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## How does the pressure of demand for pastureland impact local farming systems? Developments and evidence from South-East Albania

*L'impact de la demande en terres pâturables sur les systèmes agricoles locaux.  
Le cas du Sud-Est albanais : données et évolutions*

Florjan Bombaj, Dominique Barjolle, Jean-Marc Touzard and François Casabianca

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# How does the pressure of demand for pastureland impact local farming systems? Developments and evidence from South-East Albania

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In different cases, local societies have gradually been constrained to establish rules to access their pastures, firstly when there were not enough (see the tragedy of the commons) and more recently with new environmental challenges.<sup>1</sup> Due to unsuitable environmental conditions and unsustainable management, nowadays most of these pastures are highly degraded.<sup>2</sup> Recent research shows that the pastoral system is best conceptualized as an open system, in which a combination of individual decision-making and coordination of movements leads to an ideal free type of distribution of transhumance.<sup>3</sup> Furthermore, results show that pastoral communities derive positive utility in connected systems that enable reciprocal access to pastures.<sup>4</sup> However, recent research shows interest in sustainable management of

1. Mohamed Taher Srairi, Jean-François Tourrand, Ruijun Long, Adama Faye, Hermes Morales Grosskopf, Fernando Raul Coronato, Christian Corniaux and Bernard Hubert, "Coviability in the governance of pastoral systems, permanence and change. How does the governance of pastoral systems appeal to the coviability concept?", in Olivier Barrière, Mohamed Behnassi, Vincent Douzal, Mireille Fargette, Frédérique Libourel and Serge Morand (eds.), *Coviability of Social and Ecological Systems: Reconnecting Mankind to the Biosphere in an Era of Global Change*, Cham, Springer, 2019, p. 387-409.
2. Dietmar Sattler, Romain Seliger, Udo Michael Nehren, Friederike Naegeli de Torres, Antonio Soares da Silva, Claudia Raedig, Helga Restum Hissa and Jürgen Heinrich, "Pasture degradation in South East Brazil: status, drivers and options for sustainable land use under climate change", in Walter Leal Filho and Leonardo Esteves de Freitas (eds.), *Climate Change Adaptation in Latin America. Climate Change Management*, Cham, Springer, 2018, p. 3-17.
3. Mark Moritz, Paul Scholte, Ian M. Hamilton and Saïdou Kari, "Open Access, Open Systems: Pastoral Resource Management in the Chad Basin", in Ludomir R. Lozny Thomas H. McGovern (eds.), *Global Perspectives on Long Term Community Resource Management*, Cham, Springer, 2019, p. 165-187.
4. Alphayo I. Lutta, Lance W. Robinson, Olivier V. Wasonga, Eric Ruto, Jason Sircely and Moses M. Nyangito, "Economic valuation of grazing management practices: discrete choice modeling in pastoral systems of Kenya", *Journal of Environmental Planning and Management*, vol. 63, n° 2, 2019, p. 335-351.

pastoral resources in the face of conflict between local actors and new arrivals who weaken and complicate the common management of these resources.<sup>5</sup>

Albania is one particular country that has experienced enormous changes in its pastoral resources in recent years. It is a mountainous country with more than 45% of its total area located above 1000m. Its mountains are mostly covered by forests and pastures. On the national level, pastures represent 18% of the total area and are affected by economic challenges (cattle grazing), environmental challenges (open landscape preservation) and social challenges (common management of pastures).

As a former communist country, the historical dynamics of pasture management have been characterized by important reforms (such as collectivisation in 1945 and de-collectivisation in 1991), which constitute discontinuities in pasture management. Aiming at balancing the fragmentation of Albania's current territorial units, the 2016 territorial reform has centralized the current pasture management responsibilities to larger units of governance and established new rules, like demanding that local farmers pay for a resource which was previously free.

The municipality of Vithkuq in the Korçë region has rich pastures.<sup>6</sup> These pastures have been used for centuries by farmers to feed their livestock: mostly sheep, cattle and goats. Over the last years, increased livestock production has led to a greater demand for pastures. In this municipality the biggest mountain is "Rrungaja" characterized by the diversity of its pastures. The nearest pastures to villages which are located above 1200m are also available in winter. Some other pastures, located far away from villages, are used by almost all the local farmers with small herds and local transhumant farmers with bigger herds. On the same mountain some pastures are private (more than 1000 ha) while others are public and in common use (more than 3000 ha). However recent research shows that the allocation of pastures is one of the central issues in the economic performance of many farms in the mountain.<sup>7</sup>

The purpose of this paper is to analyse how the allocation of pastures by local and national institutions impacts the farming systems of the municipality of Vithkuq and to identify the systems that are the most economically efficient today.

Recent governmental changes regulating pasture access have not created transitional institutions capable of properly applying these changes. The institutional vacuum means that local farmers will be competing for access to pastures with farmers from other regions. If locally adapted rules are not well-established, this could result in overgrazing. The discussion involves comparing different parameters of the livestock systems related to pasture access.

5. Abdoukader Afane and Laurent Gagnol, "Convoitises et conflits entre ressources pastorales et extractives au Nord-Niger", *Afrique contemporaine*, vol. 249, n° 1, 2014, p. 53-68.

6. Florjan Bombaj, Dominique Barjolle, Theodosia Anthopoulou and Gabriel Michaud, "Family Farming in the Albanian Mountainous Areas: Local Agro Pastoral Farming Systems and Market Integration Perspectives", *The Natural Resource Economics Review*, Special Issue, 2017, p. 41-52.

7. Florjan Bombaj, Dominique Barjolle, François Casabianca and Theodosia Anthopoulou, "Albanian Municipalities facing decentralisation of pastures' management rules", *Food Systems – Systèmes Agroalimentaires*, n° 3, 2018, p. 31-59.

This paper is organized as follows: the first section outlines the Albanian research context and current decentralization issues for pastures. Then the second section analyses the theory about competition for pasture access and its impact on local communities. The third section specifies the case study setting and the analytical methods used. The fourth section presents the evidence-based results on how pasture access affects different livestock systems in terms of economic performance. In the final section, these findings are discussed.

## Theoretical background on pasture competition and the research question

According to Garrett Hardin,<sup>8</sup> when a resource is “open access”, each user has unlimited use of this resource, leading to his disappearance. For Garrett Hardin, the management of natural resources must imperatively be based on one of two alternatives: if we want those resources to last, we must either privatize them or have a higher political and administrative organization to control them. In a community where a common free resource becomes a paid resource, the local users may be not able to cope with the new situation and the common resource may become useless to them. As a possible solution to this potential tragedy, as highlighted by Elinor Ostrom,<sup>9</sup> communities should find adequate ways to manage their common resource.

If the ownership of livestock is private but the resource on which they feed their livestock is common (and limited), the use of common pastureland needs to be regulated in order to prevent competition and conflict among farmers attempting to utilize more of the pasture for their own interests.<sup>10</sup> Thus, the land-owner elaborates rules for the use of the common pasture, which corresponds to a way of “stinting” the common. In fact, the rules set limitations on the number of animals, hours of grazing, etc. The rules are put in place to prevent the abuses of excessive individualistic competition.

Previous research has shown that the regulation of public land increased the competition for availability and access.<sup>11</sup> In fact, the disappearance of open public land has ended its land use pattern in the past, resulting in the decline of transhumance. Recent research shows that the continuation of this practice becomes untenable when economic, political and social contexts change.<sup>12</sup> In other cases, transhumants have adapted their practices because they do not have the necessary

8. Garrett Hardin, “The tragedy of the commons”, *Science*, vol. 162, n° 3859, 1968, p. 1243-1248.

9. Elinor Ostrom, “Collective action and the evolution of social norms”, *Journal of Natural Resources Policy Research*, vol. 6, n° 4, 2014, p. 235-252.

10. H. Scott Gordon, “The economic theory of a common-property resource: the fishery”, *The Journal of Political Economy*, vol. 62, n° 2, 1954, p. 124-142.

11. David Beesley, “Changing land use patterns and sheep transhumance in North-Eastern Sierra Nevada, 1870-1980”, Forum for the Association of Arid Lands Studies Texas Tech. Univ., Lubbock, 1985, p. 3-8.

12. Sally Huband, David I. McCracken and Annette Mertens, “Long and short-distance transhumant pastoralism in Romania: past and present drivers of change”, *Pastoralism: Research, Policy and Practice*, vol. 1, 2010, p. 55-71.

resources to cope with the re-composition of pastoral areas. However, they still remain vulnerable.<sup>13</sup> Other research has shown how farmers face difficulty in gaining access to adequate pasture as the legacy of major systemic changes resulting from post-communist economic and political reforms.<sup>14</sup> Furthermore, if the rights for pasture access are insecure, farmers have no incentive to improve their condition. Therefore, secure use rights for farmers are indispensable for sustainable pasture management in the long term.<sup>15</sup>

However, the notion of pastoral pressure depends on complex processes concerning methods of herd management and, more generally, on breeding methods.<sup>16</sup> In Albania, since the new territorial reform, local farmers are under two kinds of pressure for the management of pastures. On one hand, the territorial reform has made costly a resource which was previously free. And on the other hand, they face intense competition for use of the resource from some big transhumants coming from Southern Albania, usually with big flocks of between 500 and 1,500 sheep. They have enough money to rent pastures at a high price each year, and openly declare their willingness to rent more pastures on the territory in the future.

The competition between livestock systems for pastures brings to light various issues in terms of governance and the economic performance of these systems. Recent data shows that while some farmers decrease their livestock, others substantially increase the size of their herd. In the context of the current territorial reform in Albania, this paper highlights the governance issues of this resource. Indeed, surveys have shown that different modes of ownership govern these pastures.<sup>17</sup> Consequently, this paper attempts to answer the following research question: how do the recent governmental changes on pasture access impact the local management of the farming systems and which farming systems are the most economically efficient today?

## The research context and territorial reform

Before 2016, Albania was composed of several administrative levels: 12 regions, 36 districts and 373 “governance units”. In total, there were 65 municipalities for cities and 307 rural communities. A governance unit was the management unit

13. Alexis Gonin and Bernard Tallet, “Changements spatiaux et pratiques pastorales: les nouvelles voies de la transhumance dans l’Ouest du Burkina Faso”, *Cahiers Agricultures*, vol. 21, n° 6, 2012, p. 448-454.
14. Pawel Sendyka and Nicolette Makovicky, “Transhumant pastoralism in Poland: Contemporary challenges”, *Pastoralism*, vol. 8, n° 1, 2018, p. 1-14.
15. Jonathan Etzold and Regina Neudert, “Monitoring manual for summer pastures in the Greater Caucasus in Azerbaijan (Baku)”, *Sustainable Management of Biodiversity South Caucasus*, GIZ, 2013, Working Paper, 62 p.
16. Roy H Behnke and Ian Scoones, “Rethinking range ecology: implications for rangeland management in Africa”, 1993, Working Paper, 31 p.
17. Florjan Bombaj, Gabriel Michaud, Dominique Barjolle and Theodosia Anthopoulou, “Mountain pastures and local products in Southern Albania. Between production and resource management issues”, in Isabel Casasús and Giampiero Lombardi (eds.), *Mountain pastures and livestock farming facing uncertainty: environmental, technical and socio-economic challenges*, Zaragoza, CIHEAM, n° 116, 2016, p. 167-170.

with the most powers covering: (1) infrastructure and public services: water supply, waste management, etc; (2) local economic development: forest and pasture management, veterinary services, etc; (3) social matters and (4) civil security.

At the national level these territorial units face difficulties, particularly due to:

- High fragmentation, with 75% of the “local governance units” inhabited by less than 5 000 people, a consequence of the rural exodus the country has been facing since delocalization.<sup>18</sup> At the national level, administrative costs per inhabitant are high<sup>19</sup>
- Limited human resources, which prevent good implementation of the unit’s functions;
- Lack of financial revenue, with some units localized in poorer regions and unable to collect tax due to the low income of its inhabitants.

The Albanian government aspires to obtaining EU membership. Therefore, the need to align their territorial management to European rural development policies along with the difficult decentralization of State control to small local governance units have motivated this reform. In this context, the new law (2016) aims at reforming one unit of management, the “local governance unit”, in order to reduce their number from 373 to 61 and to merge their functions regarding environmental resource management. Before 2016 there existed three types of pastoral resource management: a) State pastures managed by the Department of Forests and Pastures at regional level and primarily allocated to local herds; b) private pastures owned and managed by individuals, according to family property rights dating from before the communist period; c) village property corresponding to communal pastures managed by the villagers, who consider themselves the legitimate users of a resource located on their village territory. After 2016 the governance modalities of the State and communal pastures changed. The State and communal pastures were to become “public pastures” managed at the district level.

## Pastures’ availability of the Korçë region

One of the most developed regions in Albania is the Korçë region in South-East Albania (figure 1 below). The Korçë Mountains are characterized by a Mediterranean mountainous climate<sup>20</sup> with high temperatures and low rainfall during summer and with temperatures decreasing with altitude. Conversely, low temperatures and high precipitations are frequent during winter.<sup>21</sup> The Korçë Mountains

18. Örjan Sjöberg, “Rural retention in Albania: administrative restrictions on urban-bound migration”, *East European Quarterly*, vol. 28, n° 2, 1994, p. 205-234.

19. David O. Sewell, *Fiscal Decentralization and Intergovernmental Finances in the Republic of Albania* (vol. 1384), World Bank Publications, 1994.

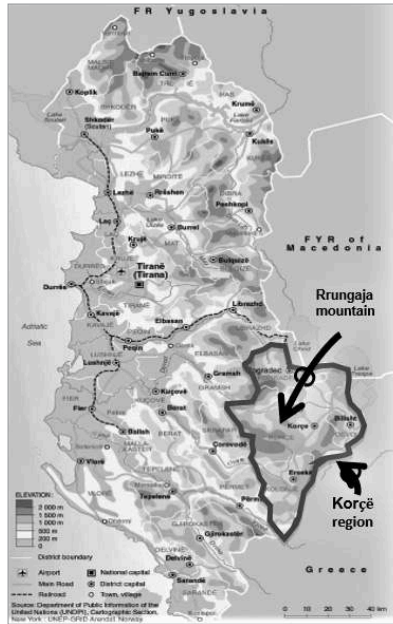
20. Sabri Laçi, “Potentiel naturel et agriculture. L’Albanie, une agriculture en transition”, Adrian Civiçi and François Lerin (eds.), *L’Albanie, une agriculture en transition. Options Méditerranéennes: Série B. Etudes et Recherches*, Montpellier, CIHEAM, n° 15, 1997, p. 51-57.

21. Simon Gontard, *Diagnostic agraire du massif pastoral de Rrungaja. Région de Korçë-Sud-Est de l’Albanie. Mise en valeur des pâturages-principale ressource de ces territoires de montagnes-par les systèmes d’élevage*, AgroParisTech, Paris (France), Mémoire Master fin d’études, 2016, 79 p.



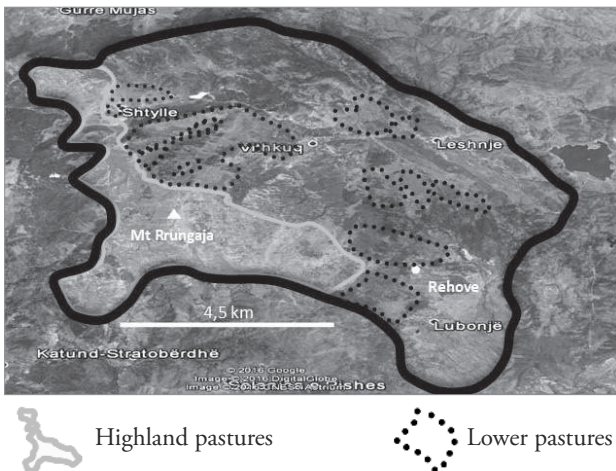
are also characterized by a variation of altitude from 1000 to 2000 metres. The climate is highly dependent on altitude as is the availability of pastures. Pastures located below 1600 m altitude suffer from lack of water and high temperatures (hydrological deficit) in July and August. On the other hand, pastures located above 1600 m suffer from lower temperatures during the winter with four months characterized by sub-zero average temperatures and snow.

Figure 1. Localisation of the Korçë region and Rrungaja Mountain in South-East Albania



Source: google maps; adapted by the authors

Figure 2. Localization of highland pastures and lower pastures in the study area



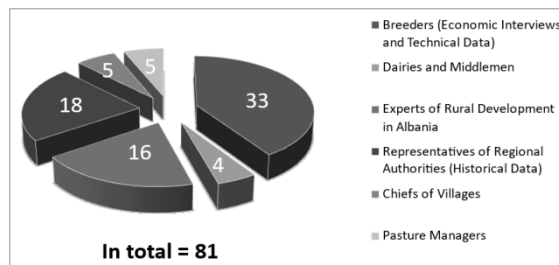
Source: produced by the authors



## Methods to identify local farming systems and their economic performance

Our overall methodology is based on a collection of qualitative and quantitative, primary and secondary data. At the national level, interviews were done and documents were consulted to analyse the evolution of decentralization of pastures. After data on the general context had been collected, a case study approach was used: documents, grey literature, and interviews for gathering primary data were done in the municipality of Vithkuq. As source of information on the local context, a comparative agriculture approach was used and has identified pastures as the main resource for the local production systems.<sup>22</sup>

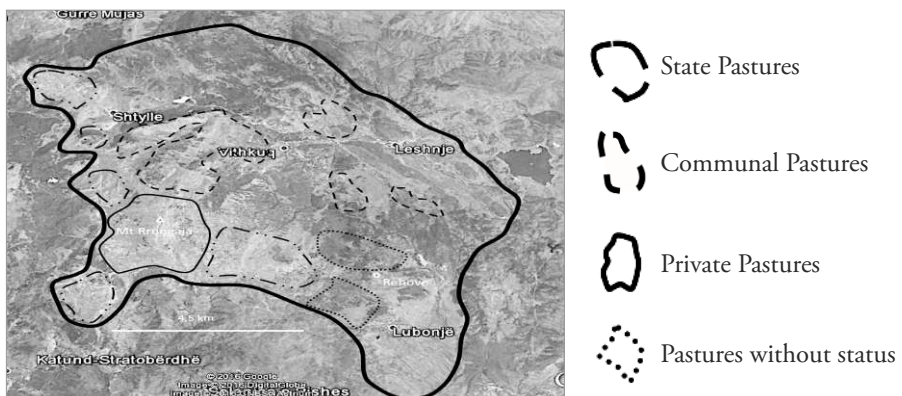
Figure 3. Sample survey



Source: Authors' survey

As it can be seen on the figure 4 below, there are five villages (Shtyllë, Leshnje, Vithkuq, Lubonjë and Rehovë) located around the mountain of Rrungaja. A total of 298 farmers are found in the villages using the pastures. All farmers do livestock production, mostly sheep production, and they do agriculture for their own consumption.

Figure 4. The villages using the pastures



Source: produced by the authors

22. Hubert Cochet, Sophie Devienne and Marc Dufumier, “L’agriculture comparée, une discipline de synthèse?”, *Économie rurale. Agricultures, alimentations, territoires*, n° 297-298, 2007, p. 99-112.

The farmers can be classified in three categories.

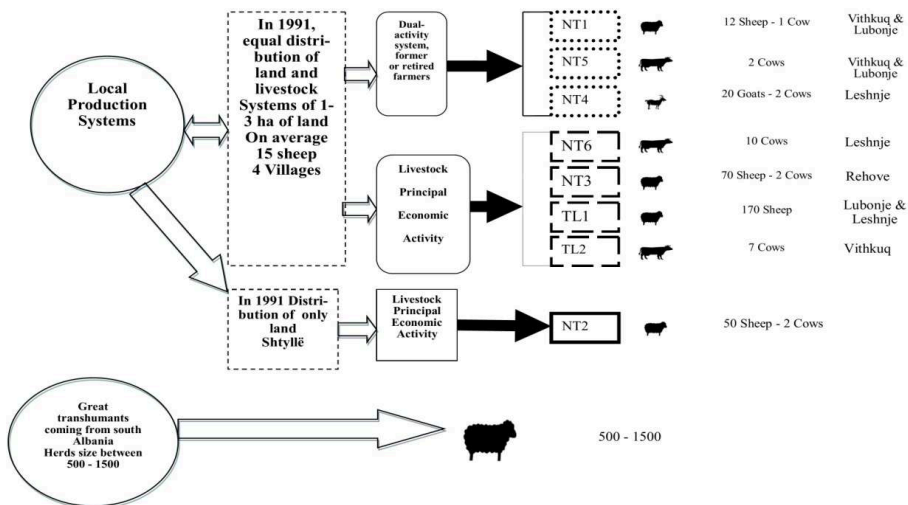
Non transhumants (NT): local small farmers with small herds mainly using the communal pastures that are near the villages and located at lower altitudes. Most of these farmers have 10 to 30 sheep or three cows. Local transhumants (TL): medium-sized farmers with big herds. They use both communal pastures and State pastures located at higher altitudes than the communal pastures. Most of these farmers have 150-200 sheep or 10 to 15 cows. Communal and State pastures are historically and locally divided into several parcels. External great transhumants (GT) are the third category of farmers. They mostly use the private pastures which are summer pastures. These farmers have on average 500 to 1,500 sheep.

Current production systems are marked by the initial redistribution of the pastoral resource, which continues to impact their dynamics to this day. Three criteria differentiate the production systems:

1. The type of pasture management in summer:  
 NT = Non-transhumant  
 TL = Local transhumant  
 GT = Great transhumant
2. Specialization (sheep, cow, goat)
3. The size of the flock or herd

Today, livestock systems are highly dependent on access to pastoral resources. Figure 5 below shows the evolution of production systems since the fall of communism.

Figure 5. Livestock systems in the case study



Source: produced by the authors

## The contrasting economic results of livestock systems according to their access to pastures

The economic results, (Net Added Value - NAV) are presented by family asset (Active Work Unit - AWU) and according to the flock or herd (sheep, cattle and goats), converted into livestock unit (LUs) per AWU. It was more relevant to represent the results according to the herd because a farm's capital is measured primarily by herd size and many farmers do not perform agriculture and their system is essentially based on pastoral resources. The allocation of pastures has a different impact on livestock systems in the territory. Specifically, in the village of Vithkuq (village and administrative centre of the municipality of Vithkuq), the predominant systems, such as NT1 and NT5, are associated with a small herd and they use communal pastures. Their Net Added Value (NAV) per Active Work Unit (AWU) based on the number of Livestock Units (LUs) per AWU is very low compared to other types of pastures such as State and private pastures and the growing problem of under-grazing is prominent (see table 1 below). Other systems such as NT3 and NT6 using communal pastures are located in Rehove (NT3) and Lubonje (NT6). These are non-transhumance systems with big herds but their access to communal and State pastures is limited. Their NAV/AWU based on the number of LUs per AWU is higher and their increasing dynamics make the problem of overgrazing a prominent one as all State pasture parcels are already rented. In Leshnje, the pressure on communal pastures is less evident than in Lubonje and Rehove, because many farmers with NT1 and NT5 systems have small herds and practise other agriculture activities. In Shtylle, the NT2 system cannot evolve, the winter is too long and for over sixty sheep, the purchase of winter food considerably diminishes the added value created. In order to increase its added value, this system must have access to State pastures which in fact are used by the TL1 and GT systems. The TL1 and GT systems have the highest NAV/AWU based on the number of Livestock Units (LUs) per AWU of all the systems.

*Table 1. Economic results and pressures on demand for pastures of each livestock system*

	Size herd	Communal, Private or State pastures	Rent prices €/sheep/year 1 Cow=10 Sheep 1 Goat=1 Sheep	Economic results for every system €/year	Pressures on demand	Risk of overgrazing
NT1	12 Sheep 1 Cow	Communal	0,75	3 440	Low	Low
NT2	50 Sheep 2 Cows	Communal	0,75	5 763	High	High
NT3	70 Sheep 2 Cows	Communal	0,75	7 955	High	High
NT4	20 Goats 2 Cows	Communal	0,75	3 940	Low	Low
NT5	2 Cows	Communal	0,75	2 661	Low	Low

NT6	10 Cows	Communal	0,75	10 181	High	High
TL1	170 Sheep	Communal & State	0,75	14 581	High	High
TL2	7 Cows	Communal & State	0,75	7 267	High	High
GT1	200 Sheep	Private	3,5	18 033	High	High
GT2	500 Sheep	Private	3,5	61 167	High	High

Source: produced by the authors

According to our data, the NT<sub>1</sub>, NT<sub>4</sub> and NT<sub>5</sub> systems are essentially maintained by other sources of income such as the remittances and retirement pension that are crucial for their livestock systems. Many farmers de-capitalize as they get older. Their livestock systems are decreasing because they are not able to increase their livestock. The other systems such as NT<sub>2</sub> and NT<sub>3</sub> have some animal fodder problems. In particular the NT<sub>2</sub> system in the village of Shtyllë cannot evolve because the winter is too long. Farmers having livestock systems with over sixty sheep, have to make a high outlay to purchase winter fodder for animals, which reduces their added value. The Livestock numbers are a limiting factor for agricultural activities, which is why farmers often prefer not to have flocks of more than 70 sheep. The livestock system NT<sub>3</sub> shows some important overgrazing issues. Farmers have difficulty in starting transhumance because the pressure on the State pastures is already significant.

The livestock systems that are unable to increase their herds are the NT<sub>3</sub> and TL<sub>1</sub>. If, due to the high demand for State pastures, they cannot access these pastures, they are obliged to use communal pastures. The breeders of the NT<sub>3</sub> system cannot evolve towards the TL<sub>1</sub> system. The specialized systems NT<sub>6</sub> and TL<sub>2</sub> are quite dynamic. They demand a higher labour force but the incomes are comparable to those of other systems. If the family labour force is available, their dynamics could be more positive. They can increase their herds and cultivate more animal fodder for winter if the summer pastures are ensured in advance. These systems have raised pressure on the demand for both communal and State pastures.

The TL<sub>1</sub> and GT<sub>1</sub> systems (transhumant local and non-local sheep) are quite similar. Their NAV/AWU based on the number of LUs per AWU is very high compared to non-transhumant systems. The evolution of the TL<sub>1</sub> and GT<sub>1</sub> systems is linked to access to state pastures. If the plot they manage to rent is at its maximum load, they cannot increase their herd and their dynamics are slowed down. The TL<sub>1</sub> and GT<sub>1</sub> generate higher incomes than the others. They could continue to increase as long as they continue to find State pastures. The GT<sub>1</sub> and GT<sub>2</sub> systems have higher purchasing power to rent private pastures, the prices of which are constantly increasing. The most efficient system is GT<sub>2</sub>, which seems to create higher added value than the other systems. For the GT<sub>2</sub> system, access to private pastures during summer is crucial.

## Public policy consequences

At the national level, territorial reform merged the communal and State pastures into public pastures, thus modifying the pasture governance mechanisms. More precisely, communal pastures are now managed at the district level as a result of the merging of municipalities into larger administrative entities, as in the case of State pastures (under decentralization). They are preferentially given to local farmers, who must now pay to use them. The access conditions for the communal pastures have not changed. Nevertheless, what has changed is the exclusivity of the right to use communal pastures.

At the local level this reform has a different impact on the dynamics of the various livestock systems. It is for the non-transhumant systems that the reform could be delicate; they will have to get together to organize the rental of parcels of pasture previously used as communal pastures. If they do not succeed, some parcels could be attributed to big transhumants (GT) coming from other regions of Albania. Farmers will also have to pay to access the pastures that were free before 2016.

For local transhumants, the reform should in theory strengthen their position with regard to big transhumants, but for the moment only one village has survived their pressure. For big transhumants, the reform only affects those who rent State pastures. They could be disadvantaged in the face of local transhumants. However, many pastures may become available for rent. In the village of Vithkuq for example the communal pastures are undergrazed. In addition, the new rules of territorial reform are not always strictly adhered to. In the current context, it may be possible that big transhumants manage to keep their state pastures thanks to their network.

The results show, as in previous research,<sup>23</sup> that the regulation of pastures has increased the competition for their availability and access. Since on the same mountain different governance modalities exist, it becomes crucial for public institutions to regulate the use of public pastures in order to prevent competition and conflict among farmers.<sup>24</sup> Our results, as in previous research,<sup>25</sup> show that local non transhumant breeders especially are not able to adapt to the new context and still remain vulnerable. Public pastures will not be attributed to the farmers who will rent them for long-term periods; consequently, they will have no incentives to improve the pastures' condition. Therefore, as in other cases,<sup>26</sup> secure use rights for local breeders will be crucial for sustainable pasture management in the long term.

23. David Beesley, "Changing land use patterns...", art. cit., p. 7.

24. Alberto Bernués, Roberto Ruiz, Ana Olaizola, Daniel Villalba and Isabel Casasús, "Sustainability of pasture-based livestock farming systems in the European Mediterranean context: Synergies and trade-offs", *Livestock Science*, vol. 139, n° 1-2, 2011, p. 44-57.

25. Alexis Gonin and Bernard Tallet, "Changements spatiaux et pratiques pastorales...", art. cit., p. 498.

26. Jonathan Etzold and Regina Neudert, "Monitoring manual for summer pastures...", art. cit., p. 17.

## Conclusion

The particular context of the Albanian case shows that local agro farming systems have gradually adapted to the new political and economic context after the fall of the communist regime in 1991. The land fragmentation that occurred in that period persists even today, resulting in subsistence farms not being able to capitalize and expand their activity. Subsistence farms tend to diversify their production by diversifying their sources of income. Furthermore, the fragmented agricultural land and the small size of the farms make it impossible to reach economies of scale. Territorial reform raises the question of the ideal territorial unit of management of public pastures. By analysing the use of communal pastures before 2016, it seems that the village as management unit was not suitable because it created strong disparities between villages owing to the difference in the dynamics of their production systems.<sup>27</sup> Currently, the management unit of public pastures, such as is found at the district level, seems to be big in size. Local farmers lack confidence in this way of managing public pastureland. They are reluctant to accept big transhumants demanding public pastures near their previously communal pastures. Local farmers think that the district pastures administration is unaware of the problems of pastoral massifs, sometimes located several hours away.

It would seem that Vithkuq's administrative unit, if it had correctly applied the rules of grassland management at the unit level, levying taxes from farmers to ensure the quality of grazing land, would have been a good unit, at least for mid-altitude pastures. The total current stocking rate is about equal to the carrying capacity and could have been better distributed through village unit management. The administrative unit could also have better managed the high-altitude pastures by renting them first and foremost to village farmers and then selecting transhumants from outside the area to rent the remainder. In recent years, the demand for pastures in the municipality considered in our study has increased significantly. The consequences are economic (a fall in animal yields) and social (the pressure undermines the common management of certain parcels). The challenge of good governance of these pastures is central to the rural development of this municipality. In similar conditions, local communities need to find adequate ways to manage their common resources.<sup>28</sup>

Besides this reality, some local initiatives appear to be promising for the future. The institutional changes on the communal pasture governance modalities show that they are preferentially given to the local farmers, who must now pay to use them. This territorial reform has given the authorized beneficiaries "exclusive use rights" access. All the villages use the communal pastures but only one village drew up a combination of local rules allowing farmers to benefit from a change initiated at national level. The conditions that were able to activate such a reaction were the group homogeneity of the farmers, the strong social ties between

27. Simon Gontard, *Diagnostic agraire du massif pastoral de Rrungaja...*, *op. cit.*, p. 53.

28. Elinor Ostrom, "Collective action and the evolution of social norms...", *art. cit.*, p. 240.

farmers, clearly defined pasture boundaries and the imminent threat of pasture use access by big transhumants from outside the village.<sup>29</sup>

This new context has set the initial conditions for a new management of the pasture as a “common” (as per definition given by Elinor Ostrom).<sup>30</sup> However, to manage common pastures sustainably, a better adaptation of local collective organization is needed. This can be achieved by promoting interactions at the local level and by articulating community, public and private management policies around local needs. The need for social inclusion appears to be an issue. Social inclusion means the participation, and the ability to participate, in political and social structures, and it is seen as essential to political stability.<sup>31</sup>

The introduction of “exclusive use rights” has led to more collective management arrangements between farmers, and could be the start for improving their social capital and enabling them to engage in extended actions for the collective marketing of their animal products, especially for their meat products, in the future. In the municipality under consideration the question of pasture management is complex, caused by the coexistence of several modes of ownership and management on Rrungaja mountain. Pasture governance is complex, firstly because of the private pastures (almost 1000 ha) which represent half of the high-altitude pastures of the mountain; and secondly, because the livestock systems that use the resource are not homogeneous and their dynamics are different. Further research is needed to analyse how these dynamics will evolve in the future.

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29. Florjan Bombaj, Dominique Barjolle, Jean-Marc Touzard, François Casabianca and Simon Gontard, “Systèmes de production locaux et gestion des ressources pastorales en Albanie. Entre stratégies d’acteurs et évolutions institutionnelles”, *Cahiers Agricultures*, vol. 30, n° 6, 2021, p. 1-11.

30. Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge, Cambridge University Press, 1990.

31. Sally Shortall, “Are rural development programmes socially inclusive? Social inclusion, civic engagement, participation, and social capital: Exploring the differences”, *Journal of Rural Studies*, vol. 24, n° 4, 2008, p. 450-457.