

Tenure challenges to implementing forest landscape restoration in northwestern Madagascar

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Key messages

- Madagascar has established ambitious goals for restoring its degraded forests under the Bonn Challenge; tenure rights and tenure security are likely to affect landholders' willingness to invest in forest landscape restoration practices.
- In northwestern Madagascar (Boeny region), tenure challenges in three major local land categories (forests, savannas and seasonally flooded bottomlands) need to be considered; each category has particular tenure issues associated with it.
- The main sources of tenure insecurity for forests are: (a) the undermining of local forest management groups and (b) tensions between the Forest Service and communes over allocation rights to forested lands.
- In the savannas, reforestation is emerging as a way for migrants to claim land through the state, thereby bypassing traditional authorities. While tenure security is strengthened for migrants, there is a long-term risk of conflict as the area available for grazing lands and upland crops declines.
- In the bottomlands, women in some communities are working to obtain primary rights to land; having those rights will provide a greater incentive to plant trees since secondary rights holders are typically prohibited from doing so.
- Tenure varies across the different land types; these differences and their impacts on landholders' willingness to invest in land conservation are important to understand for the implementation of forest landscape restoration.

Introduction

Madagascar has made an ambitious commitment under the Bonn Challenge to restore 4 million ha of degraded forests by 2030. This infobrief takes a detailed look at tenure across different landscape types in one region of Madagascar, highlighting the specific rights and decision-making challenges relevant for successful forest landscape restoration (FLR) in each case. Studies of opportunities and barriers to FLR indicate that tenure rights and tenure security are likely to affect landholders' willingness to invest in FLR as well as the types of practices they would be interested in adopting (McLain et al. 2019; Mansourian and Vallauri 2014). Madagascar's restoration opportunities assessment (Republic of Madagascar 2017) identifies tenure insecurity for smallholders and poor forest law enforcement as likely barriers to the widespread adoption of FLR

(Republic of Madagascar 2017). To support the country's restoration objectives and to address the challenges of tenure insecurity and weak governance of land and forests, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) is implementing a project – *Projet de Promotion d'une Politique Foncière Responsable*¹ (ProPFR) – in Boeny region of northwestern Madagascar. This region is identified as a priority for forest landscape restoration. A key assumption underlying the ProPFR project is that landholders who have obtained a land certificate issued through local land offices, or a title issued through the centralized state land administration office, will have greater tenure security and will therefore be more likely to invest in FLR. The ProPFR is part of the Special Initiative of the One World – No Hunger of the German Federal Ministry for Economic Cooperation and Development (BMZ).

¹ Project for the Promotion of a Responsible Land Tenure Policy: (<https://www.giz.de/en/worldwide/39918.html>)

In 2018, GIZ-Madagascar commissioned scientists from the Center for International Forestry Research (CIFOR) and the University of Antananarivo's École Supérieure des Sciences Agronomiques-Forêts (ESSA-Forêts) to conduct an exploratory study aimed at better understanding local tenure systems and how those might affect FLR investment decisions in the project area. This infobrief describes major local land categories, together with tenure challenges that are likely to influence FLR investments in each of the categories. Based on our results, we describe factors that FLR planners and practitioners need to take into account in order to facilitate the widespread uptake of FLR practices and equitable livelihood outcomes, while reducing the potential negative impacts of FLR.

Background

Madagascar's land and forest tenure system is an amalgam of a French-derived, centralized state land and forest administration combined with multiple – and sometimes overlapping – customary tenure institutions. However, it was clear by the end of the 20th century that the state system was incapable of providing the vast majority of rural Malagasy households with tenure security or incentives to manage forests in a sustainable manner. To address this problem, Madagascar enacted a series of forest and land tenure reforms during the 1990s and early 2000s.

One key reform was Loi No. 96-025,² a 1996 law known as GELOSE (*Gestion Locale Sécurisée*), which authorized the transfer of some forest management authority and responsibilities to local management groups called *Vondron'Olona Ifotony* (VOI), or *Communautés Locales de Base* (COBA) in French (Pollini et al. 2014). Initially, these agreements were drawn up between the VOI, the Forest Service and the commune, but a 2001 decree authorized the forest administration to enter directly into management contracts with VOI (Pollini et al. 2014). However, management contracts have tended to “transfer duties rather than rights to local people” and have not resulted in positive livelihood or ecological outcomes in many areas (Pollini et al. 2014).

A second key reform took place in 2005, when Madagascar enacted legislation aimed at simplifying and reducing the cost of registering land parcels through the state administered system.³ The 2005 Land Law negated the presumption that untitled land belonged to the state, replacing it with the presumption that such land was in private ownership. This, in effect, acknowledged customary tenure for individuals. With

the enactment of this law, individuals with claims to land under traditional tenure – or by right of occupation or use – were recognized as the owners. The following year, another law⁴ was enacted that established a decentralized land administration system giving communes the authority to issue land certificates through offices known as *guichets fonciers*.⁵ Land claimants could choose between registering their claims through the commune's certification process or through the centralized titling system. The land certificate process is simpler and less costly than the titling process, and the intention is to enable individuals receiving land certificates to eventually obtain a title. However, the law did not include provisions for titling or certifying collective land ownership.



Figure 1. Participatory mapping – Katsepy

2 Loi n° 96-025 relative à la gestion locale des ressources naturelles renouvelables

3 Loi n°2005-019 du 17 octobre 2005 fixant les principes régissant les statuts des terres

4 Loi No. 2006-031 de 24 Novembre 2006 fixant régime juridique de la propriété foncière privée non-titrée

5 Madagascar is divided administratively into 22 regions. Regions are divided into districts, which in turn are divided into communes. The communes are divided into *fokontany*, the lowest level of the state administrative system. *Fokontany* correspond closely to the traditional Malagasy institutions that governed at the village level, but there is currently no legal pathway within the state system for *fokontany* to be recognized as landholders. Informally, land appears to be allocated largely through the customary system in some parts of our study area and through the commune in other parts.

A third important development was the introduction of commune land-use plans (*Schémas d'Aménagement Communal*, or SACs) in 2010 with support from the GIZ (GIZ/PAGE 2017).⁶ These plans, which are meant to be produced through a broad-based consultative process at the commune level, seek to promote sustainable land use and reduce the likelihood of land use conflicts.

Methods

We conducted the study in two phases. During Phase 1 (in October 2018), our research team collected data in the rural communes of Mariarano, Ankijabe, Katsepy and Ambalakida. In Ambalakida, we collected data at the commune level and in one *fokontany* (sub-commune level); in the three other communes, we collected data at the commune level and in two *fokontany* (see Table 1). In Phase 2, three team members returned to Mariarano and Ankijabe in February/March 2019 to obtain additional details about local tenure practices. During both phases, we used multiple data-collection methods, including participatory mapping, focus group interviews, key informant interviews, and field observations. We gathered data on major land use types, tenure patterns and FLR investments. In developing the land use typology, we used locally relevant categories rather than imposing external land use categories. Although FLR covers a broad set of practices, we focused primarily on tree planting and reforestation because study participants readily recognized these practices as restoration.

Table 1. Communes and fokontany included in the study

Commune	Fokontany	Phases
Mariarano	Mariarano; Antanambao	1 and 2
Ankijabe	Ankijabe; Belalitra	1 and 2
Katsepy	Katsepy; Analatelo	1
Ambalakida	Ambalakida	1

Study site context⁷

Boeny region is in the tropical dry forest ecozone. The area has a 4-month rainy season (mid-November to mid-March) and an 8-month dry season. Ankarafantsika National Park, part of which is in Ankijabe, is one of the few remaining large forest blocks in the region. Most rural inhabitants make a living through farming, with rice being the major crop. Forests are a source of products for subsistence use and for sale (i.e. charcoal, raffia leaves and honey). Cattle are a significant source of wealth, are used as draft animals and play an important role as sacrifices in funerary practices. Their manure is critical for the maintenance of soil fertility. The Sakalava were the first to settle in the region, but other groups – notably Merina, Tsimihety, Antandroy and Betsileo – have been migrating to the area for more than 100 years. The authority of the Sakalava founding families to allocate land to in-migrants varies throughout the zone.

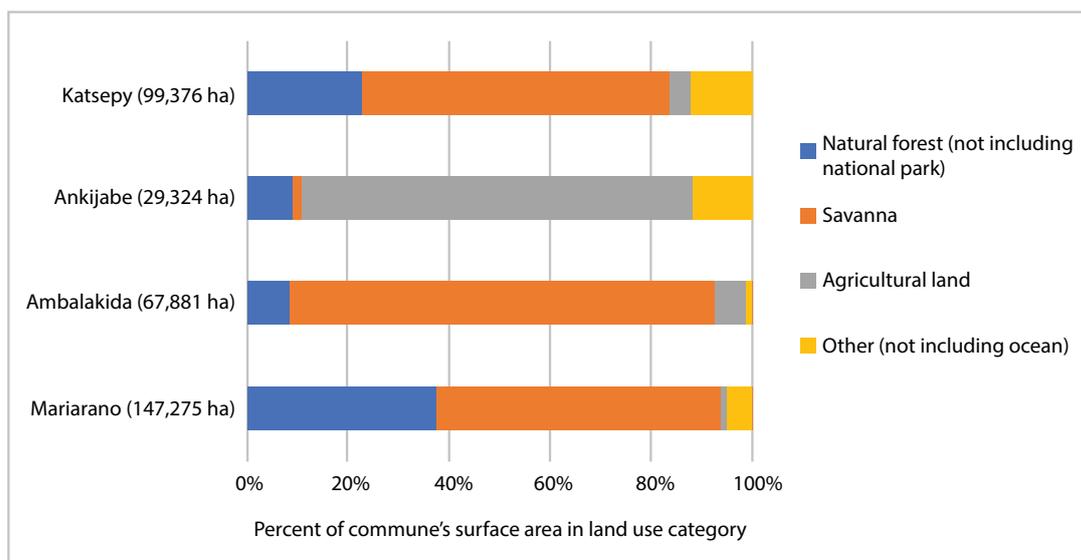


Figure 2. Land cover in the four communes included in the study⁸

⁶ The SACs are part of a nationwide system of commune planning and are included in regional and national land-use planning efforts; the SACs are backed by the state through the Ministère de l'Aménagement du Territoire, de l'Habitat et des Travaux Publics.

⁷ Data on the communes were obtained from the Schéma d'Aménagement Communal for each commune (CR d'Ambalakida 2010; CR d'Ankijabe 2012; CR de Katsepy 2013; CR de Mariarano 2010).

⁸ Chart developed from statistics in the Schémas d'Aménagement Communal for each of the communes.

Ankijabe, the most densely populated of the four study sites, has an average density of 69 persons per square kilometer, which is 10 times greater than that of Mariarano (6 persons per square kilometer), the least densely populated site. Ambalakida and Katsepy have population densities of 14 persons per square kilometer and 17 persons per square kilometer, respectively. Agricultural land is the most abundant land type in Ankijabe, whereas savannas – grassy and wooded – dominate the landscape in the other three communes (see Figure 1). Titles have been issued for roughly 35 percent of the land in Ankijabe (outside the boundaries of the national park), 15 percent in Ambalakida, and less than 10 percent in Katsepy and Mariarano. However, the majority of titles were issued during the colonial period, which ended in 1960, and the legal owners have long since abandoned most of those lands. Land certification – the alternative to titling sanctioned by the 2005 Land Law – is still uncommon, with less than 5 percent of the land area certified in all four communes.

Results

Modes of access to land

There are seven principal modes of access to land considered privately held in the study area. Individuals who have primary rights acquire land through inheritance, purchase or by clearing unclaimed lands for cultivation. In general, land claimed through clearing is done with authorization from traditional authorities or the state. Historically, the Sakalava founding families held land allocation authority, but this has increasingly shifted to the communes. In recent years, participation in reforestation through the government-sponsored project *Projet de Lutte Anti-Érosive (PLAE)* has become another avenue by which individuals gain access to land. Secondary rights are acquired through rental (*mamondro*), sharecropping (*misasaka* or *ampahatelonny*) or borrowing (*mindrana*). Women often have informal secondary rights to land through their husband or a male relative. Rights for grazing and access to water points have historically been allocated through a special ceremony. Renters, sharecroppers and borrowers do not have the right to plant trees in any of the four sites. The reason given for this restriction was that planting a tree is a means by which land claims are established, and therefore primary rights holders risk losing their land if they let secondary rights holders plant trees.

Major land categories and tenure issues

For each commune, we developed a typology of locally relevant land categories and described the associated tenure challenges that are essential for understanding how FLR will be affected. Major land categories common to all four sites included forests, savannas and seasonally flooded river bottomlands. Mangrove forests were important in Mariarano and Katsepy, but we did not include them in our analysis due to time limitations.



Figure 3. Ambalakida VOI members in their sacred forest

Forests (*ala*): Several types of natural forest are found in the study sites, including dense dry forests, raffia stands, mangroves and bamboo groves. We focus here on dense dry forests and raffia stands.

Dense dry natural forests: The study sites vary considerably in the amount of area that is covered with dense dry natural forest, with Mariarano being the most heavily forested and Ankijabe the least forested. In all of the communes, there is pressure to convert the remaining forests to either residential or agricultural use. In Mariarano, this is primarily due to the recent relocation of the village of Mariarano and the subsequent need to clear the forest in the new location for residential development.

In Ankijabe, Katsepy and Ambalakida, conversion to agriculture is the primary threat.

Until the enactment of the GELOSE law, most natural forests in the study area were nominally administered by the state, but in practice open access conditions prevailed in many areas. Beginning in the early 2000s, VOI were established and co-management contracts were signed for a number of forests in the study area.⁹ In Mariarano and Katsepy, study participants described the conditions of VOI-managed forests as having improved after the VOI gained management authority. However, in both of those communes, forests that are not under VOI control continue to experience illegal timber harvesting and conversion to cropland.



Figure 4. Reforestation in Ankijabe’s savanna

⁹ The VOI have management rights, but not ownership rights, to natural forests, including areas that have been reforested.

In Ankijabe, the only remaining forested area outside of Ankarafantsika National Park is located in the park’s buffer zone and is gradually being converted to farmland. Informants in Belalitra fokontany, part of which is located in the buffer zone, indicated that a local forest agent (now removed from his position) had been responsible for much of the recent forest conversion. They stated that he had hired laborers from Ankijabe to clear land within the buffer zone so that it could be cultivated for peanuts.

In Ambalakida, the VOI has forest management rights to the area’s sacred forest through a provisional co-management agreement. However, despite patrols and rules against clearing, the VOI has been unable to prevent outsiders from converting the forest edges to cropland. According to previous research (Muttenser 2006), the inability of the VOI in Ambalakida to enforce harvesting restrictions is due to corruption and a lack of political will at levels beyond VOI control. Our interviews suggest that this continues to be the case.

A question that has arisen with regard to decentralization is whether the SAC planning process provides the communes with forest management rights. There is considerable confusion about who has the authority to allocate rights to forested areas that are neither designated as state-administered forests nor managed by VOI through co-management contracts with the Forest Service. The Forest Service continues to operate on the assumption that it has the right to allocate access to such forests and appears to presume that it can do so without consulting the communes or fokontany. The commune representatives argue that because such forests are mentioned in the SAC’s land-use prescriptions, communes have the right to make decisions about their management. This has important implications for FLR because these areas are prime restoration targets.

Raffia stands (ala rofia): Although the area occupied by raffia stands is small, raffia trees are extremely important for village livelihoods. National forest law categorizes raffia stands as communal resources, and the harvesting of raffia wood and leaves is strictly regulated. Additionally, national forest law explicitly prohibits the privatization of raffia stands. Nonetheless, informants in Ankijabe described several cases in which private individuals had appropriated raffia stands and fenced them off, depriving community members of their use rights. A focus group discussion in Belalitra revealed that residents had created an association to manage the raffia stands but it was unable to take action because the stands had been appropriated. When questioned about this situation, commune leaders agreed that raffia stands should not be subject to private appropriation and indicated their intention to demand that the SAC be revised because the current version omits the raffia stands. According

to the commune leaders, once the raffia stands are explicitly designated as resources belonging to the commune, the problem will be resolved.

Savannas (*banja*): Banja are large open grassy spaces with varying levels of tree cover. We identified three important sub-categories of land in the banja: pastureland, rainfed cropland and reforested areas.

Pastureland (*kijana*): Kijana is pastureland for zebu cattle and has three components: camps where the cattle are sheltered and spend the night; grazing areas; and watering places. In general, anyone from the community can access and use the grazing grounds and water places. Cattle camps are allocated to individuals through a *joro kijana* initiation ceremony, whereby the community grants the cattle herd owner certain exclusive rights to the space in which his camp is located. Reforested parcels are often in grazing areas.

Rainfed cropland (*tanimboly*): Tanimboly are parcels of land in the banja that have been converted into fields for dryland crops, such as beans, black-eyed peas, corn, manioc, peanuts and taro. The individuals or lineage that manages *tanimboly* has exclusive tenure rights to them. If the land in question was recently acquired by the current owner, she or he holds all rights, including rights of access and rights to alienate or transfer the land. When the owners have inherited rainfed cropland from their ancestors, the lineage exercises control. In Mariarano, a rush for ownership of land located in the savanna – which has potential for conversion to cropland – appears to be taking place, as people seek to acquire land that they can eventually sell.

Reforested areas (*fambolenkazo*): Reforestation is a new way of transforming the savanna. The PLAE project has established some reforested parcels in the four communes. Project Eden, an international non-governmental organization based in Mahajanga, also recently began reforestation activities in the savannas of Mariarano and Katsepy. Reforestation projects in the study area have typically provided *Eucalyptus camaldulensis* and *Acacia mangium* seedlings. However, ProPFR planners envision the inclusion of other exotic species (primarily for construction or fuelwood), such as *Eucalyptus citriodora*, *Eucalyptus grandis*, *Tectona grandis*, *Khaya senegalensis* and *Acacia auriculiformis* (Randrianasolo 2017). Project Eden is experimenting with native species in some sites.

Projects such as PLAE and Project Eden generally acquire land for reforestation through the commune. In the case of PLAE, the land is made available to groups that agree to plant trees on the land. Once the trees have grown, individuals in the group can apply to obtain a land certificate for a portion of the reforested parcel. Both the land and the trees planted on it belong to the individual holding the land certificate.



Figure 5. Rice fields in seasonally flooded bottomlands in Ankijabe

Seasonally flooded bottomlands (*baiboho*). Baiboho are river bottomlands that flood during the rainy season, and where rice and counter-season crops, such as tomatoes and onions, are grown. Rice fields in seasonally flooded bottomlands are known as *tanimvary*. Fields in the baiboho often have scatterings of trees; these are typically fruit trees and are owned by the landowner. Tenure for the baiboho, including *tanimvary*, is similar to that for rainfed cropland.

In Mariarano, management of the baiboho was traditionally in the hands of the eldest males in the household. As a result, in the commune's land tax records, male household members were listed as the owners. However, there is a tendency in Mariarano toward individualization of ownership rights to baiboho parcels based on the principle of gender equality. Some of the women in Mariarano described how they were working to get their family's land distributed equally among the heirs. They wish to parcel out the family's baiboho so that each man and woman has a parcel registered in his or her name. However, the women emphasized that although each person will have the right to manage his or her parcel in the baiboho, the family will retain rights of alienation. The written agreement that the family has drawn up states that rights holders must have the consent of the other family members before they can sell their parcels outside the family.

Discussion

Tenure and decision making vary across the different land types, and these differences are important to understand for FLR implementation. In areas that are conceptualized locally as forests, a factor working in favor of FLR is the presence in some areas of VOIs that have demonstrated their capacity to make and enforce rules on forest use. In other areas, such as in degraded natural forests or protected areas controlled by the

state, investments in building VOI capacity may be needed. The difficulties that the Ambalakida VOI has encountered – i.e. interference from higher levels undermining its enforcement efforts – suggest that there is a need for mechanisms that allow VOIs to hold higher levels of governance accountable. For raffia stands, the key issue is the risk that they will be appropriated by wealthy individuals and converted into rice fields. The privatization of raffia stands highlights the need for legal recognition of collective ownership so that communities are in a better position to resist the appropriation of resources held in common.

The history of the study area indicates that reforestation efforts have been focused on the savannas. The savannas are widespread in three of the study sites and are less valuable as farmland than the bottomlands. Land claims appear to be the weakest in the savannas, making them a likely target for projects, such as ProPFR, which seek to link FLR with land certification. On the one hand, study participants indicated that in the recent past, restoration project managers approached the Forest Service for permission to plant trees in the savannas, bypassing the traditional authorities, commune and fokontany. On the other hand, in some areas, the communes have emerged as important players in allocating land for reforestation, relying on the SAC process to justify their authority to make decisions about where restoration can take place. Yet all three of these local actors (i.e. traditional authorities, commune and fokontany) would normally weigh in on land allocation decisions, and their support is necessary if FLR initiatives are to be successful.

Protecting and managing the savanna for grazing (i.e. ensuring that sufficient areas are not converted permanently to cropland or tree plantations) is important given the central role that the production of cattle (and other livestock) plays in the household economy. Also, depending on broader economic incentives, grazing lands and rainfed cropland may be competing with each other. Determining where to carry out afforestation within either land type is vital in light of how livestock production occurs in this environment. To forestall conflicts over savanna lands, support is required for land use planning that engages the local community and the commune in mapping out future grazing areas and water points where afforestation (or permanent conversion to rainfed cropland) might occur. Ideally, such maps would be integrated into revised SACs. However, revising the SAC requires convoking all parties that participated in the development of the original SAC – it is also expensive and cumbersome. Given the difficulties associated with revising the SACs, local land covenants (*dina*) or other agreements may be more viable in the short term.

Seasonal bottomlands also deserve attention from FLR initiatives because these are areas where many people already plant

trees, albeit primarily fruit trees. A tenure aspect that FLR proponents will need to consider, however, is the extent to which bottomland parcels are subject to secondary use rights, since the land user probably lacks the right to plant trees without the landowner's permission. In areas where secondary users dominate, efforts to promote FLR will need to focus on restoration practices other than tree planting.

Conclusion

Our exploratory study suggests some key factors that can facilitate FLR investments in Boeny: (1) support for recognition of collective forms of tenure; (2) capacity-building support for VOI; (3) measures aimed at increasing downward accountability on the part of government officials; (4) engagement of fokontany and traditional authorities in land allocation decisions; (5) assistance with SAC revisions and/or development of local agreements that map out grazing and reforestation areas; and (6) accompanying measures that will increase the likelihood that secondary users will benefit from tree crops. Additional research is needed to assess the effects of FLR with regard to the historical rights and claims of the Sakalava; the likely effects of FLR investments on the livestock portion of the economy; and the impacts of restoration on secondary rights holders.

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