



Land tenure and pastoral productive systems: sustaining livelihoods through maintenance of collective land access

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SUMMARY

Pastoral communities are facing increasing pressure on their livelihoods due to depletion and degradation of their productive resources. Land tenure plays a decisive role in sustaining pastoral productive systems. However, these communities are also facing pressures on their land as a result of misconceptions about pastoralism, changing demographics, urbanisation, climate change, and environmental degradation. In addition, public policy has not always favoured the development of pastoralism. Instead, public policies has promoted individualisation of land tenure. Individual land tenure is inconsistent with the sustainability of pastoral productive systems as it does not support sustainable practices such as mobility. On the other hand, these practices are supported under collective land tenure. Given that pastoral communities reside in areas characterised by arid and semi-arid conditions, and where alternative uses of land such as crop farming may not be possible, we argue for the maintenance of collective land tenure as it enhances the sustainability of pastoral productive systems.

BACKGROUND

Land tenure systems are under pressure in pastoralist societies

Pastoral communities around the world, occupy areas that are vast and characterised by arid and semi-arid conditions such as high temperatures and low rainfall. These communities practise extensive livestock production systems that are environmentally well-suited to these conditions. The ability to adapt to the ecological uncertainty and variability of the ecosystem plays a key role in the suitability of pastoralism for the livelihoods of these communities. Traditionally, pastoral communities have accessed and managed these lands collectively, under customary systems.

However, public policy has not always supported pastoral communities. This is as a result of misconceptions about pastoralism as a productive system. Over the years, pastoralism has been perceived as backward, a contributor to environmental degradation and an inefficient use of land. Government programs that favour land intensification are being pushed in pastoral areas despite evidence to the contrary about their effectiveness. Key among these programs is the individualisation and privatisation of land tenure.

In Kenya, such land individualisation among pastoral communities started in the mid-1980s in the Maasai areas (now Kajiado and Narok Counties). Kajiado County is a good example of where previously communal land was privatised pushing pastoral communities' further back into game reserves and an unstable situation economically, socially and environmentally.

This brief discusses sustainability of pastoral productive systems, especially how they are likely to be affected by land tenure systems in pastoral areas. We compare pastoral communities in two different contexts i.e. Kenya and the Peruvian Altiplano to validate our conclusions. We use lessons from these communities in order to show that collective land tenure systems facilitate livestock keeping under extensive systems, while individual land tenure is likely to lead to collapse of pastoral productive systems.

Contextual Definitions

We define land tenure regimes as a set of rules and procedures that define and allocate rights –of access, withdrawal, management, exclusion and alienation– over land. These rights can be held by individuals, families or communities. We define the institutional arrangements found in pastoral areas by developing a taxonomy to categorize the tenure regimes, either as collective or individual depending on this set of rules and who holds the rights. Collective land tenure regimes are those where several or all land rights are held by the community. Community is defined as a collective group of people who can either be families, clans, villages, tribe or community in the form of a group of people that is bound by common objectives. Thus, these regimes can present higher or lower degrees of “communality” depending on how many rights are allocated to the community. On the contrary, when all land rights are held by a sole individual or by a nuclear family (as a single household), then we have individual tenure regimes.

The two forms of land tenure regimes are found among pastoral communities in Kenya and Peruvian Altiplano although some variation exists between the two regions. For instance, under communal access in the Peruvian Altiplano, we find the condominium and communal-condominium land tenure regimes. In Kenya, we find un-adjudicated communal lands and group ranches. However, these regimes are comparable when we go deeper and look at how rights are defined



Alpacas grazing in Callyoma Province, Peru

Although in high altitude, extensive systems are similar to those in Kenya

and allocated (See Damonte et al., 2017 for details).

Lessons from pastoral communities: Different contexts, similar histories

As indicated earlier, pastoral communities reside in fragile areas characterised by arid and semi-arid conditions. However, they have developed a form of opportunistic management approach that allows them to adapt to the constant fluctuation in fodder availability. This approach requires monitoring. For example, communities should be able to estimate their feed requirements based on the number and type of animals and available grazing land.

To effectively implement such management practices, pastoralist communities need to organize themselves to guarantee physical and political access to a wide variety of resources. Land tenure regimes are the central axis of this institutional structure since they define the rights over the main economic asset of pastoralists: grasslands. Collective land tenure regimes guarantee access to a minimum land area suitable for extensive production systems, allow for access to resources that may be unevenly distributed and prevent individualisation of critical resources such as wetlands and

saltlicks. They enable pastoralist societies to undertake four opportunistic management strategies that maximise the use of land, namely: mobility, split grazing, herd size management and breeding strategies.

Table 1 shows how these strategies are practiced by pastoral communities in the vastly different contexts of Kenya and the Peruvian Altiplano. These strategies are either supported, inhibited, constrained or enforced under different land tenure regimes. The land tenure regime that supports these strategies is said to support the sustainability of the pastoral productive system.

Pastoralists in the Peruvian Altiplano are found in different ecological environment (mountainous drylands ecosystems) and keep different animals from communities in the

Collective land tenure regimes support sustainable pastoral production systems.

Collective land tenure regimes provide the institutional basis for more sustainable production systems

Public policy should place emphasis on supporting the maintenance of collective land tenure regimes and improving community mechanisms to manage land under collective access in pastoral areas.

Kenyan savannah. If ecosystems and the types of animals herded were to affect the sustainability of pastoral systems, we would expect to find differences in how the strategies mentioned above would influence pastoral productive system in the two regions. However, we find that in both cases, there is a clear relationship between the land tenure regimes practised and the sustainability of the productive strategies, regardless of their social, cultural and economic differences. Under collective land tenure regimes, pastoral communities have developed strategies that enable them to maximise production, while conserving local ecosystems. In contrast, the same strategies cannot be sustained within individual-based regimes. As in Kenya, Peruvian governments have also erroneously pursued policies aimed at the individualisation of land tenure.

An analysis of the use of the strategies indicates the following:

a) Mobility is highly practised. This involves moving animals depending on fodder availability within a mosaic grazing system, that consists of the spatial combination of intensively grazed and underutilised patches, and the temporal combination of a limited period of intensive use followed by long periods of little or no grazing at all. Pastoral communities in Narok, Isiolo and Laikipia move their livestock in seasonal patterns according to pasture availability. A best practice of mosaic grazing is the Kiina community in Isiolo. Land is divided into *dbeeda* which essentially are grazing clusters. Each cluster develops its own grazing and water management plan. In practice, land is divided based on potential to generate pasture and season. In this way, different lands are accessed based on season e.g. rainy, dry, famine or drought. Maintenance of the *dbeeda* is, however, facing challenges from inability to enforce the customary laws to outsider communities. If individual land tenure were dominant, such mobility practice would not be possible. First, the amount of land required would be too vast for any individual ownership. In addition, individual ownership would prevent the sharing of the resources on their land. A case in point is the ranchers in Laikipia. Although they own relatively huge tracks of land in more favourable areas, they do not allow access to pastoral communities unless that access has been pre-negotiated.

Table 1: Land Tenure Regimes and Sustainable Production Strategies

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

b) Adopt breeding strategies that emphasise the environmental adaptation of livestock instead of their commercial utility, and diversifying herds' composition is also greatly practised. By providing access to a varied set of resources, collective land tenure regimes give pastoral families the opportunity to diversify their herds, as different species have different pasture preferences. For instance, among pastoral communities in Kenya, there has been a shift from large livestock to small livestock. Maasai pastoralists started adopting sheep, notably the Dorper sheep introduced from South Africa, which have replaced many cattle owing to the latter's demanding pasture requirements. This practice has also been adopted by other pastoral communities such as the Borana, Samburu and Turkana. Additionally, those in the northern part of Kenya have started to keep camels, which are more suited to arid conditions. Similarly, Maasai pastoralists in Kajiado and Narok have also improved their cattle by adopting the Sahiwal breed which is more productive for both milk and meat and adapts well in semi-arid conditions. Under individual tenure systems, improvement of breeds is enforced due to limited land and pasture.

c) Splitting herds according to the species, breed, sex and age of animals, for improved genetic management is also a common practice. Among pastoral communities in Kenya, herd splitting is mainly by age and sex of

animals. For instance, calves are separated from the main herd, goats and sheep are grazed together, and camels are also separated from other animals owing to their ability to browse for trees. The majority of pastoralists will have one type of breed as a majority, i.e. indigenous cattle rather than a mixture of indigenous and improved breeds. Under individual tenure regimes this strategy is enforced as a result of intensification of production systems. Private ranchers improve productivity through adopting intensive systems. If they were to adopt extensive systems under individual land tenure, challenges such as spatial and labour constraints would limit this practice.

d) Herd size management is not practised but pastoral communities. This refers to a deliberate strategy whereby herders avoid overgrazing especially when pasture is scarce, and maximise their flock size during periods when pastures are abundant. To reduce the flock, herders can destock animals through sales during drought, and restock when fodder is available. For example, in the lean period, private ranchers such as those in Laikipia County cull their animals and only maintain a number that can be supported by available pasture. However, pastoral communities usually resist the need for destocking and restocking programs - although they have been made available by the government and civil society organisations- because pastoralists' believe that mobility strategies provide an opportunity to seek pastures elsewhere,

without reducing their herd sizes. In contrast, under private tenure regimes, destocking and stocking practices are common due to limited land pasture.

Policy implication/recommendations

The Kenyan government has for decades pursued policies aimed at privatisation of land tenure in pastoral areas. Over time, land privatisation has been increasing in these areas threatening the sustainability of pastoral productive systems. We, therefore, recommend that public policy should be re-oriented to help pastoralist communities maintain collective land tenure regimes since these are likely to sustain pastoralism especially in the arid and semi-arid areas where alternative economic practices are not easily feasible. This can be achieved by promoting policies that focus on formalisation of land tenure rather than the individualisation of land tenure.

Local and customary institutions for land management and governance should be strengthened. As part of strengthening customary institutions, formal recognition of customary rules in the country's legal system will strengthen the enforcement of customary laws pertaining to land and resource management. Further, territorial rights can be allocated to communities in un-adjudicated pastoral land. We recommend policies aimed at strengthening community governance mechanisms to effectively manage land and support collective action among herders.

Pastoral communities also need to be sensitized about herd size management. If herd sizes are properly managed, together with the adoption of other practices such as breed improvement, then the sustainability and productivity of pastoral systems is likely to be enhanced. Mobility on its own will not lead to sustainability of these systems because pressure on natural resources will continue to increase with increase in population.

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