

Collective land rights: an essential asset for Pastoral communities in order to sustain their livelihoods and the environment in the Andean Altiplano

Considering communal or condominium land tenure regimes enable sustainable pastoral production systems, public policy should be re-oriented to support pastoralist families' collective land right access.

Gerardo Damonte, Manuel Glave, senior researchers at GRADE, and Sandra Rodriguez

1) Policies encouraging individual land tenure are failing in pastoralist communities

Pastoralism is an extensive form of livestock production that constitutes the main production system found in rangelands, providing livelihoods to an estimate of 500 million people globally (WISP 2014). Crucially, in Peru, it is established as the main production system in the rural Altiplano for its optimal adaptation to high environmental uncertainty and variability of the rangeland ecosystem.

Yet, short sighted to the subtle dynamics of this interrelationship, global development policies directed towards pastoralist societies have conventionally been designed based on the labelling of these societies as archaic, unproductive and environmentally destructive. Governments have put forward initiatives to support other more intensive uses of rangelands such as encouraging individual land tenure of once commonly used pastoral lands. These policies not only have not yielded the expected results, but have contributed to the mounting pressures on pastoralist livelihoods around the world. In Peru, pastoralist land individualization policies in places such as

Caylloma province in Arequipa have led to poor outcomes in both environmental and social terms.

Having been taken all of this into account, we have analysed the relationship between land tenure systems and the sustainability of pastoral communities' production systems. Through comparative research that englobes pastoralism around the world, aiming specifically at the comparison in between the Andean Altiplano and East African Savannah, we estimated that different regimes of land tenure either enable or hinder the performance of production strategies that are key for the sustainability of pastoralism. Predictably, collective land tenure supports the sustainability of pastoral production systems, whereas the individualisation of land tenure undermines it.

2) Pastoralist land tenure regimes: Peru and Kenya compared

Land tenure regimes are institutional configurations constituted by a set of rules and procedures that define and allocate rights – of access, withdrawal, management, exclusion and alienation – over land. These types of rights can be held by either individuals,

families or communities. In our study, we have characterised tenure regimes by combining these types of rights and their holders and, as a result, we have managed to identify five different types of land tenure regimes that can be more generally simplified as collective or individual regimes.

Under collective regimes, several or all land rights are held by collectives, whether they are extended families or communities. Thus, these regimes can present higher or lower degrees of “communality” depending on how many rights are allocated to collectives. On the other hand, we speak of individual tenure regimes when all land rights are held by a sole individual or by a nuclear family (as a single household).

A common feature among traditional pastoral societies around the world is that land tends to be treated as a common-pool resource that is accessed, used and controlled collectively. This is also the case in pastoralist communities in Peru and Kenya. Despite the differences in terms of their environmental conditions and the type of animals herded, collective regimes have historically remained as the most prevalent form of land tenure around the world.

But over the last decades the aforementioned countries have tried to promote individual-based land tenure regimes as a way to foster development. Nowadays, we can see as a result the coexistence of both collective and individual land tenure regimes.

3) Collective land tenure regimes provide basis for more sustainable production systems

Pastoralism is an extensive production system that has been adapted for the efficient use of rangelands resources, providing a range of economic and environmental values from the limited and unreliable resources. To this end, pastoral societies have developed a form of **opportunistic management** that allows them to adapt to the constant fluctuation in fodder availability. This allows pastoralist families to benefit from a system that maximizes their production without destroying the environment. The literature and our case studies show that other land uses in rangelands such as intensive cattle raising or mining may be more profitable in the short term but are indeed destructive for the ecosystem in the longer one.

This opportunistic management requires **tracking**, which involves the matching of available food supply with the amount of animals in a given area at any particular time. Tracking strategies provide the basis for sustainability in traditional forms of pastoral production. But in order to pursue such strategies, pastoralist communities need to organize themselves to guarantee physical and political access to a wide variety of resources for their family or community members. On the other side, land tenure rights are the central axis of

this institutional structure since they define access over the main economic asset of pastoralism: grasslands.

Moreover, evidence shows that collective land tenure regimes **are institutionally better placed to provide the conditions for tracking strategies to unfold**. Collective regimes seek to guarantee access to the **material base** that is needed for their reproduction by enabling the access (i) to the minimum area of land area needed for extensive use and (ii) to variety of resources that are unequally distributed in the territory, while at the same time (iii) preventing the concentration of key resources such as wetlands in few hands. Once this material base is guaranteed, pastoralists from the Altiplano are able to perform **three tracking strategies** that allow the opportunistic management of resources:

- a) **Moving animals depending on fodder availability within a mosaic grazing system**, that consists of a combination of intensively grazed and underutilised patches on one hand, and temporary intensive use, followed by long periods of little or no grazing at all, on the other. In the Antiplano, access to extensive and varied pastures implies pastoral families being able to move their herds around according to seasonal feed availability, while performing a mosaic system of grazing. This is common practice in both family condominiums and pastoral communities in Caylloma. Where individual tenure regimes predominate, herd mobility is inhibited as a result of land fragmentation.
- b) **Adopting breeding strategies that emphasise the environmental adaptation**

of livestock instead of their commercial utility, therefore, diversifying herd composition. By providing access to a varied set of resources, collective land tenure regimes gives pastoral families in Caylloma, the opportunity to diversify their herds, as different species have different pasture preferences. Besides, maximising the use of heterogeneous resources, herd diversification functions as a risk diversification strategy. There are two breeds of alpacas that co-exist in Caylloma: the most productive is the *suri* because its fibre fetches a higher value in the market, while the most popular is the *huancaya* because it tolerates lower temperatures in a more efficient degree.

c) **Splitting herds according to the specie, breed, sex and age of animals, for improved genetic management**. Under individual tenure regimes this strategy is limited due to spatial and labour constraints in both regions. In the Altiplano, herders that produce under collective-based land tenure regimes organise themselves to divide up labour tasks for looking after the herds. In Caylloma, Arequipa animals are normally split into at least three flocks: female alpacas and babies; male alpacas; and, llamas altogether, in order to gain control over reproduction.

In our comparative research, we found that the relationship between collective based production systems and the ability to develop tracking strategies for sustainable pastoralist production, is present in the widely differing regions of both the Andean Altiplano and the East African Savannah as we show in the following table:

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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 in communal lands	Supported Kenya: This is increasingly being practised and pastoralists are making efforts to improve breeds	Supported Kenya: Practised in communal lands	Encouraged Kenya: Encouraged but not practised
	Peru: Practised in communal lands	Peru: Widely practised	Peru: Practised in communal lands	Peru: Encouraged but not practised
Individual	Inhibited Kenya: Not supported	Supported Kenya: Enforced due to limited land and pasture	Constrained Kenya: Enforced through intensification	Enforced Kenya: Enforced due to limited pasture
	Peru: Not supported	Peru: Constrained	Peru: Constrained	Peru: Constrained

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Our comparative study shows that there is a clear interplay between land tenure regimes and the sustainability of productive strategies across regions, 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. However,

the same strategies cannot be sustained within individual-based regimes. Thus changes in land tenure regimes trigger changes in production practices and vice versa. In our case studies, land tenure changes from collective-based to individual-based regimes have inhibited and constrained some productive strategies, thereby threatening the sustainability of pastoralism as a whole in both regions.

Policy implications and recommendations

As stated before, policies promoted during the last decades have encouraged land individualisation and privatisation thus threatening local institutions that support the sustainable practices in pastoral territories. We therefore recommend that **public policy should be re-oriented to help pastoralist communities maintain collective land tenure regimes**. In particular, we advise for the implementation of policies aimed at strengthening community governance mechanisms to effectively managing land and supporting collective action among herders. For this we recommend:

- **Strengthening the local and customary institutions for land management and governance through the recognition of collective land access rights.** In the Altiplano this leads to the recognition and formal regulation of the Condominium and other collective based land tenure regimes. We must further the discussion of how to recognize customary collect rights in the region.
- **Stimulating the formation of small and medium herders' associations in order to increase their access to a greater quantity and diversity of pastures.** This would help to support more sustainable resource management that will confer benefits in terms of increased incomes. In Peru the Ministry of Agriculture is helping pastoral peasant communities with loans when they have enough resources: land, water and labour to develop their business as Alpaca fibre producers. This state support may be expanded to pastoral families with lesser access to resources by promoting their association.
- **Promoting the continuity of local sustainable management practices, such as resource tracking among pastoral families through programs that showcase and reward such practices.** In Peru the Ministry of Environment and Ministry of Agriculture are promoting sustainable production practices in the context of climate change through new programs such as Haku Wiñay for peasant producers. Pastoral communities' sustainable production practices in dry and semi-dry ecosystems can certainly be incorporate into similar programs as well.

This policy brief is based on the key findings from the study, «Land Tenure and the Sustainability of Pastoral Productive Systems: A Comparative Analysis of the Andean Altiplano and the East African Savannah», authored by Gerardo Damonte, Timothy Njagi, Lilian Kiriimi, Manuel Glave and Sandra Rodriguez. It was published as a Comparative Evidence Paper of the Research Paper Series for ELLA Programme. Available in: <http://bit.ly/ELLALandtenurecompanalysis>

Análisis & Propuestas explores several themes on Peruvian reality, based on the findings from research conducted by GRADE's members, and aims to offer public policy recommendations.

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