

**Participation and Decentralized Forest Management:
Social Effects of Local Government Initiatives**

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Introduction¹

Decentralization initiatives over the past decade in Africa, Asia and Latin America have presumably aimed at giving greater decision-making powers to actors in the local arena. In many cases, this includes decisions regarding natural resources (Agrawal 2001). Researchers have found, however, that most often decentralization and other devolution policies have actually been designed or obstructed in ways that not only prevent the transfer of real decision-making powers over natural resources (Ribot, Agrawal and Larson, forthcoming) but may even undermine local decision-making structures that existed previously (Edmunds and Wollenburg 2003).

These findings, of course, fly directly in the face of the goals of many decentralization proponents. These proponents argue that democratic decentralization should increase efficiency, equity and democracy through greater local participation in the decisions that affect local lives and livelihoods (Larson and Ribot 2004, Ribot 2002, World Bank 1988, 1997, 2000). As local elected officials, municipal governments have a greater incentive to take into account the needs and desires of local people than central institutions. It is precisely upon the premise of representation and accountability that democratic decentralization is presumed to increase local democracy and equity.

Local governments in Nicaragua have little formal discretionary power over forestry-related decisions, though they have begun to exert significant influence, in some cases, over the approval process of logging contracts in their jurisdictions. In part in response to this influence, a new forestry law, passed in late 2003, attempts to recentralize control over the nation's forests and minimize local government 'interference.'

Nevertheless, both past and present legal and institutional frameworks allow important maneuvering room for local initiatives. In addition, municipal authority over local development

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provides some discretionary authority regarding projects, policies and priorities related to forest resources. For example, various municipalities have passed local ordinances to regulate their forests and other natural resources; others have declared municipal protected areas; and all participate in some way in the approval process for household wood use and commercial logging.

How do these local initiatives affect local resource users? Comprehensive forest policies should recognize the economic, ecological and social functions of forests and their products. But Nicaragua's forestry law, as did most Central American forestry laws through the mid-1990s (Segura 1997), emphasizes only the economic and productive benefits of forests, under the auspices of the National Forestry Institute (INAFOR). Under a different set of policies and laws, the Ministry of the Environment and Natural Resources (MARENA) addresses ecological or conservation concerns. An integral approach implies forest (and development) policies that are oriented toward 'a much more complementary and participatory vision' that combines 'productive activities, human beings and natural resources' (Segura 1997). If Nicaragua's national forestry framework is still compartmentalized, can local authorities facilitate a more integral approach?

This article is based on research undertaken in eight Nicaraguan municipalities (Bonanza, Chichigalpa, Dipilto, El Castillo, Estelí, Mozonte, Siuna and Tola), as well as an analysis of several laws and institutions at the national level. The case studies involved in-depth interviews with local and central government officials, local resource users and NGO and project officials. The municipalities were chosen to include those representing the three most important forestry contexts in the country: deforested areas (3), pine forests (2) and broad-leaf forests (3), as well as municipalities both with and without protected areas. In particular we selected municipalities that had clearly taken some kind of initiatives in the forestry sector, whether these were beneficial or not for forests or local people. (See Table 1 for more information about the municipalities selected.) Based on these case studies, this article examines the types of local forestry initiatives being promoted, the effects on resource users and the role of local participation in municipal government decisions.

Though the research is preliminary, the results suggest a clear correlation between effective participation and the absence of corruption or elite capture by logging companies, but participation alone does not guarantee *positive* results for resource users. One of the most important factors found to adversely affect these local actors is a dominant ideology of conservation that sees resource users as ‘the problem’ in deforestation. The research suggests that the main initiatives providing direct, positive benefits for local resource managers were those that took the resource users themselves as their starting point for intervention.

The next section of this paper discusses the theoretical benefits of decentralization and some of the problems found with its implementation in practice. The ensuing section briefly presents the legal and institutional framework of forestry in Nicaragua. The following section presents the findings from the case studies. This is followed by the conclusions.

Decentralization in theory and practice

Decentralization is usually referred to as the transfer of powers from central government to lower levels in a political-administrative and territorial hierarchy (Crook and Manor 1998, Agrawal and Ribot 1999). This official power transfer can take two main forms. Administrative decentralization, also known as deconcentration, refers to a transfer to lower-level central government authorities, or to other local authorities who are upwardly accountable to the central government (Ribot 2002). In contrast, political, or democratic, decentralization refers to the transfer of authority to representative and downwardly accountable actors, such as elected local governments. To merit the term ‘democratic decentralization’, however, these representative and accountable local actors should have an autonomous, discretionary decision-making sphere with the power—and resources—to make decisions that are significant to the lives of local residents (Ribot 2002). Democratic decentralization is often the yardstick against which power transfers in practice are measured, and is used as such in this article.

Decentralization is a tool for promoting development and is aimed at increasing efficiency, equity and democracy. Efficiency should increase because greater local input should result in better-targeted policies and lower transaction costs (World Bank 1997). Efficiency concerns are

often the most important, in practice, to central governments. But the equity and democracy benefits (specifically, greater control over livelihoods and a greater share of other natural resource benefits, Edmunds et al. 2003) are likely more important to most local peoples. These are expected to come about by bringing government ‘closer to the people’ and increasing local participation as well as government accountability (World Bank 1988, 1997, 2000, Manor 1999).

Most theorists now agree that local participation is essential for effective and sustainable natural resource management (Carney and Farrington 1998, Enters and Anderson 1999, Gibson et al. 2000, Edmunds et al. 2003). Because of the failure to integrate local livelihood needs into outside interventions, for example, integrated rural development projects were often ineffective (Lutz and Caldecott 1996), and many protected area projects actually increased biodiversity losses as well as social conflict (Enters and Anderson 1999). National governments are often unable to control the sometimes vast forest areas under their legal authority (Carney and Farrington 1998). And local people often ignore or filter rules imposed from outside; under the right circumstances, they are much more likely to respect rules that they had some role in creating (Gibson et al. 2000, Agrawal 2002). Hence, in theory, the institutional framework of democratic decentralization should also provide the conditions to enhance resource sustainability.

Though the definition of decentralization does not say anything about the *way* power transfers occur, it implies—and is often conceptualized by policy-makers as—a top-down process. But participation and democracy are, at least in part, bottom-up processes. Development that includes effective poverty alleviation through livelihood strategies (Ellis 2000) and local empowerment (Chambers 1997) depend on bottom-up processes. Many authors argue that some form of decentralization or demand ‘from below’ is essential to forging local democracy as well as overcoming central government obstacles to decentralizing authority (Contreras 2003, Larson 2004b, Mandondo n.d.).

But national development policies, such as Nicaragua’s National Development Plan (Gobierno de Nicaragua, 2003), are often top down strategies aimed primarily at increasing GDP, hence conflicting with the equity and democracy goals of a bottom-up decentralization (Larson 2004a).

In practice, the most common goal of decentralization is to reduce costs (Colfer, in press), often while increasing forest department revenues (Muhereza 2003, Pacheco 2003), reaffirming private property rights (Pacheco 2003, Beneria-Surkin 2003) and/or addressing central government problems of legitimacy or economic and political crises (Bazaara 2003, de Grassi 2003, Kassibo 2003, Oyono 2004, Resosudarmo 2004) at the same time. Democratization may be a stated goal but in reality is sometimes no more than official rhetoric. In fact, some studies found that ‘decentralization’ policies actually served as a way to *increase* state control over forest management (Contreras 2003, Sarin et al. 2003, Wittman 2002).

Institutional Framework for Nicaraguan Forestry

As mentioned above, the institutional framework for forestry in Nicaragua is divided between its economic or productive aspects, under the management of INAFOR, and its ecological services or values, under the management of MARENA. In spite of some, if limited, discourse to the contrary, economic management of forests is seen as a central government right and responsibility, with little room for local participation of any kind. In contrast, both the environment law and MARENA’s internal documents base environmental management on the premise of grassroots participation—though in practice the decentralization process undertaken by the Ministry is still incipient, particularly with regard to protected areas.

Most importantly for the purposes of this paper, the forestry law (known as the Law for the Conservation, Promotion and Sustainable Development of the Forestry Sector, No. 462) and its implementing regulation (Decree 73-2003) passed in late 2003 refer almost exclusively to timber production and to logging companies. It thus fails to recognize the multiple values of forests, as well as small-scale forest owners, community forestry, agroforestry or the rights of local communities. Farmers who own trees that are outside of forests—an important source of wood products in Pacific Nicaragua—are simply ignored (Barahona 2004).

Decisions regarding logging, under this law, are defined exclusively as ‘technical’ and ‘scientific.’ There is no recognition whatsoever of the validity, or even existence, of other criteria, such as, for example, preferences regarding the management of forests for other products

or values. Local participation, of course, *can* interfere with decisions that are merely technical, but the results should be more socially appropriate. But the space offered to ‘civil society’ is largely limited to INAFOR’s clients.²

The new law—particularly its implementing regulations—clearly seeks to marginalize the growing role of local governments in forest management decisions. Though the law, passed by the National Assembly, includes important references to the participation of local governments, the implementing regulation, passed by decree, largely ignores these provisions. Also, whereas local governments previously gave their independent opinion on every logging request presented to INAFOR, the new law now establishes a so-called ‘public audience’ for the review of management plans. First, this excludes local government comment on smaller-scale requests that do not require management plans. Second, there is nothing at all public about the public audience, but rather participants are limited to INAFOR and forestry personnel from the municipal government office. Third, few local governments have forestry personnel who would be qualified to participate by the law’s definition. Fourth, the law establishes that the only valid criteria that used to make the decision regarding the logging request will be the technical criteria established by INAFOR.

The law also affects local government income in several ways. Most importantly, it limits the right of local authorities to charge any fees for logging permits, and it offers a 100% property tax exemption as one of the key incentives for forest plantations and natural forests logged under management plans. In recent years, the property tax has been the primary source of local income for most municipal governments (Bravo, pers. comm.).

The logic behind the forestry law is a business logic. Rather than seeking to work with local governments to build a cooperative effort that establishes complementary roles for INAFOR and municipal authorities, the law seeks to smooth the way for private enterprise by eliminating, or at least minimizing, local government interference. Logging companies, as well as small-scale

² It is notable, however, that in its initial considerations the forestry law mentions improving the population’s living standard through forest management and the importance of regional and local government and civil society participation in resource conservation, ‘to assure the multiple benefits in goods and services produced by our forests’ (Law 462). It makes no further reference to these issues, but the fact that the discourse is present implies a certain awareness that it is expected.

loggers and forest owners, have complained that local government participation simply increases costs and bureaucracy, while duplicating the work of INAFOR and adding nothing. Local governments, on the other hand, see INAFOR as continuing to plunder local forests without giving local authorities or communities any decision-making power or sufficient benefits.

INAFOR, for its part, has an uphill battle ahead. The institute has been fraught with corruption since its inception in 1998. In part because of both real and perceived corruption, and in part because its budget has always depended on the income it generates from logging taxes³, INAFOR has rarely, if ever, given anyone reason to believe that it is promoting sustainable forest production (Krauter, et al. 2003). In 2003, however, the clean up began. The institute was under audit, and numerous staff members were identified as associated with questionable activities and removed (*La prensa* 10 Jan 2004). The current director fully supports the investigation (*El Nuevo Diario* 10 march 2004, Rodríguez, pers. comm.). New field staff positions have been created all with new recruits from outside the institute (Rodríguez, pers. comm.).

The logic behind the attempt to re-centralize control over the forestry sector is based on overcoming the history of corruption and attempting to regain control over a sector that operates largely outside of an effective regulatory framework. In the opinion of INAFOR's director, the more gray area there is in the rules, the easier it is to find loopholes for avoiding them (Rodríguez, pers. comm.). Eliminating 'gray area' thus means eliminating any doubt regarding who has the authority over forests—in this case INAFOR.

Though it is in some ways reasonable, there are various problems with this logic. First, cleaning up INAFOR for the medium term depends on the good will and leadership skills of the director—and INAFOR's previous directors have usually lasted less than a year in their post; and even with the will to try it is unlikely that INAFOR *alone* will ever be able to 'control' logging. Second, INAFOR still depends on the income generated from logging for its annual budget; there is little guarantee that sustainability will be a priority. Third, INAFOR's perspective fails

³ This has been seen as a serious problem, creating an incentive for logging without regard for sustainability (see Krauter et al. 2003). The new forestry law provides INAFOR with a national budget transfer for the first time (though still based on the income it generates); however, INAFOR was not included in the 2004 budget and has spent the first few months of 2004 without a budget at all.

to recognize any legitimate role for other approaches to forest management, or any other values of forests beyond timber. Fourth, INAFOR only addresses the needs of medium and large logging companies, and there are no mechanisms by which to make it accountable to other sectors such as peasants, agroforesters, small forest owners or local communities.

Local Governments in Forest Management

In spite of the limitations imposed by the new forestry law, local governments still have important maneuvering room to implement policies and initiatives related to forests. These initiatives allow us to observe local government priorities under conditions of limited direct authority over forests, but they also allow us to conjecture about what these authorities might do if they were given greater decision-making powers. Responsible local governments must make policy choices based on local economic needs, ecological concerns and constituent needs and demands. What forest-related initiatives are local governments taking, and how do they reflect these different spheres of concern? How do they affect and/or reflect the needs of local resource managers?

Local Government Initiatives

For analytical purposes, we grouped the different kinds of initiatives according to their primary emphasis, as economic, ecological or social, though in practice some initiatives can have more than one—or several—intentions.⁴ In general, economic initiatives primarily refer to those aimed at raising revenue for the municipal government; ecological initiatives refer to those with an environmental protection emphasis such as the formation of protected areas or reforestation; and social initiatives mostly refer to mechanisms established for local participation and government accountability. A few social initiatives, however, turned out to be the most truly integral forestry initiatives, and those that appear to provide the most direct benefits to local resource managers. We will discuss these social initiatives and their implications in ensuing sections.

Before reviewing some of the indicatives taken, it is important to recognize that all of the municipalities studied had environment offices with at least one staff person (Chichigalpa had three and Bonanza four) dedicated full-time to forestry and environmental concerns.⁵ These are often funded by projects, though in over half of the eight cases studied (Bonanza, El Castillo, Siuna, Estelí and Tola), staff were funded by the local municipal budget.⁶ At the other extreme, one environment office (Mozonte) was simply shut down when project funds ran out, though at the time of our interviews, a proposal was being written to a different funding agency to reopen it.

Economic initiatives: Local governments have undertaken a variety of initiatives aimed at raising funds from forest resources. These include payment for the local government service of providing its opinion on a logging application and fees for other activities related to resource use; controls and fines for illegal activities; and the promotion of environmental services projects.

- ◆ In all of the municipalities, personnel from the environment office are in charge of receiving requests for logging permits, undertaking field inspections⁷ and making a recommendation to the mayor for a favorable or unfavorable opinion regarding the permit. In almost all the municipalities studied, at the time of our interviews, local governments charged fees for this service including, in some cases, a tax per cubic meter to be logged. Other charges included fees for a required chainsaw registration and road use fees for logging trucks, justified by the damage these trucks tend to cause to road surfaces.

- ◆ The municipal governments in general do not have the legal authority to charge fines for the illegal use of natural resources; fines for illegal logging, for example, fall under the jurisdiction

⁴ For example, a fee for resource use can be aimed at raising funds and/or at discouraging resource use, and hence promoting conservation; watershed protection or reforestation can have ecological motives as well as economic and social ones associated with the water supply.

⁵ This is not necessary typical, though many municipalities now do have some kind of environment office or personnel.

⁶ In Bonanza, Siuna and El Castillo as of January 2004.

⁷ Though these do not always occur in practice.

of INAFOR⁸. They can, however, undertake inspections and/or establish or support control posts, usually in conjunction with the police and INAFOR, to detain people who are logging illegally, and then report them to INAFOR. In other cases, local governments have facilitated claims through the office of the Attorney General for the Environment. In Siuna, for example, one peasant denounced another for burning his fields and farmhouse, having failed to prepare the necessary firebreaks for a controlled burn; the mayor's office put him in touch with the Attorney General, and a local court fined the accused C\$ 120,000.⁹

- ◆ Initiatives regarding environmental service payments are still under discussion; the offices demonstrating the greatest interest in this option were the municipal governments of El Castillo and Dipilto. In general, the idea is to combine environmental services with the development of eco-tourism in the future.

Ecological initiatives: Ecological initiatives include the formation of municipal parks (PEM); support for national protected areas; reforestation and watershed protection; the attempt to declare moratoriums on logging; fire prevention and control; environmental education; environmental ordinances; and land use and environmental planning.

- ◆ Several municipalities have declared municipal ecological parks (PEM). The mayor's office of Chichigalpa was able to establish the Las Brisas PEM after convincing the Las Brisas cooperative to donate an area of approximately 50 mzs of forest to the municipality. In Tola, the proposed PEM has failed to come about because the peasants who would donate their lands fear that the local government is actually interested in selling the property rather than establishing a park.

- ◆ National protected areas often receive some kind of support from local government administrations. In Estelí, the administration of the Tisey-Estanzuela protected area was ceded

⁸ In some cases, MAGFOR has signed agreements with local governments delegating the right to fine farmers for the setting of fires (to clear fields) without a permit.

⁹ These kinds of actions may have primarily economic goals—preventing the evasion of taxes and fees on resource exploitation—or may be aimed at environmental protection. We maintain our rough categorization here for reasons of simplicity, but used information from the interviews to determine the principle motivation in each case to conduct the analysis that follows.

to a local NGO under a co-management scheme. The presidency of the local co-management committee is held by the vice-mayor in representation of the local government. In other cases, local governments participate in the control of protected areas and in inspections for logging and other permits, as in Chichigalpa and Mozonte. Bonanza and Siuna, the two municipalities that house part of the Bosawas Biosphere Reserve—the largest reserve in Nicaragua—have, under the coordination of the Bosawas Technical Secretariat (SETAB-MARENA), publicized information regarding the park, promoted projects, undertaken presentations and training workshops, reviewed and approved activities such as development projects and evictions, and participated in the development of the park Management Plan.

- ◆ Watershed protection projects have different goals depending on the context of each municipality. In the northern areas where Hurricane Mitch's effects were most devastating, watershed protection is understood as disaster mitigation, in particular the prevention of landslides. In other regions, watershed protection is mainly aimed at protecting water sources, and in the case of Bonanza, at protecting hydroelectric energy generation. In general these projects consist mainly of reforestation efforts. In addition, local governments also reforest urban streets, highways and other public areas such as city parks. Reforesting with timber or other useful species increases the economic and social benefits of reforestation, but unfortunately this is not done very often.

- ◆ Many municipalities have declared moratoriums on logging. In the municipalities studied, Tola, Estelí, Mozonte and Dipilto have all declared moratoriums. Not one worked. In Tola, not even the mayor's office wanted to enforce it due to the implied loss of income from logging. In Estelí, the local government found that the population did not stop logging and was unable to enforce it. In Mozonte and Dipilto, it was INAFOR that prevented the moratoriums from being put into practice. In contrast, Bonanza declared an ordinance prohibiting the export of wood from the municipality. Wood can be logged only for local use. Currently, steps are being taken to create the conditions for the primary and secondary transformation of logs, with the aim of allowing wood exports in the future, but only with some aggregate value generated locally.

- ◆ Five of the eight municipalities studied have fire prevention brigades, and another two have prevention strategies and campaigns; only Tola appears to have neither. At least in the first five cases, the formation and equipping of brigades has been undertaken with significant support from NGOs and sometimes from the central government.
- ◆ Many local governments undertake some kind of environmental education. In El Castillo, the local government coordinates with MARENA-DANIDA to support environmental education in the schools in neighborhoods bordering the Indio-Maíz Reserve. In Bonanza and Siuna, the RAAN-ASDI-RAAS project provided funds so that the local governments' environment offices could give environmental workshops to peasant leaders as well as certain target groups (small miners, loggers, indigenous communities).
- ◆ Environmental ordinances do not necessarily constitute another policy but are rather mechanisms by which the kinds of initiatives mentioned above have been institutionalized. For example, fees and fines for resources use, the management of controlled burns and fire campaigns and brigades are often backed up by local government ordinances or resolutions.
- ◆ At least three of the municipalities studied have some kind of general land-use plan, or an environmental management plan specifically. The problem with these is that they are often written by consultants without sufficient participation of the local population; or the local government may simply not know how to use such a plan once it is developed.

Social initiatives: The social initiatives found include two different types of initiatives, those that involve providing mechanisms for local participation in government decisions, and those that provide specific social benefits from forestry projects. Both of these types of initiatives will be discussed more in detail in sections below.

The many different initiatives identified here can be grouped, based on our interviews, according to the motivations behind them, hence identifying the primary motivating factor behind each municipal government's actions. We found four categories of motivations: conservationist,

developmentalist, corrupt and integral. Local governments with *conservationist* motivations have primarily been concerned with promoting ecological and other initiatives with the primary underlying goal of protecting local resources (forests and water supplies in particular).

Developmentalist motivations refer to those municipalities that have been primarily concerned with raising income from the forestry sector—not with corrupt intentions or with total disregard for the future of the resource but with a sincere interest in raising funds to increase possibilities for local investment in projects such as infrastructure and social services.

Corruption, of course, refers to those municipalities who are also primarily motivated by an interest in income¹⁰, but with little apparent concern for environmental effects or interest in investing that income in local development; in these municipalities people refer to ‘shady’ interests behind logging contracts (as well as with regard to other resources) and ‘timber mafias.’ We identified one municipality with a clear, *integral* understanding of the economic, ecological and social aspects of forestry and local development.

As a whole, we found that it was not difficult to identify a local government’s primary emphasis, though we also often found contradictory priorities or more than one motivating factor within the same government office—in part because of differences between elected officials or between elected officials and technical staff, and in part because of the kinds of opportunities with which they are presented. That is, in some cases local governments take advantage of opportunities offered by funders that may not be part of the predominant local vision. In any case, there is ample space for the co-existence of more than one perspective. Hence our summary should be recognized as a simplified version of reality. Fundamentally, however, we found Bonanza y Estelí to have a clear interest in conservation, as well as Chichigalpa, though the latter also tends toward the developmentalist perspective.¹¹ Siuna and Dipilto are led primarily by developmentalist interests, though both have also clearly supported some conservation

¹⁰ Our classifications of “corrupt municipalities” are based on perceptions expressed in interviews with local leaders and other actors; we cannot confirm or deny the veracity of these accusations (though in one case a person involved admitted to being pressured into making certain decisions).

¹¹ In Estelí we found a clear difference between the environment office, which was committed to conservation, and the elected government, which was dominated by officials with little apparent interest in forestry or the environment.

initiatives. Tola and Mozonte would have to be classified as corrupt. El Castillo is the one municipality with an integral vision.

The Role of Local Participation

What role does local participation play in defining or shaping these orientations?¹² There is a pattern only with regard to corruption: we found a clear correlation between the absence of effective participatory mechanisms and the presence of corruption and elite capture in Tola and Mozonte. In five of the other cases, participatory mechanisms operate much more effectively. In the last case, Siuna, the situation, both in terms of corruption and participatory mechanisms, has improved substantially over at least two previous corrupt administrations, but participation cannot yet be said to operate effectively; hence Siuna falls somewhere in the middle.

In the five cases where participation was relatively more effective¹³, participatory mechanisms appeared to have several common elements. First of all, they did not depend solely on open town meetings—the only specific mechanism defined in the Municipalities Law (40 and 261)—as the main forum for participation. Second, local organization and representation began at the community or neighborhood level, with local assemblies, sometimes facilitated by local government officials (elected councilors or salaried employees), and elected representatives from each. Third, these representatives, as a group, had the opportunity to meet with government officials, on a regular basis, either in the Municipal Development Committee, at town meetings, or at other special meetings with the entire Municipal Council. In some cases, in particular in

¹² Participation is, of course, not the only factor in these decisions—or, at least, what local people demand is shaped by other factors. Conservation interests, for example, are generated in various ways: in Bonanza, there is a strong sector of conservationist NGOs and projects, a large indigenous presence with a cosmivision more compatible, in some ways, with conservation, and an important gold mine that offers an economic alternative to agriculture and ranching (the main activities causing deforestation in Nicaragua's tropical forests); Chichigalpa is the most deforested municipality of the study with only 6% forest cover and is next-door to Posoltega, which suffered a devastating land-slide that buried some 3,000 people alive and has been associated (rightly or not) with deforestation; Estelí is the second most deforested (13% forest cover) and has suffered the gradual decline of its pine industry as forest cover has declined; concerns regarding conservation in Dipilto are related mainly to the loss to blight of important areas of pine forest—key to the local economy.

¹³ This assessment is based on fairly general comments by those interviewed, not a survey or more systematic process. Hence our conclusions are based on *relative* differences between the municipalities, which were fairly apparent, and should not therefore be taken as absolutes.

Bonanza and El Castillo, these community representatives had regular meetings by region or zone with government representatives.¹⁴

In contrast, in Tola there appeared to be few structures other than town meetings, which few people attended; in Mozonte, there were community-level structures and a Municipal Development Committee (CDM from its initials in Spanish), but the CDM meetings with government representatives appeared to be particularly unfruitful and the legally required town meetings have only rarely taken place. In Siuna the local government has only just begun to hold town meetings, and the CDM just began to operate in 2002.

The correlation between ineffective participatory mechanisms and more corruption does not suggest clear causality. Greater participation does appear to make it more difficult to hide corruption, but at the same time, corrupt officials may simply shut down participatory mechanisms to be able to operate more freely. Maintaining participation over changes of government, in such a way that it makes corruption a greater risk, probably requires both a certain consolidation of the participatory mechanisms over time as well as an organized, vigilant population.

In addition, though we find local populations more content with participatory mechanisms in five of the municipalities, we do not find that local resource users are necessarily more effectively *benefited* by local resource policies in those municipalities, which represent all three of the other ‘types’: conservationist, developmentalist and integral.

Who Benefits from Local Policies

It is clear from the eight case studies that where there were accusations of shady deals, timber mafias and corruption, there is also a perception that an elite group is getting rich at the expense of the rest. In Tola, accusations that reached the news media included officials of both the local government and INAFOR, though by the time of our study, the main allegations were against

¹⁴ Future research should examine the variations with this basic pyramid structure more systematically to see which ones do in fact work more effectively.

local government officials tied to logging.¹⁵ Tola's peasants are particularly concerned about natural disasters and water scarcity and are very critical of indiscriminate logging in places they know (because *they* have been prohibited from cutting there) it is prohibited; some of these locations include hilltops where local citizens volunteered for reforestation and forest enrichment programs. Some have even risked their lives confronting illegal loggers only to see them go unpunished.

Something similar has happened in Mozonte. There, however, many peasant pine forest owners do not live on their farms, but rather in town. When they complain about illegality and the timber mafia, they are referring to their own farms and timber, which, according to them, is robbed in their absence. As in Tola, the loggers have almost never been punished; in addition, those who have accused them have received death threats.

The elite, however, do not only benefit from corruption, but also from other policies that are biased in their interest. In Las Segovias, many peasants own pine forests and participate in the forestry business, but they argue that their hands are tied by local government policies. In Dipilto, these forest owners report that they suffer extraordinary delays when they apply for logging permits, in particular to receive the local government's *aval*, or opinion, which then is often negative.¹⁶ For its part, the mayor's office defends its policy of denying *avals* for ecological concerns: (1) to revert deforestation, (2) to prevent natural disasters and (3) to conserve forest resources to have alternatives such as the sale of environmental services and ecotourism. These policies reflect the conservationist 'side' of the municipality, and there are clearly peasants who agree with this perspective.

But the government's policy is not consistent. Some forest owners argue that 'conservation' is simply a smokescreen. They see that logging companies are in fact receiving favorable *avals* in timely fashion and accuse the mayor's office of only denying them to small and medium forest owners. They even accused the local government of approving permits in the same locations that

¹⁵ Several people interviewed stated that the people who were removed from their position in INAFOR and the local government were not the guilty parties; in their opinion, the firings were simply a smokescreen.

¹⁶ Though legally this opinion is not binding, in many municipalities INAFOR has chosen to respect the local government's decision, at least prior to the implementation of the new forestry law.

forest owners had been denied. In the end, forest owners are obliged to sell their standing timber to the ‘heavyweight’ loggers and intermediaries, who can get an *aval*, or to log illegally. Both in Dipilto and Mozonte, small forest owners lack both capital and machinery that would make it possible for them to log their own trees and thus have access to a broader market.

Conservationist municipalities argue that their policies benefit the whole population because of the environmental good they are promoting. But local actors do not necessarily see it that way. In both Bonanza and Estelí we heard the accusation that the local government is concerned more for the trees than the people. In Estelí there are several indications that the predominant vision coming from the local government offices is that forestry is a problem and that those who participate in the forest commodity chain are the ones who cause deforestation. The few remaining mills in the city are being pressured to move to the outskirts of town or shut down; logging is prohibited on private property in protected areas even where the owners have management plans; *avals* are frequently denied and after long delays; and there are high local taxes on logging even if the wood is for household (as opposed to commercial) use.

There are complaints about conservationism in both Bonanza and El Castillo, both agricultural frontier municipalities. Here the concern, however, is primarily regarding road construction and the lack of economic alternatives. Immigrants to the region have put intense pressure on the BOSAWAS reserve in the North (Bonanza) and the Indio-Maíz reserve in the South (El Castillo), as well as on indigenous territories in Bonanza. The indigenous communities demand that the immigration be stopped, while in Siuna and El Castillo, the immigrants dominate the municipality. In Bonanza, though they are seen as more conservation-friendly, some Mayangna communities, as well as non-indigenous who work in the forest sector, want the opportunity to use and sell timber resources. At least one important, recent policy initiative is aimed at increasing value-added locally before the wood leaves the municipality. This will be discussed further below.

Both in Bonanza and El Castillo, road construction has been a conflictive topic. In Bonanza, the mayor’s office promoted a road project to the Mayangna community of Musuwás, but the German cooperation office GTZ intervened to stop it. In El Castillo, various institutions and

sectors of the population support a development strategy that permits the opening of new roads and improvement of existing roads, but the Danish cooperation agency DANIDA has opposed it. GTZ, which supports the Bosawas reserve, and DANIDA, which supports the Indio-Maíz reserve, believe that roads will increase logging and deforestation; others believe that it will increase marketing alternatives and decrease the dependence on ranching, and hence the conversion of forests to pasture. In El Castillo, it appears that the road project will proceed.

Siuna's institutions have been dominated by loggers until the most recent municipal elections; conservation interests have played little role. Rather, the municipality has been an important site for colonization, forest conversion and logging. Previous governments have given out *avals* without charge and without obstacles, but, notably, this policy has not particularly benefited the local population either. In contrast, as in Dipilto, logging companies and merchant intermediaries are the ones who have benefited; all forest owners receive is the arbitrary low payment for standing timber, ranging from \$10 to \$20 per tree—if they ever actually receive payment. Peasant forest owners often have no idea of the value of the wood they are selling, and have little recourse if the logger fails to pay.¹⁷

Today Siuna has begun to change some of its policies, but the main conflict relates to charges for the *aval*. Precisely when the forestry law has prohibited local forestry taxes, the Siuna municipal government has tried to introduce them to finance its forestry office. This has led to conflicts with loggers—being an election year, however, the local government may back down. The current mayor also unleashed criticism for stating publicly that the Bosawas reserve was “a headache”—which some believe could lead to the interpretation that the government will not act to stop the colonization of the protected area, and a few fear it may have been an election year stunt.

There is very little logging in the most deforested municipality of the study, Chichigalpa; in Chichigalpa conservation concerns dominate, though the local government is clearly also

¹⁷ In Río San Juan I personally witnessed several such situations, in this case among a group of peasants who *did* know the value of the timber: one peasant refused to sell a mahogany tree for about \$15, instead negotiating \$150 with a different merchant; another sold a lot of 20 or so trees, which were felled then never taken or paid but simply left to rot.

interested in generating income (people complain in particular about the cost of *avals* as well as property tax charges in protected areas, which, according to the Environment Law, should be exempt¹⁸). In general, with an important exception that will be discussed below, the peasants interviewed claimed that they had been abandoned, by both local and national governments.

Policies for People

The previous description of the effects of local policies imply that some local resource users have been adversely affected by two main factors, aside from outright corruption that was not entirely local: increased taxes and conservationism. This section will examine these two factors in turn before moving on to look at a few exceptional initiatives that have benefited, or should benefit in the near future, resource users.

It is important to maintain a perspective on taxes and other such charges. The charges in question refer to fees and taxes on logging, although some municipalities wave fees for non-commercial use; they also refer to property taxes on forest owners in protected areas. These fees affect all loggers and all landowners equally, whether small or large. Though they clearly affect small forest users and owners, then, it is important to remember that taxes of all kinds often engender a certain amount of discontent, particularly among a poor population used to subsidies¹⁹; this does not necessarily imply that they are all wrong or unnecessary.

On the one hand, then, it is important to recognize the economic needs of local governments, which began to participate in the permit approval process without receiving any economic benefits from forests or compensation for the costs of this (though local governments were supposed to receive 25% of taxes on logging contracts paid to the central government as of 1997 or 1998, INAFOR failed to pay for several years). In addition, Nicaraguan municipal governments received the lowest share of national budget transfers in all of Central America until recently; and their main source of income, the municipal sales tax, has been gradually

¹⁸ MARENA argues that the Environment Law (No. 217) exempts lands in protected areas from property tax (IBI); local governments argue that neither the Municipalities Law (No. 40 and 261) nor the Property Tax Law (Decree 3-95) mention any such exemptions. The local government of Estelí also charges IBI in protected areas.

decreased. Property taxes are their primary source of local revenue (Bravo, pers. comm.). Even with the payment of the 25% tax share they now receive from INAFOR, many municipalities do not earn enough to pay a staff person's salary.²⁰

On the other hand, citizens are usually less bothered by tax payments when they see their logic or the benefits they generate. At present, however, the role of the local government in general is seen as simply repeating the work of INAFOR rather than complementing it. If these charges survive the implementation of the new forestry law, local governments could begin to implement scaled payments that favor forest owners; the legal contradictions regarding property taxes in protected areas also need to be resolved.²¹ In order to consider these options, however, which involve forgoing income, local governments need to be economically stable. Municipalities could also work to define local criteria regarding the approval of logging permits rather than duplicating INAFOR's criteria, though the forestry law currently leaves little room for this.

It is also notable from the previous section, however, that even when local governments do not impose additional fees on resource users, these are still adversely affected. That is to say, the status quo in forestry in Nicaragua does not benefit small and medium-scale resource users. In Dipilto and Mozonte, even without local government obstacles and a timber mafia, forest owners are adversely affected by the nature of the market and their lack of the capital and equipment that would facilitate better alternatives. In Siuna, although the local government has not 'interfered' in the permitting process until recently, forest owners, as in Las Segovias, are left with low prices for their wood, or it is simply stolen. We will return to this observation below.

With regard to conservation measures, it is important to recognize, again, that restrictions arise at least as much from the central government as from local governments. MARENA has principal

¹⁹ This problem with regard to the management of credit in the past, for example, has been written about extensively. See various chapters in Bastiaensen (2002).

²⁰ On the other hand, most municipalities we found simply incorporated the 25% from INAFOR into the local budget without specifically earmarking it in any way for investments in forestry or the environment.

²¹ The property tax (IBI) issue is a complicated one. First, the IBI is now the municipal governments' principal source of local revenue. Second, the calculation of central government transfers is based in part on rewarding municipalities that raise substantial local revenues. Hence, loss of IBI revenue converts to a double loss. Third, IBI losses will increase with the implementation of the forestry law, which, as an incentive, exempts plantation owners and those who manage forests under management plans from paying property taxes.

authority over protected areas, for example, and policies in Bonanza and El Castillo are defined in part by the biosphere reserves contained in their jurisdictions. Most important, however, is the role of the dominant *conservation ideology*, which sees local actors, and logging of any kind, as ‘the problem’, and hence the cause of deforestation; this ideology inhibits the search for viable, socially and ecologically sustainable alternatives to outright resource preservation. This is the primary reason that the local governments, as well as sectors of the central government, that promote conservation impose restrictions rather than seeking alternative policies, in spite of protests from affected groups.

Nevertheless, in three municipalities we have seen organic, creative solutions arise for forest resource users.²² In two cases, local solutions have been generated in spite of the domination of a strong conservationist ideology, at least in part imposed by central government actors and/or cooperation agencies. Though we do not have enough information to be sure, it appears that these alternatives have arisen from the local arena, facilitated by local governments, and in part in reaction to the dominant conservation ideology. The third case was facilitated by a close personal connection between the benefiting community and the local government.

The first case refers to Bonanza, where the local government recently arranged for a German cooperation agency DED to work with a local consortium of loggers, carpenters and forest owners, COOSBA. Several years earlier the municipal government banned the export of wood from the municipality and in general made logging difficult by placing numerous obstacles in the way of obtaining permits (Larson 2002). Over time, however, the emphasis has shifted slightly from what was basically a total prohibition, to raising local added value. This occurred for two main reasons: first, adding local value under controlled logging conditions is still compatible with the dominant conservationist perspective; second, COOSBA’s members have important economic power locally as well as a significant social base. COOSBA is now receiving training, in carpentry as well as organizational management, and has been promised support for marketing. Its 51 associates hope to establish a municipal carpentry workshop.

²² There are also several other smaller projects and initiatives, but we identified these three as the most important.

The second case refers to El Castillo. The local government of El Castillo has been less stable than the government of Bonanza, which has remained fairly uniform over the past several administrations. El Castillo's previous mayor facilitated logging under somewhat questionable conditions, and at least one forester working for INAFOR in the region was removed for suspicion of corruption. The Sustainable Development Project, promoted by DANIDA since the early 1990s, however, has maintained an important presence in the municipality until recently. The current mayor has worked in at least one related project and has a clear understanding of both conservation and development perspectives. His administration has apparently decided to support both road improvements and new roads as well as the extension of the electrical grid into communities where value-added projects can be developed.

Most importantly, perhaps, the local government has modified the charges for property taxes. The national cadastre has significantly increased the value of forested land over pasture and agricultural land, probably as a policy of trying to overcome the undervaluing of forests and their facile conversion to other uses. The result, however, is that *annual* property taxes result much higher for forested areas—which also provides an incentive for conversion. El Castillo's local government lowered the value of forests such that taxes on forests and pasture would be the same. It has also considered exempting forested areas altogether—but recognizes that this still does not provide the local population with economic alternatives. Finding alternatives that make conservation and development compatible is the greatest challenge in El Castillo—an agricultural frontier area with massive immigration and the rapid conversion of forests to agriculture and pasture. (It is also a very poor municipality, with both high poverty levels and a low municipal budget.)

In Chichigalpa, the third case, a different type of initiative has arisen that benefits both local communities and the forest. A community on the banks of the San Cristobal volcano reached a reciprocal agreement with the local government. The community has a fire brigade with some 35 members, which has received support from the mayor's office in the formulation of projects such as for fire-fighting equipment. The brigade is in charge of protecting the forests in the volcano's protected areas, including a Municipal Ecological Park established by the local government. In return, the mayor's office has authorized the community to collect forest

resources, particularly downed timber for firewood, without charge for the permit or *aval* even if the firewood is sold commercially. This agreement was made possible primarily because a community-member and founder of the brigade, which started many years earlier with the support of an NGO, works as a forester for the municipal government. One observer claimed that the forest had climbed the slopes about a kilometer in the years since the agreement was reached.²³

Conclusions

In spite of very different contexts, from heavily forested agricultural frontier areas to deforested Pacific plains, one finding holds true to all the cases: neither the status quo—that is, local governments doing nothing to interfere with the way things currently are—nor local government interventions tend to provide direct benefits to small-scale resource users unless these initiatives are designed specifically with this goal in mind. These initiatives, which take local actors as a key starting point, also represented the most integral solutions to forestry-related problems. Notably, in two of the three cases, offering economic benefits to local actors required that the local government forego income for itself. In at least one case, organized social pressure played an important role in generating the initiative; in another, close communication between the beneficiary community and the mayor's office was a key factor.

If direct intervention in favor of local actors is a key determining factor, however, there is no reason that such intervention cannot be undertaken by the central government—or, for that matter, by a non-governmental actor. Nevertheless, given INAFOR's current priorities, alternatives appear much more likely to arise from the local decision-making arena. Also, relations of representation and accountability are stronger between local actors and elected local officials, and local participation—and an organized vigilant population—represents another determining factor.

Effective participatory mechanisms are clearly needed to avoid corruption, elite capture, the theft of local resources and other adverse effects on local people. Also, the integral alternatives we

²³ The local government does, however, charge a small transport fee for large quantities of firewood.

found—the policies that most benefited local resource users—appear to have emerged because of effective communication over time, social pressure and/or privileged communication (as in the case of Chichigalpa) between local government and these local actors. This communication or social pressure made it possible to generate more balanced alternatives, either by overcoming the conservation bias that blames local resource users for deforestation, or seeking more balanced compromises within it. Nevertheless, such solutions have not emerged in Dipilto, where the actors interviewed were quite positive about participation in general and the responsiveness of local government; nor have they emerged in Estelí, where the local government recently won an award for transparency and local participation. Participation is clearly a necessary but insufficient condition for local resource users to benefit from decentralized forest management.

Further research needs to be undertaken to understand the additional variables that allowed for creative options to arise in some municipalities but not others, in spite of apparently similar conditions—particularly with regard to local participation and the tensions between restrictive conservation policies and livelihood needs.

It is also important to remember that these alternatives, where local resource users benefited from local policies, were found in spite of the fact that Nicaragua’s local governments legally have no direct decision-making authority over the forest resources in their jurisdictions. Notably, in two of the municipalities where these alternatives arose, INAFOR is virtually absent. It is possible that local actors are more demanding—and more successful—when they know their local government has important authority over local forest resources. The transfer of greater powers to local governments may increase risks, but also opportunities for the generation of more creative solutions.

Table 1. Characteristics of the Municipalities Studied

Municipality	Area (km2) *	Population**	% Rural*	% Poor#	% Extreme Poor#	% Indigenous (from local sources)	% Forest Cover	Protected Areas
Bonanza	2,039	15,447	57	60	38	40	97	Reserva de Biósfera Bosawás Cerro Cola Blanca Cerro Banacruz
Chichigalpa	223	50,777	32	48	15	n.d.	6	Complejo Volcánico San Cristóbal
Dipilto	105	4,503	90	75	35	n.d.	67	Cordillera Dipilto y Jalapa
El Castillo	1,656	13,520	97	76	41	n.d.	85	Reserva de Biósfera Indio-Maíz
Estelí	754	125,853	21	45	16	n.d.	13	Cerro Quiabúc-Las Brisas Cerro Tisey-Estanzuela Cerro Tomabú Moropotente Miraflor
Mozonte	242	6,536	72	81	42	82	34	Cordillera Dipilto y Jalapa
Siuna	5,040	78,169	85	77	41	1	43	Reserva de Biósfera Bosawás Cerro Banacruz Cerro Saslaya
Tola	474	25,013	91	73	29	n.d. (Nancimi, Las Salinas commun.)	21	Río Escalante-Chacocente

* INIFOM 2001 (% rural of El Castillo from 1995 census, cited in Larson and Barahona 1999)

** INEC 2004 cited by INIFOM and MHCP in tables calculating municipal budget transfers for that year

INEC 2001

INAFOR/ PROFOR/ MAGFOR 2002 (Local sources argue that figures for Bonanza y El Castillo are high.)

n.d. no data

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