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The international debate on forest management transfer and our contribution

Thorkil CASSE¹

I – The local management of forest resources : our contribution

The international debate on the local management of forest resources is focused on how to protect the forest (conservation) while leaving an opportunity for local people to gain from the exploitation of forest resources (resource access). This is a contribution to this debate, and concludes that the attempt in Madagascar to reconcile these two often contradictory objectives ends in a place between a fully fledged success and a tremendous failure. Why ? Because, even in the event that research is focused on a specific geographical area, the conclusion (success or failure) depends on the importance any given researcher devotes to each of the two objectives. If the objectives are not unequivocally defined at departure, interpretations of all sorts will queue up one after the other.

Formulated differently, we end up by concluding that meeting the conservation criterion in the long run is at stake if alternatives to forest exploitation are absent. If land, forested or cleared from forest, is posteriorly recognized by the authorities as legal, if not a formal entitlement, the resource access criterion is easier to meet. If the prioritization of potential conservation areas is crucial to policy makers in a context of scarce financial resources, the transfer of management may still stand a chance, even when no economic alternatives are suggested to local people. The forest offers shelter to cattle, and due to this functional value villagers may still see an interest in the conservation of the forest, even in the event of no direct economic benefits being included in the management contracts.

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Through our we demonstrate how the transfer of the management of forest resources to local communities becomes instrumental for the various strategies of the different stakeholders. The forest authorities, the implementing agency, the NGOs, and the villagers determine their position and willingness to accept the transfer in accordance with their own long-term strategies. An example illustrates the challenge. A transfer of management is based on a contract in terms of the sustainable use of forest resources, whereas villagers act in terms of the use of all resources, not only forest resources. If restrictions are imposed on the use of forest resources within a specific spatial area, villagers will claim access to other forest resources (outside a local management scheme) or insist on improvements in agricultural techniques (for example access to an irrigation scheme).

The transfer of management is an instrument for residents in some areas to exclude migrants ('they cut down the forest and should not be members of the local management set-up') whereas the transfer in other places is used by migrants to acquire an informal, but locally recognized entitlement to land. Local people are not passive stakeholders in a process where critics of the transfer of management tend to regard transfers as an environmental imposition from outside to hinder local access to the forest resources. Local villagers reinterpret the rules in accordance with their own proper strategies. Emphasising the local reinterpretation of rules is maybe the most important contribution of our analysis of the transfer of forest management in Madagascar.

2 – The local management of forest resources : the debate

For many years, the protection of nature was dominated by ideas about separating animals from man. National parks were created in the US and then the idea spread to other countries. By 1972, more than 250 parks were established in Africa (Weber and Vedder, 2001). Later this approach was called 'fortress conservation' or the 'fences and fines approach' (Hutton *et al.*, 2005).

During the 1980s and 1990s a community approach became part of the agendas at the World Congress on National Parks and Protected Areas (Hulme and Murphree, 2001). The acceptance of the community approach is supposed to have four grounds. First, the Brundtland Report in 1987 and the UN Conference on Environment and Development had the ultimate objective of bringing together conservation and human development. Second, a romantic idea about the community emerged in contrast to the state. Third, new concepts in development circles became common jargon even within the conservation sphere : top-down, technocratic compared to bottom-up, and participatory methods. Fourth, the market approach promoted by new

conservative governments in the US and in Europe challenged the earlier belief in states' abilities and thus the state planning of national parks and reserves.

Weber and Vedder (2001) refer to the publication of the 'World Conservation Strategy' in 1981 – a joint effort from worldwide conservation organizations IUCN (International Union for Nature Conservation), WWF (World Wildlife Fund) and UNDP (United Nations Development Program) – as the fundamental change in approach, linking conservation with development. The practical outcome was the creation of Integrated Conservation and Development Projects (ICDP) which attracted much donor money during the 1990s and at least were temporarily seen as the vehicle with which to reconcile the conservation and the development objectives.

Over the years it turned out that lessons were difficult to derive from the ICDP since there is often no baseline information available, and because most activities were financially unsustainable. When baseline information concerning the situation before the start of an ICDP is missing, it is difficult to evaluate whether the results of the project were positive or negative. Activities entirely based on donor funding fall apart once the funding dries out.

Moreover, the so-called fortress conservation approach made its conspicuous re-entry on the scene as natural scientists increasingly distrusted the conservation efforts of nature in areas of community management. Hutton *et al.* (2005, p. 347) list five arguments for this pendulum swing to the barriers (as they call the process) :

- Protected areas require strict protection.
- Biodiversity conservation is a moral imperative.
- Conservation linked to development does not protect biodiversity.
- Harmonious, ecologically friendly local communities are myths.
- Emergency situations require extreme measures.

Reviewing the support of donors, Hutton *et al.* (2005) further state that both USAID and the British DFID have backed out of their former endorsement of the community approach. In Madagascar, the transfer of management of natural resources, in our case forest resources, was sustained by financial funding from the French and the Swiss Intercooperation, not USAID, though they engage in donor activities in the country.

Concluding this short review of the debate about local management of natural resources, in our view part of the debate is wrong footed. Pure protection might be required in cases of threatened species or attacks on crucial ecosystems. However, a community approach will still be valid in areas of less than international importance and, more importantly, local people cannot be expelled from all areas of protection interest. Compared to other

forest management types, the forest area designated by the state for use of communities makes up a share of 9 % of the total worldwide forest cover and privately owned forests by communities add another 2 % to the forest area under community management (Sunderlin *et al.*, 2008, p. 7).

The debate on how to strike a balance between conservation and development is very lively. In a debate on local conservation, placing greater emphasis on conservation than development though the distinction with respect to the local management of natural resources is not clear, Vermeulen and Sheil (2007, p. 437) argue in favour of partnerships :

Partnerships can be understood as a means to share the portfolio of risks associated with an undertaking... in a hypothetical example of a community-based ecotourism project, a conservation agency may agree to shoulder and mitigate regulatory risks, whilst local partners work to reduce safety risks (*e.g.* damage to fields and livestock by wild animals).

One of major advantages of the local management of natural resources might rightly be the sharing of risks ; an aspect often overlooked in the debate.

3 – The local management of forest resources : our point of departure

This volume is the culmination of a research project ('Is community forestry the answer to the environmental crisis in Madagascar ?') which received a grant from the Danish Council for Social Science Research. Three articles are written by researchers outside the original network. The original idea, in 2005, was to address the following research question

Has the implementation of *Gelose/GCF* (*Gestion Locale Sécurisée/ Gestion Contractualisée des Forêts* : Locally guaranteed management/ Contact-based management of forest) in south-western Madagascar led to any improvement in economic output (efficiency), equity and/or ecological quality ?

The transfer of management of forest resources to communities in Madagascar is instituted by an act adopted by Parliament in 1996 (*Loi n° 96-025*). The first National Environmental Action Plan (NEAP) was formulated in 1987-88, supported by the World Bank. Domestic NGOs proliferated during the implementation of NEAP1 (1990-1996). They did this by participation in the preparation and execution of Integrated Conservation and Development Projects. During the NEAP2 (1997-2002), the services of NGOs were replaced by the Malagasy National Park Service (ANGAP). One of the problems encountered during NEAP1 was the creation of tension between expatriates and locals and between ANGAP and the forest authorities *Direction des Eaux*

et Forêts (DEF : Department of Water and Forest)). In NEAP2, classified forests became equally important to conservation (Gezon, 2000 and 1997). Whether the more fundamental critique observers articulated against NEAP1, for example the neglecting in identification of causes of environmental degradation and destruction (see Larson, 1994), was accommodated for within NEAP2, is more questionable. In NEAP3 (2003-2008), the focus was switched towards the promotion of sustainable development. Over the years the main objective went from the management of biodiversity by the creation of a proper regulatory framework, to more involvement of government agencies and finally in the last phase more involvement of local people and emphasis on environmental financial mechanisms (Razafindralambo and Gaylord, 2006).

Gelose represents one version of the CBNRM (Community Based Natural Resource Management) vehicle in Madagascar. It includes three parties : the forest agency DEF, the municipality (the administrative lowest level where the forest belongs), and a community level forest association that was formed for this purpose. A second version of CBNRM in Madagascar is the GCF. In this version, the municipality only plays an indirect role (entering a contractual agreement with the forest agency). In the literature, Gelose is often linked to law 96-025 (see Sigogneau and Rajaspera, 1998 ; Antona et.al., 2004) though the text of the law only refers to the local management of natural renewable resources and not to locally guaranteed management which is the correct spelling of the abbreviation Gelose. Even a later decree (*Décret 2000-027*) in which the responsibility of the basic community is stipulated, refers to the local management of natural resources. It appears to be a detail, but it is important to bear in mind that the wording ‘security’ or ‘guarantee’ in the local management regime (Gelose) is not in accordance with the text in the applied legislation.

In purely legal terms, another ambiguity appears in the legal text. Article 7 rightly refers to a contract between the basic community (normally a village) and the municipality within the Gelose legal framework, and then proceeds by mentioning that such a contract only has a legal status if specified in the Gelose contract. In other words, the role of the municipality is reduced to one of providing support to the basic community, but without according any formal rights to the municipality as opposed to the rights of the community. Gelose becomes a bipartite contract, and then in reality there is no difference between the Gelose contract and the Swiss inspired GTC contract, we briefly mentioned in the beginning of the chapter.

We soon realized that completing Gelose/GCF contracts between the three signing parties (Forest Department-municipality-basic community) was the easy part (fig. 1). By the end of 2002, 250 communities had signed a transfer

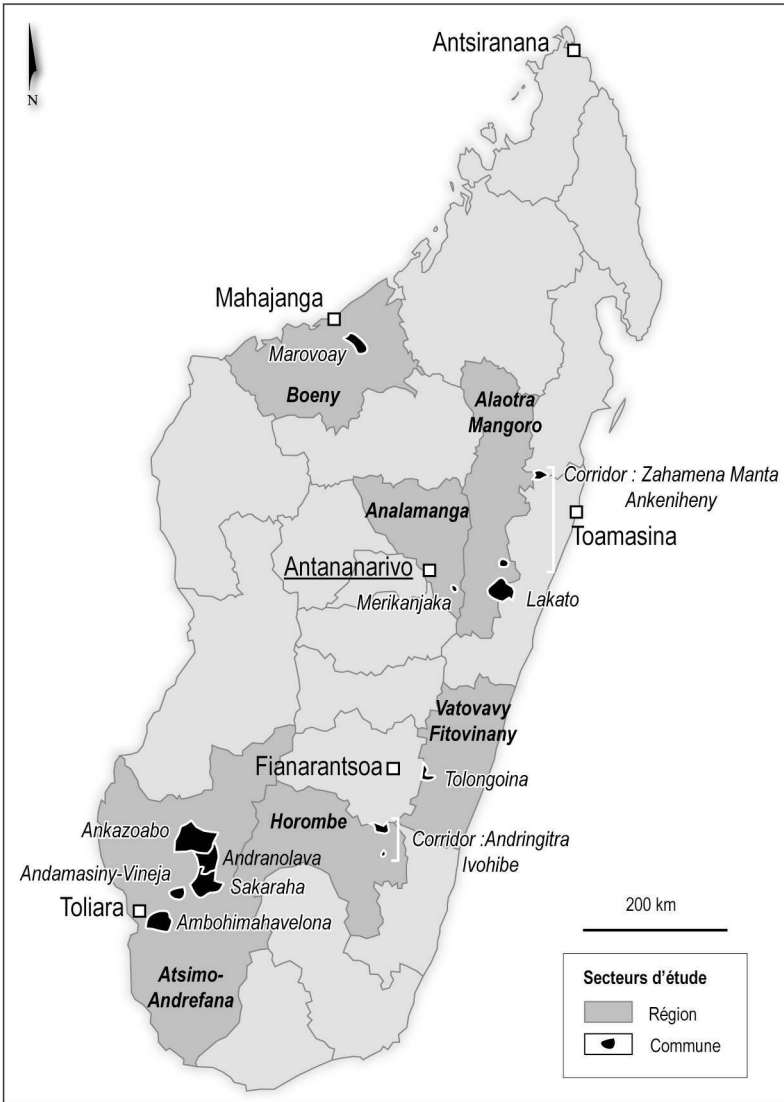


Figure 1 – Map of study areas

of management contract (chapter by Ramamonjisoa and Rabemamananjara). But, once the preparation phase is over, lack of monitoring and absence of provision of tangible benefits to the community are the reality, many villages have to face. So, assessing the state of the country's forests, and exploring whether the collecting of forest products, land use patterns and income sources have changed since the introduction of Gelose/GCF contracts had a different meaning than seemed initially to be the case. We cannot hold the Malagasy

experience in local management accountable for the three outcomes if the scope was rather limited at the start. Still, we are in a position to formulate a number of hypotheses which are discussed in the various chapters :

- 1) Deforestation is present even in zones, where the transfer of management of forest resources has been completed
- 2) The rules negotiated on the use of forest resources before the signing of a transfer of management contract are always reinterpreted by the local actors.
- 3) Local community management evolves with the passing of time in accordance with the dynamic, local forces.
- 4) Management transfers fail under external forces in the absence of local financial autonomy.
- 5) The feasibility of management transfers may depend on the presence of a donor, if not funded by the government, especially during the execution of the project.
- 6) Lack of alternatives to slash and burn agriculture (*hatsaké*) make local management contracts financially unsustainable
- 7) The space of intervention does not always coincide with the boundaries of the communities as it is the local value system that defines the spatial unit of the management system.
- 8) There are two opposing types of interpretation of conservation values.
- 9) The destruction of the natural forest is a way to acquire related property rights.
- 10) The success of management transfers depends on the inclusion of all the local actors in the negotiation process and is shaped by local conditions, inter alia the level of education and the possibility of enhancing forest resources.
- 11) The tenure issue is only one among numerous causes of deforestation.

4 – How to characterize the local management of forest resources in Madagascar : Gelose

In Madagascar, the total forest loss is estimated at 9-15 % of the forest cover in 2005 compared with the 1990s, or at least 1 million hectares over the entire decade (Moser, 2008). One of the major mitigating measures, outside national parks and reserves, is the implementation of legislation authorizing the transfer of forest management. Once locals have obtained the management rights of the resources, they will pay attention to not depleting the resource base, or so goes the general argument in Madagascar or anywhere else in developing countries opting for the local management of natural/forest resources.

However, a transfer of the management of natural resources seldom aims to fulfil one single objective. CBNRM is the broader concept. In one version, the overall objective is stated as :

CBNRM can be considered a management strategy aiming to reduce poverty, conserve natural resources and promote good governance' (Danida (Danish aid agency), 2007, p. 2).

We will deploy the term community forestry in the following to characterize the framework of Gelose/GCF. In the general debate on local forest initiatives, confusion reigns about definitions. Referring to definitions used by 12 major forestry initiatives, Rice *et al.* (2001) found considerable disagreement in terms of sustainability, socioeconomic and biodiversity criteria. In the absence of any clear definition, we will argue that community forestry separates itself from SFM (Sustainable Forest Management) by being less explicit with concern to long-term sustainability but more concerned with economic benefits accumulation and benefits sharing.

Community forestry may be regarded as a process, gradually increasing the commitment of the communities and devolving the control of the state :

- 1) Community participation in the decision-making process surrounding resource utilisation.
- 2) Government relinquishment of controlling forest areas to communities.
- 3) Engagement of the communities in value-added activities. (Glasmeier and Farrigan (2005).

Prado (1995) distinguishes between three forms of transfer :

- 1) forest handed over to communities for management,
- 2) forests leased to communities for production ;
- 3) partnership between forestry agencies and communities to share benefits.

Substituting industrial timber companies with community-based forest enterprises seems to be a strategy adopted in the Philippines and in Albania. In India and Nepal, the strategy being promoted is based on partnership for benefit sharing.

Various studies have addressed the benefit accumulation and the benefit sharing. Either from an equity perspective (rural communities gain a larger share) or from a cost-efficient perspective (common-property regime can increase economic benefits under certain conditions). A trade-off between the benefit sharing objective and the maximum benefit accumulation may develop but is not unavoidable (Castrén, 2005). Poor performance in benefit sharing could stem from uneven access to the most valuable resources. Based

on African experiences, Wily and Mbaya (2001) distinguish between benefit sharing and power sharing forest managements systems. They conclude from a study of 12 African countries that power sharing programs are more common than benefit sharing. The latter often fall prey to mood changes of the authorities (CAMPFIRE in Zimbabwe being the clearest example).

Gelose/GCF is a type of transfer in its early stage. Communities participate in decision making, but the state has reserved its right to cancel contracts and the forest tenureship *de jure* is not yet an issue for discussion. Examples of direct benefits drawn from forest exploitation are rare in Madagascar and mostly related to the collection of firewood (see the article by Muttenter in this volume). Power sharing is a more appropriate notion by which to classify the management system in Madagascar.

5 – What are the key concepts that our study examines ?

First, we will select a number of key concepts from the general debate on community forestry and compare them with the use in our study. What degree of congruence exists between the general debate and our observations, and where do we add to the general debate ? Second, we will refer to studies undertaken in Madagascar and try to find similarities or differences between our study and others.

a – Resources and resource size

Resources are classified into four groups : state property, private property, common property (or common-pool resources) or open-access property. In reality, property rights are seldom static and common property is not necessarily managed by a communal regime (Hulme and Murphree, 2001). Agrawal (2001, 2002) highlights the resource characteristics and the external factors. Factors affecting the management of the commons are divided into resource characteristics, group characteristics (boundaries, norms and heterogeneity), institutional arrangements (simple rules, graduated sanctions) and finally external factors (government supporting local authority and clear legal framework). A success in common property (in our case community forestry) may materialise if natural resources are characterised by low levels of mobility and are small in size, predictability and in relation to external factors low level of articulation with external markets.

Not all observers agree on these characteristics. In a study from India, Misra and Kant (2004) show that collective action increases with the size of the forest. On the issue of community conservation, though different from

community forestry, Adams and Hulme (2001) equally find the resource ought to be large enough to gain support from the community.

Our study does not claim to enter the debate on the resource size question in detail. Nevertheless, the article by Ramamonjisoa and Rabemananjara, analyzing Gelose from a commodity value chain angle, underscores the problem of community forestry in a case where marketing of the transformed resource is well organised (the agricultural commodities, maize and manioc, replacing the forest products). A high exposure to external markets for maize cropping is detrimental to the protection of the forest resource, which is in line with Agrawal's argument.

b – Local policies of community forestry

Central to our approach is how various stakeholders perceive the management contract and how external stakeholders in the preparatory phase conceive which economic activities to promote. Rakoto analyses the approach adopted by the SAGE (*Service d'Appui à la Gestion de l'Environnement* / Office of Management Support in Environment) which mandate is to supervise the preparation leading up to the signing of a Gelose contract. If local customs are not well understood initially, the future of the contract is at stake.

Interviewing villagers in India, Matta and Alavalapati (2006) observe major divergences in perceptions of the participations in the JMF (Joint Forest Management) program. A third of the households could not identify any reason to join the JFM program, and nearly 60 % of the villagers claimed not to have received any benefit. The article by Casse and Milhøj relates to a similar issue : what are the advantages/disadvantages of Gelose from a participant perspective, and what would villagers prefer to include in future Gelose contracts. Conclusions stress the absence of tangible economic benefits, but villagers in our study area in Madagascar were still largely in favour of Gelose due to the indirect benefits the contract engendered (like better relations with DEF ; often frictions are present between local communities and forest authorities). Indirect benefits or noncash benefits can be important side-effects in community forestry or in community conservation projects. Salafsky *et al.* (2001) reach an analogous conclusion looking at community based enterprises within community conservation projects. Conservation in their case occurred regardless of the importance of cash benefits stakeholders were receiving. In our case, any attempt to link support to Gelose or to any particular kind of income increase also ended blind.

Stakeholder strategies are the cornerstone of most analyses of community forestry. Analyzing strategies is the main topic in Ranaivoson's article.

The success in implementation of Gelose is broader than calibration of the deforestation rates. Ranaivoson starts by examining the results of satellite remote sensing images combined with on-the-ground observations to ascertain which villages have managed to save the forest (or achieving a slower deforestation rate), then goes on to discuss the strategies chosen by migrants compared with residents in managing the forests. In villages where there are continuous conflicts between migrants and residents, the Gelose contract was never completed, but more likely turned into a battlefield of rules for sharing land. In other villages, while demonstrating a declining deforestation rate, most of the surrounding forest has gone already.

Heterogeneity in the ethnical composition of the village has previously been seen as an impediment to collective management effectiveness. When asking villagers in Nepal about monitoring rules and penalty systems, translating the score into an ordinal scale (values), neither the study by Varughese and Ostrom (2001) nor the one by Adhikari and Lovett (2007) could demonstrate any association between heterogeneity and collective action. In this respect, Ranaivoson's article is more in line with the traditional view of heterogeneity being an obstacle to collective action. Residents or migrants from the same family or village of origin dominate in villages classified as success stories. Attention needs to be paid to the fact that the general studies from Nepal were entirely based on subjective observations of the villagers' own perceptions of rules and penalties, and thus conclusions could be biased.

In the implementation of local strategies, Gelose is used as a means to reinforce and to legitimate the traditional land management system (*dina*). When the forest belongs to one family or a few families, migrants claim that they share the equivalent ethnical identity that normally only the residents hold, in order to get access to land. In other areas, when the local power structure is more balanced between migrants and residents, the Gelose contract never got signed. Gelose becomes of battlefield of opposing interests and the COBA (composition of the basic community) the instrument of the power struggle. Rakoto and Dieudonné describe these divergent strategies leading to the signature or non signature of Gelose contracts in their article.

Oyono (2005a) looks upon decentralized forest management as a process having numerous negative effects. The committees in Cameroon are being taken over by literates and in some cases by young people with a better educational background than the average villager. In the words of Oyono :

'the architects of decentralization have... cleared the way for damageable social distortions and conflicts' (p. 326).

Open confrontation between local villagers and chiefs is the natural outcome of the forest decentralisation process in Cameroon, according to Oyono. In Madagascar, Blanc-Palmard and Fauroux (2006) witness a similar process unfolding. They stress the consolidation of the existing power structure by the creation of artificial institutions (the COBAs) seized by those who are best at dialoguing with the donors (not necessarily the young people as in the Cameroon case).

Compared to these studies, the article by Ranaivoson is less categorical in its conclusions, and adds further details to the discussion on local power and local management contracts. Gelose either consolidates an existing power structure (but with a positive impact on preservation of the forest), exposes unresolved conflicts or finally becomes a pure illusion (in cases where the forest has long gone). Blanc-Pamard in this volume raises another important issue concerning representation, beyond the internal power conflicts within community councils or within villages. The role of the external, non-signing stakeholders : the municipality (in Gelose contracts the municipality is, on paper, a signing party), and the collectors of agricultural products. Conflicts between the village or community and the forest authorities, signing the transfer of management contracts, are inferior to conflicts between residents and migrants, between villages and between villages and the service providers, like the economically powerful collectors. In this sense, the transfer of management is an asymmetric management tool.

c – Tenureship

Neo-classical economic theory on natural resource management argues that a first-best solution would be to provide farmers with better incentives for conservation through a more secure land tenure system (Barbier and Burgess, 2001 ; Deacon, 1999). In a report on poverty reduction and tropical forests, Chomitz (2007) of the World Bank points to forest tenure and community rights as determining conditions for success in community forestry. Leach, Mearns and Scoones (1997, p. 233) emphasize 'environmental entitlements' which are :

'alternative sets of utilities derived from environmental goods and services over which social actors have legitimate effective command and which are instrumental in achieving well-being'.

Gibson *et al.* (2000) argue that much of the theoretical foundation underpinning the debate on property rights assumes that there are only two kinds of property : state owned (public goods) and private owned (private goods). Reference is made to a study in Uganda showing that the lack of tenure cannot

explain the variation in forest conditions between five cases. Only enforcement rules linked to a certain mode of property rights can explain the variation. But even when property rights, enforcement and an additional condition on the appropriate-size of forest group are in place ; successful management might still not emerge. In another example from Ecuador, differences between user groups still affect the outcome of forest management, and in this case part of the forest is not managed (characterized by open-access). Based on a variety of case-studies, we know today that the provision of tenure security in itself is not a sufficient condition for better, less degrading forest management, and that local management or common-pool management under certain conditions can be an efficient management type.

Ranaivoson discusses three examples of ‘environmental entitlement’ in southwest Madagascar where the implementation of Gelose becomes instrumental in excluding migrants in one area, illusional in another (no forest left), and finally a means to exclude residents in a third case. In the last example, the forest is used as a parking space for cattle, and the Gelose arrangement serves to exclude the original population. In the first two examples, all available land is already parceled out to the residents, and Gelose simply endorses a de facto private property regime (*i.e.* Gelose is not really needed). In the last example, the forest is not parceled out, but the signing of a management agreement is utilized as a means of exclusion. Local enforcement, without any support from government agencies is the key to the protection, in one case a de facto private property regime, in another a common-pool management regime. In this interpretation, Gelose does not change the rules, and the official cadastral recognition of property has only confirmed traditional rights. Unfortunately, the prospect of acquiring official recognition by land clearing has led to an increase in deforestation in villages where there were initial conflicts. The allocation of formal property rights seems to be have worsened the situation for forest protection, at least in southwest Madagascar, due to the combination of internal conflicts and lack of monitoring and enforcement of forest regulations.

Muttenzer compares two villages in western Madagascar saying that participation in the charcoal burners’ association is crucial where Gelose officially has sanctioned the association’s activities. Individual customary rights to land require membership of the association. In the village without a Gelose contract participation in the burner association is not particularly attractive. Comparing the two articles by Ranaivoson and Muttenzer reveals that Gelose offers a weak institutional framework for local forest management, and when the natural resource represents a valuable economic good (firewood supply), signing a Gelose contract can have implications for the role of local

forest user groups (the burner association). Yet, Gelose will fail in protecting the forest. Open-access in one case (without the Gelose contract), a de facto private property regime in another, the outcome is still an increase in deforestation. Only when the resource is not an economic asset, can Gelose be used as an instrument to protect the forest.

Our study lends support to the argument by Gibson *et al.* (2000) that common-pool management is an option, though hard to determine whether it is an efficient mode of management. Enforcement rules are almost absent in any of our cases ; but we claim that common-pool management may be a feasible option, even when enforcement rules are weak.

d – Community forestry compared to other management types

An important on-going debate, to which the book adds its proper contribution, concerns the effectiveness of local management of forest compared to strict protected areas.

In a study of 163 forests in 13 countries, based on interviews of hired foresters and of forest user groups (asking questions about forest rules), Hayes (2006) rejects the statement that parks are better than non-parks to protect the forest. She criticizes another study by Bruner *et al.* (2001) for basing their positive conclusion about the effectiveness of parks on two methodological shortcomings : park officials were those who were interviewed (biased sample), and they failed to compare with other management types. As opposed to the study by Bruner *et al.* (2001), her results show no significant difference in vegetation densities between the two categories. So, we could accept that community forest management is one option in the search for forest protection. Case-studies are not numerous but on the increase. Nagendra and Gokhale (2008) compare various management types (community forestry, buffer zones, Joint Forest Management in India, and leaseholds) concluding that both community forestry and buffer zones records are positive in terms of regeneration of forest cover and improvement in biomass. Tucker *et al.* (2007) focus on community forestry management compared to privately owned forests in Guatemala and Honduras and argue that the nutrient concentration and institutional sanctions against offenders work better on private forest land. Comparing a local community forest area with a natural reserve in Mexico (corridor), Ellis and Porter-Bolland (2008) demonstrate that the protected area status in the corridor did not halt the deforestation process, and in this respect the community forest experience was more positive.

Sunderlin *et al.* (2008) challenge the conventional approach to protection, and argue :

This approach to forest conservation has negative effects on the livelihoods, wellbeing, health, and culture of millions of people excluded from forest areas (*ibid.*, p. 20).

However, to deduce from these facts that local management of forest resources is also good news for forest protection in general constitutes which is yet another issue, we return to later (cf. section success or failure).

Bertrand *et al.* are concerned with both the non-effectiveness of national parks in Madagascar (rare plant species are disappearing), lack of legal sanctions against offenders in national parks, and finally the way environmental NGOs allegedly take over the agenda in the communities enjoying local management contracts (Gelose or GCF), turning the contracts into pure protection arrangements. Why opt for more protected areas, if they are not effective ? Local management contracts need to show their effectiveness and include commercialisation opportunities for community members, based on the exploitation of forest products. In order to allow for this to happen, the lip-service of the NGOs to community projects should be avoided (Hutton *et al.*, 2005, also mention this problem of bias in the NGO role as intermediate agency).

Blanc-Pamard perceives the bordering process in the regional land use planning between areas of protection compared to areas of community forestry as a threat to both the conservation efforts and efforts to sustain villagers' income from forest products. Distortions are the rule, not the exception. In one forest area, the conservation zone includes a section where human instigated fires usually happen once in a while, while the government officials have assigned primary, intact forest patches to be part of the community forestry zone. Applying an often distorted territorial zoning policy triggers simultaneously a change in the legitimizing status of land areas among villagers. Those with land in newly gazetted protected areas and those with little land acquisitions at the onset of the transfer of management process are likely to loose out.

From an overall planning perspective, it might be less evident how to assign protected areas compared to areas of community management (where exploitation under regulation is authorized). Even if the conclusion of Bertrand *et al.* sounds logical and reasonable (new protected areas should exclude human activities, but where humans are already settled pure protection as a management option ought to be ruled out), biologists have reported that macro-studies exhibit a correlation between human densities and animal richness (biodiversity hotspots) worldwide, consequently conflicts over the 'correct' zoning policy will continue to emerge (Balmford *et al.*, 2001 ; Arújo and Rahbek, 2007). One explanation of the correlation could be the availability

of energy both for humans and animals is abundant in these places, so humans and animals alike tend to conquer the same habitats.

e – Decentralization

Ribot *et al.* (2006) show how central government in countries so diverse as Senegal, Uganda, Nepal, Indonesia, Bolivia and Nicaragua use strategies to obstruct the decentralisation process of forest resource management.

In Senegal, a new code authorizes local councils to decide whether commercial production ought to take place, but the central government still forced the councils to continue commercial exploitation, even when they express a will to stop the logging. In Nepal, important forest areas were handed over to local management (forest user groups), though the most valuable commercial forests continued to be governed under the auspices of the central government. Municipalities in Nicaragua may be unaware of the number of logging operations authorized by central government. A common problem is :

the devolution of management responsibilities without corresponding funds to carry them out.

Another means is to control the territory over which local authorities have the right to impose their proper rules, as in Bolivia where only 20 % of the total forest area is subject to local jurisdiction. Finally, insisting on legal ambiguities during the decentralisation process is the third major pillow in the half-hearted decentralisation process.

Li (2002, p. 266), looking at the cases of Indonesia and the Philippines, argues that :

CBNRM, rather than rolling back the state and reducing official interference in local affairs, is a vehicle for realigning the relationship between the state and upland citizens.

The 1999 Forest Law in Indonesia recognises the category of customary forest but still lists it as a component of the national forest estate, under the control of the Department of Forestry. Referring to a specific law, Li states that community forestry is a right to use the forest approved by the Department of Forests, while not extending a formal recognition of locals' already existing forest rights.

Muttenzer ties the transfer of management of forest resources to the marketing of charcoal. The COBAs in this case consist of producers of charcoal with a keen interest in gaining the responsibility for management. Contrary to many other community forest projects in Madagascar, the Gelose

contract in western Madagascar near a major national park (Antkarafantsika) includes economic benefits. Charcoal producers have the right to exploit the natural forests around the national parks in a sustainable manner and to market the charcoal. Muttenter claims sustainability (or better restrictions in former unlimited exploitation) is another illusion of Gelose. Charcoal procedures have no legitimacy to impose the new, stricter rules on any actor in the charcoal value chain, not the least when politicians and foreigners continue requesting cheap energy supplies to cover the demand of urban consumers and tourists. Furthermore, under the surface of an overall strategy, defined by the Malagasy state, to reconcile development and conservation objectives, the charcoal production chain has much broader functions, apart from securing cheap energy supply to the district capital of Mahajanga. Functions including the tasks of collecting low rather symbolic taxes and, on behalf of government, to regulate land-tenure issues among migrants who settle on previously unoccupied land.

The Gelose charcoal producers' control of migrants' occupation of land and collect taxes in the adjacent forests to the national park, but the park itself is still under the auspices of the national park authorities (ANGAP), and only three forests around the national park are given local management contracts. In that respect, Madagascar aspires to become yet another example of 'recentralizing while decentralizing'. The central authorities in Madagascar are still in control of the territory, the amount of locally collected taxes, as in the cases of Bolivia and Nepal, and the government passed a legal framework in which ambiguities persist. Complaints about not respecting Gelose rules from non-members of the basic community cannot be lodged formally anywhere, neither with the forest authorities nor with the local courts.

f – Success or failure

Almost any researcher dealing with community forestry puts forward the question of success or not : referring to an ecological definition (*e.g.* forest cover), an economic definition (*e.g.* income from forest products) or a social/distributional definition (*e.g.* which group of stakeholders gains economically from community forestry arrangements).

What is striking is the little evidence-based knowledge one can deduce from the enormous number of studies ; this is partly explained by the very broad and all-encompassing definition of community forestry or in general terms CBNRM.

As Blaikie (2006, p. 1954) states :

the attractiveness of CBNRM rides on a heterogenous set of theories and sentiments' and 'CBNRM is porous, can absorb all manner of different agendas, and rich in the variety of benefits it promises, and there appears to be 'something in it for everybody.

The overall account is negative, concludes Blaikie referring to one single evaluation of 14 case studies in eight countries of Africa by Shacklenton and Campbell (2001). Villagers do not gain anything from CBNRM projects, but the deployed methodology in the evaluation report is regrettably not discussed explicitly by Blaikie.

A review of success or failure in community forestry, measured in ecological terms by slower deforestation rates or increase in biomass, is inconclusive (remember Blaikie does not claim to address the ecological issue). Casse and Milhøj (2011) found no systematic correlation between presence of community forestry projects and lower deforestation rates/increase in biomass or improved forest conditions, reviewing approximately 100 case-studies in developing countries. Variables in community forestry covered accountability (upwards, downwards), degree of power devolution and degree of local collective action (sanctions towards members/non-members). Closest to showing significance was the degree of local collective action. The only other existing meta-study suggests a positive correlation between tenure security or clearly defined boundaries on the one hand, and success in community forestry on the other (Pagdee *et al.*, 2006). Unfortunately, the two meta-studies are not entirely compatible, since Pagdee *et al.* define success as any of the three attributes : ecological sustainability, social equity, and economic efficiency.

According to the Danida definition of CBNRM, other concepts of measuring success/failure may come into play. In the absence of any proper review based on alternative concepts (economic benefits or more equal distribution of benefits), we cannot conclude as categorically as in the case of applying the ecological condition. Various studies suggest economic benefits, at least in India and Nepal, as being significant in forests subject to local collective actions (Chakraborty, 2001 on Nepal ; Nino-Murcia, 2006 on India). Nevertheless, major questions remain : Are the case-studies representative for the status of community forest projects in these two countries (in Nepal 20 % of the entire forest area is controlled by communities, Shrestha and McManus, 2007) and do community forests perform better in accessibility to potential economic benefits than state controlled forests ?

Since conservation or access to economic benefits might be a too narrow remit for judging community forestry a success, a number of studies have

addressed the third definition of success, namely the issue of distribution (closely linked to poverty alleviation in the Danida definition). Suggesting according to various studies, not surprisingly, that local elites tend to siphon off the benefits generated in community forests (Iversen *et al.*, 2006 and Adhikari, 2005 on Nepal ; Oyono, 2005b on Cameroon). Whatever the success criterion applied (ecological, economic or distributional), little knowledge related to explaining success is accumulated in developing countries' experiences in community forestry.

II – Success or failure in our study

Success	Nearly success	Neither	Nearly failure	Failure
- Razafy Fara (if only changes in deforestation rates are considered)	- Bertrand <i>et al.</i> (compared to alternative of pure protection) -Blanc-Pamard (provided a broader approach is adopted) - Ranaivoson	- Casse & Milhøj	- Muttenger - Rakoto/Dieudonné - Rakoto	- Ramamonjisoa/ Rabemananjara

Table 1 – Success or failure of GELOSE contracts, overall assessment by the various authors

Razafy Fara : Success is claimed, because of no or insignificant increase in the deforestation rate in areas under Gelose management. Using the interpretation of satellite photos, the author detects a slow or no increase in the deforestation rate from the year 2000 to 2005. The study is limited to our main research area in south-west Madagascar. However, comparing the satellite photos with ground verification shows various signs of forest degradation or illegal logging activities. In view of this important modification of the main observation of no or little deforestation, the author concludes prudently that it would be premature to argue that the granting of autonomy to COBAs is effective. Supporting this conclusion the author finally refers to the role of the COBAs not always being clearly defined.

Ranaivoson : While the results of measuring the forest extension are important, the author adds other criteria to the definition of failure villages : where the forest is detained by one single person, where the signature on the

contract is still pending and a final case where the forest has disappeared. In the end, only four out of 11 villages in our main research area, in southwest Madagascar, could be considered successful in protecting the forest. Finally, the author observes signs of overexploitation of adjacent forests to those chosen for Gelose rules, replacing the pressure on the forest to non protected forests (open access forests).

Bertrand *et al.* : Local forest management contracts have been hijacked by the environmental NGOs and most of the transfers of management contracts do not authorize commercial exploitation of forest products. The result is illegal logging and slash-and burn practices within the boundaries of the area under community forestry. However, the creation of more protected areas does not represent the ideal solution since the record of national parks in Madagascar is far from convincing (due to rapid disappearance or even extinction of rare and valuable plant species). A better future option is to distinguish clearly between the criteria of selection of protected areas compared to community forests. In the long run it could turn out to the benefit of community forest experiences.

Blanc-Pamard : Comprehension of successes and failures in community forestry is a challenge. Often the criteria of zoning of community land as compared to protected areas are ambiguous, the community councils (COBAs) are overtaken by those already in power, and the contracts lack inclusion of external stakeholders. A strategy for sustainable development could replace the asymmetric transfer of the management model in which conflicts and contradictions internally in communities and in dealings with authorities and collectors are acknowledged. Recognition of a conflict or conflicts is a first step towards identification of an adequate solution to the rural livelihood problems.

Casse & Milhøj : The authors collected household based data on villagers' perceptions of advantages and weaknesses of the Gelose contracts in 11 villages in south-west Madagascar, and transforming the qualitative responses into category data yield not significant differences among households in success villages compared to failure villages. Compared to the criteria of Razy Fara and those of Ranaivoson, the authors define eight failures villages and three success villages based on villagers' opinion as to whether the actual Gelose contract is sufficient or not. A third of all households, regardless of being located in success or failure villages, request access to non-managed forest areas, where they can, if needed, encroach on the forest resources without restrictions. The transfer of management model in Madagascar, at least in this part of the country, did not change significantly the attitude of villagers towards conservation of the forest. However, we observed that, despite lack of economic benefits embraced in the Gelose contacts, the majority of the

households claim that they will refrain from transforming the forest (even forest not included in the Gelose contracts). So the attitude of today may change tomorrow.

Rakoto and Dieudonné : Due to persistent conflicts over land Gelose could represent a more or less legal vehicle to the control of land. The author argues in favor of aligning the poverty reduction strategies to the conservation efforts, and the originality of Gelose appears not as a means to conserve the forest, but rather as an instrument to acquire control of space or land by local inhabitants. In that logic, Gelose is a half success.

Muttenzer : Villages depending on income from charcoal trade around a national park in north-west Madagascar did not achieve a higher level of sustainability in production, just by signing a Gelose contract. The advantage of the Gelose contract is confined to the indirect gain following the implicit official recognition of former illegal settlement (clearing of forest area). Gelose has become an instrument for occupants of land (forested or deforested) to prove a more formal access right to land. The quota system of charcoal production in the north-west, in line with an objective of ensuring long term sustainability, was compounded by the overall increasing demand for firewood at the provincial capital (Mahajanga). In the overall assessment, Gelose is closer to being regarded a failure, as it does not respond to any criteria of sustainability.

Rakoto : Examining the situation in central Madagascar, the transfer of management rights should be the easiest case of all those included in the study. The forest is already protected for social and religious reasons, and the Gelose contract merely legalized an existing historical customary right to the forest. However, the architects of the Gelose contract misinterpreted the site specific restrictions, excluding any income-generating activity to be based on the forest resources, by proposing an eco-tourism venture. In a longer term perspective, Gelose could turn into a straight failure, since no economic long-term alternatives were accommodated in the contract. In conclusion, the future looks quite bleak.

Ramamonjisoa and Rabemananjara : The communities cannot resist the option of transforming the forest into agricultural land since the total amount allocated to facilitate the process of transfer of management is less than 6 % of the annual estimated income from activities replacing the forest. The option of clearing is by far more economically attractive than to conserve the forest. Worsening observation is the quasi-total external absorption of the Gelose allocations by consultants or the facilitating agency SAGE with almost no financial resources left for those who are the direct beneficiaries. On top

of that, the local forest authorities do not achieve any monetary compensation for the work they invest in drawing up the transfer of management contracts. Gelose is a failure to the two authors.

The authors of the book disagree on the main conclusion, even when focusing on the same study area. The reason being that community forestry (Gelose/GCF) is supposed to fulfil several targets, even if the legal context accentuates sustainable production (see below). Several targets leave room for different interpretations. Razafy Fara concentrates her analysis on the forest cover in the Gelose managed forest areas, whereas Ranaivoson privileges articulation of social conflicts as the crucial issue, and these authors even differ in their respective assessments. The villagers' right to more or less unlimited access to the forest is the crucial factor in the interpretation of Dieudonné, Muttenger and Rakoto. The zoning of exploitable forests compared to protected areas, and bias in election criteria to the community councils were the criteria used in Blanc-Pamard's analysis. Statistical significant differences in comparing villagers' behaviour and interest in local management are the focus of Casse and Milhøj's analysis. The lack of alternatives offered by Gelose is the corner issue of Ramamonjisoa & Rabemananjara's study. Closely related is the criteria of Bertrand *et al.* on how to distinguish community forest areas from protected areas, if most community contracts are to comply with a protection objective only. Had the overall aim of Gelose and the definitions of community forestry been less ambiguous, our interpretation would certainly have been more convergent.

1 – Comparing our study to other studies of community forestry in Madagascar

What are the conclusions of studies on community forestry in Madagascar? Not surprisingly, similar weaknesses in the general literature on community forestry are replicated in a Malagasy context.

a – Governance

Only one study compares different forest governance systems in the same publication (McConnell and Sweeney, 2005). The authors compare six forests, one under pure state control, a private forest and three community forest projects and finally a community plantation. Using satellite images comparison for a period of 1985-2000, they show differences in forest cover performance in favour of the community forests. However, caution is required before clear conclusions are deduced from the study. The deforestation rates decline observed in the community forests projects relate to the last five years

of the entire period (1995-2000) for which sub-period data is not available in the state or in the private forest areas. In addition, due to the foreign aid allocation to the community projects, we know little about long-term financial viability. What will happen, once the NGOs withdraw their funding ? Our article on deforestation rates by Razafy Fara covers the same period for all Gelose forests (2000-2005), so it does not suffer from the same weakness. In addition an important modification of the interpretation of satellite photos was produced by checking with ground verification, which we do not find in McConnell and Sweeney's study. However, our study does not compare the Gelose forests with other forest management types.

Contemplating the Gelose governance framework, Antona *et al.* (2004) voice the following general conclusions : When stakes are high for government, like regulation inside national parks, Gelose contracts are not extended to communities. Transferred resources are mostly over-exploited, usually related to non-commercial user rights as far as timber and forest resources are concerned and important to local people only, not to government. Gelose rules either confirm *de facto* rules (traditional *dina* rules) or raise conflicts. Rules are effective when they constrain a minority of members or are supported by a majority. In south-west Madagascar, confusion reigns about the user rights in Gelose : 65 % claimed there were no rights of exploitation, while 32 % answered that they could collect firewood and timber (Casse and Milhøj). Stating the legal framework as is found in the work of Antona *et al.* (2004) is maybe less crucial than the examination of the local perception of their rights :

We have learned that whether individuals are motivated to think about engaging in collective action is strongly affected by their perceptions of the conditions of a resource – not by the actual condition', (Poteete and Orstrom, 2004, p. 228).

As mentioned above the chapters by Razafy Fara and Ranaivoson reckon at least one more potential outcome of Gelose contracts, apart from confirmation or exposing/raising conflicts, namely the option of Gelose creating an illusion.

Few proper evaluations of Gelose are published. According to a study of 25 Gelose contracts (Resolve Conseil, 2005) Gelose is a success, as 16 villages in which Gelose rules are applied demonstrated signs of reduction in bush fires, while the involved households have increased their revenue. Pollini (2007) notes that the measure of bush fire frequencies was undertaken shortly after a major and repressive anti-fire campaign in 2002, so it is questionable whether changes can be linked to changes in forest management types only. Finally, the author objects that the real motivation of villagers to cut down bush fires is not fully explained. The final version of the evaluation report (Montagne *et al.*, 2007) reflects an approach geared towards suggestions about improvements in future local management contracts. The integration of forest

management contracts into regional plans, a focus on ecosystem planning, and proper base-line studies of the communities prior to contract formulation, are the recommendations issued in the final report. The greatest challenge appears in the actual mismatch in expectations between villagers and external organisations, assisting in contract preparations (NGOs or SAGE), that is the overall purpose with the transfer better protection of forest or better income-generating activities to communities ?

b – Cost-benefit and cost-effectiveness analyses

Only one study has attempted an economic analysis of Gelose contracts (Hockley and Andriamarivololona, 2007) interviewing members of six basic communities in eastern Madagascar. The study correctly points out that external donors may still prefer community forest projects, even in the absence of win-win situations (both the environment and the economy are better off after the transfer of management) if the conservation is more cost-effective in this type of forest governance compared to alternatives.

The USAID study underscores the disappointment among basic community members after the initial contracts were signed. No monitoring followed, and lack of (in their case) promised development assistance was the general picture. Despite the absence of backing from the state authorities, four out of six basic communities exclude intruders and report illegal activities to the forest authorities. This behaviour might be weakened in the future as external organisations do not provide any support. Casse and Milhøj report similar problems in south-west Madagascar (72 % of the households express a preference for military control of access to the community forests).

While cost-effectiveness studies, comparing community forestry with ICDP or national parks, are few, more documentation is available on the question of opportunity costs of conservation. Even in Madagascar. In a study of linking two minor reserves with a major national park in eastern Madagascar (Ranomafana) in a corridor of conservation, Hockley and Razafindralambo (2006) estimated the global net value to be positive (more than \$ 300 m), almost break-even at the national level and a substantial negative value to the local communities (\$ 30-50 m). At the national level, timber value and eco-tourism benefits are included. At the international level, carbon sequestration and bioprospecting are included. This conclusion confirms the general opinion worldwide that the costs are borne by the locals, while the tourist industry and international conservation organisations reap the benefits of nature protection. We restrict the following discussion to the estimates of opportunity costs. Figures from various studies are given below.

It is obviously extremely difficult to estimate the ‘correct’ opportunity costs based on so diverse calculations.

Carret and Loyer (2003) estimate the land productivity at 0.5 tonne of paddy (rice) per hectare per year and multiply this figure with a net price of \$ 160 per hectare. The productivity approximation is fixed at quite a low level. In Casse and Milhøj the gross income from maize, based on data from a household survey, averages \$ 340 per hectare, which is much closer to the estimate of Ramamonjisoa and Rabemananjara. Data are collected independently in the two articles. Carrett and Loyer (2003) restrict their analysis to the yield the first year after deforestation, while Ramamonjisoa and Rabemananjara calculate an average for the first three years after deforestation, when the soil is still fertile. This last approach appears more correct than the estimation offered by Carret and Loyer (2003).

Product / Activity	Value	Source	Comment
*Rice (NPV)	\$ 40 per household	Ferraro (2002)	A 1991-1992 household survey (Eastern), 5 % discount rate
*Slash-and- burn agriculture	\$ 85 per household	Minten (2003)	A 2003 household survey (Northwest), 5 % discount rate
*Willingness to abandon forest use	\$ 177 per household	Minten (2003)	A 2003 household survey (Northwest), 5 % discount rate
*Slash-and-burn (NPV) agriculture	\$ 520 per household	Hockley and Razafindralambo (2006)	Values are taken from various other studies and presented in 2005
*Slash-and-burn agriculture	\$ 80 per hectare	Carret and Loyer (2003)	National average
*Slash-and-burn agriculture (3 years)	\$ 280 per hectare (average per year) or \$ 840 per hectare	Our study	Interviews of farmers (Southwest). Figures are collected in 2006

Table 2 – Estimates of opportunity costs of agricultural production in Madagascar, various years (NVP: Net Present Value)

Looking at the other major studies, the main difference between the study by Carret and Loyer (2003) and the one undertaken by Hockley and Razafindralambo (2006) is the calculation of the hydrological benefits of forest protection. Whereas the first two authors claim that these benefits will level out the opportunity costs of less agricultural income, because of conservation plans, the second author team arrives at a figure of only \$ 40 (NPV). A figure

which is obviously inferior to the opportunity cost estimation. The discussion will not be extended here, only it seems that Carrett and Loyer (2003) made an effort to value the costs of protection at the lower end. Donors might be eager to adjust the real costs of conservation downwards.

Returning to the question of cost-efficiency in Gelose compared to other types of forest governance, no such study has yet been conducted in Madagascar. Prior to such a study, planners and researchers will need to ascertain whether community forests are as cost-efficient or effective in protection as national parks. Furthermore, we would like to be in a position to better determine the support or non-support from the forest authorities, even in the case where the economic rationale of Gelose could be enhanced by increasing the number of income-generating activities. These are activities which help cutting the substantial opportunity costs of conservation (in general linked to foregone revenues from agricultural production). In other words, buying off the contentment of the farmers through the introduction of economic alternatives might help only halfway if the forest authorities are still against the entire idea of forest management devolution. Above, in the section on 'Changing legal status', we referred, among others, to the study by Hayes (2006) on the effectiveness of parks compared to other management types concluding that parks are not any more effective than non-parks in terms of vegetation densities. Cost-effectiveness in comparing various forest management types does not yet seem to be a major issue in the international research agenda on community forestry.

Only one study in Madagascar has focused on the support from the forest authorities in community forestry projects (Raik and Decker, 2007). The authors classify actors on the ground, in the implementation of a GCF project (the municipality does not sign as in the case of Gelose), into three groups : the basic community, the forest agency and the conservation NGO (facilitating the contracting process). The forest agency is the least satisfied among the three parties with the transfer of management to communities. Lack of transparency, corruption within the communities with permits of exploitation and failure to protect the forests in western Madagascar (Menabe region) from illegal timber harvests are the main reasons given. Mutenzer also reports a negative opinion, in the eyes of national park agents, of charcoal burners in buffer zones around a park in western Madagascar (Ankarafantsika). Indian foresters share this opinion when asked about their perception of the JFM program in India (Sood and Gupta, 2006). Contrary to the Malagasy foresters, the Indians name the communication gap between field staff and the central forest department in New Delphi as the most important reason, in their view, for failures of JFM.

We close the discussion on cost-benefit and cost-effectiveness analyses by pointing out that opportunity costs are probably substantial, and community forestry projects (Gelose or GCF) have failed to compensate for the loss of income. National parks or ICDP enforce stricter rules than Gelose, so the opportunity costs are higher here (adding opportunity costs of exploitation of wood products). However, a trade off exists between opportunity costs and support from the forest agency. When opportunity costs in community forestry projects decline compared to more pure conservation projects, the resistance of the forest agency increases.

c – Local perceptions of ICDP and Gelose

Peters (1999) sees the lack of an *ex ante* examination of the impact of exclusionary policy of local economic activities within the national park (Ranomafana in eastern Madagascar) as the major impediment to creating national parks and buffer zones (ICDP). A later study refines the understanding of local reactions by stressing the need for informal contacts between national park staff and locals as a means to overcome conflicts (Ormsby and Kaplin, 2005). However, external pressure on illegal harvesting of rosewood in this case (Masoala in northern Madagascar) poses a large challenge such as the pressure for cheap firewood supply in the buffer zones (ICDP) around Ankarafantsika in western Madagascar (Muttенzer). Comparing the attitudes towards the national parks, the villagers' perception of national parks might not be uniform. In a study of people living close to three national parks, the population around Masoala (north Madagascar) demonstrated more support than in the two other buffer zones to national parks (Andohahela in south and Ranomafana in eastern Madagascar). The result was obtained by comparing target villages (ICDP) with non target villages in the three places (Marcus, 2001). One explanation suggested in the study refers to the tourism sector, being more developed in Ranomafana (close to the capital in Madagascar : Antananarivo).

In a final study from central Madagascar, Klein *et al.* (2007) argue in favour of a return to the old 'fortress model' of pure conservation projects. An ICDP failed when eucalyptus nurseries and small coffee plantations were burned. The development projects did not match the local priorities (no shortage of firewood) and targeting subsistence farmers will have no mitigating effect of the major threats like runaway fires to clear land for cattle rearing. While arguments showing the failure of ICDP in this case look convincing, the article could have gained from a more general review of ICDP in Madagascar, before declaring the entire ICDP model wrong and the implementation flawed.

Blanc-Pamard and Rakoto (2007) offer an interesting study looking at a GCF project in eastern Madagascar, viewing local management through the lenses of the villagers. The spatial limits of the GCF project, the close-by national park (Ranomafana) and the territories of the various local ethnicities demonstrate a seldom seen visual interpretation of the challenges of the transfer of management to local communities. The authors claim that conservation restrictions on traditional use of forest resources have accelerated the transformation of the forest in valleys to rice fields. The GCF contract provides no proposal to the local practice of valorisation of land through deforestation, claiming user rights to the now cleared land plot. However, the authors offer no alternatives to reconciliation of the conservation need of a corridor between national parks and the local need for access to the forest.

According to Muttенzer and Rakoto, Gelose constitutes a relative failure, since no economic alternatives are offered and in the one case, charcoal production to supply the district capital in north-western Madagascar (Mahajanga) has proven an unsustainable business. In the case of central Madagascar, the forest is already protected because of its religious values, and the question is more whether lack of economic alternatives to slash-and-burn agriculture will translate into a pressure, and one day replace the social values of the forest. In the short run, locals do not write off the Gelose approach, since they gain in other respects. An advantage to the local population is the legitimization of the conquest of former forest land for charcoal production (Muttенzer), and the provision of a collateral guarantee to be used for credit requests from villagers (Rakoto).

d – Weaknesses of our study

The major weakness is the absence of comparison with other types of forest management in Madagascar. In particular, we still lack information of the level of biodiversity in the Gelose forests compared to other forest types. The evaluation of community forestry experiences will have to address the question of biodiversity if compared with pros and cons of the establishment of national parks. In a situation of scarce financial resources, a community forestry concept in some format, Gelose or not, may still be required in Madagascar. If the Malagasy government agencies in exchange for recognition of customary rights attain forest protection at very low costs, the idea of Gelose might not be entirely futile. Comparing various types of forest management in terms of advantages and disadvantages then becomes the cornerstone of decision making. Open access is the worst scenario in forest protection terms, so a certain degree of deforestation or degradation, by recognition of illegal settlement, might be acceptable when a given forest area appears low on the national priority list. When, nonetheless, conflicts between ethnic groups

are severe and none of them are in a majority, community forestry is not the adequate approach to forest conservation according to our study.

Closely related to the issue of comparative studies is the spatial dimension. Several of the authors point out that protection in one forest may be replaced by more pressure in another forest area (the substitution problem). We are not certain if this pattern is common or a fact exclusive to a minority of villages of conflicts. We lean more towards the first version, but our study cannot confirm it. Linking social variables to forest management in a spatial context is a challenge that further studies will have to consider.

A final shortcoming in our approach is the lack of a more profound comprehension of why donors and the Malagasy government embarked on the entire idea of a forest management decentralisation process. Allocating huge funds to the implementation stage of Gelose, but without any budget left for monitoring the results. Neither the legal text nor the Gelose contacts included any proposals to villagers of alternative income sources to what the government and the donors considered the prevailing unsustainable forest exploitation. Why did the government or the donors not offer monetary compensation for the loss of income from extractive activities like logging or more important : agricultural income ?

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Studies of the local management of forest resources : the general debate

Closing this introduction, we emphasize the implications of this study for the general debate. We believe no analysis, in a scientific paper or as a more practical exercise, should narrow the scope of evaluation to just one main criterion. The local management of forest resources is about how to identify practical tools to obtain conservation in some simultaneously with increasing the social and economic benefits accrued to local people (resource access). If binding these two ends together is impossible in a given setting, the researcher or the practitioner ought to state it clearly and not conceal the stalemate by only favouring one single aspect in his/her analysis. A local contract might be a failure on all accounts or may be successful in partial protection or in partially benefiting local people, or finally in rare cases a success both in environmental and economic/social terms. The analysis becomes even more complicated if we insist that the local management regime is also to meet a criterion of cost-effectiveness (from a planning perspective).

In order to safeguard biodiversity, there is a need to promote the demarcation and protection of indigenous territories which have high conservation value and to legally recognize the conservation and sustainable use efforts of communities through secure land tenure and community property rights.

The real tragedy is the wishful thinking that local management is a panacea for reconciling conservation and development criteria. We do find very few examples, worldwide and in Madagascar, where both criteria are met. Nepal is often hailed as such an example, but often lack of control groups in various studies make positive observations (*i.e.* in forest cover or in community profits) difficult to link exclusively to the presence of a local management contract of forest (Casse and Milhøj, 2011). Vermeulen and Sheil (2007) talk about shared conservation values, strong basis for practice ('living within ecological limits'), and tactical alliances (between locals and international conservation agencies), while looking at examples of success on both main accounts (leaving out the cost-effectiveness criterion). We believe a step forward could be to prioritize between the two-three main criteria, depending on the context, and then decide on possible additional (donor) funding, when locals do not gain sufficiently from contracts.

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Abstract

By outlining the international debate on local management of forest resources, the authors of this volume concerning the Madagascar example of local forest management attempt to address the international debate by pointing out two major observations : objective setting is crucial, and the transfer of management is a strategy defined differently by the various stakeholders. If the objectives of local management contracts are numerous and even contradictory, the conclusions about success or failure of any case study become ambiguous. Numerous objectives also invite stakeholders to define various and often contradictory strategies. One way forward could be to prioritize between objectives, depending on the local context, and then decide on additional funding, when local stakeholders do not gain sufficiently, economically, socially or in institutional terms, from the local management contracts.

KEYWORDS : Madagascar, local management of forest resources, transfert of management Gelose Law.

| Résumé |

A propos du transfert de gestion des forêts aux communautés villageoises : notre contribution au débat international (exemples malgaches)

À partir du débat international sur la gestion locale des ressources forestières, les auteurs de ce volume examinent l'exemple malgache du transfert de la gestion de forêts à des communautés villageoises. Leurs conclusions soulignent deux principaux points. Premièrement, la clarification des objectifs dans les contrats est un aspect crucial. Deuxièmement, les parties contractantes définissent différemment l'objectif du transfert. Les objectifs des contrats de gestion locale étant nombreux et parfois opposés, il est difficile d'identifier les cas qui caractérisent nettement un succès ou un échec de la gestion locale. Établir un ordre de priorité entre les différents objectifs en fonction du contexte local apparaît comme une piste à suivre. De même que solliciter un financement supplémentaire, lorsque les acteurs locaux ne tirent pas un bénéfice suffisant des contrats de gestion locale en termes économique, social ou institutionnel.

MOTS-CLÉS : *Madagascar, Gestion locale des forêts, Transfert de gestion, Loi Gelose.*