

## Collective Land Tenure Regimes and Vulnerability Reduction in Pastoralist Societies of the Andean Altiplano

Based on research into the evolution of land tenure regimes and their implications for the sustainability of pastoral production systems, this document provides public policy recommendations to help sustainable development of pastoralist societies. Evidence shows that collective land regimes create the conditions for the development of sustainable production systems while individual land tenure regimes are unable to create these conditions, endangering the sustainability of pastoralism and rangelands.

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### 1) Problem and new approach to sustainable development in pastoralist societies

Development policies directed towards pastoralist societies have conventionally been designed based on an appreciation of these societies as archaic, irrational and in need of “modernization”. Mobility, an essential characteristic of pastoralist societies around the world, has been seen as inefficient. Based on this inadequate understanding of pastoralism, policies have been implemented to promote individual land privatization as a way to achieve a more efficient use of resources. However, as several studies have shown, these policies have usually caused negative and sometimes disastrous results for pastoralist production systems.

Therefore, since recent decades, a new

approach is being adopted, in which three specific social and environmental characteristics of pastoralist societies are recognized.

- a) Pastoralist societies have developed in drylands, where the possibility of intensifying production is constrained by environmental factors.
- b) Most of the environments in which pastoralist societies live follow non-equilibrium dynamics so, in order to adapt, it is necessary to develop various production strategies to cope with environmental variability and uncertainty.
- c) Pastoralist societies have, throughout centuries, developed production systems adapted to their environment, so it is essential for policy design to take into account traditional models of production.

### Pastoralist societies and Land tenure: Key concepts

Pastoralism is usually defined as a form on extensive and itinerant animal husbandry and is one of the main production systems in drylands. It is estimated that 200 million pastoralist households exist worldwide, of which about 18% are in Latin America.

Land tenure regimes are an institution, a set of rules that define the relationship between people, as individuals or groups, with respect to land. These rules establish how the rights to access, use, control and transfer land are allocated, as well as the responsibilities and obligations related to these rights.

Today it is recognized that pastoralism is an extensive production system adapted to the high variability and uncertainty of drylands that is able to make an efficient use of the limited resources provided by these ecosystems.

However, pastoralist production systems are currently under increasing economic, social, political and environmental pressures.

In some regions, these processes are leading to a progressive individualization of access rights to land which has created scenarios that threaten the sustainability of both dryland resources, and pastoralist livelihoods. In this context, this paper seeks to explain the relationship between collective land tenure regimes and the sustainability of pastoral production systems.

## 2) Sustainable management strategies and land tenure regimes

Pastoralism is an extensive production system that has been adapted to use the resources of drylands very efficiently, providing a range of economic and environmental values. To this end, pastoral societies have developed a form of **opportunistic management** which allows them to adapt

to the constant changes in fodder availability. This requires tracking, which involves the matching of available feed supply with animal numbers in a given area at any particular time. **Tracking strategies** provide the basis for sustainability in traditional forms of pastoral production.

Evidence shows that collective land tenure regimes, as a set of rules and procedures that determine the access, use and control of land, provide the necessary conditions for tracking strategies to unfold. Collective tenure arrangements have enabled pastoralists to develop a method of extensive and mobile production, while avoiding at the same time the concentration of access to resources that are unequally distributed across the territory.

However, external factors, such as public policies that promote the individualization of land, and internal factors, such as urbanization processes are generating institutional crises in collective land tenure regimes, generating their fragmentation. This trend is having negative impacts on the sustainability of pastoral production systems as we can see in the case study of the pastoralist society of Caylloma Province in Arequipa, Peru.

### Tracking Strategies

- a) Moving animals to areas with fodder availability.
- b) Seeking feed alternatives during times of drought, by importing feed or enhancing pastoralist fodder production.
- c) Breeding strategies that emphasize criteria of adaptation to the environment rather than commercial utility.
- d) Splitting herds according to species, breed, sex and age of animals, for improved genetic management.
- e) Destocking during the dry season and restocking when fodder is available after the dry season.
- f) Diversifying the species composition within the family herd as well as the family income from other livelihood sources besides animals.

Photo: Sandra Rodríguez



«Collective land tenure regimes, as a set of rules and procedures that determine the access, use and control of land, provide the necessary conditions for monitoring strategies to unfold».

# Análisis & Propuestas

Photo: Sandra Rodríguez



### 3) Case study: Tenure and productive sustainability in Caylloma

In Caylloma, two types of collective tenure regimes, the 'Condominium' and the 'Communal Condominium', coexist with one type of individual tenure regime, in which just one household holds access, use and control rights over the land.

A Condominium groups a set of family units, generally linked through kinship, who collectively access land and organize animal grazing, following rules and procedures that are recognized as legitimate by the group. If a Condominium is situated within a Peasant Community, it is known as Communal Community. In this case, the Peasant Community shares

with the family units some control rights over land.

In terms of sustainability, the institutional rules of Condominiums:

- Guarantee that the family units have access to a variety of resources that are unevenly distributed across the territory.
- Avoid the concentration in a few hands of the access to key resources such as wetlands.
- Establish authorized periods of grazing among users in order to avoid overgrazing.
- Develop tracking strategies that depend on the establishment and implementation of rules for the collective use and management of pastures.

However, since the nineties, we observe a trend towards the individualization of land rights and the fragmentation of the condominiums' land in Caylloma that has endangered not only the reproduction of the pastoralist productive system, but also the sustainable practices that are supported by collective tenure regimes. Among the factors driving this process are two closely related ones: firstly Peruvian public policy which promotes the individualization of land, and secondly the crisis of the condominium as an institution able to enforce rules oriented to make a proper use of resources. Without state support, condominiums will keep losing the ability to enforce traditional grazing rules onto new generations, creating scenarios of conflict between users and families, resulting in decisions to dissolve the condominium and divide the land to form individual land tenure regimes.

The problem lies in that the individual land tenure regime, generally associated with smallholdings, does not create the necessary conditions for the reproduction of sustainable practices. Such smallholdings in Caylloma have neither diversity and quantity of necessary pastures, nor the institutional support, for the sustainable management of these dryland resources.

**«The system of individual ownership, generally associated with smallholdings, does not create the necessary conditions for the reproduction of sustainable practices».**

## Policy recommendations

Our research shows that collective land tenure regimes generate the conditions for the development of a sustainable pastoral production system. Therefore, the general recommendation of our study is that in pastoral societies located in drylands, collective land tenure regimes should be promoted in order to generate the conditions needed for the unfolding of opportunistic management and tracking strategies. Likewise, the fragmentation of pastoral land, associated to the emergence of individual land tenure schemes, should be discouraged, as they are unable to support sustainable productive practices. Based on these findings, the following suggestions can be made:

- Seek to strengthen the local productive institutionality through the recognition and formal regulation of the Condominium and/or promote new formal organizations that provide institutional support to efficient resource tracking strategies and other sustainable management practices.
- Stimulate the formation of small and medium herder's associations in order to increase their access to a greater quantity and diversity of pastures. This would help to support more sustainable resource management.
- Promote the continuity of local sustainable management practices, such as the ones of resources tracking, among pastoralist families.
- Adjust genetic improvement programs for alpaca breeding to the productive capacity of the land to sustainable bear livestock management.
- Promote the improvement of irrigation technologies that take into account the environmental constraints posed by drylands. The increased availability of water may lead to an uncontrolled growth of herds that would eventually result in overgrazing.
- Provide pastoralist families with information on changes in climate and the tools for monitoring it in order to help them manage the growing uncertainty around climate change.

This policy brief is based on the key findings from the study, «The Evolution of Collective Land Tenure Regimes in Pastoralist Societies: Lessons from Andean Countries», authored by Gerardo Damonte, Manuel Glave, Sandra Rodríguez and Andrea Ramos. It was also published as an Evidence Article of the Research Papers Series for ELLA Project - Evidence and Lessons from Latin America. Available in: <http://bit.ly/ELLALandTenure>