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Article

From Communal Forests to Protected Areas: The Implications of Tenure Changes in Natural Resource Management in Guatemala

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Abstract

Protected area initiatives have sometimes led to conflicts with indigenous peoples who depend on forests for their livelihoods. This article examines the efforts to promote formal protection in the communal forests of the Guatemalan highlands. It analyses the institutional mechanisms used to create protected areas in the context of a history of profound inequity and of Guatemala's new law recognising the existence of communal lands for the first time. Rather than supporting communal institutions and land rights, however, conservation efforts have strengthened the role of municipal governments, leading to fundamental changes in local governance and livelihood strategies and displacing community participation in natural resource management. The article responds to the following questions: What is the relationship between conservation discourse and the demands of indigenous peoples? How are the daily local practices of natural resource access and use modified with the creation of protected areas? What implications do these processes have on local territorial management institutions? And how can conservation mechanisms be designed to strengthen indigenous peoples' rights?

Keywords: community forestry, indigenous communities, highlands, protected areas, Guatemala

INTRODUCTION

It is undeniable that the creation of protected areas has contributed significantly to stopping or slowing the degradation of natural resources and the decline of biodiversity in many parts of the world. Nevertheless, the increase in protected areas has also been questioned. Their main growth period, from 1985 to 1995, coincided with the boom in neoliberal economic policies, and today protected areas form an important part of the strategies for globalising environmental policies. Yet protected areas have led to conflicts, and to social and economic impacts that principally affect the populations—particularly those of indigenous peoples—living in, and depending on, forests, who have seen their livelihood opportunities limited (Brockington et al. 2008; Zimmerer 2006).

Conservation in indigenous areas presents two closely related dilemmas. First, efforts to support conservation should not only take into account but also guarantee indigenous peoples' rights, particularly the rights to land tenure and self-determination (OIT 1989; Sunderlin et al. 2008). Second, conservation should guarantee access for subsistence activities, above all for the poorest people; that is, conservation should be seen as a mechanism for poverty reduction. This means that projects, whether or not their principal motivation is conservation or development, or even mitigation of, and adaptation to, climate change, should assume an integrated approach. That is, the struggle to fight poverty should be seen in the context of conservation, and conservation should be seen in the context of the fight against poverty. Projects should also guarantee the recognition of the human rights of the peoples who live in, and depend

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on, forests (Fisher et al. 2008; Seymour 2008). A number of important conservation organisations around the world are gradually beginning to recognise the need to rethink their concepts and create mechanisms for the creation of Indigenous and Community Conserved Areas (ICCAs), in order to recognise the right of indigenous peoples to control and manage their own territories (IUCN 2003; Borrini et al. 2004).

Collective natural resource management has been addressed by 'commons theory', based on the ideas of Ostrom (Ostrom 1990) and other authors, who since 1990 have refuted Hardin's influential 'tragedy of the commons' thesis (Hardin 1968). Hardin argued that common pool resources are doomed, as individuals will seek to maximise their benefits until exhausting them, because they are freely accessible. Hardin proposed that nationalisation and privatisation of common pool resources were the best ways to avoid tragedy. Ostrom, in contrast, has demonstrated that common pool resources are regulated by self-management principles that have over time helped conserve nature.

Nonetheless, Hardin's theory continues to influence conservation policies and actions in many parts of the world. The communal forests of Guatemala's highlands, for example, are the subject of growing conservationist interest due to their strategic importance as the last remnants of biodiversity in a region characterised by poverty and high demographic density. To address the pressures on natural resources, the main ecological proposal of the government and environment agencies is to declare these forests as protected areas. But this policy is being questioned, because protected area creation involves creating new rules that limit access to livelihoods for the local population, especially the poorest.

Indigenous peoples represent 80 per cent of the population in this region of Guatemala (INE 2002). They are solidly rooted in their ancestral territories, and their social cohesion around traditional organisations is strong. In this regard, communal tenure is a system of collective management of the territory and natural resources that has been fundamental to the care of forests and the distribution of forest benefits. Rights to access, use, and exclusion are exercised through indigenous local institutions that are in charge of regulating resource harvest and maintenance, generally following rules created by the communities themselves (Elías 2005; Wittman and Geisler 2005; Elías and Wittman 2005).

The contribution of original or indigenous peoples to natural resource management has checked the 'tragedy of the commons' and, in fact, directed attention to the need to understand, document, and strengthen the coexistence of indigenous peoples and their natural spaces (Chapin 1995). Nevertheless, in the past 20 years Guatemalan indigenous territories have experienced land tenure changes and new economic dynamics, in the form of agricultural colonisation programs, timber industries, oil exploitation, open pit mines, major highways, the pillaging of biodiversity, imposition of protected areas, and other projects that equally exclude the original populations. In response, many western highland communities are making an effort to retain control and regulation of their territories in order to balance areas of collective and individual access.

The practice of establishing protected areas in indigenous territories is widespread, especially in developing countries. Conservation and land policies come together to facilitate tenure reforms and the required institutional changes (Ho and Spoor 2006) but often fail to recognise the rights of indigenous peoples—who are thus either displaced from their territories or find their use of natural resources restricted (Colchester 2003).

This article is based on the results of a field study undertaken by the author involving interviews with indigenous populations in the Guatemalan highlands. It particularly draws on a regional study and four case studies on tenure rights and livelihoods, undertaken as part of a larger research project supported by the Center for International Forestry Research (Elías et al. 2009; Larson and Dahal This issue), as well as a study on natural resource management and conservation in communal lands (Elías 2008). It analyses the institutional mechanisms used to convert communal forests into protected areas and responds to the following questions: What is the relationship between conservation discourse and the demands of indigenous peoples? How are the daily local practices of natural resource access and use modified with the creation of protected areas? What implications do these processes have on local territorial management institutions? And how can conservation mechanisms that strengthen indigenous peoples' rights be designed?

THE ECOLOGICAL IMPORTANCE OF HIGHLAND COMMUNAL FORESTS

The forest landscape of the Guatemalan western highlands, a region that includes the departments of Huehuetenango, San Marcos, Quetzaltenango, Totonicapán, Quiché, and Sololá, is dominated by conifers (*Pinus*, *Abies*, *Cupressus*), broad-leaf trees (*Quercus*, *Alnus*, *Arbutus*), and mixed forests. Over 80 per cent of forest cover is found on collective lands, under either communal or municipal tenure (Elías 2008). The communal forests in this region are unique spaces in which biodiversity has been maintained, thanks to the efforts of communities in creating their own self-management institutions to administer this collective heritage. Nonetheless, indigenous peoples believe that biodiversity and natural resources, in general, form part of broader territorial spaces and thus should not be seen in isolation, but rather as part of an interrelated whole.

Highland forests are strategically important to both local communities and the population in general, because of their location in the higher watershed areas that contribute to the maintenance of water sources—an aspect that is acquiring greater interest and relevance in light of declining water supplies. As a consequence of demographic pressure, small-holder agricultural systems, and poverty, the forest landscape is comprised of small and fragmented forests, but their contribution to biodiversity conservation and natural resource management has been recognised by forestry and conservation organisations

(Elías 2008, 2009). The region also includes unique ecosystems with a large number of endemic species, for example the Guatemalan Fir (*Abies guatemalensis* Rehder; IUCN 2010).

Though these forests are small, they have the fundamental strategic function of providing goods and services for the population, particularly firewood, medicinal plants and water, all of which are central to local livelihoods and survival strategies. In addition, they have irreplaceable symbolic value in indigenous spirituality as the location of sacred places and sites of veneration.

These ecosystems are characterised by the slow growth of biomass due to low temperatures, intense winds, and frost. They are thus very sensitive to social pressures such as changes in soil use, deforestation, and forest fires, as well as to phenomena derived from climate change, especially prolonged droughts and irregular rains.

Despite social pressure, however, the deforestation rate is just under 1 per cent annually, which is below the national average of 1.46 per cent (UVG – INAB – CONAP 2006). This low rate is thanks to the local communities that oversee their regulation and protection. Other studies undertaken by the author, particularly Elías (1997, 2008, 2009), demonstrate that the highland forests have been conserved due to the tradition of collective forest tenure in this region. The results of these studies also indicate that conservation goals are achieved to the extent that communities benefit from the products and services that these forests provide for family subsistence. In addition, local conservation efforts are found to be better organised when communities are able to design their own rules of use and access, forms of self-government, and mechanisms of monitoring and control.

From the conservation perspective, however, several studies over the past two decades have warned of the risks of deforestation in this region, particularly due to high demographic pressure, firewood consumption, and the need for agricultural land by the populations living near the forests (Utting 1993; Valenzuela 1991; Greenpeace 1992). Based on these studies, a number of national and international organisations tied to conservation interests have proposed that declaring protected areas in the remaining forests would help conserve them, since their access and use would be regulated, thus reducing pressures on natural resources. In fact, many people continue to argue that the main causes of environmental deterioration, and particularly deforestation, are the use of firewood, which accounts for 35 per cent of the total volume extracted from the country's forests (IARNA-URL-IIA 2006), and the creation of pasture. Hence, the conservation of communal forests would necessarily involve limiting both the use of firewood (the main source of energy for 90 per cent of the households in the region), and pasturing sheep. Although the latter has declined, it still plays an important role in the survival strategies of the poorest rural families.

COMMUNAL FORESTS AS A CONSTITUENT PART OF INDIGENOUS TERRITORIALITY

Communal forests are an expression of the spatial planning of community territory, thus they cannot be seen in isolation or by focusing only on a few of their natural or ecological attributes. Indigenous territories are reference points for collective identity; they permit the expression of belonging to a particular group and culture. Indigenous territories have historical, cultural, economic, and political dimensions. As a historical space, territory symbolises the affective relations with the ancestors and also the lived-in space that bears the footprints left by the relations among community members. In its cultural dimension, territory is the main symbolic reference point for the relationship with Mother Nature and for cultural reproduction, through collective memory and wealth (Grünberg 2003). In its economic dimension, indigenous territory is a space for appropriation, as the source of goods and resources for individual or collective benefit, subject to different forms of occupation, production, and transformation. In its political dimension, indigenous territory is a space for the exercise of power relations, social mobilisation, and ethnic claims.

Indigenous peoples exercise territoriality to defend and maintain control of their living spaces. The long history of the social and symbolic construction of indigenous territories converts those spaces into collective wealth, transmitting from generation to generation the goods, knowledge, organisations, and relations (lands, forests, water sources, sacred sites, and government) that are fundamental to local livelihoods.

LAND POLICIES AND TENURE RIGHTS

The forests of Guatemala's indigenous regions are the last existing reservoirs of nature, thanks to local initiatives to maintain indigenous conservation systems, especially in the form of communal forests. These alternative forms of protection are for the most part not included in the Guatemalan System of Protected Areas (SIGAP, *Sistema Guatemalteco de Areas Protegidas*; Elías 2008). Nonetheless, several forests are being converted into protected areas at the initiative of conservation organisations. The respective official protected area norms then reduce access to livelihoods, especially for the poorest families (Elías et al. 2009).

The tenure changes being observed in the forests of the Guatemalan highlands are rooted in land and conservation policies that have been implemented over the past two decades in both Guatemala and other parts of the world. Land policies, promoted by international agencies such as the World Bank, have been designed to contribute to economic growth and poverty reduction (Deininger 2003), but they are based on a neoliberal model that defends privatisation as a *sine qua non* condition to stimulate the development of market economies in developing countries (Ho and Spoor 2006). These policies include a series of reforms to the land tenure system using mechanisms such as legal certainty for formalising property rights, land registries for improving land administration, and activation of a land market to stimulate access and redistribution.

Nonetheless, in two decades of experimenting with these policies, very little has been done to transform the profound inequity in Guatemala's land distribution, one of the most

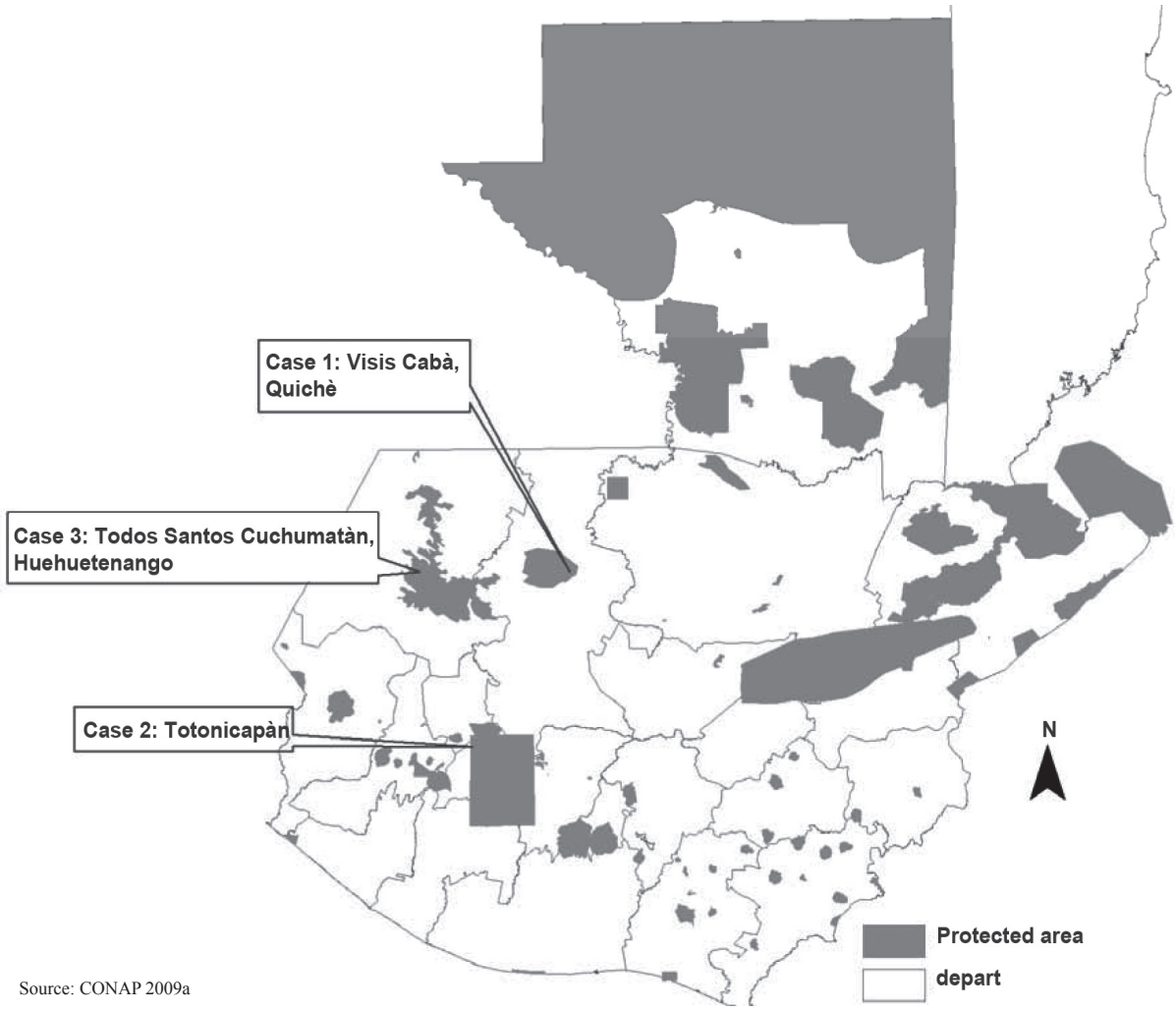
stratified on the continent. The land market program, which was instituted in the nineties, has been an utter failure and is far from triggering significant changes in an excessively polarised agrarian structure still dominated by the colonial legacy (Van Dam 1999; Carrera 2000; Merlet and Annalisa 2003).

With respect to strengthening tenure security by way of land registration and titling, progress is only now starting to be made. As part of the Peace Accord commitments that ended the internal armed conflict affecting the country for more than three decades, Decree 41-2005, the Cadastral Registry (RIC) Law, was approved in 2005 to help solve agrarian problems and establish a solid base for formal land tenure security. At the same time, the government is facilitating access to land under the market-assisted agrarian reform model. Both are being implemented under the land policy approach promoted by the World Bank in underdeveloped countries. In fact, the World Bank has granted the Guatemalan government a USD 62 million loan to develop the cadastre in seven provinces.

A large portion of the lands to be assessed and registered are communal, but indigenous and peasant communities generally do not have legal documentation to demonstrate their rights, thus jeopardising their recognition. For that reason, indigenous and peasant organisations have insisted on compliance with article 65 of the RIC law, which establishes that "If communal ownership, possession or tenure of lands is determined during the process of cadastral establishment, the RIC shall recognise and make the administrative declaration of communal land and issue the certifications… and… order the registering." Although the RIC has recently approved a Communal Lands Regulation after more than two years of debate, communities know little about it, and it is not, in and of itself, sufficient to ensure collective rights to communal lands. It is important to point out that the need for the cadastre also arose from the demands of grassroots organisations, which sought to attain the documents required for regulating tenure, reverse improper appropriation, resolve agrarian conflicts, and restore lands plundered from indigenous communities.

COMMUNAL GOODS VS CONSERVATION DISCOURSE

Motivated by international agreements, among them the



Source: CONAP 2009a

Figure 1
Case studies in the Highlands of Guatemala

Convention on Biological Diversity (CBD), environmental organisations and government offices have assumed the commitment to increase the number of protected areas. In Guatemala, there are thus far 241 protected areas with an area of 34,000 sq. km, equivalent to 32 per cent of the country (CONAP 2009a).[1] The most important protected areas—the Maya Biosphere Reserve (see Barry and Monterroso This issue) and the Sierra de las Minas Biosphere Reserve—are found in the northern part of the country, and were created in the early nineties. During their creation, little consideration was given to the access and use rights that many communities and individual users possessed before their declaration or to the preexisting economic dynamics (traditional gathering of timber and non-timber forest products, fishing, and hunting), giving rise to a series of conflicts and management difficulties that still prevail today. Later, there was a rapid increase in protected area declarations in locations where natural conditions provided evidence of significant interest for conservation (Sundberg 1998).

The main proposals for declaring protected areas in Guatemala's western highlands came from national and international environmental groups which, based on a well-intentioned discourse regarding the need to protect nature, set about identifying such spaces, whether for their landscape, biological, or natural value. Many of the protected areas were formed without free, prior, and informed consent by affected communities. To illustrate these circumstances, three emblematic cases are presented below (Figure 1).

The first case refers to the 1997 creation, via Decree-Law 40-97, of the Visís Cabá Biosphere Reserve in the 45,000 ha that form part of the ancestral territory of the Maya-Ixil people of the municipality of San Gaspar Chajul, in the northern part of the department of Quiché. The Visís Cabá Biosphere Reserve was established by conservation groups from Guatemala City, revealing their control over indigenous territories through the political-institutional framework of the country. The affected communities voiced their objections and demanded that the decree be repealed, arguing that they had not been consulted and, furthermore, that they believed they were being stripped of their rights to control, access, and use their own ancestral territory. These communities demonstrated that existing conservation in the area was the product of long-term efforts they had undertaken on their own, and that the mountain in reference is a space they depend on for their livelihoods. In their view, the protected area category proposed by conservationists not only infringed on their livelihoods, but also transferred control of the forest to entities outside the community, to which they would be subjected. After an intense conflict, the Ixil people of Chajul were finally heard by government entities and environmental NGOs, and although they have not managed to force the repeal of the protected area declaration, they have made progress in claiming their collective rights as indigenous peoples.

The second case is the 1996 transformation of 16,000 ha of the Totonicapán communal forest into Los Altos de San Miguel Totonicapán Regional Municipal Park, in the ancestral territory of the Maya-K'iche' people. From the environmental perspective, this forest is important for the conservation of *Abies guatemalensis*, a threatened fir species included on the CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) red list, for which a very restrictive protection strategy has been designed—one that even restricts its use by the communities that own the communal forests where the species exist. For communities, in contrast, the forest has symbolic value because it contains a great many sacred places; it is of hydrological importance because over 900 springs that supply water to the communities are found there; and it has economic importance because the forest provides the wood for furniture production, an activity that for many years was the most important of the livelihood strategies of the Totonicapán communities (Veblen 1978; Elías 1997; Tiu and Garcia 2002). The protected area strategy gave a leading role in administering the recently established protected area to the municipal government, although protection and management had been undertaken by the traditional organisations represented in the committee of the 48 cantons. Nonetheless, the environmental organisations pressured for the creation of an ad hoc community organisation, which it named *Ulew Che Ja'* (meaning Land, Tree, and Water in Mayan Quiché language)—an entity made up of local indigenous leaders, but with an operational model very unlike the traditional organisations of the indigenous communities. For example, the new organisation was legally incorporated and had to approve official written statutes, which gave it a more formal character that appealed to the state and outside actors, but less so to the communities themselves. *Ulew Che Ja'* received community backing for a while, but its vulnerability to powerful groups, especially its subordination to the municipal government and political parties, soon became evident. This undermined its credibility to the point that the indigenous population itself decided to dissolve it, having concluded that it responded more to external than local interests.

The third case refers to the formal protection of the 7,068 ha Todos Santos Cuchumatán communal forest, located in the territory of the Maya Man people, in the department of Huehuetenango, which they have occupied since the pre-Hispanic era. This territory has a spatial arrangement in which each of the communities claims the portion of land in its area of influence as communal land. Although there is no formally established physical delimitation of each community's area of influence, each one recognises the limits that separate it from the next. In 2001, after extensive efforts led by national and international environmental organisations, the protected area was created as a Municipal Forest Reserve through an agreement with the Todos Santos Cuchumatán Municipal Council and was recognised by the National Council of Protected Areas (CONAP, *Consejo Nacional de Areas Protegidas*) in 2004. To administer the protected area, the municipal government created an institutional infrastructure with the support of environmental NGOs, consisting mainly of a new regulatory mechanism for access to, and use of, the reserve. The municipal government then acquired a leading role

it had not previously held, since care of the forests had been the responsibility of the local populations living in the vicinity. Some of the communities opposed the implementation of the new rules, especially since use of forest resources was now limited and sheep-pasturing areas were reduced, although that activity had for many years been the main source of subsistence for local communities, especially the poorest women (Elías et al. 2009).

INSTITUTIONAL AND TENURE CHANGES

The conversion of these communal forests into protected areas has required establishing a series of institutional mechanisms, such as legal and policy reforms, and technical support. None of these aspects are explicit in the technical and legal instruments for protected areas; rather, they are tacit agreements being promoted among community organisations in order to ensure conservation of their natural resources and to obtain the technical and financial support available for grassroots organisations—principally the NGOs involved in these processes. In this regard, the main institutional changes observed are the following:

Strengthening the role of municipal governments

The emergence of municipal leadership in managing natural resources is very recent; it was only in 1999 that the Municipal Code was reformed, assigning municipal governments the role of comprehensive oversight of their jurisdiction, and of preserving their natural and cultural heritage. This helped to ensure that conservation discourse would be well received by the municipal governments, which have seen in these proposals a revaluing of their role in territorial control and regulation. Many municipal governments thus gained or regained control over various areas traditionally considered to be communal lands (Totonicapán, Todos Santos Cuchumantán in Huehuetenango, Tecpán), thanks to the support they received from conservation NGOs to turn those communal lands into protected areas. Parallel to this, municipal governments strengthened their institutional capacity to assume the new responsibilities required for their incursion into the issue of conservation. This municipal role is also buttressed by the functions that the 1996 Forestry Law, Legislative Decree 101-96, assigned to municipal governments in forestry administration (Wittman and Geisler 2005). Both factors facilitated the creation of municipal forestry offices as well as protected area departments in several municipalities in the country; these offices have since attracted funds from forestry incentive programs and international cooperation. The most important aspect, however, has been assertion of the municipal governments' leadership role in administering natural resources.

Although the highlands population is mostly indigenous, in practice the municipalities respond to an official structure that operates uniformly throughout the country, as established by the Municipal Code; this means that they do not behave as indigenous government structures, even if all of the members of government are indigenous. Nevertheless, in most highland municipalities there are also traditional indigenous structures known as the 'lndigenous mayors'. The primary purpose of these entities is to maintain territorial cohesion, regulate natural resource use, and resolve conflicts through customary law. When communal forests become protected areas, formal regulations established by the Law of Protected Areas mandate that they fall under the jurisdiction and control of the municipality, while customary norms and the role of the traditional indigenous government gradually disappear. Even in municipalities where all council members are indigenous, these local governments obey the official laws and objectives of the state, which are often contrary to the expectations and goals of indigenous peoples. In addition, foreign cooperation, and national and international conservation organisations prefer to work with these municipal governments, precisely because they are formal entities, while the indigenous governments are left with very little technical and financial support.

Creation of protected areas

The main categories of protected areas that have been promoted are Municipal Forestry Reserves (related to IUCN category III), Regional Municipal Parks and Municipal Ecological Reserves (both related to IUCN category IV)[2]. These categories, whose only real difference is in the name, have been promoted in the western highlands since 1996 by various national and international NGOs, which are supporting technical, financial, and administrative capacity building among municipal governments. These NGOs are also coordinating efforts with both communities and local governments to facilitate the registration of communal and municipal forests in that management category. This includes building awareness and education activities to encourage municipal approval of mechanisms and instruments for protected area administration, among which the following stand out: agreements to create the park, establishment of a Municipal Department of Protected Areas and Environment (Departamento de Areas Protegidas y Medio Ambiente, DAPMA), assignment of a budget and corresponding personnel, and approval of respective bylaws.

These models bring about a substantial institutional transformation of natural resource management mechanisms in collective forest spaces. They can be seen in four spheres: first, a change in the actions, roles, and rights of stakeholders in relation to natural resource use and management; second, the establishment of the administrative apparatus, and the implementation of forest and natural resource regulation from the communal to the state arena; third, a new relationship between communities and state entities, specifically CONAP and the National Institute of Forests (Instituto Nacional de Bosques, INAB), for administration of the areas; and fourth, the presence of new external agents linked to technical and financial cooperation.

According to CONAP, 46 protected areas have been established in the country under the responsibility of municipal governments since 1996, of which 31 are municipal regional

parks, 3 are municipal forest reserves and 1 is a municipal ecological reserve (Table 1). They cover a total of 48,688 hectares (CONAP 2009b).

Institutional innovations

The creation of protected areas has raised the profile of municipal governments in natural resource management, mainly in the administration of those areas that were still under collective access. Municipal governments are more involved in defining policies and managing natural wealth, but are also involved in efforts to develop institutional capacities, such as the creation of DAPMAs as a technical and administrative area, in their respective municipal governments. One of the most notable aspects is the access to funds from national forestry incentives, primarily around forest protection and reforestation, and national and international cooperation being offered to municipal governments for that purpose. This has also obliged the creation of new norms to regulate natural resource use and access, which in most cases respond to the requirements established by CONAP. Examples of the new norms include: the administration of the new protected areas under the exclusive control of the municipal governments, restricted harvest of timber and non-timber forest products by traditional forest users, prohibition of traditional pastoral activities in protected areas, and formalisation of use norms and sanctions for offenders (Table 2).

The internal regulation for use of the forest of Totonicapán provides a concrete example of the new norms. Article 4 states, "Municipal forest management regime: the municipality together with the association authorises the felling of a tree in a determined area, after the technical study and payment of the fixed fee and the agreement to reforest the assigned area. The transport of firewood in vehicles and from live trees is prohibited." Article 5 establishes three types of sanctions: "first: a call to attention and written record of the case…, second: suspension of water services to the offender for one month and payment of a fine of fifty quetzals [50 GTQ, i.e., ~USD 6.50], third: definitive loss of the right to potable water" (Ulew Che Ja 1999).

CONAP itself has created a municipal government support unit called Municipal Government Linkage Unit, whose function is to support and involve the municipal governments in protected area management.

IMPACT ON THE LOCAL POPULATION AND COLLECTIVE MANAGEMENT

The transformation of communal forests into protected areas has involved a significant change in natural resource management. There is an evident contradiction between traditional forms of governance of communal forests and the official administration of protected areas. This is weakening the sphere of traditional use rights, local institutionality, local participation in collective management, local economy, and systems of resource and territorial governance.

The establishment of a protected area involves new regulations for natural resource management, in most cases limiting traditional uses (pasturing and extraction of timber and non-timber forest products)—as these activities are commonly considered incompatible with conservation objectives and thus are not included in the respective management plans.

Next, the mechanisms of control, supervision, and regulation of natural resource use that communities previously used are

Table 1

Protected areas on municipal and communal lands in Guatemala

Management Category	Quantity	Extension (ha)
Municipal regional park	42	39,938
Municipal forest reserve	3	7,226
Ecological reserve	1	1,524
Total	48	48,688

Source: CONAP 2009b

Table 2

Comparison of traditional and official norms in the new protected areas

Type of norm	Traditional norm	Official norm
Access for the harvest of timber products	Community members can cut branches or collect firewood from fallen trees; according to the needs of the petitioner and his or her services to the community, the communal authorities may permit the harvesting of live trees	Harvest should be authorised by protected area officials; harvesting of live trees is prohibited
Monitoring and supervision	The community elects a group of 'forest guards' annually, who offer their services to the community ad-honorem	The protected area office contracts of group of 'resource guards', who work for a salary
Sanctions	The communal authorities seek conciliation and the reversal or correction of the damage done based on customary law	The protected area office fines the offenders
Maintenance (tree nurseries, reforestation, control of forest fires)	Community members are required to contribute a certain number of labour days toward forest maintenance	The protected area office pays wages to the people who work towards the maintenance of protected areas

Note: In locations where communal forests are still run by indigenous governments, traditional norms are fully operational today. In contrast, where forests have been declared protected areas, official norms are rapidly being imposed. Nevertheless, some traditional norms can still be found in practice, mainly due to the demands for rights and access made by community forest users. For this reason, in the three cases studied, traditional norms can still be partial, viable options to guarantee the sustainable management of the new protected areas.

in decline, since the local system of norms has gradually been replaced by new municipal regulations established specifically for the management of protected areas. The local population thus participates less in natural resource administration. For example, the conciliatory role played by the *principales* or elders in the case of infractions has been replaced by fines or the suspension of water services, as imposed by the municipalities.

In addition, in many cases local economies based on the use of natural resources have been altered. In Todos Santos Cuchumatán and Totonicapán, the sheep pasturing activities practiced particularly by poor women have been significantly reduced. In those locations, plots for the natural regeneration of *Abies guatemalensis* have been established; their principal characteristic is to impede the passage of livestock. Consequently, families that have sheep have had to reduce the size of their herds due to the shortage of areas for pasture, and though the management of sheep in stables has been promoted, this practice has not been widely adopted because people do not have land to cultivate feed either.

Finally, socio-environmental conflicts have emerged due to the restriction of access to natural resource use and administration for communities that have not been included in the new governance schemes (Elías and Wittman 2005). Some of those conflicts involve disputes between interest groups within the communities themselves (Elías et al. 2009); others involve communities pitted against municipal governments (Prado 2007; Durocher 2002; Wittman and Geisler 2005); while still other cases express the rejection of the decisions imposed from the central level (Ferroukhi 2003).

CONSERVATION IN COMMUNAL FORESTS: TOWARD A NEW PARADIGM BASED ON THE WORLDVIEW AND TRADITIONAL KNOWLEDGE OF INDIGENOUS PEOPLES

Conservationists' concerns about the effects of social pressures on the degradation of communal forests are legitimate in the sense that they require immediate interventions to avoid irreversible damage to biodiversity and the environment in general. At issue, however, are the mechanisms used to promote conservation. In many parts of the world, the creation of protected areas has involved tenure changes that have been counterproductive for both communities and conservation objectives.

How should we move toward a new conservation paradigm that includes traditional forest users? The author's experiences in the Guatemala highlands suggest six fundamental proposals, emerging from the way in which conservation is understood by indigenous peoples.

Recognition of territorial rights and tenure for indigenous peoples

In the indigenous worldview, nature represents the vital space of which indigenous peoples are a part. Hence, conserving nature also means protecting the rights of indigenous peoples, particularly the rights to territory, organisation, and self-determination. Nonetheless, this dual sense of conservation is not always on the conservationist agenda, which generally focuses on biological or landscape elements, defined as 'areas of interest for conservation'. A new conservation approach must have as its starting point recognition of the collective rights of indigenous peoples and of their efforts to protect nature. In that regard, both International Labour Convention No. 169 (from 1989) and the United Nations Declaration on the Rights of Indigenous Peoples (from 2007) support the need to base conservation policies and actions on the collective rights of indigenous peoples.

Governance based on community organisation

Resource protection by communities is exercised through their local institutions, i.e., their own forms of government and norms. Thus rather than pressuring indigenous communities and local peoples to restructure their organisations to make them compatible with mechanisms proposed by NGOs, existing organisations must be recognised and buttressed, because they are the base on which conservation actions can be made more dynamic, without triggering conflict in communities.

Proportion between costs and benefits

The costs of supervising and maintaining natural resources in communal areas are generally compensated through the individual and collective benefits received by families and communities, such that this becomes a kind of incentive for collective action. Conservation projects generally introduce money, which is needed for some maintenance activities, but which often ends up replacing individual responsibilities or generating uncertainty and internal disputes over the control of funds.

Strengthening of traditional knowledge

Given their long relationship with nature, indigenous peoples and communities have developed knowledge systems that can serve as a basis for supporting conservation actions. Nonetheless, this knowledge is not only at risk due to processes of cultural change, but is also being taken advantage of for commercial purposes, without indigenous peoples having access to the distribution of benefits.[3] It has been demonstrated in the Guatemalan highlands that the great wealth of agro-biodiversity is due to the contribution of indigenous peoples to local knowledge, but that knowledge is being significantly threatened due to the introduction of new practices based on the use of improved seeds, agro-chemicals and commercial cropping. Conservation initiatives that respect and strengthen traditional knowledge are thus urgently needed.

Respect for the symbolic and cultural dimension of nature

For indigenous people, nature has a symbolic and sacred value

that is seldom understood or even included in conservation discourse. Sacred sites, for example, have an inestimable value in indigenous culture, hence new approaches are needed for their conservation. In Guatemala, a bill on sacred places under discussion in Congress has not yet received sufficient legislative backing for its approval, because it reverses some private tenure rights.

Strengthening community forest management

There are a few incipient initiatives that provide direct support to communities for forest management and conservation, such as the Communal and Municipal Forestry Strengthening Project (*Proyecto de Fortalecimiento Forestal Municipal y Comunal*, BOSCOM) of the INAB, and the forest initiative programs that have been operating since 1995. They are working with communities without the need to force them into declaring their forests as protected areas. Some NGOs are promoting similar initiatives aimed at helping communities improve and strengthen their communal forest management and conservation mechanisms.

CONCLUSIONS

The conversion of communal forests into protected areas is based on a dominant discourse about the need to ensure that diverse pressures do not accelerate natural resource destruction. This discourse is well received by municipal governments, which see in these initiatives a mechanism to assert control over the administration of natural resources in their jurisdiction and as an opportunity to access available funds.

Nonetheless, the creation of protected areas has meant restricting traditional rights over these spaces; this has led to fundamental changes in local governance and livelihood strategies that have displaced or restricted community participation in natural resource management.

If there is an interest in promoting conservation in indigenous territories, it is essential that indigenous peoples have the right to retain a certain degree of control over those resources through their existing collective territorial management institutions. This requires designing new governance schemes based on local participation and recognition of the collective rights of communities.

There is currently extensive debate on the need to rethink official protected area schemes to make them more pertinent to the needs and practices of indigenous peoples. This could mean including aspects of collective management, local knowledge, worldview, sacred places, and livelihoods in the management and planning mechanisms for protected areas, forests, watersheds, water sources, and other spaces in which sustainable management is important for society in general. In addition, the contribution of indigenous nature conservation systems in global efforts to address climate change is being increasingly recognised at a world level.

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Notes

1. http://conap.gob.gt:7778/conap/areas-protegidas/sigap/listado-areas-protegidas/
2. Neither the Law of Protected Areas (Legislative Decree 4-89) nor its implementing regulation (Governmental Accord 759-90) makes explicit reference to the IUCN protected area categories, but it is assumed that the six categories included in the regulation refer to those of the IUCN.
3. The working groups of the CBD are currently discussing an Access and Benefit Sharing (ABS) proposal for the uses of biodiversity with associated traditional knowledge.

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