

A pastoralist herding cattle in a dry, open landscape. The scene is dimly lit, showing a herd of cattle in the foreground and a person standing to the right, likely the herder. The background features sparse trees and a clear sky.

# A comparative perspective on the evolution and sustainability of pastoralist production systems

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University of Exeter



**Tegemeo Institute**



**Northern Rangelands Trust**



**Group for Analysis for Development**



**University of California, Davis**



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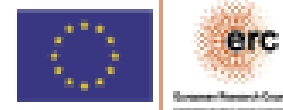


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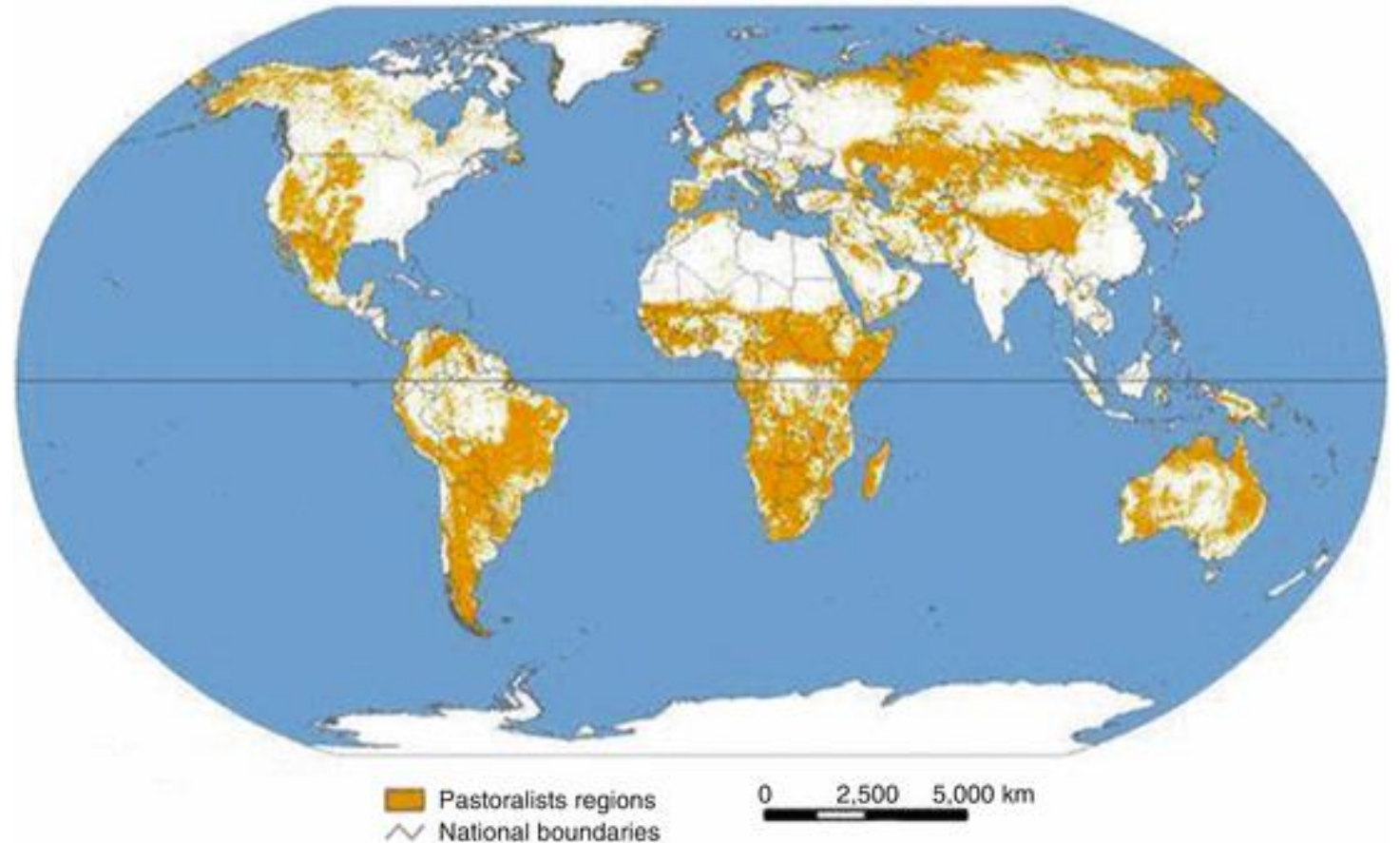


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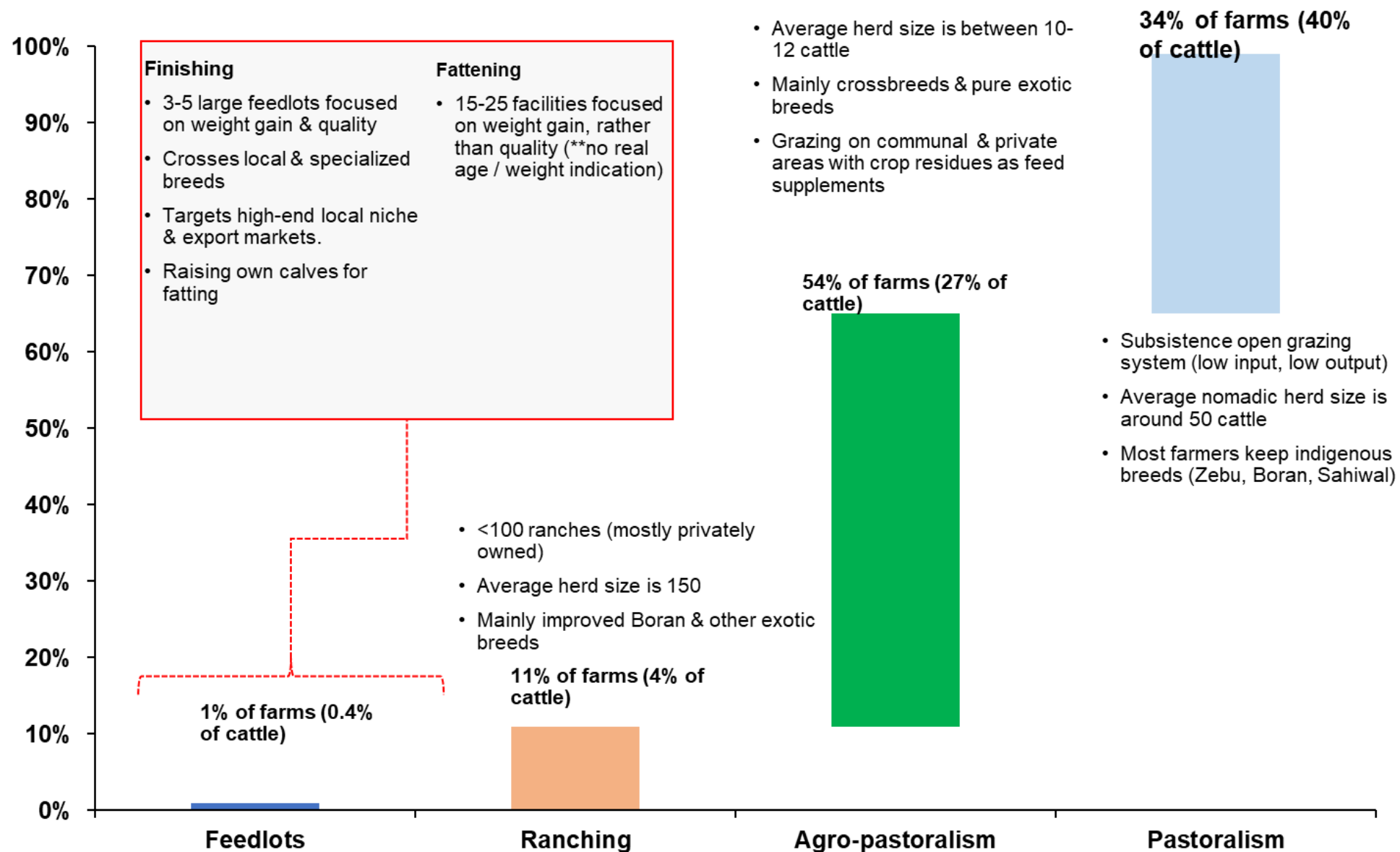
# Background

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- Pastoralism – extensive livestock production system – main production systems in rangelands and drylands
  - Rangelands & drylands cover about 40% of total land surface (FAO, 2011)
  - Estimated 200-500 million pastoralists - majority live in developing countries



# Economic value of pastoralism





# Pastoralists lands unsuitable for 'traditional agriculture'

Arid & semi arid climatic conditions characterized by low rainfall and high/low temperatures



# Similar characteristics in different contexts


## Kenya

- Low land areas
- Low rainfall
- High temperatures
- Keep cattle, sheep, goats, camels
- Low market orientation

## Peru

- High land areas
- Low rainfall
- Extreme cool temperatures
- Keep Alpacas, Llama
- High market orientation





Land management is critical  
for sustaining pastoralists  
productive systems

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Pastoralists have relied on  
customary institutions and practices  
to manage their lands

Communal land systems guarantees  
access & utilization of land, but have  
suffered CPR challenges

Indigenous ecological knowledge &  
customary practices have enabled  
pastoralist thrive



# Pastoralists facing increasing pressure over their lands

- Five key drivers

1. Unfavourable public policy
2. Population growth
3. Economic activities
4. Urbanisation
5. Climate change







# Evolution of land tenure regimes in pastoralist communities

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# Public policies biased towards pastoralism

- Govts & development agencies favoured land liberalisation policies
  - Increase access to land
  - Increased investments
  - Improve livelihoods




# Public policies biased towards pastoralism

- Govts & development agencies favoured land liberalisation policies
  - land concentration and fostered social inequalities (Jansen & Roquas, 1998; Ghimire, 2001; Zoomers & van der Haar, 2001; Lohr, 2012)
  - Did not lead to increased investment in land (Atwood, 1990; Deininger & Binswanger, 1999; De Janvry & Sadoulet, 2001; Zoomers & van der Haar, 2001; Place, 2009; Obeng-Odoom, 2012)

# Public policies biased towards pastoralism

- Communities with collective land access benefit from economies of scale in production, spread the risks and avoid costs of enforcing individual property rights (Nugent & Sanchez, 1998; De Janvry & Sadoulet, 2001).
- Collective land access can ensure greater access to resources for the poor (De Janvry & Sadoulet, 2001; Zoomers & van der Haar, 2001).
- So why has public policy not shifted to support pastoralism?



A wide-angle photograph of a dirt road in a dry, open landscape. The road is reddish-brown and leads towards a small, isolated tree in the distance. The surrounding terrain is covered in low-lying, dry vegetation. The sky is a clear, pale blue.

# Changes in land tenure regimes

# Land tenure regime identification & description

## Bundle of Rights

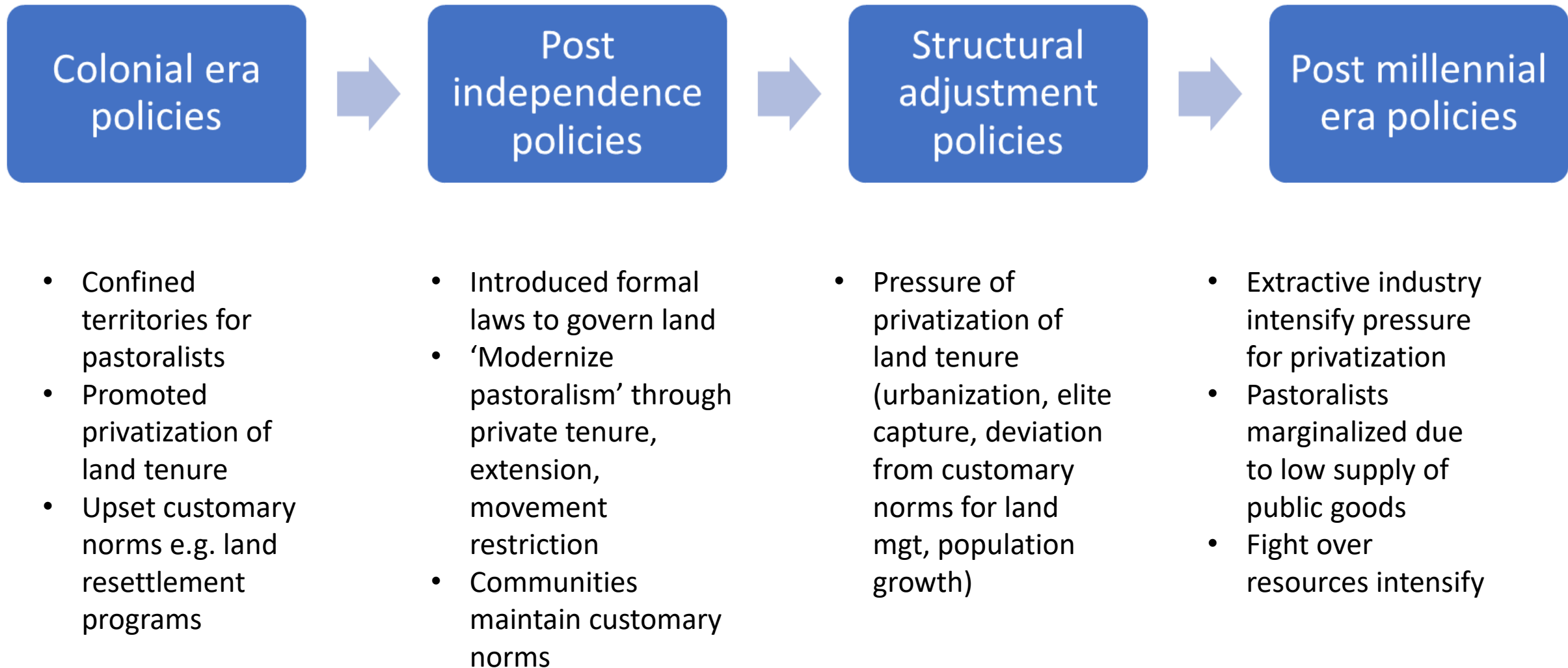
Operational Level (OL)	Access (A)	The right to enter a defined physical property
	Withdrawal (W)	The right to obtain 'products' from a resource
Collective-Choice Level (CCL)	Management (M)	The right to regulate internal use patterns and transform the resource by making improvements
	Exclusion (E)	The right to determine who will have access right, and how that right might be transferred
	Alienation (AI)	The right to sell or lease either or both of the above collective-choice rights



# Characterizing land tenure changes in East Africa

	Kenya	Uganda	Tanzania
Pre-colonial period: Collective land tenure by communities	Similar	Similar	Similar
Colonial Era land laws	Similar	Similar	Similar
Post independence land laws	Followed colonial era land laws	Followed colonial laws interrupted by civil strife in 70s & early 80s	Adopted Ujamma policy
Structural adjustment period: Promotion of individual land tenure	Similar	Similar (New administration in 1986)	Similar (ujamma abolished in 1985)

# Public policy failed to address CPR challenges and ended up marginalizing pastoralist communities



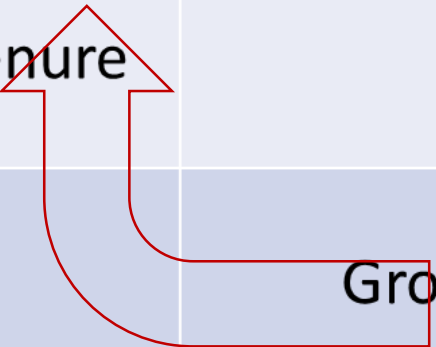
# Changes in State land policies

- From State led policies for communal land protection to avoid land concentration and promote internal markets
  - Group ranch formation and peasant communities
  - State led marketing boards
- To State liberal policies for promoting land market & individual privatisation
  - New land laws
  - Promotion of private investment & infrastructure development



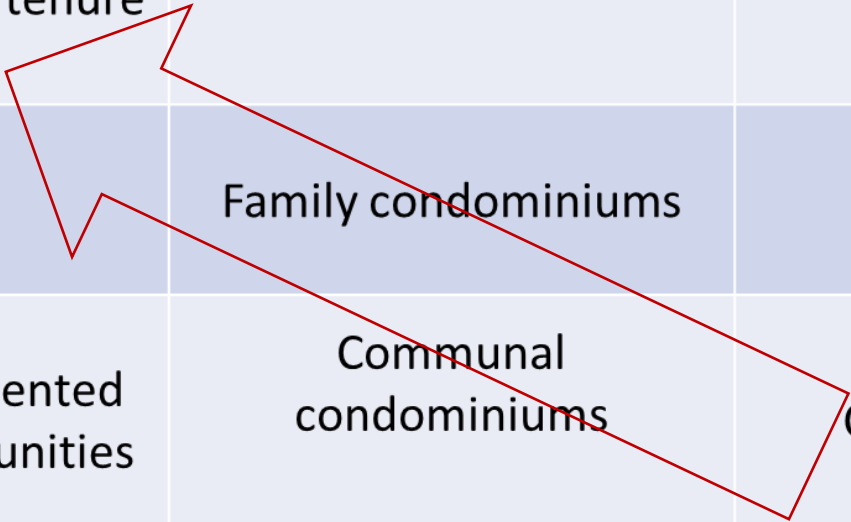
# Land access regime typology for East Africa: Kenyan Case


		Operational-Choice Action (access and withdrawal)	
		Individual	Collective
Collective-Choice Action (ownership and control)	Individual	Private tenure	
	Collective	Group Ranch B	Group Ranch A Un-adjudicated communal land



# Land access regime typology: Andean Case

		Operational-Choice Action (access and withdrawal)		
		Individual	Family	Collective
Collective-Choice Action (ownership and control)	Individual	Private tenure		
	Family		Family condominiums	
	Collective	Fragmented communities	Communal condominiums	Communal lands
	External		External condominiums	





## Current trend

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- Increasing trends individualisation of tenure in pastoral areas
- What does this mean for the sustainability of pastoral areas?
  - Access to productive resources
  - Implication for pastoral livelihoods





## Key drivers of changes in land tenure

# Misconceptions about pastoralism

- ✓ Backward agricultural system
- ✓ Economically irrational & irrelevant
- ✓ Environmental damaging

## Kedong ranch dispute poses threat to key railway project

SGR's Naivasha leg is challenged as locals claim disputed land

BY GEORGE SAYAGIE  
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The proposed routing of the Standard Gauge Railway

they will also stop the planned construction of an industrial park and drilling of geothermal wells on the over 77,000-acre farm.

Led by Narok East Member of Parliament Lemanken Aramat, the residents yesterday asked the National Land Commission to investigate how the community lost the 77,000-acre ranch.

"We have continued to be viewed as aggressors in our own land. The government should change its perception and give us our land as a measure towards addressing historical injustices,"

a women self-help group fundraiser.

Mr Aramat called on the NLC to revise all the leases on the controversial land and accused successive governments of extending the leases to exceed 99 years.

Last Friday, over 500 members of the community blocked the busy Mai Mahiu-Narok road

The government should change its perception and

near Suswa town to protest over the ownership of the land.

The protest followed a newspaper advert by Kedong Ranch Limited that it was the rightful owner of the land that lies between Nakuru, Kajiado and Narok counties.

But the disgruntled community has questioned the caveat placed on the land. "We shall not sit back and watch as our ancestral land is grabbed by unscrupulous traders and we ask the President to intervene on this," said the area MCA Kipas Lengues.

## Privatisation of land in Samburu County a boon to local community

For decades, the nomadic Samburu used their land mostly as pastureland. However, with the advent of devolution, huge chunks of what were previously

## 10 killed as armed herders fight over grazing land in Isiolo conservancies to save Maasai Mara ecosystem

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**Ruling Titles for land on which Sh70 billion project sits acquired irregularly**

### Turkana wind project title deeds nullified in land row

Court says law not followed when transferring 150,000 acres of community land

BY CHARLES WANYORO

The High Court in Meru has nullified title deeds for the land on which the Sh70 billion Lake Turkana Wind Power project sits, saying it was acquired irregularly.

Judges Peter Muchoki Njoroge, Yuvinalis Angima and Grace Kemei said the Constitution was not followed when 150,000 acres of community land was allocated to Lake Turkana Wind Power Ltd.

But the judges declined to cancel the title deeds, giving the Marsabit County government, the Attorney-General, the Chief Land Registrar and the National Land Commission one year to regularise the process.

In the landmark ruling that could open the way for the community to seek compensation, the government agencies will be required to hold public participation forums.

The judges highlighted the petitioners' complaint that the wind farm, where the company has erected 365 turbine generators, is on 40,000 acres but the company has cordoned off 150,000 acres.

Mr Mohamed Itarakwa, Mr Kachale Jomo Jale, Mr Issa Jitengwe Gambare and Mr David Tomaso Arakhole, who filed the case, had protested that the community's views were not sought.

The petitioners, who represented residents of Laisamis constituency and Karare ward, where the project is situated, argued that they are unable to access the land for grazing and to hold communal circumcision rites.

Through lawyer Amina Hashi, the petitioners emphasised that the acquisition was not done in accordance with the Trust Land Act and the Constitution.

They wanted the title deeds for Africa's largest wind farm nullified and the expansive land given back to the community.

But the judges said that though the law requires that irregularly issued titles be cancelled, they were not inclined to nullify a completed project.

"Titles issued irregularly by the operation of the law, automati-

cally invite cancellation," said Justice Muchoki, who read the judgment.

The project generates 310 megawatts of green energy, equivalent to 17 per cent of the power produced on the national grid.

The case, filed in 2014, had dragged on for years, at one time seeing justices Boaz Olao, Enock Cherono and Lucy Mbogua disqualify themselves in a stormy hearing session.

Lake Turkana Wind Power, Kenya's largest wind power project, recently confirmed the appointment of insider Philip Leferink as new chief executive.

The green energy project is connected to the national grid by the 438km Loiyangalani-Suswa transmission line.

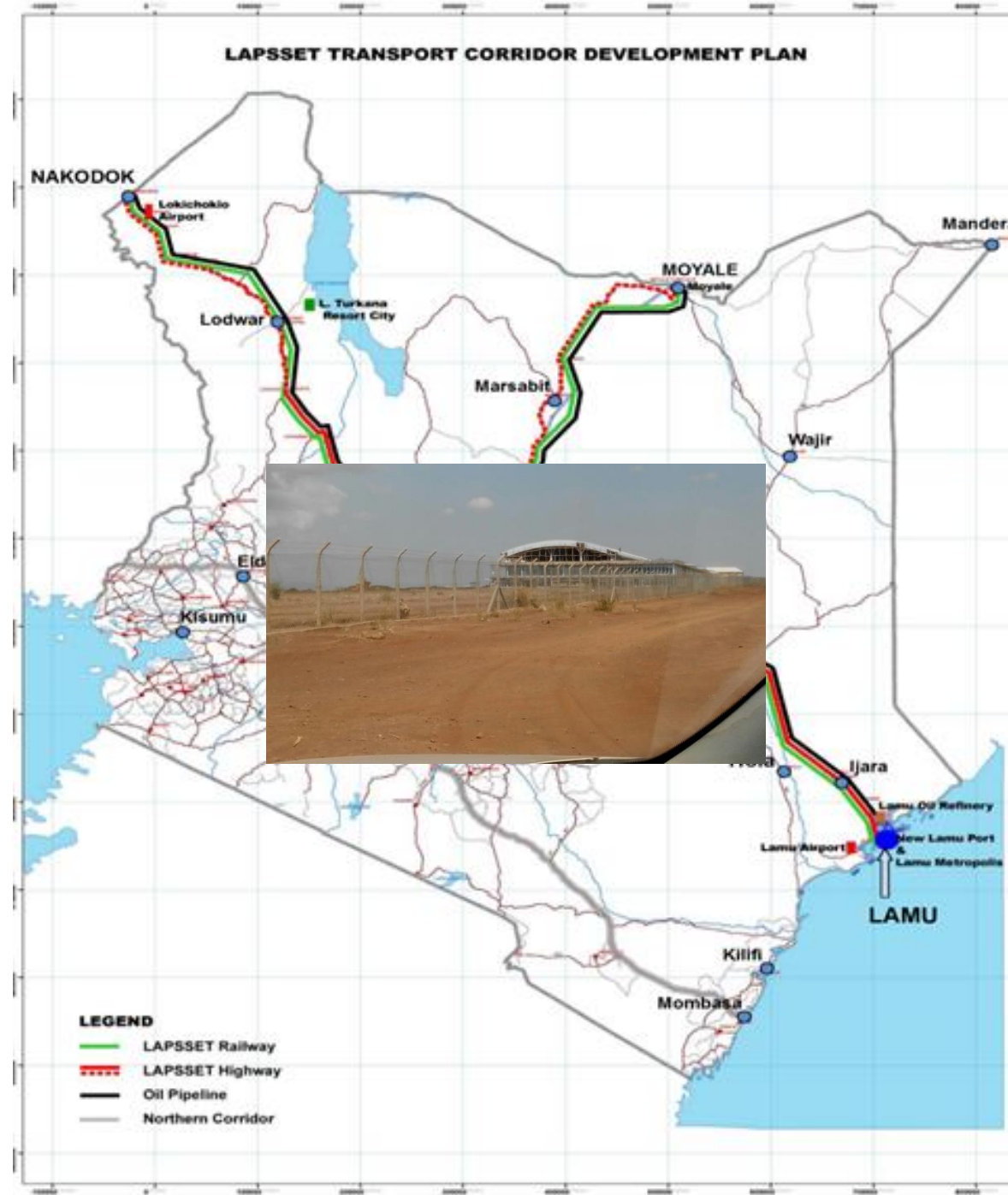
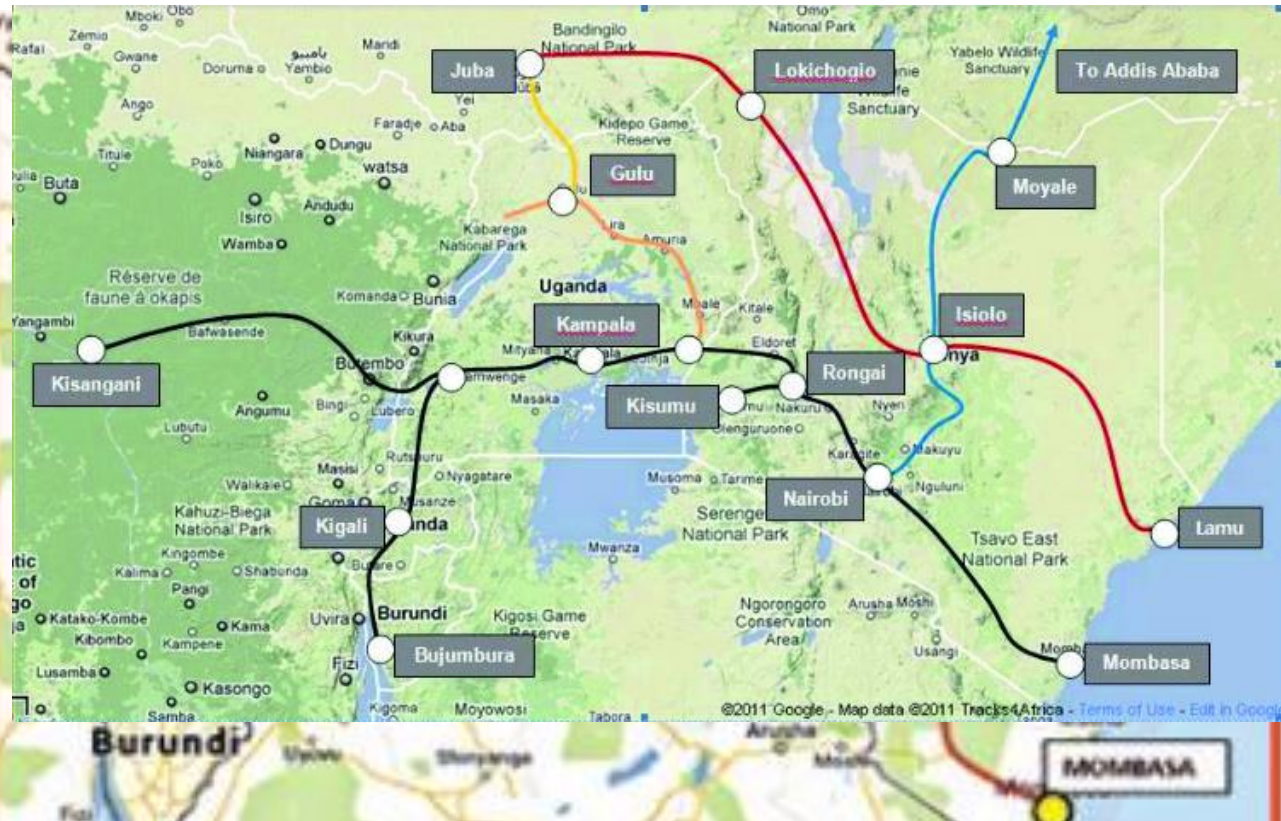
The plant was commissioned in July 2019 by President Kenyatta.

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**Kusi Ideas Festival: 'Nation' team meets Ghana's President**

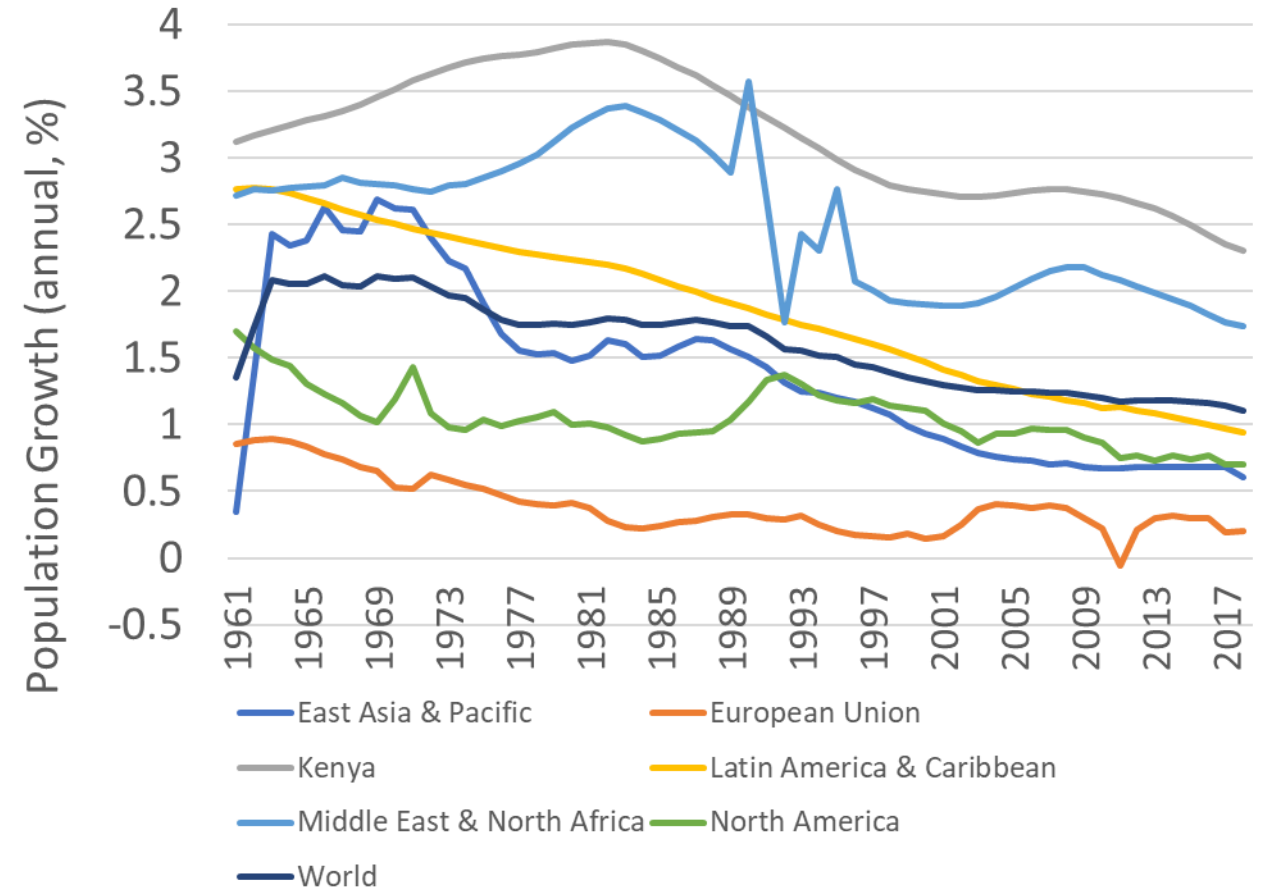
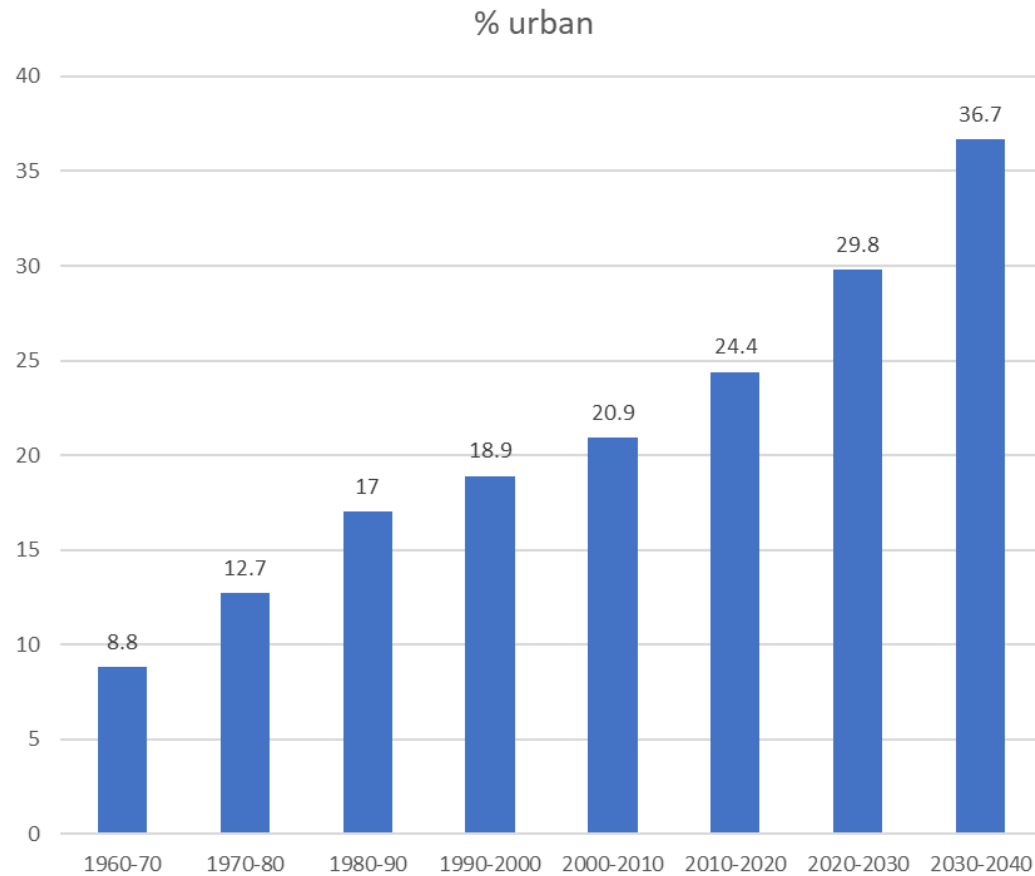


Economic  
development:  
Mega projects





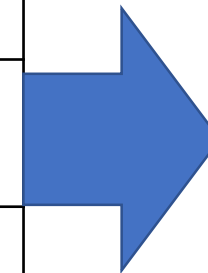
# Urbanization & population growth





# Consequences of changes in land tenure

	Institutional Crisis	Land Policy/Law	Urbanisation
LA	✓	✓	X
SSA	✓	✓	✓



Emergence of  
Individual  
based land  
tenure regimes  
that does not  
support  
sustainable  
pastoralism

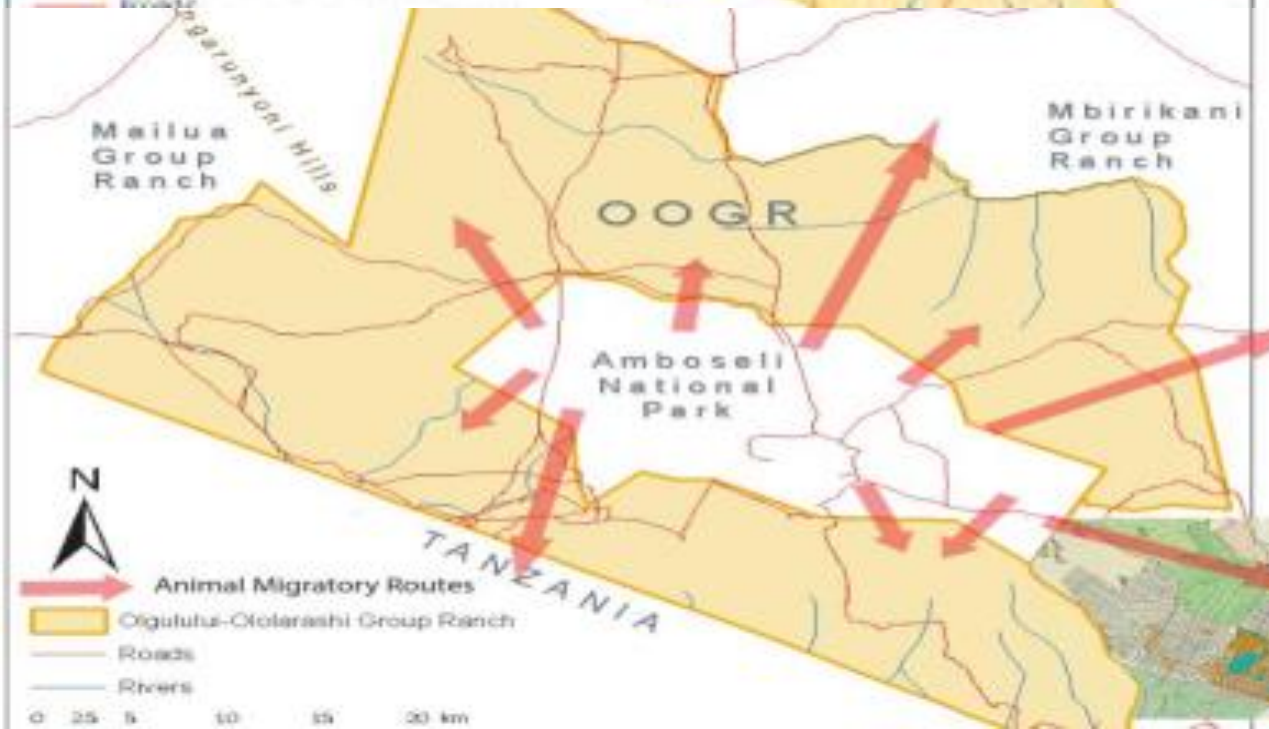


# Adverse effects

- Individualisation made pastoralists worse off
  - Economically
  - Socially
- Community Institutions & mechanisms to manage land under collective access have been weakened
  - Recognition in legal framework
  - Formalisation vs security of land tenure











# Exacerbated environmental degradation

Overgrazing not only issue, but  
environmental degradation also higher  
when mobility is hampered







Key lessons



## Lessons on sustainability of pastoralists productive systems

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- Collective land tenure supports strategies that improve productive systems such as
  - Mobility & mosaic grazing
  - Split herding
  - Genetic improvement
  - Herd size management



# Collective land tenure enhances sustainable practices

Land Tenure Regime	Sustainable Productive Strategies			
	Mobility and mosaic grazing	Herd diversification	Split grazing	Herd size management
Collective	Supported  Kenya: Practised Peru: Practised	Supported Kenya: This is increasingly being practised and pastoralists are making efforts to improve breeds Peru: widely practised	Supported Kenya: Practised in communal lands Peru: Practised in communal lands	Encouraged Kenya: Encouraged but not practised Peru: Encouraged but not practised
Individual	Inhibited Kenya: Not supported Peru: Not supported	Supported Kenya: Enforced due to limited land and pasture Peru: Constrained	Constrained Kenya: Enforced through intensification Peru: Constrained	Enforced Kenya: Enforced due to limited pasture Peru: Constrained



# Policy Lessons

- Pastoralism recognised as the best possible use of arid environments
  - Specialised system in marginal ecological environments (harsh & unpredictable conditions)
  - Considering climate change, pastoralists have indigenous knowledge & institutions to cope with variability
- Improve sustainable institutional arrangements for pastoralist production systems
  - Strengthening governance systems for communal lands
  - Recognition of customary laws
  - Formal property rights including transitory & temporary rights

# Conclusion

- **Reorient** public policy to support pastoralism
  - Political engagement by pastoral communities
  - Governance matters for enhancing access to resources
- **Strengthen** community management of communal land
  - Recognition & enforcement of community laws
- **Encourage** multiple use of sustainable practices
  - Rangeland's ecology to rationalize land use
- **Emphasize** herd size management
  - Breeds improvement to improve margins & productivity
  - Market orientation