

A large, stylized green tree graphic is positioned on the right side of the page. The tree has a thick, vertical trunk and several large, rounded, leaf-like shapes branching out from it. The leaves are a light green color, and the overall style is minimalist and modern.

**WHO OWNS THE WORLD'S FORESTS?  
FOREST TENURE AND PUBLIC FORESTS IN TRANSITION**

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## PREFACE

There has been much attention and effort—on national and international levels—devoted over past decades to global problems of deforestation and forest degradation and to improving forest management and conservation. The number of protected areas has increased dramatically; new funds have been established to finance protection. Also, many international and non-governmental organizations (NGOs) have moved to develop markets for sustainably-produced forest products.

Despite these efforts, forest degradation has steadily increased throughout much of the world. At the same time there is growing realization that insecure property rights are a key underlying problem and cause of degradation. Property rights to forest lands and resources are often contested, overlapping or simply unenforced. Much of the global forest estate is characterized by confusion and insecurity over property rights. This insecurity undermines sound forest management, for without secure rights forest holders have few incentives—and often lack legal status—to invest in managing and protecting their forest resources. While secure property rights cannot ensure sustained protection and investments in an asset, they are often a necessary condition.

This growing global recognition of the importance of property rights is mirrored by longstanding preoccupation with rights issues at local levels. The questions of who owns the forests, who claims them, who has access to them and further, who *should* own them, are hotly contested in many forest regions of the world. These are often the primary concerns of local people most directly dependent on forest resources.

Growing interest in developing markets for environmental services has also brought new attention to property rights issues. Many governments, local organizations and private-sector actors are beginning to consider questions of ownership regarding the services provided by forests, such as carbon sequestration, biodiversity habitat and watershed protection. They are considering who should pay for the production and maintenance of these services. The ways in which existing cultural, legal, and regulatory mechanisms should be applied to these potentially marketable services is likewise becoming a source of considerable debate.

This publication is designed to highlight trends in tenure and to provide data for more informed decisions by policy makers, governments, companies, investors, local communities, research institutions and concerned NGOs. We also intend to highlight gaps in available information and raise the question of who owns—and who should own—the world's forests.

Andy White and Alejandra Martin led the analysis presented here, working with Owen J. Lynch of the Center for International Environmental Law (CIEL). Given that official information on tenure distribution remains limited, this report serves as an alert about the magnitude of the issue's importance. It complements two other publications from Forest Trends on forest tenure: *Strategies for Strengthening Community Property Rights over Forests: Lessons for Practitioners* and *A Place in the World: Tenure Security and Community Livelihoods*.

Michael Jenkins

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## INTRODUCTION & RATIONALE

Until recently, the answer to the question of who owns the world's forests was fairly straightforward. For most of modern history, governments have legally owned most forests. In the Western world, this tradition of government ownership began in medieval Europe, where royalty excluded commoners and laid claim to forests to serve the interests of the manor. It was there, too, that the practice of modern forest management had its roots. The profession of forestry grew from the initial tasks of policing the grounds and ensuring a steady supply of forest products and wildlife for the crown.<sup>1</sup> This tradition of government ownership and government-led forest management was transported to many colonies and adopted by imperial states in the sixteenth and seventeenth centuries. Throughout Africa, the Americas and South and East Asia, new governments took rights from native peoples and gave public forest agencies authority over essentially all natural forests—and indirectly, over large numbers of native inhabitants.<sup>2</sup> A number of countries, including the United States, Mexico, China and Papua New Guinea, did not follow this path of government-dominated ownership. Still, since the Chinese revolution of the 1940s, global forest ownership has been largely static, and it is still largely dominated by government ownership.

But this picture of government ownership is beginning to change. Since the late 1980s, some governments of major forested countries have begun to reconsider and reform forest ownership policies. These transitions are driven by three primary considerations. First, governments are increasingly aware that official forest tenure systems in many countries discriminate against the rights and claims of indigenous people and other local communities. Although the data are incomplete, it is estimated that some 60 million highly forest-dependent indigenous forest people live in the rain forests of Latin America, West Africa and South East Asia.<sup>3</sup> An additional 400 million to 500 million people are estimated to be directly dependent on forest resources for their livelihoods.<sup>4</sup> Around the world, indigenous people have legitimate claims to more forest areas than governments currently acknowledge. In South and Southeast Asia alone, several hundred million people live on land classified as public forest.<sup>5</sup> International conventions and national political movements are driving governments to recognize the traditional ownership claims of indigenous peoples and recognize legal ownership and land use rights held by them and other local communities.<sup>6</sup>

This growing recognition of rights for indigenous and other local communities is not simply an issue of justice. There is also an increasing convergence of economic development and environmental protection agendas. Without secure rights, indigenous and other local community groups lack long-term financial incentives for converting their forest resources into economically productive assets for their own development. There is growing evidence that local community-based entities are as good, and often better, managers of forests than federal, regional and local governments.<sup>7</sup> In addition, biologists and protected area specialists are beginning to change perspectives on human interactions with nature, acknowledging that the traditional management practices of indigenous peoples can be positive for biodiversity conservation and ecosystem maintenance. This positive outcome is best gained by devolving control of forest land to communities.<sup>8</sup> A recent review of property rights and deforestation in Ecuador, for example, found that community ownership often provides a disincentive to forest conversion.<sup>9</sup>

A third reason for this transition is the growing recognition that governments and public forest management agencies often have not been good stewards of public forests. While many countries have proven that public ownership can be effective in protecting and managing forests, others have not developed the governance structures and management capacities necessary to ensure effectiveness. While exploitation is a legitimate use of public forests, in many places forests have been abused to finance political elites and curry political favors. The findings from a number of recent studies on illegal logging and corruption are staggering; illegal logging on public forest lands is estimated to cost forest country governments at least \$10 billion to \$15 billion a year—an amount greater than total World Bank lending to client countries and greater than total annual development assistance in public education and health.

Understanding tenure issues and trends is essential for all actors concerned with forests—for governments that seek to promote sustainable use, combat illegal logging and quell local unrest; for indigenous and other local communities and their supporters who want legal recognition of community rights and broader political participation; for environmental organizations that seek conservation without undermining local tenure rights; for sustainable forest management certifying bodies that want to ensure they do not unwittingly reinforce unjust claims; for private industries requiring reliable sources of timber and fiber; and for investors seeking low-risk investment opportunities.

Unfortunately, progress on studying, debating and addressing tenure issues is constrained by a lack of data and information. Despite the importance of forest tenure, there is no comprehensive overview of the global situation. Few countries keep accurate tenure data and little has been done to document and describe tenure distribution at the regional or global levels.<sup>11</sup> This lack of information is partly due to the complexity of the issue. To start, tenure definitions vary, and the spectrum of tenure types is wide and diverse. Ownership also is often in dispute, with a great difference between official government claims and those of local communities, especially indigenous ones. Finally, when it is available, tenure data is frequently outdated and often contradictory.<sup>12</sup>

This report is an initial attempt to capture the pieces of this global picture using the available information. It presents a newly collected and aggregated set of official tenure data for 24 of the top 30 forested countries of the world and summarizes the findings from that data.<sup>13</sup> These 24 countries represent approximately 93 percent of the world's remaining natural forest of approximately 3.9 billion hectares. This data is presented in a novel manner that more clearly distinguishes between community lands that are legally regarded as private property and those that are ostensibly in state ownership. This is a central difference, as private property rights are typically much stronger than rights to public forests. Given the predominance of public forest ownership, this report then describes the status of logging concessions in public forests -as a primary mode of government exploitation of forestlands.

Next, changes in forest tenure are illustrated by three major global trends in public forest ownership—all of which entail shifting ownership and access rights from governments to indigenous and other local communities. Given the growing importance of community ownership, this report also reviews the emerging evidence of the possibilities created by community forest ownership and management. The report concludes with a description of the data's key implications and opportunities for key actors to address forest tenure issues.

## OFFICIAL FOREST OWNERSHIP: THE GOVERNMENT PERSPECTIVE

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### THE DATA

Tenure data collected for 24 of the top 30 forested countries appears in Table 1. The top 30 forested countries include 14 of the 17 megadiversity countries in the world<sup>14</sup> as well as the top 7 of the 10 leading industrial roundwood-producing countries—the United States, China, Brazil, Canada, Indonesia, the Russian Federation and Sweden (the other three major roundwood producers are France, Malaysia and Germany). Reliable tenure distribution data for six of the top 30 countries—Angola, Venezuela, Zambia, Mozambique, Paraguay and the Congo Republic—are unavailable. For Tanzania, Indonesia, Peru and Colombia, data are incomplete.

This report presents forest ownership data as identified by governments, recognizing that these statistics do not acknowledge the unrecognized claims of indigenous and other forest dependent local communities, including areas where communities, in fact, exercise authority over forest resources without official sanction. The administration of forest resources by indigenous and other local communities is thus greater, perhaps much greater, than reflected in the official data. This difference between official ownership and effective authority is perhaps most pronounced in Africa and Asia, where governments own most forest land, but often appear to have authority over very little of it.<sup>15</sup> A further complication is the fact that governments have their own definitions for “forest,” and these definitions can have profound impact on the ways in which forest tenure issues are perceived and addressed.<sup>16</sup> Another complication in presenting the data derives from the complex relationship between legal “ownership” of land and forest resources and rights to access, use and exploit those resources. Governments universally retain some rights to control the use of land and resources—regardless of ownership. For this reason, ownership often does not equate to effective control over the land.

In order to better understand and depict tenure status, this report adopts a set of categories of ownership, starting with the predominant legal categories of public and private property—recognizing that in reality there is a broad spectrum of tenure arrangements between these two.<sup>17</sup> These categories, and the particular placement of country data within these categories, will need to be refined and improved over time.

This report defines public ownership as all lands owned by central, regional or local governments. The public category is further divided into two subcategories: lands administered by government entities and lands set aside—or “reserved”—for local communities, including indigenous groups, on a semi-permanent, but conditional, basis. In this latter category, governments retain ownership and the entitlement to unilaterally extinguish local groups’ rights over entire areas. Under this arrangement, local groups typically lack rights to sell or otherwise alienate land through mortgages or other financial instruments.<sup>18</sup> Although the distribution of rights between government and community in this category is different in almost every country, invariably governments retain strong authority to extract and manage forest resources. Examples of this category include tracts of government lands “reserved” for indigenous peoples in Brazil and the United States, the joint-forest management schemes of India, areas covered by social forestry instruments in Thailand, the Philippines and Indonesia, and areas included in Zimbabwe’s pioneering CAMPFIRE program.

**TABLE 1 — OFFICIAL FOREST OWNERSHIP IN 24 OF THE TOP 30 FOREST COUNTRIES**

COUNTRY  (by descending area of forest cover as identified by FAO 2001)	AREA IN MILLION HECTARES (PERCENTAGE OF COUNTRY TOTAL)			
	PUBLIC		PRIVATE	
	Administered by Government	Reserved for Community & Indigenous Groups	Community/ Indigenous	Individual/ Firm
Russian Federation <sup>19</sup>	886.5 (100)	0.0 (0)	0.0 (0.0)	0.0 (0.0)
Brazil <sup>20</sup>	423.7 (77.0)	74.5 (13.0)	0.0 (0.0)	57.3 (10.0)
Canada <sup>21</sup>	388.9 (93.2)	1.4 (0.3)	0.0 (0.0)	27.2 (6.5)
United States <sup>22</sup>	110.0 (37.8)	17.1 (5.9)	0.0 (0.0)	164.1 (56.3)
China <sup>23</sup>	58.2 (45.0)	0.0 (0.0)	70.3 (55.0)	0.0 (0.0)
Australia <sup>24</sup>	410.3 (70.9)	0.0 (0.0)	53.5 (9.3)	114.6 (19.8)
Democratic Republic of Congo <sup>25</sup>	109.2 (100)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)
Indonesia <sup>26</sup>	104.0 (99.4)	0.6 (0.6)	0.0 (0.0)	0.0 (0.0)
Peru <sup>27</sup>	n.d.	8.4 (1.2)	22.5 (33.0)	n.d.
India <sup>28</sup>	53.6 (76.1)	11.6 (16.5)	0.0 (0.0)	5.2 (7.4)
Sudan <sup>29</sup>	40.6 (98.0)	0.8 (2.0)	0.0 (0.0)	0.0 (0.0)
Mexico <sup>30</sup>	2.75 (5.0)	0.0 (0.0)	44.0 (80.0)	8.3 (15.0)
Bolivia <sup>31</sup>	28.2 (53.2) <sup>32</sup>	16.6 (31.3) <sup>33</sup>	2.8 (5.3) <sup>34</sup>	5.4 (10.2) <sup>35</sup>
Colombia <sup>36</sup>	n.d.	n.d.	24.5 (46.0)	n.d.
Tanzania <sup>37</sup>	38.5 (99.1)	0.4 (0.9) <sup>38</sup>	0.0 (0.0)	0.0 (0.0)
Argentina <sup>39</sup>	5.7 (20.5)	0.0 (0.0)	0.0 (0.0)	22.2 (79.5)
Myanmar <sup>40</sup>	27.1 (100)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)
Papua New Guinea <sup>41</sup>	0.8 (3.0)	0.0 (0.0)	25.9 (97.0)	0.0 (0.0)
Sweden <sup>42</sup>	6.1 (20.2)	0.0 (0.0)	0.0 (0.0)	24.1 (79.8)
Japan <sup>43</sup>	10.5 (41.8)	0.0 (0.0)	0.0 (0.0)	14.6 (58.2)
Cameroon <sup>44</sup>	22.8 (100)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)
Central African Republic <sup>45</sup>	22.9 (100)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)
Gabon <sup>46</sup>	21.0 (100)	0.0 (0)	0.0 (0.0)	0.0 (0.0)
Guyana <sup>47</sup>	30.9 (91.7)	0.0 (0.0)	2.8 (8.3)	0.0 (0.0)
<b>Total</b>	<b>2,803.2</b>	<b>131.4</b>	<b>246.3</b>	<b>443.0</b>

The private ownership category is also subdivided into two categories: forest areas owned by indigenous and other local community groups and those owned by private individuals and firms. Private ownership is defined as rights over a specific area that cannot unilaterally be terminated by a government without some form of due process and compensation. Owners of private property typically have rights to access, sell or otherwise alienate, manage, withdraw resources and exclude outsiders. This situation is described as “fee-simple” ownership in countries with Anglo-American property traditions. Private group ownership, by contrast, simply refers to an area owned by a group as private property.

These categories may appear academic—particularly the distinction between private group rights and public “reserves”—but the distinctions are important. Private rights are more secure because they are not as easily controlled or expropriated by government. Communities that hold private rights have more leverage than communities with long-term public use rights when negotiating with governments and external commercial interests. The importance of this distinction may become more apparent as the importance of ecosystem services provided by forests grows. Communities with private rights generally have much stronger claim to the benefits of ecosystem services and opportunities generated by their forests—as well as control over more traditional uses—than do communities on public land. Communities with corporate governance systems recognized in law can also be eligible in some countries to take on collective debt and thereby attract private investment for their forestry activities.

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#### SUMMARY ANALYSIS OF OWNERSHIP

The aggregate tenure distribution for the 24 countries reported in Table 1 is: about 2.8 billion hectares owned and administered by governments; 131 million hectares reserved for communities; 246 million hectares owned by indigenous and community groups; and 443 million hectares privately owned by individuals and firms. These aggregate statistics should be used with caution given that they are derived from only 24 of the many dozens of countries with forests, include only official data for lands that are known to be in each of the categories, and do not reflect the amount of forest land actively claimed by indigenous and other local communities. For these reasons the aggregate numbers should be understood as low-end estimates, particularly for the three non-government-administered categories. The percentages of forest in each tenure category are perhaps more reliable. Extrapolated to the global forest estate of 3.9 billion hectares, these data suggest that approximately 77 percent of the world’s forest is—according to national laws—owned and administered by governments, at least 4 percent is reserved for communities, at least 7 percent is owned by local communities, and approximately 12 percent is owned by individuals (see Table 2).



**TABLE 2 — ESTIMATED DISTRIBUTION OF FOREST OWNERSHIP FOR SELECTED CATEGORIES**

CATEGORIES	EXPRESSED IN PERCENT OF TOTAL			
	PUBLIC		PRIVATE	
	Administered by Government	Reserved for Community & Indigenous Groups	Community/ Indigenous	Individual/ Firm
Global Forest Estate	77	4	7	12
Developing Countries	71	8	14	7
Developed Countries	81	1	2	16
Countries with Tropical Forests	71	6	13	10
Top 17 Megadiverse Countries	65	6	12	17
Top 5 Roundwood Producers	80	7	6	7

When aggregated for developing countries only—which excludes statistics for Canada, the United States, Russia, Australia, Sweden and Japan—the importance of community reserves and ownership increases. Community reserves represent at least eight percent of all developing country forests, community ownership represents at least 14 percent and individual ownership represents only 7 percent. This suggests that in developing countries, community reserves and ownership total at least 22 percent of all forests—approximately three times the amount held by private individuals and firms. Interestingly, the percentage of government-owned forest is higher in developed countries as is the percentage of privately-held forest. To date, community ownership and access is largely concentrated in developing countries.

There are some important exceptions to these generalities within certain countries. First, in the United States private individuals and firms own more than half of the forests, or 55 percent. The U.S. is joined by two other commercially important northern forested countries, Sweden and Finland at 70 percent and 80 percent respectively,<sup>48</sup> and Argentina, where some 80 percent of forests are also privately owned by individuals and firms. Other important exceptions are Mexico and Papua New Guinea, where indigenous and other local communities respectively own some 80 percent and 90 percent of forests respectively.

African countries with available data have essentially no land areas officially reserved for communities and no privately held forest, community or individual. These data do not accurately represent all of Africa, as some countries are beginning to reform their land laws and recognize customary use of forest resources.<sup>49</sup> Further research will be needed to document this trend as soon as data become available.

## PUBLIC LOGGING CONCESSIONS

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While identifying whether forest areas are publicly or privately owned is critical, it is also important to ascertain how owners exercise their property rights. Forest owners, for example, frequently grant access and use rights to other parties. Given that governments own and administer the vast majority of the world's forests, the question of who has access and rights to those public forests becomes important. Although there are exceptions, governments in countries with large amounts of forest have traditionally chosen to transfer access rights and management authority to large-scale private forest industry through logging concessions. In most concessions, companies have long-term rights to access, manage the land, harvest timber and exclude the public. In return, firms typically promise to pay royalties and other fees to the government. One author estimated that in 1980 some 90 percent of all industrial roundwood derived from logging concessions.<sup>50</sup>

Data for the 16 countries for which concession information is available are described in Table 3. These countries constitute approximately 23 percent of the global forest estate. Reporting concession data is very difficult for a number of reasons. First of all, most governments do not publish data regarding concessions, rendering difficult the task of locating and verifying information. Secondly, concession area and access can change quickly, making data quickly out-of-date. Nonetheless, given existing data sources, for these 16 countries alone, the total number of hectares of public forest currently allocated to private industry is about 396 million hectares. This figure is most probably low, given for example, that some 81 percent of Cameroon's forests have been allocated to concessions, but only 37 percent is currently under concession.<sup>51</sup>

The total area of public forest currently allocated to large industry in these 16 countries is about 150 million hectares greater than the amount owned by local communities, about 265 million hectares greater than the amount of public forest reserved for communities and only some 47 million hectares less than the amount of all forest area owned by private individuals and firms. Concessions occupy the majority of public forest land in eight of the 16 countries listed above: Canada, Republic of Congo, the Central African Republic, Gabon, Equatorial Guinea, Malaysia, Cambodia and Indonesia. In addition, logging concessions are known to predominate in Russia, Papua New Guinea, Cote d'Ivoire and Ghana.

**TABLE 3 — PUBLIC FOREST CONCESSIONS IN SIXTEEN FOREST COUNTRIES**

Country	AREA IN MILLION HECTARES (PERCENTAGE OF COUNTRY TOTAL)			
	Total Forest	Area Under Concession	Number of Operating Concessions	Comments
<b>AFRICA</b>				
Central African Republic <sup>52</sup>	4.9	3.5 (71)	10 <sup>53</sup>	This 10 is composed of 4 French companies, 2 from Romania, 1 Former Yugoslavia and 3 domestic.
Cameroon	19.4	7.2 (37)	117 <sup>54</sup>	Only 84 of the 177 companies have valid documented logging rights. Half of the total area under concessions is abandoned.
Republic of Congo	21.6	17.1 (79)	17 <sup>55</sup>	
Democratic Republic of Congo	112.5	40.9 (36)	n.d.	
Equatorial Guinea	2.1	1.5 (71)	n.d.	
Gabon	21.0	11.9 (56)	221 <sup>56</sup>	13 companies hold 50 percent of the concession area. This equals almost 21 percent of Gabon's total forest cover.
<b>AMERICAS</b>				
Bolivia <sup>57</sup>	53.0 <sup>58</sup>	5.4 (10.2)	86	In addition to regular concessions, the government awards different types of "land leases" for long-term contracts (400,000 ha.) and scientific research (200,000 ha.).
Canada <sup>59</sup>	388.9	220.0 (56.6)	n.d.	Thirteen companies hold 48 percent of the area of commercial forestry operations.
Guatemala <sup>60</sup>	4.2	0.2 (4.8)	n.d.	
Peru <sup>61</sup>	68.1	1.2 (1.7)	n.d.	
Suriname <sup>62</sup>	14.3	3.2 (22.4)	32	
Venezuela <sup>63</sup>	45.8	2.7 (5.9)	n.d.	
<b>SOUTHEAST ASIA</b>				
Cambodia <sup>64</sup>	9.8	6.3 (64.3)	33	Legally reported log volume is 220, 894 m <sup>3</sup> , export volume of "unreported" logs is 902,500 m. <sup>65</sup>
Indonesia <sup>66</sup>	104.6	62.5 (60.0)	n.d.	There were 585 concessions in 1994-95. The top 10 conglomerates held 228 of these concessions, 45 percent of the concession area.
Malaysia <sup>67</sup>	18.9	10.9 (57.7)	n.d.	Figure refers to area designated for production, not necessarily currently under concession.
Philippines <sup>68</sup>	6.6	1.5 (22.7)	n.d.	Area under concession refers to active and inactive zones.
<b>Total</b>	<b>895.7</b>	<b>396.0</b>		

The literature reviewed in Table 3 also indicates that the governments of many countries grant logging rights to a relatively small number of companies, and that corruption and illegal logging are commonplace. According to a recent global review of illegal logging prepared by Britain's Royal Institute for International Affairs, the "allocation of timber concessions has often been used as a mechanism of mobilizing wealth to reward allies and engender patronage. Protected by powerful patrons, timber companies may evade national regulations with relative impunity. State forestry institutions may be subject to regulatory capture, becoming clients of concession-holding industrial interests of the ruling elite, exercising their powers as a form of private property rather than a public service."<sup>69</sup> As has been reported in Indonesia, government-required forest management plans often have provided official cover for the corruption and illegal logging common on public lands.<sup>70</sup>

Unfortunately, in many countries few profits from concessions are reinvested in forest communities or social programs that aim to provide sustainable livelihoods to local people. Harvest levels are often unsustainably high and lead to boom-bust cycles in local development.<sup>71</sup> This approach to public forest land management has often led to environmental degradation, social instability and insecurity, and additional financial burdens on cash-starved governments.

Logging concession policy has been studied by a number of authors who have generally focused on the technical mechanics of concessions and measures to improve performance.<sup>72</sup> However, new evidence suggests that the fundamental assumptions underlying concession policy merit reconsideration, including the assumptions that governments have the capacity to effectively administer these complicated systems and that large private firms are uniquely qualified to administer and exploit public forest resources.<sup>73</sup> Most fundamentally, concession policy is founded on the notion that government ownership is the optimal—or at least the most adequate—form of forest tenure. The weight of evidence on illegal logging and corruption, along with the social consequences of the quick liquidation strategies practiced by many industries, are driving some countries to rethink and reform concession policies.

## PUBLIC FORESTS IN TRANSITION

In some countries governments have begun to shift dramatically toward community access and ownership in the last decade, partly in recognition of the legitimate claims of indigenous and other local communities and the limits of public forest governance. At least ten forest countries have enacted new legislation to strengthen indigenous ownership in this period (Table 4). Approximately 57 percent of the legal rights over the some 380 million hectares now owned by, or reserved for, communities have been transferred in the last 15 years (Table 5). In the eight Amazon basin countries alone, the total area of public land reserved for communities or legally recognized as being under community ownership now exceeds one million square kilometers, roughly the area of Bolivia, and all this land has been transferred since 1985.<sup>74</sup> These legal reforms represent a dramatic shift in forest ownership. This shift, which began in Latin America in the late 1970s, appears to have gained momentum in Africa by the late 1990s and then spread more recently to Asia. The bulk of the some 215 million hectares recognized or legally transferred in the last decade have been in Latin America. It is likely that once the African governments begin to delimit forests and implement new legislation, a second wave of community ownership will occur.

Within these many shifts and changes in the major forest countries of the world, three new trends in public forest ownership are most pronounced—each reflecting a different degree of governments' legal transfer of rights to communities or recognition of pre-existing community-based rights.<sup>75</sup> Some governments have begun to recognize community ownership and reform their legal frameworks accordingly; others are devolving responsibility for managing public forest lands to communities and a third group is beginning to reform public logging concessions to support greater local community access. Each of these three trends is discussed below.

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### LEGAL REFORMS TO RECOGNIZE COMMUNITY-BASED PROPERTY RIGHTS

The legal recognition of indigenous and other local community property rights is the subject of major national debate and conflict in many nations—including Bolivia, Peru, and Colombia in South America and Uganda, Tanzania, South Africa and Zimbabwe in Africa. Some nations have reformed land laws to recognize private community-based property rights of forest-dependent communities. In these countries the process of recognizing of community property rights has developed in tandem with demands for rights to self-determination and cultural differentiation. In Colombia, for example, legal changes in 1995 allowed indigenous groups and Afro-Colombian communities to register their rights to territories they have historically occupied.<sup>76</sup> Titles to land have been granted to 404 communities, protecting them against government expropriation.<sup>77</sup> The Philippine Supreme Court recently upheld the constitutionality of the Indigenous Peoples Rights Act of 1997, providing legal recognition of ancestral domain rights pursuant to indigenous concepts of ownership over potentially as much as twenty percent of the nation's total land mass, including well over a third of the previously public forest estate.<sup>78</sup>

**TABLE 4 — RECENT LEGAL REFORMS STRENGTHENING COMMUNITY FOREST TENURE IN FOREST COUNTRIES**

Country	Year Enacted	Key Feature Legal Reform
Australia	1996	The federal government returned ownership rights to traditional Aboriginal groups and portions are leased back to the National Parks & Wildlife Service for national parks.
Bolivia	1996	Ancestral rights of community groups have precedence over forest concessions holders where these rights overlap. Subsequent laws have strengthened community rights.
Brazil	1988	The Constitution recognizes ancestral rights over land areas indigenous groups and former slave communities traditionally occupied. Federal government is responsible for demarcating indigenous reserves on public lands and ensuring land rights of indigenous groups are protected.
Colombia	1991	Constitution of 1991 recognizes and outlines a framework for collective territorial rights for indigenous groups and Afro-Colombian traditional communities.
Indonesia	2000	New regulatory process recently established by which customary ownership can be recognized.
Mozambique	1997	Titles for customary rights are available.
Philippines	1997	Constitution of 1987 protects ancestral domain rights. Indigenous Peoples Rights Act of 1997 provides legal recognition of ancestral domain rights pursuant to indigenous concepts of ownership.
Tanzania	1999	Customary tenure is given statutory protection whether registered or not. Titles for customary rights are available.
Uganda	2000	2000 draft currently under revision. Government is embarking upon an ambitious program of devolution to district and local councils.
Zambia	1995	Recognizes customary tenure but with strong encouragement to convert to leaseholds and titles for customary rights are not available.

In Canada, Indonesia, Malaysia and Nicaragua, recognition of indigenous and community rights is the subject of major national debate and conflict. A 1997 decision by Canada's Supreme Court on the Delgamuukw case recognized the sovereign land rights of First Nations over land they can document as traditional territory.<sup>79</sup> Some provincial governments have yet to fully accept this decision, sustaining the conflict between First Nations and governments over forests.<sup>80</sup> In Indonesia, the government recently established a process by which customary ownership can be recognized, although the process is so cumbersome and vulnerable to political manipulation that community advocates question its utility.<sup>81</sup> In October 1998 a district court in East Kalimantan issued precedent-setting statements recognizing the existence of indigenous peoples in Indonesia and their right to protect their territories.<sup>82</sup> In a recent landmark case in Malaysia, the High Court in the state of Sarawak upheld the customary rights of the Iban village Rumah Nor against a major forest company operating a government concession. The court faulted the Borneo Paper and Pulp Company for unlawfully accessing and exploiting the group's forest. The ruling expanded the definition of customary law to include rivers, streams and communal forests.<sup>83</sup>

In 1995 the Supreme Court of Nicaragua ruled that a 30-year logging concession granted to the SOLCARSA company on Mayagna ancestral lands was unconstitutional. This was the first case before the Inter-American Court on Human Rights to directly address the territorial rights of indigenous communities. The government of Nicaragua refused to revoke the logging permit and in a landmark decision in September 2001, the Inter-American Court affirmed the Mayagna peoples' collective right to their land, resources and environment by "declaring that the community's rights to property and judicial protection were violated by the government of Nicaragua when it granted concessions to a foreign company without either consulting with the community or obtaining their consent." The court found that the government discriminated against the community by denying equal protection under the laws of the state and violated its obligations under international law.<sup>84</sup> While little action has yet taken place, the government has pledged to carry out the court's decision.

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#### GOVERNMENT DEVOLUTION OF LIMITED RIGHTS TO INDIGENOUS AND OTHER COMMUNITIES

Over the last 15 years several governments, such as that of Brazil, have begun to set aside public lands for indigenous communities. Other countries, including India and Nepal, have devolved limited rights to local communities to manage and benefit from forests that are still officially considered public land. This process is actively underway in most of the African sub-continent, with more complete transfer of rights present only in Tanzania, Gambia and Cameroon.<sup>85</sup> These arrangements, known by terms such as "joint management" and "co-management," do not alter state ownership. They represent a much weaker form of property rights than those provided by private community-based ownership.

These new arrangements involving various types of collaborative management by governments and local communities are increasingly common in areas where governments recognize their limited capacity to manage public forests lands effectively. It is also increasing in forest areas that have already been severely degraded and no longer interest private industry.

**TABLE 5 — AMOUNT OF FOREST RECOGNIZED AS COMMUNITY OWNERSHIP OR RESERVED FOR COMMUNITIES IN SELECTED COUNTRIES SINCE 1985**

Country	AREA IN MILLION HECTARES	
	Recognized Community Ownership	Reserved for Community Administration
Australia	53.5	
Bolivia	2.8	16.6
Brazil		74.5
Colombia	24.5	
India		11.6
Indonesia		0.6
Peru	22.5	8.4
Sudan		0.8
Tanzania		0.4
<b>Total</b>	<b>103.3</b>	<b>112.9</b>

In India, out of the 65.2 million hectares recognized by the government as public forests, over 10 million are co-managed with forest user groups. Nepal uses a similar type of joint forest management, and the percentage of benefits going to communities increased from 40 percent in 1978 to 100 percent in 1995.<sup>86</sup> However, the Nepali government is now attempting to take back many of the rights and benefits that it previously devolved. In Indonesia, forestry laws have been modified to allow forest communities to form cooperatives and extract timber from public forests, but this has also served as a screen for industries to act as cooperatives. These rights can be unilaterally revoked by the state at any time.<sup>87</sup>

Mounting evidence suggests these efforts to devolve government authority to communities can increase local benefits and incomes.<sup>88</sup> Responsibilities for resource management, however, are often being transferred to local users without transferring commensurate rights and access to benefits. In some cases these arrangements can actually reduce and erode pre-existing community rights.<sup>89</sup> In Brazil, for example, where some 75 million hectares have been set aside for indigenous communities, these communities have no right to harvest their timber, even under sustainable management regimes. The evidence from India indicates that forest cover and government forest departments have benefited from joint forest management, but the impact on communities has been mixed. In many countries, local groups see joint management as an inadequate but politically acceptable step toward increasing local community management authority and benefits.

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#### REFORMING PUBLIC FOREST CONCESSION POLICY

Some countries, including Canada, Laos and Guatemala, are beginning to adjust traditional industrial logging concession arrangements to encompass indigenous and other local communities. In British Columbia, the provincial government recently agreed to allow Weyerhaeuser Limited to transfer its concession rights to a new business venture with a coalition of indigenous groups as the lead partner.<sup>90</sup> This venture, named Iisaak Forest Resources, is composed of Weyerhaeuser Limited and a coalition of First Nations that holds majority ownership. The coalition now has majority ownership of access and use rights to a portion of its ancestral homelands—but not to the land itself. More transfers of use rights between companies and communities are underway and more joint ventures are being explored in British Columbia. These agreements are often seen as “interim measures” by First Nations, helpful in their ongoing treaty negotiations with governments.

The Guatemalan government has piloted the granting of timber concessions to local communities rather than large industries, and the early experience is positive (Box 1). In Laos PDR, the government has launched a similar participatory management pilot program involving 60 villages through fifty-year management contracts. Preliminary evaluations indicate that the quality of management has improved, the amount of illegal activity has declined and the royalty payments to the government have increased, although the share of income from forests destined for local people remains low.<sup>91</sup>



### Box 1 — Community Concessions in Guatemala

The Mayan Biosphere Reserve is the largest area of natural forest in Guatemala. Encroachment and illegal logging have long been major threats to the Reserve. In 1998 the National Council of Protected Areas (CONAP) issued at least four forest management concessions to local communities that were supported by partner NGOs that provide technical, administrative and community organizing expertise. The concessions range from 7,000 to 55,000 hectares. Timber and non-timber resources are managed under a single plan. Timber is sawn on site to increase local employment. Experience has been varied but generally positive. One community's operation produced a net profit of US\$89,500 for the first year in operation, roughly translated to \$318 per hectare or \$4,400 per family. Satellite images recently revealed that illegal logging and the agricultural frontier have continued to expand in protected areas, while in the community concession areas, logging has decreased.

*International Tropical Timber Organization Newsletter. 2000. Spencer Ortiz. Community Forestry for Profit and Conservation: A successful community management experience in timber production and marketing in Guatemala.*

## THE POSSIBILITIES & POTENTIAL OF COMMUNITY FOREST OWNERSHIP

Indigenous and other communities are increasingly acknowledged for being important stewards of the global forest estate. This relatively new development provides an historic opportunity for sustainable forest conservation and the economic development of some of the world's poorest regions. In practice—as is the case with governments, individuals and firms—some communities have translated ownership into effective forest management, and others have not. Unfortunately, in addition to contending with historic political discrimination, community management is often doubly disadvantaged from a policy perspective: first because the policy frameworks of most governments privilege agriculture over forestry, and second because most forest policies privilege large producers over small.<sup>92</sup> Performing on these “uneven playing fields” is very difficult, effectively competing even more with established enterprises.

In parallel with policy and market discrimination against communities, community groups face their own internal challenges of building on traditional governance systems to manage their forests.<sup>93</sup> Papua New Guinea is a frequently cited case where community ownership has not led to effective management (Box 2). There, and in other countries across the world, local communities face many of the same temptations as governments and private timber companies.

### Box 2 — Challenges to Effective Community Ownership in Papua New Guinea

Papua New Guinea contains the largest intact tropical rainforest wilderness in the Asia Pacific region and the third largest on the planet. Some 90 to 97 percent of its forests are owned by some 8,000 traditionally autonomous tribal groups. Despite state-recognized local community ownership, government and industry continue to wield tremendous influence, often taking advantage of limited community capacities to defend local interests against outside entrepreneurs. Almost half the country's accessible forests are already committed to industrial logging and over 30 proposed timber projects threaten the rest. Some community leaders participate in corrupt deals that advance their own interests at the expense of their communities. Rapid deforestation, widespread corruption and illegal logging have led to a moratorium on all new logging concessions in PNG and new support for community-based forestry management initiatives.

*International Institute for Environment and Development (IIED). Papua New Guinea Country Study. Policy that Works for Forests and People Series No: 2. 1999. Forestry and Land Use Program. London.*

Nonetheless, there are many examples of sound community management where harvest levels appear sustainable and benefits are distributed more equitably to local community members.<sup>94</sup> In Mexico, for example, community-owned forests contribute substantially to local livelihoods (Box 3). As with private individually-owned property, this occurs when communities have clear rights and there are mechanisms in place to monitor and regulate use and exclude outsiders.<sup>95</sup>

A key lesson from these experiences is that, just as in the case of government and private land owned by individuals, there must be a legal and policy environment to support community ownership in order for it to be effective. Official legal recognition of community-based rights to forest resources must be feasible to acquire, and must be defensible in both political and judicial arenas.<sup>96</sup> Unfortunately, progress on these fronts is lagging in many countries.

For example, in 1996 the government of Bolivia enacted legislation recognizing indigenous territorial ownership, but the conditions for achieving formal documentation of communal legal rights is complicated and costly. By 1999, only 10 percent of the designated territories had received titles.<sup>97</sup> Even when native tenure rights are officially recognized, timber concessions, other extractive commercial enterprises and protected areas are often “legally” overlaid on ancestral domains without any notice, participation, or benefits accorded to indigenous and other local peoples.<sup>98</sup> In China, although the law states that local communities have clear authority over collective forests, the government has frequently reallocated rights to forest resources without any local consultation or compensation.<sup>99</sup> A recent example is the so-called “logging ban” of 1998 that originally was intended to address over-harvesting on public forests. However, in many provinces it was arbitrarily extended to community forests—which by some accounts are better managed than public forests.<sup>100</sup>

### Box 3 — Mexico's Community Forests

Mexico is one of the few countries in the world where the vast majority of forests are privately owned by indigenous and other communities. Even so, there are important barriers to effective community forestry stemming from inadequate policies, technical support and markets. There are approximately 8,000 communities who own 44 million hectares of forest, or an average of 5,000 ha. per community. The legal status of these lands derives from the creation of *ejidos* as land reform blocks transferred to producers from large landowners after the Revolution, recognition of traditional claims of indigenous groups to ancestral territories, or lands to which they fled after conquest. Many of the social systems governing these communities predate the Spanish conquest although they have been strongly modified by cultural contact. A constitutional amendment proposed in early 2001 attempts to regulate indigenous self-governance rights, including land and forest use, but this amendment has been criticized as not ratifying basic principles of indigenous rights.

Despite official community ownership, until 1986 government unilaterally granted access to commercial value community forests to private concessionaires and then to parastatals, giving communities little voice over management decisions and transferring limited benefits from logging. This approach, combined with historical agricultural and forest policies biased in favor of large private industry and urban dwellers, created a situation whereby indigenous and *ejido* communities remain among the poorest people in Mexico and community-based forest industries account for less than 18 percent of the registered national forest industry capacity. The 1986 Forest Law and subsequent modifications in 1992 and 1997 suspended the concessions system and increased opportunities for communities to direct their own forest enterprises—including extraction, provision of services and processing, as long as they prepared legal management plans for their forests. Less than a quarter of all communities and *ejidos* have active management plans—related to the cost of preparing such plans and encouraging illegal logging. The poor quality of original territorial surveys of community boundaries leaves many inter-community conflicts over boundaries and encourages substantial investment of community funds to police their lands and advance their claims in court.

Despite these limitations, some 500 communities and *ejidos* have developed quite successful integrated forest enterprises, generating local employment and technical expertise and providing an alternative to labor migration and deforestation. Some communities hold strong cultural values that lead them to invest profits in social services and infrastructure and conservation of biodiverse areas. The forest sector has an enormous potential to provide economic, environmental and social services, with opportunities in timber and non-timber forest products and small-scale tourism, but the sector has yet to receive equal treatment as agriculture or cattle raising. It is clearly time to reconsider the role of social forestry in Mexico as a development strategy that addresses poverty alleviation, economic development and environmental protection.

*A. Molnar and A. White, 2001. "Forestry and Land Management" in Mexico: A Comprehensive Development Agenda for the New Era. Giugale, Lafourcade and Nguyen eds. World Bank. Washington, D.C.*

*Segura, Gerardo. The State of Mexico's Forests Resources Management and Conservation. UNAM. Mexico.*

Recent experiences in Africa have been similar. Although Uganda and Tanzania now legally recognize community ownership, as in most other countries that have enacted similar reforms, there is no legal guidance on the principles and rules for formally recognizing and governing these areas.<sup>101</sup> Tanzania has gone farthest, in devolving formal registration of Village Land Forest Reserves to local communities with or without the explicit support of the central forestry administration.<sup>102</sup>

Relationships between community-based property rights and environmental services that benefit the general public are drawing new attention. Governments' traditional approach to conservation has been the creation of official protected areas—either by delineating an area of existing public property or by using the right of eminent domain to expropriate land.<sup>103</sup> Not only has this approach often abused legitimate community rights, but it has often led to mixed results, largely because governments often lack the incentives, resources and political will needed to protect and sustainably manage natural resources that are public property. At the same time, valuable public services provided by the private forests of indigenous and other communities have often been taken for granted by the wider public that benefits. At the same time it is still widely believed by political and economic elites in many nations that local communities should not or will not use their forest assets for economic development. Official efforts on national levels, therefore, to protect and maintain publicly valuable environmental services often have not been harmonized with local communities' rights and incentives to manage their private property. Nor do these strategies acknowledge the role of indigenous peoples as a living repository of cultural norms and technical knowledge that shapes the biodiversity of ecosystems, which can be an important element in biodiversity conservation and in carrying out ex situ conservation.

Australia provides an innovative exception to this long-standing disconnect. In 1998 the government began recognizing the community-based private ownership of national park lands covered by aboriginal titles. Local aboriginal communities are, in turn, now leasing some areas back to the government.<sup>104</sup> A related approach is under development in Mexico, where, rather than investing in the establishment of new protected areas, local communities would be compensated for continuing to conserve their privately-held forest resources.<sup>105</sup> This approach is akin to the conservation easement approach used in some developed countries. It is a proven approach based on secure private property rights and incentives for local landowners to enhance the value of their assets.

Identifying and promoting innovative legal processes and mechanisms for achieving forest conservation merits much more attention and support. New tools can contribute to low-cost, poverty-alleviating strategies for improving forest management and conservation with fewer complications than traditional state-centric approaches. In short, clearly identifying and recognizing private property rights held by indigenous and other qualified local community groups can lead to fairer, more effective and more efficient compensation schemes for environmental services. It can lead to more sustainable management and conservation of forest resources.

## MANAGING THE TRANSITION

Realizing the potential of private community-based ownership and avoiding further forest degradation will require removing existing legal, market and policy barriers. Just as in the case of individual and government ownership, there must be clearer legal protections accorded to community ownership appropriate to the particular situation. In some situations, community ownership should be equal to individual ownership, but allow the community to define rights, including private property rights within its ownership; in others the state might have some mediating or protectorate role. But not providing clear, specific and adequate legal rights results in a non-viable arrangement.

In many countries, reforming ownership inevitably has implications for restructuring industry, as well as the existing policy and subsidy frameworks. Effectively guiding these transitions is a daunting political, technical and fiscal challenge. The experiences of some countries undergoing similar forest-sector transitions are instructive. For example, Indonesia's central government recently decentralized management responsibility to local governments in a very short period of time, with limited preparation and guidance to the local entities. The limited management capacity of local governments threatens to enhance degradation and deforestation—the very problems that drove the reforms in the first place.<sup>106</sup>

Russia provides a similar example. Sudden dissolution of that country's Forest Service in 2000, collapse of the budget for basic public forest management and confusion over rights to forest resources have fueled a rapid rise in illegal logging. Unfortunately, this is occurring at a time when indigenous people are beginning to gain additional rights to publicly-held forests (See Box 4). Recent experience in the newly independent states of Eastern Europe shows that returning forests to private ownership after the collapse of communist rule has sometimes led to rapid deforestation.<sup>107</sup> A more promising example comes from Bolivia, where a more structured reform, accompanied by long-term technical assistance, has led to much better outcomes (see Box 5). As the examples given here illustrate, governments need to carefully plan and manage transitions in public forest ownership. The findings of the Treaty Commission in British Columbia are also instructive: "A treaty is a process, not an event. Our expectations for comprehensive treaties were unrealistic. We tried to accomplish too much too soon."<sup>108</sup>

#### **Box 4 — The Status of Indigenous Land Rights in the Russian Far East**

Siberia and the Russian Far East are home to some of the world's largest forest and woodlands ecosystems. Covering an area of 2.3 million square miles, these forests represent 21 percent of the earth's remaining forests; an area equivalent to the continental United States and almost twice as large as the Amazon rainforests.

All of Russia's forests are currently owned by the government. There is no legal recognition of indigenous ownership, forest or otherwise. Although indigenous ownership is not recognized, there are Guarantees in the Russian Constitution and a federal law on Guarantees that specify the rights of indigenous groups to traditional lands, including forests. During the 1990s a number of different regional governments began to pass legislation that enabled the designation of Territories of Traditional Natural Resource Use (TTPs)—areas that are designed to support native peoples in their traditional activities and where native peoples have a voice in the development activities that occur on the land.

However, the exact set of rights within this designation and enforcement has varied tremendously across the region and not all areas where indigenous peoples live passed necessary legislation and thus, not every native group with a claim has been able to establish a TTP. In general though, most legislation provided indigenous groups residing within a given TTP the capacity to “veto” development activities (e.g. timber harvest, mining, etc.) not in keeping with and not supporting a traditional way of life. In practice, this is a “fuzzy” right and it has been abused, terribly at times, but never-the-less this capacity is as close as native peoples have come to ownership or even co-management. The Khabarovsk Region, the home of some 70 percent of all forest processing operations in the Russian Far East, for example, has been relatively aggressive in establishing TTPs. There are 43 TTPs—covering 29,819,200 hectares (more than half of all the forestlands in the region). Despite this enthusiasm for the legal designation, the new rights of indigenous peoples were routinely ignored until the Khabarovsk Regional Association of Indigenous Peoples of the North (RAIPON) successfully contested the application of the law to ensure that timber companies negotiate with indigenous peoples. In neighboring Primorsky Region, however, only one TTP has been designated. There, regional native peoples and environmental groups have been advocating that more forests, including forests currently tendered for logging, should be designated as TTPs.

Given the mixed passage and application of TTP legislation by regional governments, a new law on TTPs was passed by the Federal Duma and signed into law by Russian President Vladimir Putin on May 7, 2001. This legislation establishes a framework through which native peoples can pursue their claim to the use of traditional lands. However, some native groups worry that the new law appears to provide regional governments a means to remove some lands from this designation and there is concern that the Khabarovsk Regional Government, for example, might seek to roll back the number and extent of TTPs.

A new national Land Code was signed by President Putin on October 26, 2001. This code provides clear rights for private parties to own urban and industrial land and reconfirms private rights to small plots, notably dacha and household plots. It also provides clear authority for private owners to decide how to use and transfer their land. The law theoretically does not affect indigenous claims and forests; however, forest conservationists in Moscow worry that the lack of clarity in the new Land Code could allow the development of a “black market” in forestlands. These worries may be justified, considering that Russian governmental control over forests has been severely weakened under the Putin administration. In May 2000, President Putin liquidated the 200-year-old Russian Forest Service, transferring its functions to the Ministry for Natural Resources—an agency driven by a resource-exploitation mission. As government oversight over forest use has weakened and confusion over access rights has increased, illegal logging and trade has grown in Siberia and the Russian Far East, including a sharp increase in illegal trade with China. Ministry officials now calculate the total amount of illegal exports to be approximately 50 million m<sup>3</sup>/year, equal to total legal exports.

*Personal communication with David Gordon and Misha Jones, Pacific Environment.*

### Box 5 — Guiding the Transition in Bolivia

In 1990 Bolivia, a country of some fifty-three million hectares of forests, launched comprehensive and ambitious reforms of its forestry sector. Progress has been remarkable—the difficult process of confirming land ownership rights to indigenous communities is well under way, with some 1.4 million hectares with clear property boundaries and ownership rights. A professional and transparent public forest administration has replaced corruption and inefficiency. And there has been significant progress toward decentralizing and devolving responsibilities and decisions regarding forest resources management to rural communities. In addition, seven million hectares of forests are now under sustainable forest management plans and the country is a world leader in tropical forest certification with some 800,000 hectares of forest resources certified. The forest industry is restructuring towards more vertical integration, creating greater efficiencies in processing, diversification of species exploitation and raising the value of export composition. These reforms have been in part possible due to the strong and long term support of international donors, particularly USAID through its BOLFOR project. However, the reform process has faced many obstacles and offers the following main lessons for policy makers who are considering reforming their forestry sectors:

- **Radical reforms require strong political will.** These sectoral reforms were carried out in an environment of innovation at the federal level and under political conditions that facilitated public participation.
- **Provide clear ownership and use rights.** The absence of clear land ownership rights has proven a major obstacle in promoting sustainable forest management in Bolivia. Reformers must keep in mind that this means more than the simple division of space in neat parcels of land. Use rights by different groups tend to overlap, thus, the distribution of land may not be the primary policy consideration. Rather, the much more complex legal establishment of use rights and responsibilities may be a key element in organizing forest resources management.
- **Consider establishing participatory consultative strategies in designing policy reforms.** In countries where the forestry sector has potentially economic and environmental importance and provides support and livelihoods for a large number of poor families, the benefits of consultation can justify its costs.
- **Establish a sectoral policy vision with quantitative goals.** Several of the problems encountered in preparing and executing Bolivia's national forestry system stemmed from the lack of an articulated sectoral development policy with clear and quantitative goals. The discussion of quantitative goals forces a more detailed analysis of the feasibility of measures proposed in policy reforms and exposes those that are simply unrealizable.
- **Pay attention to the financial impact on principal stakeholders and provide economic incentives to guide private action in the desired direction.** But these incentives need to be paired with adequate penalties for not complying with the law. Economic incentives are not a sufficient condition if illegal activities can generate better commercial results.
- **Obtain an adequate understanding of the capacity of and obstacles faced by, main actors in following the policy and law.** Policy reforms must strive to be realistic. Some have argued that Bolivian entrepreneurs have not been able to adapt to the changing economic conditions created by the forestry regime. This, because of an acute scarcity of managerial and technical expertise and a dearth of capital markets that would have facilitated the adoption of more advanced, but also more expensive, technologies.
- **Promote vertical as well as horizontal integration of forest-based operations** (not necessarily enterprises or ownership).
- **Establish transparent procedures open to the public and administrative strategies aimed at reducing incentives and opportunities for corruption and manipulation of the public forestry administration.**
- **Harmonize legislation of related sectors that could affect the progress of the forestry sector,** such as agriculture, industry, transportation infrastructure and international commerce.
- **Strive to make sustainable forest management more profitable, rather than more complex and costly.**

*Extracted from Conteras-Hermosilla, Arnoldo and Maria Teresa Vargas. Social, Environmental and Economic Impacts of forest Policy Reforms in Bolivia. Forest Trends and CIFOR. 2002.*

## LOOKING FORWARD: OPPORTUNITIES TO REFORM TENURE & IMPROVE FOREST MANAGEMENT

There is a major, unprecedented transition in forest ownership underway. This transition presents both opportunities and challenges to the global forest community. The recognition of indigenous rights and community ownership—and the broader rationalization of public forest tenure—present an historic opportunity for countries to dramatically improve the livelihoods of millions of forest inhabitants. Governments have an opportunity to make real headway in establishing the conditions for effective forest conservation. But seizing this opportunity and preventing further forest degradation will require ambitious and concerted action by the global forest community. Some of the more important opportunities are listed below.

**Better knowledge on actual forest tenure claims, disputes and ownership is needed.** As evidenced by the difficulty in collecting information for this report, it is clear that data and information regarding who owns, and who has access to, the world's forests are incomplete. Where they exist, they are often questionable in quality and difficult to compare. New mapping technology presents a unique opportunity to collect, describe and monitor tenure distribution. The Global Forest Watch project, for example, is making a great contribution to knowledge at the local, national and global levels by mapping forest cover. Work of this type provides a platform for mapping tenure and access. With this information, all players will be able to better conduct informed debates on reforming forest tenure.

**Greater awareness of transition strategies, lessons and best practices is needed.** Many governments and supporting actors are reforming tenure systems, but the knowledge generated from these experiences is often difficult for innovators in other countries to find. While the social and political context of every country is different, some lessons can be learned and some errors can be averted by sharing information. Collecting and disseminating information on the most effective uses of these strategies would be very valuable.

**Major investments will be required to facilitate this transition.** Assessing community claims, mapping tenure, delimiting property, reforming legal frameworks, devising regulations and establishing new enforcement mechanisms are not inexpensive. Developed countries and multilateral and bilateral organizations need to dedicate their technology and financial resources to the monumental task of reforming tenure.

**Property rights to ecosystem services should be identified and clarified.** Growing recognition of the linkages between forest cover and water quality, carbon absorption and biodiversity habitat has led policy makers and practitioners to design market mechanisms for capturing those benefits. Further legal development is needed to fill the void in property rights to environmental services in all countries. This would help compensate those whose lands and resources provide these services. As indigenous and other communities own and have long-term rights to a large and increasing percentage of the world's forests, it is important to ensure that their rights and economic interests are protected. Recognizing their private property rights also will serve as a critical step in achieving effective and efficient forest conservation. It is important to better understand the linkage between traditional community management systems and the corridor of ecosystems to be managed. In many cases, the human-managed part of the system is integral to the long-term maintenance of the whole.



**Markets and global finance must be creatively leveraged to support tenure reforms.** Without secure property rights, the incentives to manage forests responsibly are limited. Advancing the tenure reform agenda is in the interest of socially responsible industries that rely on forest fiber, environmental organizations interested in habitat protection and governments that truly seek economic development for their citizens.

**All stakeholders will play a critical role in advancing tenure reforms and ensuring that this transition serves the interests of people and forests:**

- **Forest-dependent peoples** can learn more about their rights and the experiences of other forest groups, building on proven strategies to assert their rights to forest resources.
- **Socially responsible forest industries** know and appreciate the importance of secure property rights. They can support the resolution of indigenous and community tenure conflicts, develop partnerships that serve the mutual interests of communities and industry, and creatively leverage market forces to support tenure reforms.
- **Forest management certifying bodies** can be mindful of tenure conflicts and carefully avoid reinforcing any one party's claims where tenure is contested. Certifiers can learn more about the nature of community managed forests and multiple-use arrangements and combinations of agro-forestry, which can in certain conditions help to sustain an ecosystem over a period of time.
- **Multilateral development banks** can leverage clout and carry the urgency of addressing tenure issues to finance ministers and other influential actors by sponsoring national studies and debates on the effective ways to advance tenure reforms and their associated economic benefits. International investors and NGOs should work with communities and governments to develop capacity in communities for management, governance and strategic planning, and create linkages between sets of communities to share learning.
- **Investors** can incorporate tenure considerations in their due diligence procedures and aggressively support investments that address community tenure issues. Investors can learn to recognize environmental and social risks and the very real impact of inappropriate action on companies' financial performance. Respecting local access to resources is essential to pleasing shareholders.
- **Environmental NGOs** can be cognizant of humanity's historic role in shaping forest ecosystems, recognize indigenous and other local community claims and property rights, fully embrace these communities as equal partners in conservation and promote strategies that recognize and compensate communities for the environmental services their forests provide.
- **Governments** can recognize ancestral domain rights of indigenous groups and provide full rights to forest owners to use and manage their forest assets. Governments also can "level the playing field" for communities by removing subsidies to large industry and providing community property equal protection under the law.

## END NOTES

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- <sup>2</sup> Lynch, Owen J. and Kirk Talbott. *Balancing Acts: Community-Based Forest Management and National Law in Asia and the Pacific for Indonesia, India, Nepal, Philippines, Sri Lanka and Thailand*. World Resources Institute, Washington DC, 1995. Poffenberger, Mark (ed) 1990, *Keepers of the Forest: Land Management Alternatives in South-east Asia*. Manila: Ateneo de Manila University Press. Wilmsen, Edwin N., ed. (1989) *We Are Here: Politics of Aboriginal Land Tenure*. Berkeley: University of California Press. Peluso, Nancy L. (1992) *Rich Forests, Poor People: Resource Control and Resistance in Java*. Berkeley and Los Angeles: University of California Press. Seymour, Frances (1995) *A Preliminary Review of Experience with Resettlement to Achieve Conservation Objectives*. Washington, D.C.: World Wildlife Fund. For Africa, see . "The Tragic African Commons: A Century of Expropriation, Suppression and Subversion" in *The Common Property Resource Digest*. June 2001, No. 57. Quarterly publication of the International Association for the Study of Common Property. Gary, Indiana. U.S.
- <sup>3</sup> World Bank, July 2001. *Draft. Revised Forest Strategy for the World Bank Group*.
- <sup>4</sup> World Resources Institute estimates around 400 million people worldwide live and depend on tropical forests alone. <http://www.wri.org/forests/tropical.html>. While Lynch and Talbott, 1995 estimate that there are 447 million in India, Indonesia, Nepal, the Philippines, Sri Lanka and Thailand alone.
- <sup>5</sup> Lynch and Talbot, 1995.
- <sup>6</sup> Colchester, Marcus, ed., 2001, *Survey of Indigenous Land Tenure: A report for the land tenure service of the Food and Agricultural Service of the Food and Agriculture Organization*, unpublished draft., December 2001.
- <sup>7</sup> See, e.g., *Diversity and Dynamics of Shifting Cultivation: Myths, Realities and Policy Implications*. Lori Ann Thrupp, Susanna B. Hecht and John O. Browder, co-authors. Washington, DC: World Resources Institute (1997). Owen Lynch and Janis Alcorn. "Tenurial Rights and Community-Based Conservation" *Natural Connections: Perspectives on Community-Based Conservation*. David Western, Michael Wright and Shirley Strum, eds. Island Press (1994).
- <sup>8</sup> Tuxall, John and Gary Paul Nabhan. 2001. *People, plants and protected areas: A guide to in situ management*. *People and Plants Conservation Manual*, Earthscan: London.
- <sup>9</sup> Wunder, Sven. *The Economics of Deforestation: The Example of Ecuador*, St. Anthony's Series, Macmillan & St. Martin's Press, London & New York 2001.
- <sup>10</sup> See "Forest Law Enforcement", Contreras-Hermosilla, A. World Bank, Washington DC (2001) for an impressive compilation of studies on illegal logging and corruption from around the world. The scale of this problem is hard to overestimate. In Indonesia, for example 84 percent of concessionaires violated the law during the mid-1990s, including systematic operations in important national parks, an estimated 40 percent of all wood supplies to the pulp and paper industries came from undocumented sources and the sum of these illegal acts cost the government some \$3.5 billion a year. In Cameroon, over half of all active logging licenses were illegal in 1999 and at least three companies held concessions larger than the legal limit of 200,000 hectares. These stories are repeated across Asia, South America, Africa and Russia. The comparison of the costs of illegal logging and World Bank lending is reported in *A Revised Forest Strategy for the World Bank Group*. The World Bank, July 2001. DRAFT.
- <sup>11</sup> There have been some regional efforts, most notably: United Nations Economic Commission for Europe, Food and Agriculture Organization of the United Nations. *Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (industrialized temperate/boreal countries)*. 2000. UN-ECE/FAO Contribution to the Global Forest Resources Assessment 2000. Geneva Timber and Forest Study Papers, No. 17. New York and Geneva, Lynch, Owen J. and Kirk Talbott. *Balancing Acts: Community-Based Forest Management and National Law in Asia and the Pacific for Indonesia, India, Nepal, Philippines, Sri Lanka and Thailand*. World Resources Institute, Washington DC, 1995 and David J. Brooks U.S. *Forests in a Global Context*. General Technical Report RM-228. US Department of Agriculture. Forest Service. Rocky Mountain Forest and Range Experiment Station. Fort Collins, Colorado 1993 for United States, Canada, Nordic Countries, Europe, Japan, New Zealand, Australia, Tropical forested countries. For a survey of indigenous land tenure from the Colonial period to the present, see *A Survey of Indigenous Land Tenure: A Report for the Land Tenure Service of the Food and Agriculture Organization*. December 2001. Marcus Colchester (editor). Marcus Colchester, Fergus MacKay, Tom Griffiths and John Nelson. *Forest Peoples Programme*.
- <sup>12</sup> Tenure advocates and researchers have sometimes claimed this dearth of information as fully intentional and motivated by government desire to maintain control of natural resources. See Owen J. Lynch, *Whither the People? Demographic, Tenurial and Agricultural Aspects of the Tropical Forestry Action Plan*. Washington, DC: World Resources Institute 1990. See also Michael R. Dove. "Theories of Swidden Agriculture and the Political Economy of Ignorance," *Agroforestry Systems*, Vol. 1, pp. 85 - 99 1983.
- <sup>13</sup> The list of 30 countries with highest forest cover derives from FAO's *Forest Resource Assessment – Forest Cover 2000*, Table 3. 2001. Rome, Italy. <http://www.fao.org/forestry/fo/fra/index.jsp>. FAO's 2001 definition of land with forest cover is: Land with tree crown

cover (or equivalent stocking level) of more than 10 percent and area of more than 0.5 hectares (ha). The trees should be able to reach a minimum height of 5 meters (m) at maturity in situ. FAO. *FAO's Forest Resource Assessment – Forest Cover 2000*, Table 3. 2001. Rome, Italy. <http://www.fao.org/forestry/fo/fra/index.jsp>

<sup>14</sup> Bowles, I., R. Rice, R. Mittermeier and A. da Fonseca. 1998. "Logging and Tropical Forest Conservation." *Science* 280:1899-1900. Megadiversity is a concept first proposed in a paper at the Smithsonian's 1988 Biodiversity Conference. This approach looks at biodiversity priorities by political units, in this case sovereign nations, rather than by ecosystems. It recognizes that a very small number of units (17 countries out of a global 200+) are home to an inordinately large share of the world's biodiversity. The only megadiverse countries which are not in the top 30 forest cover list are Madagascar, Ecuador and the Philippines. The other top megadiverse countries are Brazil, Colombia, Indonesia, Peru, Mexico, China, India, Venezuela, Papua New Guinea, the United States, Australia, Democratic Republic of Congo, Cameroon and Tanzania.

<sup>15</sup> Liz Alden Wily and Sue Mbaya, 2001. *Land, People and Forests in Eastern and Southern Africa at the Beginning of the 21st Century* Natural Resources International, The World Conservation Union. Lynch and Talbott, 1995.

<sup>16</sup> See Fay, Murat and Kusworo 2000 (draft) who estimate that almost one-half of the state forest domain in Indonesia actually remains forested, the rest of the domain has either been converted to agriculture or agroforests and much of this land is populated by millions of local and indigenous peoples.

<sup>17</sup> This categorization is informed by the typology proposed by Owen J. Lynch, 2000. "Promoting Legal Recognition of Community-Based Property Rights, Including the Commons: Some Theoretical Considerations". Paper presented at the Symposium of the International Association for the Study of Common Property, Indiana University, Bloomington, Indiana. For a more expansive and recent discussion of CBPRs see Chapter I on "Community-Based Property Rights: A Conceptual Note" in *Whose Nation? Whose Resources? Towards a New Paradigm of Environmental Justice and the National Interest in Indonesia*. Washington, DC, Center for International Environmental Law (2002)

<sup>18</sup> Of course, all governments retain the right of "eminent domain" to unilaterally "take" lands and rights to select portions of private holdings when deemed in the public interest to do so. The difference here is that in the case of public "reserves" the government can unilaterally extinguish all rights to the entire parcel of land allocated to local groups.

<sup>19</sup> United Nations Economic Commission for Europe, Food and Agriculture Organization of the United Nations. *Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (industrialized temperate/boreal countries)*. 2000 UN-ECE/FAO Contribution to the Global Forest Resources Assessment 2000. Geneva Timber and Forest Study Papers, No. 17. New York and Geneva.

<sup>20</sup> Government figures: <http://www.un.org/esa/agenda21/natlinfo/countr/brazil/natur.htm#forests>  
Community figures refer to indigenous lands only, quilombos not included. Proxy figures based on indigenous population in the Amazon Basin by country. Tresierra, Julio. "Rights of Indigenous Peoples over Tropical Forest Resources" in *Forest Resource Policy in Latin America*. Kari Keipi, editor. Inter-American Development Bank. Washington, D.C. 1999.

<sup>21</sup> United Nations Economic Commission for Europe, Food and Agriculture Organization of the United Nations. *Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (industrialized temperate/boreal countries)*. UN-ECE/FAO Contribution to the Global Forest Resources Assessment 2000. Geneva Timber and Forest Study Papers, No. 17. New York and Geneva, 2000.

<sup>22</sup> *Ibid*, 2000.

<sup>23</sup> Chinese Academy of Forestry, International Institute for Environment and Development, Overseas Development Institute. *Instruments for Sustainable Private Sector Forestry: China Country Study, Work Plan: December 1999 to December 2000*. Forthcoming.

<sup>24</sup> United Nations Economic Commission for Europe, Food and Agriculture Organization of the United Nations. *Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (industrialized temperate/boreal countries)*. UN-ECE/FAO Contribution to the Global Forest Resources Assessment 2000. Geneva Timber and Forest Study Papers, No. 17. New York and Geneva, 2000.

<sup>25</sup> Except for Cameroon, the data regarding African countries derives from Egli, N. Annex 1 in Grut, M, J. Gray and N. Egli, 1991, *Forest Pricing and Concession Policies: Managing the High Forests of West and Central Africa*, World Bank Technical Paper Number 143, World Bank, Washington, DC and is somewhat dated. Both Grut et al. 1991 and Gillis (1995) state that the forests of Africa are predominantly publicly owned, almost wholly by central governments.

<sup>26</sup> All natural forests are owned and administered by the State. Community figure refers to "Community Forest Development Program". FAO. *Country Profile, Indonesia. Forest Management, Status and Trends. Public Participation in Forest Management*. [http://www.fao.org/forestry/fo/country/index.jsp?geo\\_id=82&lang\\_id=1](http://www.fao.org/forestry/fo/country/index.jsp?geo_id=82&lang_id=1)

- <sup>27</sup> Out of the 1000 indigenous communities in Peru, 673 have been demarcated and titled. This equals an area of 22.488 square kilometers for titled land and 8.403 given for use only. J. Tresierra. 2000. *Derechos de uso de los recursos naturales por los grupos indígenas en el bosque tropical*. IDB. Washington DC. Page 23.
- <sup>28</sup> State Forest Department. "Progress of the Joint Forest Management Programme in India" As of April 30, 2001. India. Poffenberger, Mark, editor. *Communities and Forest Management in South Asia. Working Group on Community Involvement in Forest Management, Forests, People and Policies*. IUCN September 2000, p. 54
- <sup>29</sup> Energy Sector Management Assistance Program. Sudan Activity Completion Report. April 1988. No. 073/88. Joint World Bank/UNDP. This is the minimum number allocated for village management under supervised protection. The number is believed to be higher in reality.
- <sup>30</sup> El Subsector Forestal en México. Consejo Técnico Consultivo Nacional Forestal. 1998. [www.semarnap.gob.mx/ssrn/conar/subsecto.htm](http://www.semarnap.gob.mx/ssrn/conar/subsecto.htm)
- <sup>31</sup> SIRENARE.1999. *Informe Anual de la Superintendencia Forestal. Sistema de Regulación de los Recursos Naturales Renovables Bolivia*.
- <sup>32</sup> Mapa Forestal de Bolivia - Memoria Explicativa -2000.Ministerio de Desarrollo Sostenible y Medio Ambiente. BOLFOR. Bolivia.
- <sup>33</sup> These hectares are legally on hold by any other type of claims since they have been claimed by indigenous groups and they have judicial preference. The government has stopped awarding any type of concessions to those lands. Legalizing devolution requires a lengthy and expensive procedure. The intention is that this territory will be eventually owned and managed by indigenous groups. Conteras-Hermosilla, Arnoldo and Maria Teresa Vargas. *Social, Environmental and Economic Impacts of forest Policy Reforms in Bolivia*. Forest Trends and CIFOR 2002.
- <sup>34</sup> These lands are known as TCOs or Indigenous Communal Lands (Tierras Comunitarias de Origen).
- <sup>35</sup> Mapa Forestal de Bolivia. 2000. SIRENARE. La Paz, Bolivia.
- <sup>36</sup> Community figures refer to indigenous lands as well as Afro-Colombian territories. This reflects 72 percent of the territories claimed by Afro-Colombian and indigenous groups, as the process of legal demarcation has not been completed. Bettina Ng'weno. *On Titling Collective Property, Participation and Natural Resource Management: Implementing Indigenous and Afro-Colombian Demands. A Review of Bank Experience in Colombia*. World Bank. September 2000. <http://www.cidh.org/countryrep/Colom99sp/capitulo-10.htm>. This process focuses on giving property titles to communities.
- <sup>37</sup> FAO Country Profile. Tanzania. Forest Cover 2000. <http://www.fao.org/forestry/fo/country/index>
- <sup>38</sup> This figure continues to grow monthly, joint management is also on the rise, but numbers are not available. There are many types of community management schemes such as community-owned and managed forest reserves and Joint Management Agreements in at least 4 of the 500 government owned forest reserves. *From Users to Custodians: Changing Relations Between People and the State in Forest Management in Tanzania*. Liz Alden Wily and Peter A. Dewees. Working Paper No. 2569 World Bank. Washington DC. March 28, 2001.
- <sup>39</sup> Argentina Forestry Sector Review. April 1993. Report 11833-AR. World Bank. Washington, DC.
- <sup>40</sup> Asia-Pacific Centre for Environmental Law Faculty of Law National University of Singapore. "Myanmar Primary Legislation: FOR EST LAW State Law and Order Restoration Council Law No. 8/92. November 3rd, 1992. <http://sunsite.nus.edu.sg/apcel/dbase/myanmar/primary/myafor.html#ch3>
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- <sup>42</sup> *Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand, 2000*.
- <sup>43</sup> *Ibid, 2000*.
- <sup>44</sup> Egbe, Samuel. 1997. *Forest Tenure and Access to Forest Resources in Cameroon: an Overview*. IIED. London, England.
- <sup>45</sup> Egli, N. 1991, *Summaries of Country Case Studies of Selected West and Central African Countries, Annex 1 in Grut, M, J. Gray, and N. Egli, 1991, Forest Pricing and Concession Policies: Managing the High Forests of West and Central Africa, World Bank Technical Paper Number 143, World Bank, Washington, DC*.
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- <sup>57</sup> SIRENARE.1999. *Informe Anual de la Superintendencia Forestal. Sistema de Regulación de los Recursos Naturales Renovables*. Bolivia.
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- <sup>62</sup> Nigel Sizer and Richard Rice. 1995. *Backs to the wall in Suriname: Forest policy in a country in crisis*. Washington, WRI. Andrew Mitchell.1998. *Report on forest concessions, Suriname*. London: Fortech, UK.
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- <sup>74</sup> The total area of land in community reserves or ownership in the Amazon basin is 1,007,678 square kilometers. Bolivia is 1,098,581 square kilometers in size.
- <sup>75</sup> There is a separate and important, shift in forest tenure taking place in Eastern Europe, in countries that are not among the top forest countries of the world. Ten of the 11 Eastern European countries—Poland is the exception—formerly under Soviet rule have begun returning forest lands seized under their communist regimes to their previous owners. When the process is finished, they expect an average of about a third of those lands to be privately owned. *Implications of Land Restitution for Achieving World Bank/WWF Alliance Targets in Eastern Europe and the Central Asian Region*. INDUFOR OY & ECO, Helsinki, 2001.
- <sup>76</sup> *Third Report on the State of Human Rights in Colombia. Chapter 10 Indigenous Rights. Organization of the American States*. <http://www.cidh.oas.org/countryrep/Colom99sp/capitulo-10.htm>
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- <sup>78</sup> CIEL Press Release. *CIEL helps score major victory for indigenous rights in Philippine Supreme Court*. January 29, 2001. [www.ciel.org](http://www.ciel.org)
- <sup>79</sup> *Interior Alliance Update – no date, no issue number. International edition. "The Interior- A Stronghold for Aboriginal Title"*. Canada.
- <sup>80</sup> *Efforts are underway by the Canadian government and British Columbia's largest First Nation group to draft a permanent treaty. "Canada and British Columbia's Largest Indian Group Taking Steps to First Permanent Treaty"*. Sunday, March 11, 2001. Pg. 10 NE version. *New York Times*.
- <sup>81</sup> ELSAM (Lembaga Studi dan Advokasi Masyarakat- The Institute for Policy Research and Advocacy and CIEL (Center for International Environmental Law). *Whose Resources? Whose Common Good? A New Paradigm of Environmental Justice and the National Interest in Indonesia*. June 2001. ELSAM and CIEL. Jakarta, Indonesia and Washington DC.
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- <sup>95</sup> Pye-Smith, C. and Borrini Feyerabend, 1994 *The Wealth of Communities. Earthscan; London, England.*
- <sup>96</sup> *Forest Trends. 2001. Strategies for Strengthening Community Property Rights Over Forests: Lessons and Opportunities for Practitioners. Report Developed for Ford Foundation.*
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- <sup>98</sup> *In Chile, at least 23 indigenous communities have contested legal claims against 7 forest companies and private owners for 48,554 hectares of forests. Comunidades Mapuche en Conflicto. <http://members.aol.com/mapulink/espanol/conflicto.html>*
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- <sup>100</sup> CCICED. 2001. *Forest /Grassland Taskforce Report to the CCICED 2001 Annual Meeting. The Fifth Meeting of the 2nd Phase of CCICED. August.*
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- <sup>102</sup> Wily, 2002, pg. 15.
- <sup>103</sup> See for example, Burnham, Philip. 2000. *Indian country, God's country: Native Americans and the National Parks. Island Press: Washington D.C. for an account of how American Indians were removed from lands that became national parks.*
- <sup>104</sup> *The 76,000 hectare Mutawintji National Park in the far west of New South Wales (NSW), Australia became the first park returned to its traditional Aboriginal owners and then leased back to the NSW National Parks & Wildlife Service (NPWS). Other aboriginal lands are also currently leased to state governments for state and national park use, such as the 1,325 hectare Uluru/Kata Tjuta National Park where Ayers Rock is located. Australian legislation provides for an annual rental fee paid by the government, which provides extra funding to ensure the lands are managed to meet Aboriginal community interests. Mark Sutton. Aboriginal Ownership of National Parks and Tourism. <http://www.cs.org/newdirection/voices/sutton.htm> and Northern Territory Visitors Centre. <http://www.northernterritory.com/3-2a.html>*
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- <sup>107</sup> *INDUFOR OY/ECO for The World Bank and World Wildlife Fund Alliance, 2001. Implications of Land Restitution for Achieving World Bank/WWF Alliance Targets in Eastern Europe and the Central Asian Region*
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