

THE CHALLENGES OF LEGAL RECOGNITION OF AGROPASTORALISTS' LAND RIGHTS IN MADAGASCAR

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ABSTRACT

In northwestern Madagascar, community land, some of which is used for extensive cattle rearing, is currently subject to increasing competition between users. However, the situation of community land and the local rights-holders remain on the fringes of the legal recognition mechanisms of the current Land Law Reform. By default, the pasturelands are considered to be owned and managed by the State. Thus, with the aim of contributing to the debate on the forthcoming law on community land in Madagascar, this paper analyses the methods of land governance and land tenure security used in large pasturelands by agropastoralists and all users. It is based on a study carried out in 2022-2023 and is backed up by 250 qualitative interviews in 4 pasturelands in the northwest of the country. Our results reveal that the pasturelands studied are similar to unconventional commons in the Ostromian sense. They are under the authority of "big agropastoralists". In addition to the agropastoralist collectives, other authorities also regulate access to pasturelands resources (Protected Area, State forestry service, resource management association, etc.). In this situation of polycentric governance, the interplay of these different bodies and the entry of third parties (companies, NGOs, migrants, etc.) can undermine agropastoralists' land rights (rights of use, management, alienation and decision-making powers). Faced with these situations, agropastoralists often adopt three main strategies: entering into negotiations, ignoring bans or opposing them with fire. These approaches are not without risk and can lead to a considerable loss of agropastoralists' rights and powers over land. The challenge is therefore to create legal tools that are accessible to the populations concerned, adapted to areas with multiple, evolving resources and governed by groups with blurred boundaries

Keywords

Community pastureland, common, customary rights, land tenure security, Madagascar

1. INTRODUCTION

In Madagascar, extensive livestock farming is a key source of income for rural households and a major source of meat supplies for urban markets. In addition to being an activity closely linked to the history and culture of the populations of various regions, it is also closely associated with the development of large areas of wooded savannah (Rakotomalala, 1986; Fauroux, 1989; Saint Sauveur 2002). Despite this importance, public policies and development projects pay little attention to extensive livestock farming and often consider pastoral areas as land reserves for biodiversity conservation, agriculture, reforestation or large-scale investment projects.

In the northwest of the country, large areas of extensive grazing land are used for cattle rearing, fishing, harvesting wood resources and agriculture. Historically, they have been managed by herders, but also, more or less recently, by a variety of local collectivities and local authority bodies (village elders and representatives, associations, protected area managers, decentralised government departments, etc.). These commons, characterised by “complex mosaic tenure” (Robinson, 2019), are subject to increasingly marked competition between uses. Herders are seeing their powers, rights and grazing areas evolve in the face of the arrival of migrants and young farmers, agricultural enterprises, natural resource management organisations (NGOs, associations, protected area managers) or development projects (reforestation, etc.) (Burnod et al., 2013, Burnod and Medernach, 2015, Gingembre, 2015, Randrianasolo, 2020, Burnod et al., 2021, Manaso, 2021 & 2023).

In Madagascar, these large areas and the land rights of local stakeholders are on the fringes of the legal recognition arrangements introduced by the 2005 Land Law Reform. By default, they are considered to be under the ownership and management of the State, and the holders of local rights are not considered. The drafting of a new law covering these areas is on the political agenda. What is at stake for some of the players in the land arena (civil society, development operators, academics, etc.) is that these areas should not be treated as potential investment zones or State land reserves; but that they should be classified as community land and as such benefit from an appropriate legal regime. The issues for agropastoralists are even more complex. They want to maintain their control over the land while at the same time obtaining recognition for their extensive farming practices and the maintenance of pastures by fire, which is criticized by the proponents of intensive farming and environmentalists.

In this context, the question is as follows: what are the strategies and means used by agropastoralists to protect their access to pastoral resources and maintain their management power over these areas?

The knowledge and analyses produced are intended to contribute to the debates on the forthcoming law on community land in Madagascar and to discuss the risks and benefits for agropastoralists of the legal formalisation of land rights on this land.

2. CHALLENGES ASSOCIATED WITH FORMALISING COLLECTIVE PASTORAL TENURES

2.1. In Africa

In Africa, pastoral areas are similar to commons, as described by Ostrom (1992, 2010), but rarely correspond to conventional commons. These areas do not systematically have fixed boundaries, and their contours evolve according to the availability of resources (Cousins, 2000). They are rich in several resources (fodder, water, wood, wild animals, etc.), each of which gives rise to specific management

methods depending on their abundance, seasonality, commercial or non-commercial use, etc. (Robinson, 2019; Lavigne Delville et al., 2023). These spaces thus concern various user groups whose boundaries are changing and for whom the principle of “non-exclusion” may be essential (Flintan et al., 2021). These areas, like the conventional commons, are subject to various forms of regulation, whether local or national, customary or legal. They are associated with polycentric governance (cf. Ostrom, 2010) and come under the authority of different bodies that try to control access to resources (cf. Ribot and Peluso, 2003).

These pastoral areas are subject to increasing pressure and competition over use, which is reflected in trends towards the private appropriation of strategic pastoral resources (watering holes and adjacent pastures) or, more generally, the private appropriation of land to convert its use (agricultural development by family, local or migrant farmers; forestry, agricultural or mining investment projects, etc.) (Lind et al., 2020). The ways in which pastoralists and other land users access resources can thus be challenged, fuelling a feeling of land insecurity. This raises the issue of securing the rights and powers of existing stakeholders, and the relevance of programmes to formalize land rights.

In several African countries, the processes of parcelling out, individualising and privatising rights on ranches have often proved to be a failure when it comes to securing access to resources for groups of pastoralists (Kenya - Mwangi and Dorn, 2008). Maintaining collective tenure remains central, but formalizing it risks undermining its flexibility (cf the "paradox of pastoral tenure", Fernández-Giménez, 2002). Experiments in issuing collective land certificates or titles to pastoral communities, which have been relatively limited in number and insufficiently studied, have not necessarily produced the expected results (cf Flintan et al., 2021). Fixing the boundaries of areas and formalizing a collective has restricted the mobility of herders and led to inequitable reconfigurations of power, often to the detriment of the herding communities that were the primary targets (Robinson, 2019; Flintan et al., 2021). Finally, experiments in securing village land or mapping rights, which are supposed to concern the diversity of rights-holders and users, are designed and implemented for agricultural land, and are proving to be of little use in considering and respecting the rights of use and passage of herders (West Africa - Lavigne Delville et al., 1998).

In the context of these overlapping tenure systems (Flintan, 2012), customary systems remain important because of their ability to manage the flexibility and adaptability of collectivities according to the availability of resources (Davies et al., 2016). The challenge of formalization is to promote legal tools that: i) provide security not only for agropastoralists, but also for all land users, ii) operate in territories relevant to resource availability and variability, while recognizing that these territories can be complex mosaics in terms of bundles of rights, and iii) are based on local institutions and collectivities, without freezing or weakening them. (Hesse and Thébaud, 2006, Davies et al., 2016; Robinson, 2019; Flintan et al., 2021, Lavigne Delville et al., 2023).

2.2. In Madagascar

In Madagascar, the Land Law Reform initiated since 2005 aims to legally recognize de facto land rights held under customary tenure. The laws provide a first level of protection for local property rights on all land occupied for more than 5 years such as family farmlands, residences, tree plantations, and offer the possibility of legally registering them on new property documents: land certificates. The Reform

introduced decentralized land management, with a new structure managed at the commune¹ level: the “BIF” (Birafo Ifoton’ny Fananantany = Land Office), responsible for issuing land certificates. In 2021, after 16 years of reform, 544 communal land offices have been set up, covering a third of the country's communes, and almost 800,000 certificates have been issued or are in the process of being finalized. This figure is substantial compared to the number of titles issued over a century (estimated at 600,000). However, the laws resulting from the 2005 reform do not recognize herders' rights to pasturelands. They consider extensive grazing land to be the property of the State, and therefore not eligible for land certificates.

The only laws that could address provide tenure security for pasturelands encompassing large territories relate more broadly to the management of natural resources, and date from before the 2005 Land Law Reform. The so-called GELOSE² law (1996) enabled the creation of grassroots associations known as VOI and the recognition of their rights to manage and use natural resources as part of a transfer of natural resource management (Aubert, 2012). In 2017, around 1,200 contracts had been drawn up linking a VOI, the forestry administration and the commune, affecting 540 communes and covering almost 5% of the national land area (Lohanivo, 2017). Within the framework of these contracts, the VOI develop management projects that mainly concern the management of forest resources. Pastureland, which is either totally or partially included in these regulations, is rarely considered. However, herders are involved in the management of grazing fires that could damage forests or forest plantations and must follow the rules set up by the VOI.

The Gelose law also provided for relative land tenure security (SFR) which, according to article 15 of decree no. 98-610 (regulating the implementation of SFR), can be a transitional phase towards eventual collective land registration at the community's request. However, SFR has rarely been used, and none of the VOIs have reached these milestones. The main hypothesis regarding the lack of recourse to collective titles is that they don't meet the needs and realities of collectivities, and to power plays aimed at limiting the rights of local collectivities. Legal registration is extremely expensive and complex, is inaccessible to collectivities and encounters numerous socio-political obstacles, particularly for large areas (as shown by the lack of titles for protected areas in Madagascar, despite the financial support of major conservation organizations). The legal registration of rights also implies a formalization of collectivities, and often a change, or even a simplification, of the nature of the collectivities involved, their respective rights, and the rights of members (Colin et al., 2009).

In March 2020, a draft law was developed that aimed to deal with land classified as “Terres à Statuts Spécifique” (TSS), which includes community-held land and, therefore, pastureland. Rushed out in response to the government's request to legislate on zones of economic emergence, this draft law elicited widespread negative reactions from civil society, professional organizations and rural operators (Burnod and Bouquet, 2022). In contrast to the principles introduced by the 2005 Land Law Reform, the draft law

¹ Communes are decentralized territorial administrative units and are composed of multiple fokontany, the state administrative unit closest to rural populations (Randrianasolo et al., 2022)

² The Secured local management procedure (GEstion LOcale SEcurisée in Madagascar) is commonly referred to as GELOSE (established in 1999), and its modified and simplified version is called Gestion Contractualisée des Forêts (established in 2001). The procedure enables tripartite agreements to be drawn up, involving not only the local community, but also the commune and the forestry administration. These agreements can organise the sustainable exploitation of resources (timber harvesting and replanting) or promote conservation objectives (ban on timber harvesting, but possibility of harvesting non-wood resources)

imposes registration of land in the name of the State. It only recognises use rights of local rights holders, - which must also be granted through a lease procedure. The reality and diversity of tenures, rural societies and the collectivities involved (lineage, residents of a village or territory, etc.), are totally obscured.

In 2021, as part of the resumption of negotiations on this law concerning TSS, a number of land governance stakeholders, led by civil society, called for the creation of a specific regime for land subject to collective uses and modes of appropriation (Burnod and Bouquet, 2022). In addition to State ownership (public and private domain of the State) and private ownership (titled or untitled), there would also be community land. For the time being, no concrete path has been mapped out to outline the possible options for providing secure tenure for these community spaces. This paper attempts to do so, and presents some ideas for consideration (part 5) based on the analysis of concrete dynamics observed in the field.

3. METHODOLOGY

3.1. The data production process

This paper is based on the work of researchers and experts (CIRAD, Think Tany and ESSA-forêt) based in Madagascar, and informs the reflections of a thesis on the common and polycentric governance of pasturelands in the northwest of Madagascar. Data production focused on four pastoral territories in the northwest of the country and was based on 250 qualitative interviews (conducted by the PhD student and, in part, by two Master II students: Mr. Hery Herimanana and Mr. Anja Razafindredo, with the support and involvement of senior researchers).

3.2. Site description

The research focuses on 4 sites in 3 rural communes in the Boeny region of Madagascar: Katsepy, Tsaramandroso, Betsako. These communes include agricultural areas (rice, maize, legumes, market gardening, etc.), and vast areas of wooded savannah dedicated to cattle rearing. These communes have been populated by various waves of migration, integrating Antandroy, Betsirebaka Tsimihety Sihanaka and Betsileo people from different regions of the country into the predominantly Sakalava local societies. They are currently home to between 11,000 and 20,000 inhabitants, and are said to have experienced stronger demographic growth over the last five years as a result of recent waves of migration.

The majority of inhabitants are agropastoralists. They farm in concentrated areas around the villages, and raise livestock on pasturelands generally located 3 to 10 km from village areas. Agropastoralists have herds ranging from 5 to 200 zebus (*Bos taurus indicus*). The majority of households have only two to five zebus. In this case, the zebus, generally castrated males, are tied to posts near the villages. They are used for traction (carts, ploughing). A third of households have, in addition to castrated zebus, male and female zebus in herds of ten to thirty heads (sometimes combining zebus from several owners). The animals are driven by herdsmen to the grazing areas around the villages, then brought back to the family pens each evening. These animals are mobilized for certain agricultural tasks (Ploughing, rice fields). In addition to castrated zebus, some 15% of households have herds ranging from twenty to 200 heads. The zebus are left day and night in rangelands more than 5 kilometers from the village. The herdsmen check on their numbers and state of health only one or two days a week. The herdsmen then gather them in so-called

"fananganan'omby" gathering places. This last type of herding, previously widespread, is currently only possible in areas where the risk of animal theft is limited.

The remainder of the research focuses on the most extensive form of livestock farming, which incorporates remote grazing areas. In the three study communes, four pastoral areas were selected for their size (ranging from 1,000 hectares to 5,000 hectares) and the diversity of the authorities involved (inclusion or not in a Protected Area, presence or not of VOI): Analatelo and Antrema for the Katsepy commune, Antsiatsiaka for the Betsako commune and Befolakazo for the Tsaramandroso commune.

These pasturelands are rich in resources such as water sources, remnants of forests, various varieties of fodder grasses and other non-wood products such as raffia (*raphia farinifera*) and satrana (*bismarckia nobilis*). These pasturelands are bordered by villages, hills and rivers.

3.3. Characterization table of the 4 pasturelands

Characteristics	Antsiatsiaka	Befolakazo	Analatelo	Antrema
Commune	Betsako	Tsaramandroso	Katsepy	Katsepy
Size of pastoral area	3000 hectares	4525 hectares	3680 hectares	4360 hectares
Rearing systems & number of animals	Extensive and semi-extensive rearing: around 500 zebus	Extensive rearing: around 1,200 zebus	Extensive rearing: around 1100 zebus	Extensive rearing: around 1400 zebus
Authorities present in addition to local ones	- No authorities other than agropastoralists involved	- Presence of a Protected Area in the North of the Pasture - Presence of a VOI Community in the South	-Presence of VOI, with little impact on rearing practices	-Fully included in a Protected Area

4. RESULTS

4.1. Extensive pasturelands: common land under the authority of "big agropastoralists"

Due to the various resources mentioned above, the pasturelands of Antsiatsiaka, Analatelo, Antrema and Befolakazo are ideal for extensive livestock farming. They offer grasses to feed the herds, water from rivers or ponds to water them, and patches of forest to provide resting places and shade for the animals. For herders, these pasturelands are subdivided into two types of space: rangeland areas used for grazing cattle, called "*kijana*" in local languages, and "*fananganan'omby*" (FO), cattle gathering places. As we shall see, these spaces are associated with different collectivities and give rise to different bundles of rights.

4.1.1. Two categories of agropastoralists

Any zebu owner who brings his herds into grazing areas is considered a "managn'omby" (literally zebu owner / agropastoralists). However, only those cattle owners who have set up or manage gathering sites are recognized as fananganan'omby masters. They generally own large herds (30 to 200 cattle in some cases) and head the family clan. In local languages, the places where they gather their herds are named after them, for example: "Fananganan'omby of Mr. X ou Y". This is the category we will call the "big agropastoralists". The second category is made up of those with around 10 head and/or who have not set

up or do not manage gathering sites. These are often the youngest members of the family, or their wives, who usually entrust their zebus to their family's fananganan'omby masters, before setting up their own herds.

4.1.2. Fananganan'omby (FO) – a family-owned space

Although the FO has a specific role in local cattle rearing systems, it is not a discontinuous element of the pastoral landscape. In appearance, it may consist of the space around a tree, whose only clues differentiating it from the pastoral ensemble for the untrained eye are the presence of zebus and the proximity of a water source (lakes, ponds, etc.). The size of the FO can vary greatly depending on the location and the size of the herds: it can cover dozens of hectares, as in the case of Antrema, and even correspond to the preferred grazing areas of an agropastoral family; or a restricted area around groups of trees, as in Befolakazo. But what these gathering places have in common is that they are managed by a group -- the family clan of the FO master. The corresponding bundles of rights are as follows:

FO establishment rights. Any agropastoralist from the villages bordering the grazing areas can set up an FO. It is not necessary to seek prior authorisation from anyone to do so. The only rule is that the FO must not overlap with that of another. Once the FO has been established, the person who set it up becomes the master of the site.

Use rights. While it is possible for anyone to pass through or cross the FO on an irregular basis, the right to group and periodically graze herds in the gathering places belongs solely to the FO masters and their families and herdsmen. If there is a need to access the area, to harvest woody resources or to graze zebus on a regular basis for someone who is not part of the group, a request in advance, often verbal, should be addressed to the FO master or a member of his family.

Management and exclusion rights. Like the use rights, the management and exclusion rights also belong to the FO master's family. They alone are recognized as having the right to manage this space, to intervene in the ponds located in it, if it is a vast FO, and to decide whether or not to remove trees from it. The right to use fire, which for the locals is a tool for managing grazing grasses (forage renewal, pest management, visibility for control), is traditionally assigned to the family of the FO master. FO masters can exclude some from using this territory and authorize others. However, because of family ties and local alliances between agropastoralists and villagers, this exclusion right is rarely applied.

Alienation rights. As FO is reserved for family use, it can be passed down from generation to generation within the same family, through inheritance. The right to sell is neither present nor desired by the family. No case of sale or irreversible and voluntary transfer of any of the above-mentioned rights of the FO to a person other than the family, whether for remuneration or other benefits was documented during our interviews

4.1.3. Kijana – a community land under the authority of big agropastoralists

The kijana includes all the grazing areas used by the herds. It covers a vast area, ranging from a few dozen to thousands of hectares, and is used by very large collectivities.

Access and use rights. All agropastoralists from neighboring villages have access to grazing areas for their zebus. There are no seniority criteria. New residents from other regions (migrants) also have access if they live in the villages bordering the pastureland. In fact, all the local "managn'omby" agropastoralists, whether FO masters or not, have access to the resources, which are also abundant.

Management and exclusion rights reserved for "big agropastoralists". When agropastoralists and their herds come from more distant villages (generally 5 to 20 kilometers away) - agropastoralists who will hereafter be referred to as "outsiders"- their access to the resources of the kijana (grass and temporary gathering place /rainy or dry season), requires prior authorization obtained from a "big agropastoralist". In this case, the request is verbal. Once accepted, it implies obligations in return, such as taking part in collective actions with the inhabitants, like the collective pursuit of zebu thieves, or the participation in local village ceremonies. All that is needed is the permission of one of the big agropastoralists, not all of them. There is therefore no meeting between all the agropastoralists. The agreement is tacit and part of a lasting social alliance. Once the agreement has been given, it is tacitly renewed in subsequent years as long as there are no problems. The agreement can be revoked by the "big agropastoralists" if certain obligations are not respected (as observed at Befolakazo). In general, local administrative authorities such as fokontany chiefs and sector chiefs recognize the importance of these "big agropastoralists". They play their part (control of cattle registers, etc.) and only endorses the "carnet de bovidés ³" of outside agropastoralists if the latter have already obtained the agreement of one of the big local agropastoralists.

Big agropastoralists may also grant local farmers the right to cultivate on part of the kijana near their own FO. In the case of Analatelo, this agreement allows local farmers with good relations with agropastoralists to have fields on part of the kijana. However, certain conditions have to be met, such as fencing off the fields, not selling the land, and amicably settling any damage that may be caused if the zebus destroy the fences. In the case of Antrema, in a context of competing uses of space between extensive rearing systems and agriculture, and social tensions between locals and migrants, the case of authorisation, always verbal, implies stricter obligations: the agropastoralist will not be held responsible for any damage (introduction of zebus into the fields, fire), and it is up to the farmers to protect their crops

Alienation rights. For agropastoralists, because of its importance both for livestock production and for other activities, kijana cannot be sold or definitively ceded to a third party in the 4 pastoral zones studied. The kijana is vital to the lives of these agropastoralists, and is used not only for rearing cattle, but also for activities such as gathering non-timber resources like raffia for basketry, and collecting firewood. It also has strong cultural values, making it a collective heritage. Kijana is considered to belong to nature. Only in Antsiatsiaka has there been a case of alienation (donation of land by an agropastoralist to an ally - see below). This led to internal and external conflicts that remain unresolved to this day.

³ Document in which the numbers and characteristics of an owner's herds are recorded

FO et kijana: unconventional commons

In some respects, the F.O. and the kijana may correspond to Ostrom's common. Firstly, both zones include resources. These resources are grasses, trees, river or ponds, abundant during the rainy season but present in more limited quantities during the dry season. Secondly, FO and kijana are situated in known areas. Their boundaries, which are fairly vague, unmarked by stones or stakes, and sometimes crossed by zebus, are well known to the inhabitants. They are marked by natural landmarks such as rivers, mountains and forests. The FO are managed by a group of "big agropastoralists" and their families. The only criterion for membership is whether or not the person belongs to the family. The kijana, on the other hand, is associated with a larger, evolving collectivity that includes all agropastoralists residing in neighboring villages, with no restrictions as to membership, and outside agropastoralists in cases when the latter are accepted. This collectivity is also under the authority of the "big agropastoralists". These big agropastoralists do not form a closed group. They don't organize meetings as an "authoritative body", which seems to deviate from the Ostrom ideal. However, they do ensure that the rules are respected and punish non-compliance.

4.2. Sources of challenges to the rights of agropastoralists

4.2.1. Multi-resource pasturelands and, for each of these resources, interested and more or less organized players

Pasturelands are rich in a number of resources, as described below

Satrana and raffia: The satrana (*Bismarckia nobilis*) and raffia (*raphia farinifera*) trees used for basketry and house building are of great interest to the villagers. Both are generally plentiful, except in the case of Befolakazo, and are freely accessible to residents of neighboring villages. For the satrana, a simple notice to one of the neighboring villagers is sufficient for those from outside villages wishing to harvest it. However, raffia, which is less abundant than satrana, is associated with water sources such as lakes or ponds, and is more sought-after for basketry, is subject to a stricter resource tenure system. The quantity that can be harvested is limited to family needs and cannot be used for commercial purposes. Where there are managers of protected areas or VOIs, additional rules govern the period, quantity and place of collection, as well as the process by which harvest requests are made.

Wood resources: These are among the most coveted resources in grazing areas. Used for charcoal or for building fences or houses, trees valued for their wood are of interest to and managed by the villagers, with tacit local rules, such as a ban on exploiting the resources for purely commercial purposes. In the case of Befolakazo, where the kijana straddles a protected area to the north and a VOI to the south, or Antrema, whose management area lies entirely within a protected area, the managers of these entities (VOI, Protected Areas) lay down rules for the protection and exploitation of wood resources. This takes the form of rules on the sustainable use of charcoal or the requirement for a request for cutting or burning.

Fertile land for agriculture: The fertile land in the pastures attracts villagers who have been there for several generations or have recently arrived, and is accessible in three parallel ways, granted by different players. The first is to ask agropastoralists, in a context of mutual trust. The second consists of requesting access from the VOI managers, by concluding agreements with them, in the areas regulated by the VOI. The third method involves local elites (communal officials, influential members of the VOI) opportunistically taking control of land and monetizing access (installation of migrants in return for payment - entry fees and seasonal rents).

Forests and other special ecosystems: The management of forests and other special ecosystems is one of Madagascar's national priorities, and has the support of public entities and conservation and reforestation NGOs. Protected areas have increased in number in Madagascar since the early 2000s (the Durban vision of 2003 envisaged a total of 6 million hectares), and partially or totally cover some grazing areas (Befolakazo and Antrema). In general, two logics have been applied: pasturelands are considered to be part of a large forest ecosystem and not the other way around, and protected area managers establish rules to manage these areas with a view to conservation and reforestation (limiting fire rights, controlling tree harvesting, etc.). The protected area managers or VOI managers interact actively with the forestry services upstream of the control of these activities.

Because of this multiplicity of resources and stakeholders, these pasturelands can be described as a system of "complex mosaic tenure": The pasturelands present diverse resources that may be subject to overlapping bundles of rights held by different players and institutions (Robinson, 2019). **These commons are spatially embedded:** Far from a situation where each body manages a delimited and isolated space, and where the collection of these spaces would constitute the pieces of a jigsaw puzzle, the spaces overlap and/or intersect. These common areas are also subject to polycentric governance. In addition to the agropastoralists collectivities, other authorities (Protected Area (PA), Forest Service, VOI), operating at different levels, also regulate access to pastureland resources.

4.2.2. Challenges to Agropastoralists' rights

In this situation of polycentric governance, the interplay of these different bodies and the entry of third parties (companies, NGOs, development projects, migrants, etc.) can undermine the local rights of agropastoralists (rights of use, management, alienation and, more broadly, decision-making powers).

Agropastoralists decision-making and control powers can be challenged by three types of players. Firstly, this can be done through the VOI or protected area managers. Although the latter grant and do not in practice oppose pastureland access and use rights to agropastoralists, their official documents often play down the role of livestock raising within the zones. In fact, for the purposes of conservation or reforestation, these documents never mention the existence of the FO and only rarely the kijana. By default, the rights-holders of the FO and kijana are relegated to the status of mere users. As a result, they are not necessarily involved in decisions concerning land management (reforestation, fencing, etc.).

Secondly, actions of local elites may weaken the rights and powers of agropastoralists. Indeed, certain local elites informally interfere in the management of pastureland. They grant themselves the right to control access to pastureland and install migrants in return for payment, without consulting the agropastoralists beforehand. This leads to the development of farmland and discontinuities in the grazing area.

Lastly, the bundles of rights held by agropastoralists may be challenged by government departments in charge of land or forestry with a view to benefitting private companies, whether national or foreign. The decentralized State services often consider that pastureland legally falls within their remit and undertake lease transfers to private operators without first seeking the agreement of the agropastoralists, or even without informing them (case of Analatelo and Antsiatsiaka - see below).

The use and management rights of agropastoralists are also challenged by two types of process. First, they are challenged by prohibitions or restrictions on access to fodder. In the case of Antsiatsiaka in the early 2000s, the transfer of leased land to two companies without prior agreement with the agropastoralists led to an effective reduction in access to pastureland, with the introduction of cultivation and fencing. Second, the use and management rights of agropastoralists are threatened by restrictions on

rights to use fire. Fires in pastureland are currently conditionally accepted by the Forestry Service, Protected Area (PA) managers or VOIs. In the case of Antrema and Befolakazo, where the grazing areas are, respectively, totally and partially included in a PA, fires are authorized provided that a request is made to the PA managers and then transferred to the Forest Service. This procedure is considered complicated and unsuitable by agropastoralists because it requires costs (long-distance travel) and time management (length and uncertain response times) that are incompatible with the flexibility that agropastoralists need to manage fires according to the climate (rain, wind, soil moisture, etc.). In Analatelo, fires are actually totally banned. This ban is the result of a determination by local government departments to put an end to extensive livestock raising. So not only is fire banned, but anyone with zebus grazing on burnt areas is considered responsible for the fire and punished.

4.3. Agropastoralists' strategies for maintaining their rights and authority

In order to maintain their rights and authority, agropastoralists often resort to three main strategies: demonstrating and negotiating to make people see reason; deliberately ignoring the rules and continuing or even reinforcing prohibited or restricted practices; and finally, using fire to sabotage ongoing developments.

4.3.1. Seeking compromise and then deliberately ignoring the rules: restrictions on fires - case of all zones

In the 4 pasturelands studied, fires are used by agropastoralists to control vegetation and insects, and are carried out at specific times of the year to maximize the desired effect and minimize the consequences. Faced with the restrictions imposed by institutions such as VOIs, Protected Area managers or the Land Administration, agropastoralists do not raise their voices directly. Instead, they either rely on their mastery of the science of fire to continue the practice discreetly, ignoring the rules, or they follow the rules imposed on them but only in part. In the case of the first option, agropastoralists often follow the rules when the search for a compromise with the authorities is fruitless or when they find themselves in remote areas or areas that are difficult to access, which is often the case with pasturelands. The request for authorization is therefore difficult to send to the Forest Service because of the distance and the state of the roads. Urgent needs, such as the need for agropastoralists to make fires immediately after the first rainfall, cannot be met. This leads them to continue their practice, ignoring the rules. For the second scenario, in which agropastoralists follow the rules but only partially, the case of Befolakazo is instructive. As part of the fight against fires in transfer zones managed by VOIs or protected areas such as Befolakazo, spending the night in the zone is prohibited. For reasons linked to raising livestock (extensive rearing, no need to see the zebus every day) and security (fight against migrants), agropastoralists respect this rule, but they continue to light fires, early in the morning or early in the evening, depending on the strength or direction of the wind.

4.3.2. Alliances against deforestation and agricultural development

As a first strategy, agropastoralists join forces with legal institutions such as protected areas, VOIs and even the gendarmerie⁴ to maintain their access to resources and oppose access to pastureland by charcoal burners and farmers. The case of Befolakazo is instructive on several points. Deforestation there was the result of several factors, including informal interplay and lack of control over charcoal activities by the VOIs and the interference of local elites, sometimes people in touch with commune officials, sometimes members of these same VOIs, who install migrants on farmland to generate income. For agropastoralists, the situation with migrants is tense: the latter change the use of the land, demand that cattle herders pay

⁴ Body of soldiers in Madagascar serving as an armed police force for the maintenance of public order

substantial fines in the event of crop damage, and are said (by agropastoralists) to be responsible for some livestock thefts. To fight back against the migrant farmers/charcoal burners, the agropastoralists approached the VOI, the managers of the protected area and the police to demand their expulsion, in a tense political context on the subject of migration. This resulted in the expulsion of a large number of migrants from the protected area, some of whom were imprisoned, while others were promised resettlement (although this has not yet happened). The problem is that the elites responsible for the entry of these migrants are not investigated and, once the first migrants have been expelled, these elites resettle other migrants, charging them entry fees.

4.3.3. Negotiations to obtain benefits in exchange for pastoral resources

The second strategy is for agropastoralists, and more broadly local stakeholders, to voice their discontent and enter into negotiations with the state authorities and private firms. In the case of Analatelo, the government wants to register the pastureland as part of the state's domain and lease it to a foreign company. This land, used in part as grazing land, is located close to the traditional place of worship known as "doany". When informed of this investment project, the inhabitants of the fokontany - agropastoralists, farmers and local authorities - voiced their discontent through demonstrations, requests for meetings, letters, etc. They put forward two arguments against the project: it reduced the amount of land available for grazing and it should not be possible to cede sacred land to investors. As a result of these actions, the investor and the State services were forced to redefine the area to be ceded to the investor, excluding the place of worship, and to commit to building a school and a road. The local people agreed, interested in the development of public services and convinced that the investor was in danger of abandoning the area due to the poor agricultural quality of the land and potential witchcraft practices. In the end, the legal procedures for registering the land were never completed and the company was never heard from again, leaving the locals free to reuse their land for grazing.

4.3.4. Use of legal tools or fires

In the case of Antsiatsiaka, the process was more complex and took place over a long period of time. In the 1990s, the State wanted to set up two foreign companies on areas that are pasturelands. Under the leadership of the two biggest agropastoralists in the zone, the local communities protested and decided to protect their rights on this land by applying for a title. Faced with the costs and complexity of the titling procedures, the two biggest agropastoralists in the area sold their zebus to finance the start of the titling procedure and are relying on the services of an urban-based advisor who is familiar with the procedures. Their aim is to title the land in the names of the two big agropastoralists, as representatives of the community, and then to continue to manage the land and access to resources in the customary way, accessible to all neighboring villagers. In the face of the opposition and the local application for a title, the two companies agreed to relocate their areas of operation, thereby limiting their encroachment on pasturelands. But the processes became more complex when one of the agropastoralists died and the other, to thank the urban-based advisor for conducting the procedures, ceded a large area of land to him. New tensions have arisen, no longer against the State and foreign companies, but first against the agropastoralist, who is accused of having unjustly appropriated the right of ownership over the pastureland (even though the process of obtaining a title has barely been initiated in practice and does not appear on the plans and land registers of the State services), and second against the advisor who settled on the "donated" land and fenced it off.

This case illustrates that the titling of an entire pastureland in the name of a third party can be problematic and creates tensions within the agropastoralist collectivity itself. The cost of the title is very high, requiring a great deal of time and resources, and once obtained, the title will give power to a single agropastoralist.

This could lead, in the most optimistic scenario, to the loss of decision-making powers for the other agropastoralists, who would still have access to the pasture; or in a less optimistic scenario, to the loss of access, use and management powers for locals in favor of a single agropastoralist. In the area ceded to the advisor resource person at Antsiatsiaka, the second scenario took place (fencing off of the land by the resource person). The agropastoralists and the local community resorted to two strategies: first, not respecting the fencing by completely ignoring the prohibitions. Second, they used fire to burn down the resource person's improvements on the land.

5. CONCLUSION

Discussions and Implications for Public Policy

Pasturelands are rich in resources and therefore involve multiple groups and organizations, as well as multiple local and legal rules. The agropastoralists are nevertheless recognized as legitimate authorities in the local management of these large areas and are often the first to oppose any plans to transfer land to third parties that have not been approved by them (i.e., through demonstrations, negotiations or use of fire). However, the agropastoralists do not form a strictly defined collectivity and are not governed by a system involving the appointment of single decision-makers and regular meetings between them. They manage the pastures in liaison with other local and legal authorities, accept as members all the inhabitants of the villages concerned and exchange views when they meet in the field and, exceptionally, at meetings.

Legal recognition of the rights of collectivities can make it possible to protect local rights, but it must also be accompanied by recognition of the management rights and decision-making powers of local players. Legal recognition of the local rights requires avoiding four pitfalls.

- ❖ The first pitfall would be to set definitive boundaries for a pastureland that evolves over time. Pasturelands have always evolved according to the needs of communities. Agropastoralists and their families contribute to these changes in use by developing areas dedicated to agriculture (provided that farmers protect their plots and crops with enclosures) or by welcoming people looking for farmland to meet their needs. Agropastoralists are also prepared to see part of their area reforested or protected for its biodiversity.
- ❖ The second pitfall would be to define a legal owner definitively. As mentioned above, pasturelands are multi-use and evolving territories, and may include areas with more individualized bundles of rights. These areas must be seen as mosaics with differentiated tenure systems, which must respect the movement of herds and access to watering points, include the physical protection of cultivated or reforested areas against any damage caused by animals, while maintaining sufficient space for grazing. The aim is to limit private appropriation of pastureland, but not to prohibit it definitively over the long term if the collectivities should decide to do so collectively.
- ❖ The third pitfall would be to formalize a collectivity via an association or a list of individuals. The collectivities in charge of resources, and the agropastoralists, do not function like an association. The VOI experiences should be capitalized on, given that requiring the appointment of a president and an executive committee within these associations sometimes leads to cases where those in charge go beyond their rights and legal mandate.
- ❖ The fourth pitfall would be to require costly and complex procedures that are inaccessible to local agropastoralists groups. The aim of reforms should be to move closer to an approach similar to that of certification, based on local skills and simple tools.

On the other hand, legal recognition of management and use modes could be based on four actions:

- A participatory delimitation of a territory with a local and historical basis carried out by a local rights recognition committee mobilizing local resources, simple techniques and skills at the level of decentralized institutions. If necessary, deconcentrated state entities could ensure quality control of the process.
- Inclusion of these boundaries on the “Plan Local d’ Occupation foncière” (PLOF), a tool introduced during the 2005 Land Law Reform and corresponding to a local land register. The addition of these boundaries to the PLOF would not be followed by the normal process of registration in the land register, as doing so would freeze the boundaries and require a definitive determination of the identity of a legal owner. On the other hand, it would make it possible to stop applications for title or certificates that were neither initiated nor accepted by the community of users and managers. Within these boundaries, local management could continue without being codified and evolve according to the needs of the communities and internal power relations.
- The collectivities involved, defined generically under the term “*fokonolona*”, could take on different aspects depending on regional and local contexts, include several collectivities, and evolve over time. However, arrangements would need to be defined collectively to formalize the terms of representation and decision-making, based on the modes of governance in place. Such discussions should generally be held in the various villages rather than at a single meeting held around a table in the Commune's main town. The commune representatives in the communes concerned would have a leadership role rather than a decision-making one.
- In response to social demand, a management agreement could promote or protect certain ways of developing land and using natural resources (i.e., grazing, agriculture, fishing). This agreement would be drawn up in a participatory manner and its quality control could be the responsibility of the decentralized technical services. It could set out a number of management rules on which there is consensus, but should not attempt to list all permitted and prohibited actions, or to codify all rights and obligations. It could also be a forum for interaction with other organizations working in the area (protected area managers, VOI, etc.).

Finally, legal tools are needed but do not provide sufficient conditions for the effective protection of the rights and management capacities of local collectives. As explained, agropastoralists protect their rights and reassert their authority over resource management through a variety of alliance strategies. The provision of legal tools could therefore also be accompanied by a strengthening of local players' knowledge of the diversity of tools and arenas for defending their rights. It could also be coupled with facilitating the networking of livestock producers to give them greater leverage in power relations.

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