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Common Property Institutions and Forest-based Poverty Alleviation in Madagascar: The Shift Towards A Paradigm of Integrated Conservation

Frank Muttenzer,
Graduate Institute of Development Studies, Geneva (Switzerland)
frank.muttenzer@iued.unige.ch

Scientists' ideas about integrated conservation in Madagascar cluster around a recent aid-driven policy whose objective is state legal recognition of customary law. Natural scientists consider the recognition of customary law as a tool to go beyond the protected area approach by extending conservation to all remaining natural forests. Environmental economists look at it as a means to alleviate rural poverty through tradeoffs between productive uses and environmental services. Sociologists and anthropologists think that recognition of customary law will lead to a sustainable use of forest resources because it enhances tenure security of rural populations.

Starting from that definition of the new paradigm, the paper presents a synthesis of the results field work conducted in 2003 and 2004 on a systematic sample of different local situations including cases of conversion of forested lands for agriculture, rural charcoal markets, and the extraction of palm fibre. I found that the recognition of customary law by state law lead in all of the six local situations to a repositioning of local actors' strategies. We are faced with selective reinterpretations of environmental policy according to indigenous moral and legal principles based social representations of labour, ancestral domain and trans-ethnic identity.

The resulting difficulties to implement a pro-poor forest policy are no obstacle to its political legitimacy because in postcolonial administrative practice, "exclusion", "recognition", "participation", as well as state property-based patron-client relations represent competing solutions applicable to the same problem situation, and not mutually exclusive public policies. To decide under which circumstances forest-based poverty alleviation through common property institutions can be a viable policy goal, further research should not only document case specific customary rules but also compare the differential options in implementing state forest law that lead to transformations in those customary rules.

Introduction

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I. The Emerging Paradigm of Integrated Conservation

Although many foreign and Malagasy specialists in community based resource management do have rather clear-cut opinions about the use and control of forest resources (for a review of the debate see McConnell, 2002), reliable sociological data are hard to come by. This may be surprising given that empirical research methods are widely accessible at virtually no cost. The lack of knowledge is due to the difficulty to spell out an objective research programme in an overall political and ideological contexts that favours research topics and results that are likely to justify the existing or projected action plans of international donors.

Operating in a closed circuit, the sphere of Western development aid provides the funds for action plan at the same time as North-South research partnerships which often constitute an additional legitimisation, instead of a critical analysis, of political action. This situation has lead in many African countries to an environmental policy debate that is largely about challenging the new Malthusianism well captured by the "tragedy of the commons" metaphor (Hardin, 1968) through spelling out a series of new hypotheses concerning the relation between poverty and resource degradation (especially deforestation).

The different hypotheses about the commons share one specific characteristic. They are all base on the idea that given that positive sum games (win-win situations) are possible, the concerned actors will spontaneously organise to work out a mutually beneficial solution to the

problems they are confronted with. The task of empirical research is therefore to document common property systems in a wide range of settings, to identify the basic design principles that have helped to avoid tragedy and to draw from that analysis recommendations for public policy (Ostrom, 1990 ; Gibson, McKean et Ostrom, 2000).

Because they directly depend on forest resources for their livelihoods, local communities have had to find ways to manage the local commons. Public policy should be about recognizing and encouraging those efforts trough incentives that reduce the "transaction cost" of autonomous local organisation. However, different "epistemic communities"[1] infer different policy recommendations from the alleged efficiency of local autonomy. Within the discursive field of nature conservation environmental management one can distinguish three main lines of argument, three public policy narratives[2].

For the « biologist » epistemic community (made up of such professional identities as species taxonomists, system ecologists, agronomists and forest engineers etc.), participatory policies are a tool to extend nature conservation from protected areas (from which human interference is banned) to other natural forests not yet under protection. Empirical research shows that the highest biological diversity is also found in areas that are inhabited and/or managed under a regime of customary use rights. The specialisation (namely intensification) of economic uses at the plot level goes hand in hand with the diversification of ecological functions at the level of (forest) landscapes.

The need to find mutually beneficial solutions to problems of environmental degradation implies to enlarge conservation measures to remaining natural forests now qualified as multiple use landscapes. But since the advantages of such a regime change are hardly obvious to the concerned rural households, justifications of community based resource management in terms of a scheme of "integrated conservation" are notoriously ambiguous and often superficial. Empirical research in that line of reasoning especially neglects that for indigenous representations of space, a common territory is not made up of household plots, but of several ancestral domains. According to custom households must be grouped (structured) into extended families and/or clans to actually form a local community.

Unlike biologists, « economists » (i.e. the epistemic community made up of the professional identities of neo-institutionalists, environmental economists, socio-economists etc.) consider often sincerely that participatory policies are a tool to reduce poverty. Empirical research documents through detailed household surveys that forests act as safety nets for the rural poor. Given that local rural livelihoods are intimately tied up with (nationalised) resources, a

[1] An epistemic community is a network of professionals with recognized expertise and competence in a particular domain and an authoritative claim to policy relevant knowledge within that domain or issue-area. Although an epistemic community may consist of professionals form a variety of disciplines and backgrounds, they have (1) a shared set of normative and principled beliefs, which provide a value-based rationale for the social action for community members; (2) shared causal beliefs, which are derived from their analysis of practices leading or contributing to a central set of problems in their domain and which then serve as the basis for elucidating the multiple linkages between possible policy actions and desired outcomes; (3) shared notions of validity, i.e. internally defined criteria for weighing and validating knowledge in the domain of their expertise; (4) a common policy enterprise, i.e. a set of common practices associated with a set of problems to which their professional competence is directed (Haas, 1992 : 3).

[2] A policy narrative is a narrative account of shared causal beliefs, which are derived from their analysis of practices leading or contributing to a central set of problems in their domain and which then serve as the basis for elucidating the multiple linkages between possible policy actions and desired outcomes.

scheme of "integrated conservation" should allow for an equitable sharing of the economic benefits arising from sustainable management of tropical forests.

The trade-offs between monetary benefits such as payments for environmental services of locally managed forests and the latter's non monetary contribution to a subsistence economy should ideally be able to reduce levels of poverty: internalisation of negative externalities (getting paid for conservation instead of unpaid degradation) creates a surplus; a fair sharing of that surplus in turn helps to sustain the trade-off over time. The question has however been raised as to what form environmental services should take in order to lead to a transformation of traditional practices and whether such trade-offs are acceptable that change ancestral identities and forms of life. Should it take the form of direct payments? Or only the form of increased quality of life thanks to an intact ecosystem? Let us simply not here that in the ancestral life forms of Madagascar, deforestation is not considered a negative externality but a way to internalise a social cost. Thanks to clearing the forest and transforming it into an "ancestral domain" clan descendants approach a state of equilibrium between household labour and household consumption.

What does the "fair sharing of benefits" mean in a hierarchical society based on statutory inequality of corporate groups? That is the question often raised by the sociologist critics of integrated conservation, namely by anthropologists, historians, political scientists, lawyers etc. According to them, the biologists and economists have failed to ask the right questions. Community based management of the commons is not about redistributing the economic rent of tropical forests nor is it necessarily about the economic efficiency of sustainable resource management. More than anything else it is (according to the sociologist epistemic community) about securing land rights and about restoring ancestral law. Empirical research shows that the forced introduction of Western land and forest laws has lead to a problem of tenure insecurity and to open access situations because the indigenous law has been suppressed or contaminated by foreign influences.

Should it be that Western laws have failed to recognise the patron-client relationships between descent groups and/or traditional political authorities forming the customary landscape? Or is it that those customary hierarchies have themselves failed to secure the ancestral land tenure of the concerned descendants? Community based management of the commons offers the way out of both forms of legal insecurity thanks to the recognition of indigenousness. Enclosure of "ancestral domains" restricts access to land for migrants and brings tenure insecurity and open access to forest resources to a close. Mutually beneficial solutions could not locally be found under a regime of Western colonial style law. Decolonisation of the postcolonial state is the proposed solution to problems of environmental degradation and "recognition of customary law" an essential piece to it.

As we can see by now, community based management of the commons may be justified differently according to the policy narrative followed by an epistemic community, the first narrative insisting on ecological sustainability, the second on poverty reduction, and the third on legal decolonisation and recognition of non Western legal cultures[3]. But in each case the preconception is that there are mutually beneficial compromises to be stroke between a world in which people clear the forest and cultivate the fallow to create a livelihood and a world of people arguing that the conservation of biological species are a "heritage of humankind" and thus an ancestral preoccupation of the Malagasy, a means to reduce poverty or a way to

[3] For a similar account of conservation policy narratives, see Jeanrenaud, 2002.

increase tenure security[4]. The problem is that those compromise solutions do not really exist or if they do in theory are not practically available to contemporary policy makers and addressees.

II. Case Studies in Forest-based Poverty Alleviation

The innovativeness and "usefulness for development" of a research programme not only depend on scientific rigor as judged from one or several of the epistemic criteria spelled out in the previous section. They also depend on one's ability to break free from the prison of one' ethnic, professional and epistemic identities in order to analyse objectively the position one and one's worlds hold in the observed social structure. The practical significance of policy discourses needs to be judged on the merits of its underlying political economy.

Some useful theoretical grounding for policy oriented discourses about community forestry may be indeed found in a political economy of customary law. To understand the institutional dimension of forest-based poverty alleviation in Madagascar, three types of economic activity seem particularly significant: conversion of forest lands to agriculture, charcoal manufacturing for domestic consumption in urban areas, extraction of non-timber forest products and of tropical hardwoods. Unlike forest economists who exclude land use conversion for agriculture from the category of forest products, I consider it a forest-related concern whose property rules are comparable to those of extracting wood for charcoal production or palm fibre for export market. One may take the argument a step further. According to local perceptions the hierarchy of forest products is the opposite of official classifications. Forested areas are foremost considered to be a land reserve or pasture grounds for cattle, whereas extraction of wood or non-timber resources comes second; and often it is impossible to observe the latter type of use independently given that agricultural uses of the land interfere with the organisation of extractivism.

In all three forest-related concerns, customary law provides a blueprint for the social mechanisms that explain poverty alleviation as well as environmental degradation. But the specific forms of resistance against the implementation of public policy may vary according to site-specific circumstances. Customary law in its simplest and least technical meaning can be defined as a continuation of pre-colonial custom in the wider context of colonial and postcolonial (Western) state law. The methodological difficulty is that « pre-colonial custom » is not directly accessible to ethnographic inquiry and one is left with its deformed images to be found in local peoples' oral history and in the earlier works of colonial ethnologists and administrators. The only way to come to grips with the continuity that may exist between pre-colonial and contemporary custom is to analyse contemporary justifications of resistance in the face of contemporary public policy (and then check these accounts against descriptions of pre-colonial law by earlier authors).

In order to understand whether or not the deforestation/poverty alleviation problem can be solved (or at least mitigated) through a policy of recognition of indigenous legal culture, it is necessary not only to analyse the case specific customary rules but also to compare differential options in implementing state forest law, given that "exclusion", "recognition", "participation" etc. often represent competing solutions applicable to the same problem

[4] According to the Center for International Forestry Research (CIFOR), « science can be harnessed to provide active support to social processes of inclusive and transparent negotiations over tradeoffs in land use choices to achieve greater equity among stakeholders and better environmental outcomes » (CIFOR, 2004: 4).

situation (rather than alternative public policies). Each of the three forest-related concerns has been analysed on the basis of a contrasting sample of cases, some being typical of the postcolonial crisis of the public domain model of land use management, others of a neo-colonial policy of recognition of indigenous legal culture.

A. Conversion of Forests to Agriculture in the North and Center-South (Ambanja, Ambalavao)

Agricultural colonization of forested areas typically constitutes the backdrop of the remaining peasant economic activities. Neither of the two cases of forest conversion to agriculture we chose to study is an instance of sustainable traditional shifting cultivation[5]. In both cases, peasants clear forests in order to get access to land: the distinction between the shifting and the "shifted" cultivator (Myers, 1992) seems less relevant from that perspective. Both cases (as are most cases in Madagascar) are examples of conflict between the role of the forest as a land reserve, which is the peasants' perception, and its role as a stock of biological diversity, the perception of international environmental policy makers. But there are also significant differences between the two cases with respect to customary rules regulating access to land as well as to the administrative responses to those customary practices.

In the district of Ambanja (Province of Diego Suarez), we documented a case of human occupation of a protected area (on this issue, see Weber, 1995). Migrants from surrounding regions are engaged in a struggle for land with the already established families, themselves earlier migrants. The demographic mix resulting from successive migrations means that property rules make no reference to lineage or clan based traditional custom. Instead the relations between individual families are structured through something like "age-groups" which reflect the chronology of clearing forest land and settling in area. By contrast, in the district of Ambalavao (Province of Fianarantsoa), local Betsileo clans[6] reinterpret their ancestral land rights to justify the agrarian colonisation of the forest corridor linking two national parks (Andringitra and Ranomafana). Whether or not families make reference to lineage and clan in their legal discourse, legal practice in both cases reinterprets Western state law according to the folk conceptualization of property rights in land and other natural resources.

The syncretism[7] of indigenous legal culture is more apparent in the first case where no traditional custom is available to justify the (illegal) colonisation of the protected area in terms of a prior occupation by the ancestors. In the second case, extended families use clan based rights to pasture grounds to claim participation in timber exploitation and more recently contractual duties to manage ancestral forests by preserving it for future generations. Traditional as it might be, the revival of ancestral customs in Ambalavao is not in opposition to the invention of a "detribalized" customary law in Ambanja. It is rather some sort of nativism where the search for a better life leads local actors to remove foreign persons, objects and customs from their contemporary definition of identity[8]. The revival movement is

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[5] For an analysis of shifting cultivation in the traditional setting, see Keck, Sharma and Feder, 1994.

[6] The ethnicity of those clans depends on what definition of ethnicity the observer chooses to deploy in his research. There are good reasons to believe that all those local populations are ethnically speaking Malagasy.

[7] Syncretism can be defined as a synthesis of two different cultural elements (or of two cultures of different origin) whereby those elements are reinterpreted.

[8] Nativism or revivalism is a particular type of syncretism where reinterpretation and synthesis are presented by actors themselves as « going back to one's roots ».

in part a response to heavy local presence of foreign projects and receives ideological support from international discourse on integrated conservation of biodiversity corridors. Yet the clan members' objective of getting access to new land for cultivation is the same as it is in non-traditional customary settings (as in the protected area case). The competition for land reserves explains why the clans represented in the user association claim to be in favour of contractual management and appropriate the foreign discourse of integrated conservation, wheras the clans excluded from the association form a competing faction linked to local interests in timber extraction.

The two settings also diverge in the way the postcolonial state administration reacts to local, customary forms of organisation. This response varies between measures to suppress customary law in the first case, and recognition of an idealized ancestral custom in the second one. Whereas in a protected area, corrupt state recognition of customary law may at best have a half official character, the contractual management of the forest corridor by local communities reduces customary law to an indigenous ideology cut off from contemporary practice. Traditional custom is reinterpreted in such a way as to justify state legal recognition with biodiversity conservation as its purpose. The community forestry contract recognises the rights of prior occupation at the expense of secondary rights created through the actual cultivation of formerly forested lands. But the perception of international conservation agencies is idealistic given that descendents of indigenous clans in fact reinterpret their ancestral rights on the forest in order to justify agrarian colonisation. What is at stake at the margin of the Eastern rainforest corridor is no longer a trade-off between conservation and production, but the terms according to which state law recognises the land reserves of local extended families. Because it fails to take into account the family-based economic structure behind the clan-based political superstructure, devolving management of a forest to village association whose members are the customary owners of the land raises as many new questions as it can possibly answer.

B. Rural Charcoal Markets in the North-West (Mahajanga, Marovoay, Ambato-Boeni)

Charcoal production in the province of Mahajanga responds to an increasing urban demand in domestic energy while supporting rural livelihoods of the poorest sectors of the rural population constituted by recent migrants arriving from the Southern and South-Eastern part of the island. Unlike timber exploitation (which in many ways resembles the extraction of certain non timber forest products to supply international markets) the energy wood product chain illustrates the organisation of what may be called an „extended peasant economy". In terms of its energy supply, urban society in Madagascar continues to be an integral part of the rural economy given that fossil fuel based domestic energy (such as electricity or cooking gas) is inaccessible to 90% of urban households.

This specific feature of energy wood markets has a series of consequences for their customary organisation. The most important is that the problem of over-exploitation cannot be solved at the level of forest policy alone which can only act on the supply side. Yet ideological representations about the role of fiscal incentives for management of forest plots by village associations lead international experts and internationally funded national programmes to act as if the energy wood crisis could be solved through the recognition of customary law. The measures show little impact because de the demand for rural charcoal is the result of demographic and urban growth rates as well as of rising prices of fossil fuels who could substitute charcoal. The political consequence of the economic constraint is that measures to

provide incentives on the supply side are being ignored both by clandestine producers and the local and regional forest services which authorise illegal manufacturing and transporting of charcoal.

Actors themselves however do not consider these customary practices to be a form of corruption. Given the importance of urban demand and of rural poverty, it seems absurd and unjust to confine charcoal making to the small number of contractual forest plots managed by village associations according to an annual output quota. Although the distribution of income between charcoal manufacturers, intermediaries, transporters and forest service officials is grossly inequitable, all actors of the product chain except foreign experts share a common ethic when it comes to prohibitive and/or restricting state interventions on the customary regulation of rural charcoal markets. These general features can be observed in all charcoal producing zones of the province but their implications for the specific organisation of the producing chain vary according to market access and to the demographic composition of rural populations.

In the buffer zone of the Ankarafantsika National Park, charcoal is produced in the framework of peasant associations that predate those put in place by a internationally funded regional programme to promote contractual community based management of energy wood. The associative organisation of labour is characteristic of rural populations that are almost entirely first or second generation migrants from other parts of Madagascar. The charcoal producers associations fulfil several functions at once: administrative control of charcoal manufacturing on state lands, to ensure the integration of migrants into the local society, distributing individual plots to members of the association once the land has been cleared.

The social setting in charcoal producing areas closer to the provincial capital is different. Charcoal manufacturing there is less linked to peasant strategies of getting access to land which determines the customary organisation in the other zones. Although the proportion of migrants remains significant, they are less in number, have arrived less recently and are better integrated with the fabric of local society. The associative organisation of labour can be found here as well but it is part of a more complex system of share-producing (in analogy with sharecropping) on family plots which applies equally between parents and non parents. Those family based concerns mirror the neo-traditional local political hierarchy. Their heads hold land titles for the forest plots where the charcoal is produced and are authorised to do so by the state as private forest owners. They hire labour from within or outside their extended families according to a sharing arrangement where client producers are authorised to market their own charcoal in exchange for one third of produce for the patron. Given the closeness of the city, independent and dependent workers, patrons and other village intermediaries such as shopkeepers are able to market the charcoal themselves instead of selling it at low prices to foreign collectors with motorized means of transport. The neo-traditional organisation of the producing chain thus remains autonomous from surrounding informal markets because a significant portion of the income from charcoal can be kept within village society.

C. Extraction of Raphia Palm Fibre on the Eastern Coast (Brickaville)

Extraction of non timber forest products for international markets is a third important activity of the rural economy. Unlike gathering of fruits, mushrooms, medicinal plants etc. for local consumption which state law recognises as „use rights“, the purpose of extractivist product chains is to commercialise the gathered material. Extractivism is subject to official authorisation and taxes since it is concerned with resources of no other use to peasant families

than being a complementary source of monetary income. I limited field research to a single product of this type, raphia palm fibre. My purpose was to put two cases of community forestry in the Brickaville district into the wider context of the raphia extracting chain on the Eastern Coast (Toamasina Province).

Local management contracts for raphia palm trees had been proposed to villagers of two different localities by the UNDP in order to promote poverty reduction by getting some order into what appeared as a chaotic over-exploitation of raphia fibre. The measures were presented as an instance among others of equitable access and benefit sharing through sustainable management of forest genetic resources. Environmental policy makers and experts usually consider the extraction of non timber forest products in terms of their potential to use commercial income from natural resources to finance the sustainable use of biological diversity. So-called "integrated conservation" may have as its object either biological resources (fibres, medicinal plants, etc.) or genetic resources (extraction of genetic material) although it remains an open question whether for policy makers who use these terms there actually is a difference between a biological and a genetic resource[9].

The idea that extractivist product chains are means to pay for conservation is in any case worthy of criticism. This is true even in such cases as raphia palm fibre which is economically Madagascar's most important non timber forest product. The example of raphia fibre extraction also demonstrates that the Western notion of integrated conservation contrasts with the way rural populations look at extraction of non timber forest products. According to the folk conceptualization of property rights, raphia fibres are a typical instance of a common pool resource accessible to all members of the residential community. In other words, trees are not property of individual families but each of them has a right to gather leaves and extract fibres on condition that the tree is kept alive and that the land is not used for other purposes. These customary rules reflect the fact that in popular economic reasoning extractivism is considered inferior to agriculture. In the Brickaville district, peasants frequently destroy palm trees in order to establish rice fields in low lying areas, or to manufacture baskets which are used to carry fruits during the litchi harvest[10].

The usual explanation for practices which seem irrational in view of sustaining a stock of raphia resources is the huge price difference between raphia on site and on international markets. The highest benefits are those of intermediaries and exporters whereas peasant workers incomes represent only a minor part of total value. For the administration extractivism is simply a mechanism to generate export tax revenues rather than a way to reduce rural poverty. Extraction of non timber forest products has indeed been described by specialists as a poverty trap (Sunderlin, Angelsen and Wunder, 2003). Rural people rely on those products because they are poor, but it is also possible that they are poor because they rely on extracting non timber forest products for which remuneration is low. The economic role of raphia fibre is not to lift people out of poverty but to provide a safety net through additional monetary income. The safety net and poverty trap aspects of extracting raphia fibre

[9] It would make better sense to apply the concept of « genetic resource » exclusively to biological material to be used by the life industry and to be transformed through biotechnology. But in international environmental policy discourse the concepts of biological and genetic resources are used as synonyms. The confusion at the level of international expertise in turn raises a series of questions concerning the possible content of a Malagasy national policy on genetic resources (is it actually different from forest policy concerning non timber forest products?).

[10] Recent studies on product chains for medicinal plants arrive at similar conclusions. Most of those materials are extracted at unsustainable rates by poor rural populations.

are linked. The features that make it attractive as a gap-filler also limit its potential for generating sufficient income to eliminate poverty[11].

The explanation of that paradox is to be found in peasant families' economic strategies which seek to balance satisfaction of basic needs and the burden of labour by minimizing the risk associated with different types of activities. In customary social settings that provide a series of safety nets in the form of commonly accessible land reserves, charcoal and palm fibre reserves which form the base of village economy, the unequal distribution of income and the polarisation and clientelism that follow from unequal distribution do not represent an injustice[12]. The reason why extractivism is not able to solve problems of unsustainable resource management therefore is less the failure to share benefits (a Western notion as much as that of poverty) than the moral and customary obligation to let the poorer families access the common economic base so that they can invest their labour efforts to create a livelihood.

III. Conceptualizing Property Relations and Natural Resources in Madagscar

Madagascar's environmental policy, designed during the 1990s under the influence of international development aid, reproduces in several ways the colonial theory of public domain. Ideally, space is ordered according to a geometric logic, from the national territory down to individual plots. Through the institutions of state and private ownership, complete sets of rights over each category of stocks are allocated to single right holders who ideally manage flows based on economic rationality or other forms of expert knowledge, producing protected areas for biological diversity, productive forests for fuel wood and timber supplies, and private lands for crop production. However, rural populations in Madagascar do not reason in terms of land ownership per se, but of distribution of the income flow from that land, based on both the fruits (differential rewards according to effort) and the burden of labour (equal opportunity). In the folk conceptualisation of property, security of flows takes precedence over the spatial identification of stocks.

Although state ownership suggests formal title and a complete set of rights over forest lands, things are different if we look at the owner's monopoly from a sociological perspective. Especially at the field-level of forest administration, the reasoning of public officials appears consistent with the folk conceptualisation of property, that is, being transactional not cumulative. As in many parts of rural Africa, the state in Madagascar is not able to enforce a hegemonic claim over forest domains while other agents can and do make enforceable claims. In practice, the formally 'complete' bundle of state ownership is an incomplete set of rights transacting with other incomplete sets. In concretised property relations (F. and K. von Benda-Beckmann and Wiber (eds), 2002), a single bundle of rights never contains a complete set of sticks. Each bundle has to be built up from transactions with (at least) one other bundle to be effective. This is illustrated by the recent work of French anthropologists who describe access to land in Western Africa in terms of so-called 'derived rights', arrangements premised upon distinct sets of expectations found in reciprocal relations such that specific resource rights emerge (Le Roy 1998, 2001; Lavigne Delville et al. 2002). The primary set of expectations reflects the organisation of productive activities within the land-using unit. The

[11] Those products are usually held common property by the residential group; their extraction neither contains any risk nor does it require capital investment.

[12] If local incomes were higher (let us suppose sufficient to „eliminate poverty") it would according to this logic be appropriated by the richest families rather than being reinvested in capitalist management of the common economic base.

secondary set of expectations reflects the present and future distribution of opportunities among economic units.

I refer to the transactional conceptualisation of property in a broader way, not restricted to temporary access to land. A major distinction is made in all societies between rights to regulate, supervise, represent in outside relations, and allocate property on the one hand, and rights to use and exploit economically property objects on the other (F. and K. von Benda-Beckmann and Wiber (eds), 2002). Although both types of rights may refer to the same physical objects, 'rules of allotment' define these objects as stocks which have to be transformed into flows according to 'rules of apportionment' before physically entering the economic process (Gudeman 2001: 52). In order to secure the economic flow through his/her labour, a 'taker' asks a 'giver' to authorise the intended uses. In exchange, givers expect to receive a part of the revenue generated by takers.

Neo-institutionalist authors make a similar distinction between rules of resource access and withdrawal on the operative level and rules of management, inclusion/exclusion and transfer on the collective choice level (Schlager and Ostrom 1992). Their distinction of levels is compatible with the folk conceptualisation where transacting bundles must be of unequal nature and origin (inferior/superior, economic/political, indigenous/migrant). However, according to Schlager and Ostrom's conceptual analysis, operative level rights and collective choice level rights can be cumulated by single right holders, complete sets of rights constituting either public or private ownership. Thus, the more complete the bundle of rights held, the greater the holder's authority. Frequently, individuals and communities may hold less than the full set of rights, but to hold some of these rights necessarily implies the possession of others (1992: 252). But in the folk conceptualisation of property, rights are not 'cumulative' in this way. One group may for instance hold political rights (acquired through first occupancy) that secure to them the economic rights (acquired through labour) of another group, but without holding economic rights themselves. The first right does not imply the second one because their justifications (sources) are different.

During the 1990s, environmental policy and legislation in aid-dependent countries has been widely influenced by neo-institutionalist approaches (Hufty and Muttenzer 2002: 300). In her contribution to this volume, Schlager points out that government may allocate portions of water rights in a non-cumulative manner. In Madagascar, customary law is to be 'recognised' through the contractual reallocation of portions of the ownership bundle held by the forest administration. But if the state is not able to enforce a hegemonic claim while other agents can and do make enforceable claims, how does this affect the model constructed by the neo-institutionalists? Before portions of a complete bundle (state ownership) can be reallocated in such a way, state ownership must be allocated to the administration in the first place. The largely academic question of whether folk conceptualisations of property are consistent with Schlager and Ostrom's conceptual analysis suddenly becomes a policy relevant matter.

The answer to the above question is threefold. First, complete sets of rights as defined by the fiction of state and private ownership do not give an accurate description of social practices in Madagascar. In the cases I studied, incomplete sets of rights of distinct origin are balanced against one another according to principles of just transaction that are internalised by both villagers and field-level state officials. Second, the social validation of the 'roughly cumulative' bundles of rights formally created through management contracts is unlikely for this very reason. As long as the rules of contractual management are derived from a fiction of state ownership that does not exist in practice, state 'recognition' of customary law is likely to

violate the substantive principles of the folk conceptualisation of property. Third, the distinction made by Schlager and Ostrom between operative level and collective choice level rules does not hinge on the assumption that complete sets are possible. Their conceptual framework remains useful if rules are consistently described in terms of cross-level transactions between unequal bundles, none of which can ever be so 'cumulative' as to contain the complete set that formally defines state or private ownership[13].

IV. The Conventional Meaning of Common Property (or How to Sort Out Conflicting Truth Claims)

Although folk legal principles have not been altogether ignored by the neo-institutionalist literature, the 'common property' epistemic community has in the main presented them as blueprints for formalising local custom through state law and expert knowledge. Such claims rest on a theoretically informed vision of reality and a notion of scientific validity that in turn relies on internally formulated truth tests. As in other epistemic communities, members share a common understanding of a specific problem and a preference for a set of technical solutions. Before the 1990s, environmentalists believed that Garret Hardin's 'tragedy of the commons' metaphor captured the essence of the problem facing most common property resources. Since appropriators were viewed as being trapped in these dilemmas, it was argued that the state needed to impose a set of external rules on such settings (Hardin 1968). Twenty-two years later, social scientists interpreted Hardin's metaphor as a confusion of common property and open access (Feeney et al. 1990; see also Bromley and Cernea 1989). During the 1990s, Malthusianism has increasingly been challenged on grounds that many successfully governed common pool resources have survived for centuries. Solutions worked out by the individuals concerned were described as more successful and enduring than resource regimes imposed by central political authorities. Such wise management had supposedly changed only when forests were declared state ownership. No longer perceived as local commons with a long-term value to users, a rush ensued to harvest them before others did (Ostrom 1998: 3; McKean 2000: 35).

The appropriate means to halt deforestation logically follows from identifying the problem in this way: the recognition of robust and self-governed property regimes justifies the restitution of government appropriated forests to local users. In Madagascar, forests constitute the primary field for contractual local resource management. Legally qualified as multiple use lands in 1997, all types of forests except protected areas can in principle be transferred to local user associations. The truth tests formulated by experts to justify the recognition of common property regimes evolve around empirical criteria such as clearly defined boundaries, congruence of appropriation rules and provision rules, participation in collective choice arrangements, self-monitoring or accountability of external rule monitors, graduated sanctions, conflict resolution mechanisms, minimal rights to organise, nesting into larger organisations (Ostrom 1990: 88-102). Ostrom's objective in documenting these so-called design principles in a wide range of empirical contexts has been to 'challenge the generalizability of the conventional theory', taking into account that 'a fully articulated, reformulated theory encompassing the conventional theory as a special case does not yet exist' (Ostrom 1998: 4).

For the "common property" theory to make valid truth claims, it should be able to specify at least some alternative accounts that it excludes. Rather than encompassing the conventional

[13] For more details on the folk conceptualisation of property, see Muttenzer, 2006.

theory, it would have to specify real world conditions under which that theory is empirically false. In turn those who hold the conventional theory to be true should spell out exhaustively the empirical conditions under which observation does actually corroborate it[14]. The above case studies were selected in order to reflect a systematic account of the real world conditions of common property institutions in Madagascar. Environmental degradation and/or poverty reduction is causally explained in terms of three economic concerns (agrarian colonization, energy wood, extraction of non timber forest products). To account for the variations in legal discourse, that is for the variation in configurations of legal pluralism we selected two local situations as dissimilar as possible (viz. the nativism/syncretism distinction) for each economic concern.

In our own empirical research we set out from the conventional definition of common property. What did we discover during fieldwork? The situation of raphia fibre resources in Brickaville is an instance of "common property in the strict sense" that would seem most likely to corroborate the conventional theory. Raphia trees are not held under a title of first occupation by descent groups and the administrative rules imposed by the state are put into brackets by the operational rights of access and withdrawal held in common by all members of the local community. In comparison with common property in the strict sense, the other mechanisms we discovered : patron client relations between earlier migrants and new arrivals, in-marriage within the local community, charcoal making by immigrant associations, charcoal making by extended family based share-cropping arrangements, would appear as exceptions or special cases of common property as conventionally understood.

In all of these latter situations resources are appropriated by descent groups, village associations or political entities in a way that appear to confirm the neo-institutionalist hypothesis of a transition from "common property" ("open access") to "communal property". Yet despite the differences in the local situations observed, the substantive principles of justice are the same in each situation. The creation of family or clan-based agricultural land reserves for instance, or the appropriation of forest plots for charcoal making by associations or extended families are justified only when there remain enough commonly held forest resources to be converted to such uses by any of the descent groups forming the local community. The special cases confirm the conventional theory insofar as forest lands or energy wood resources which are not yet held under family, clan or associative property may be compared to the raphia palm trees described in the third case study. Physically subtractable objects are defined and held under custom as if they were "non-subtractable". Customary membership criteria are (re)defined as if local community were "non-excludable" – at least as long as the commonly held resource base is able to sustain a local social policy of integration. Until a time short of their depletion physical objects held under common property may therefore be appropriated by any individual and/or kin group considered to be part of the local community.

Our comparison of six variable local situations suggests that the conventional theory can be harnessed to explain why a policy of contractual management of forest commons by local user associations is likely to fail in most cases. By contrast, the "design principles" put forward by the new literature on common property management are hardly specific enough to formulate truth tests that could evaluate the outcomes of a contractual 'customary law'. The reason is that those design principles do not actually describe common property situations but rather a management mode for what some economists have called "club goods". Unlike the

[14] This is one among other ways to demarcate scientific from non scientific accounts (see Popper, 1989 [1935]).

commons, which are understood by conventional theory to be both "subtractable" and "non excludable", club goods are defined as being both "excludable" and "non-subtractable" (Young, 2000: 148). For neo-institutionalists the problem to be solved by public policy is how to transform the commons into associative or cooperative private properties. Feeney et al. (1990) describe this research and policy programme of "enclosure" in its two dimension of a) gradual exclusion of potential non owners and of b) regulation of the new relation to be established among the selected co-owners.

The new theory of common property institutions during the 1990s takes as its starting point the alleged confusion (by Garrett Hardin) of common property with open access. It is Hardin's critics who confuse the issues by presenting the indigenous management of the commons as the management of club goods under Western style co-ownership, by reducing customary territorial communities to local user associations. As a consequence of this conceptual confusion neo-institutionalism describes the robustness of self-governed systems without explaining how common pool resources are actually managed. Forests may be depleted or not, but it all depends on 'local institutions' (see Gibson et al. 2000). Conventional anti-democratic Malthusians make a stronger truth claim than their neo-institutionalist opponents. In Hardin's metaphor of tragedy, short term robustness of institutions is a consequence of their failure in the long term. The forest-related going concerns I described in this chapter are self-governing, robust and politically legitimate precisely because they feed on local consumption of raphia fibres and species-diverse land reserves at a rate environmentalists consider ecologically damaging.

When there is a high degree of uncertainty among bureaucrats, scientists speak out only at the latter's request. When there is also a high degree of consensus among scientists, epistemic communities may themselves seek access to governing institutions (Haas 1992: 7-16). Outcomes of aid-driven environmental legislation are difficult to predict. What is more, in a political structure characterised by authoritative coordination among aid donors but little overall control of donors over recipients, consensus among scientists becomes a functional necessity. Consensus then is a consequence, not the legitimate cause, of the funding of research programmes by international aid agencies (Muttenzer 2002: 10). But one may still disagree.

Environmentalist policy research – environmental policy itself – would be a sterile exercise if consensus among scientists were its only valued end. The objective of applied empirical research in the social sciences is neither reconcile the actors observed nor to bring them to a substantive agreement on the scientific results of the observation. It is to lay out a theoretical framework that covers all of the known cases and that is not invalidated by further new cases. That is why it is necessary to base any comparison on a set of empirical data reflecting a) a systematic account of the objective causes of the phenomenon under study and b) maximal conceptual variation at the level of subjective actors' discourses considered. That is also why "negative cases" that expose the analytical model to crucial tests are so important. But the inquiry can be brought to a close once it has generated a set of data sufficiently plausible to sustain the conclusive inference whether or not the conclusion takes the form of a "useful" social critique.

Conclusion

The observed correlations between different configurations of legal pluralism and organisational patterns of unsustainable resource use do not warrant scientific consensus on

"design principles" of common property management. But it allows us to sketch out an alternative research programme on the issues emerging in discussions about "integrated conservation". Current approaches of the human/nature interface combine an atomistic representation of local societies consisting of households with a holistic representation of homogeneous local communities considered as groups or actors rather than as ideas/scripts for actors. These approaches neglect the heterogeneity of peasant societies (descent groups, economic groupings, neighbourhood organisations etc) the hierarchy in social relations (multiple membership in groups and groupings are not arbitrary but follows a structural logic) and the historicity of political processes (collective memories and identities found as well as reflect political and economic strategies).

Current empirical research on households and associations using and transforming forest products contains several possible justifications for a policy of "integrated conservation" whose objective may be to extend ecosystem protection two inhabited areas, to share economic benefits from sustainable use, or to recognise local and customary laws. It is base on ethnocentric (Western) categories of space, efficiency and equity which make it difficult to explain the social logic behind deforestation, environmental degradation and the impact of public policies on those processes. Yet without properly taking into account the actors' point of view, social scientific research on these issues is likely to continue to fail to explain whether and how administrative measures affect the social practice of the households and associations analysed.

According to one specialist of international forestry research (Kaimowitz, 2002: 125), the question then becomes: How do we construct and pro-poor forest discourse and policy proposals that are reasonably simple and generally applicable, have broad appeal, do not misconstrue the facts and are meaningful to both local and global audiences? I do not pretend to have an answer to that question. But a critical analysis of current ideas about multiple use landscapes, distributive justice and tenure security leads reveal some fundamental contradictions between the objective of "recognition of customary law" on the one hand and the objective of "integrated conservation" on the other. What is more, further (and if necessary) anti-revisionist reflection on the Malthusian trap does not seem incompatible with a research method aiming at giving a voice to the poor. It is a condition for understanding what their voices mean.

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