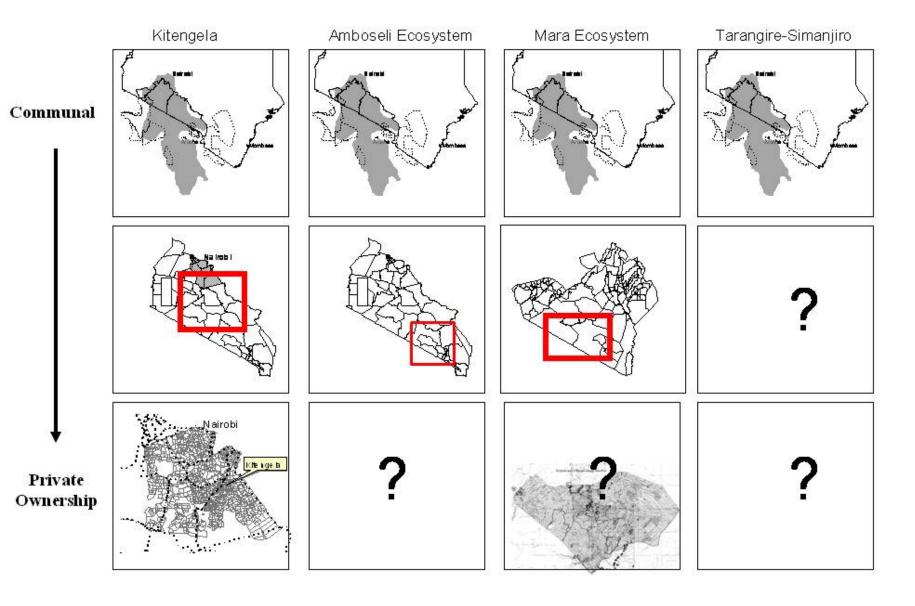
### Most of Kenya (about 80%) is arid or semi arid

- The arid and semi-arid lands are mainly inhabited by pastoralists
- These include the southern rangelands, the north, north-eastern and north-western regions
- Many outsiders see these lands as 'empty' since the population is relatively low
- With demographic pressure, these lands are being turned into various uses, most of which are incompatible with pastoralism

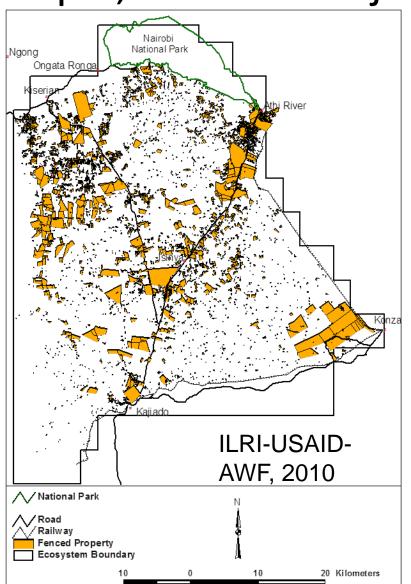
### Movement: Rainfall varies in space and time



### The process of land fragmentation



## How not to do it: the *Kaputiei* Plains example, northern Kajiado



## Droughts are among the key shocks to the pastoral system

- Droughts cyclic, and seem to be getting more frequent and severe
- Climate change will continue disrupting the predictable weather patterns hence diminishing resilience
- Mobility a critical adaptation strategy to help minimize losses
- Without proper land use and tenure policies, most dry season refuges will be converted to other uses, mainly unsustainable agriculture

## Availability and access to hay and other inputs in times of droughts





### Losses: 2005-06 drought for 100 hhs/site

Site	Class	Total died	% died	Cost Ksh †	Av. Ksh per hh	US\$ per Household
Amboseli	Cattle	2158	32	32,370	323,700	4,465
	Sheep	1665	27	2,498	24,975	345
	Goats	891	24	1,337	13,365	134
	Total			36,204	362,040	4,994
Kitengela	Cattle	2149	45	38,682	386,820	5,335
	Sheep	4586	47	9,172	91,720	1265
	Goats	1095	35	2,190	21,900	302
	Total			50,044	500,440	6,903
Mara	Cattle	2793	29	41,895	418,950	5,779
	Sheep	2836	21	4,254	42,540	587
	Goats	559	22	839	8,385	118
	Total			46,988	469,875	6,481
Simanjiro	Cattle	1091	13	16,365	163,650	2,257
	Sheep	451	11	677	6,765	93
	Goats	895	23	1,343	13,425	185
	Total			18,384	183,840	2,536

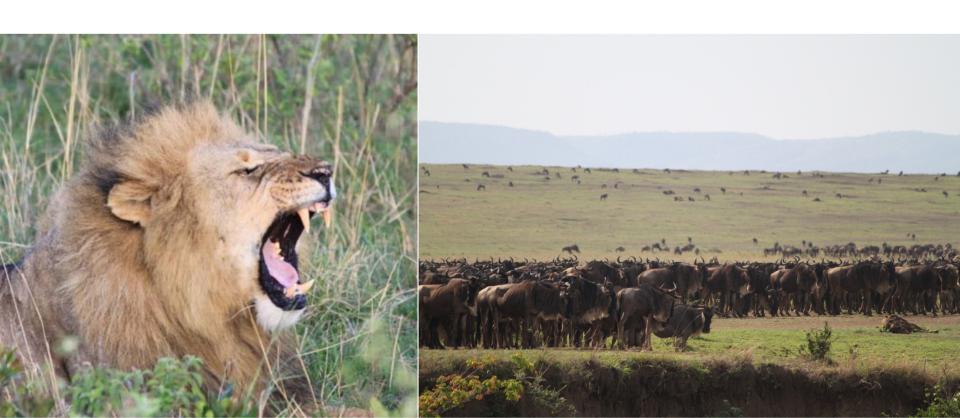
### Lactating and older cows hardest hit by drought



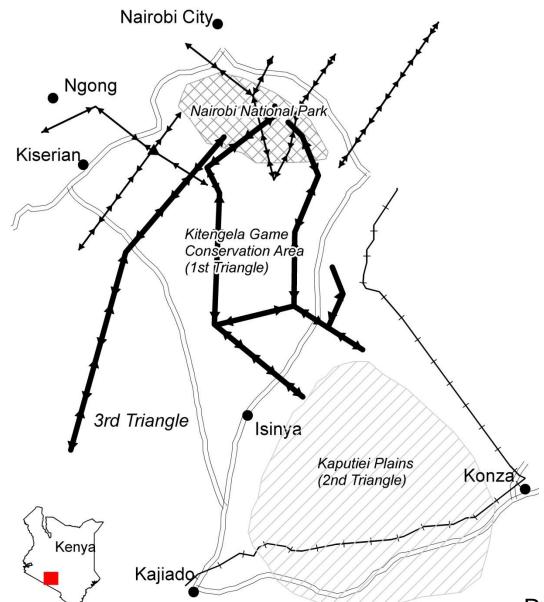
## Resilient ages: Prospects for calf kraals during drought



### Pastoral lands also home to high concentrations of wildlife



### Fragmentation affects livestock and wildlife



Reid *et al*, 2008

### Insecurity in pastoral areas

- In Kenya, the north-western (Turkana, Pokot, Samburu regions) among the most volatile
- In the north and north-eastern, porous borders are a security problem
- Proliferation of small arms
- High concentration of women and children in urban areas, refugees, food aid dependency

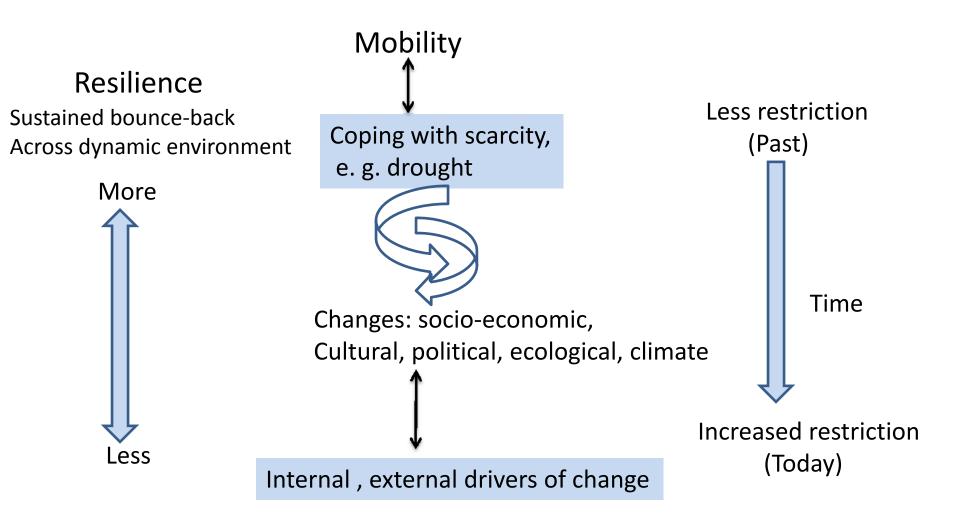
# The Turkana region and surrounding areas are prone to insecurity



### Porous borders: the north-eastern region, Kenya



#### Complexity in socio-ecological systems



#### Recommendations

- Support land use policies to stem the uncontrolled developments
- Legally protect communal use of land and access to water, salt licks, migration routes
- Build capacity of locals through County government, civil society to take part in planning and monitoring
- Support value chain, markets, women enterprises
- Support co-operative activities and social networks
- Hay harvesting, storage, other inputs
- Improve rural infrastructure: Schools (basic and higher), hospitals
- Support complementary alternative livelihoods
- Better co-ordination of relief, timely, reliable early warning infor.
- Support higher education in drylands, curriculum, research, especially pastoralist women for higher education (e.g. Centre for Sustainable Drylands, University of Nairobi), build partnerships

