

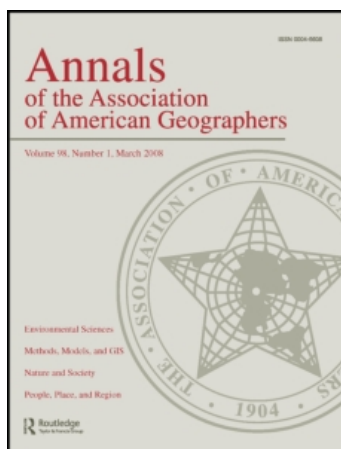
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### Territorial Tensions: Rainforest Conservation, Postconflict Recovery, and Land Tenure in Liberia

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# Territorial Tensions: Rainforest Conservation, Postconflict Recovery, and Land Tenure in Liberia

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Since the cessation of civil conflict in 2003, the Liberian government is poised to expand greatly its protected area network to conserve the country's remaining rainforest. Liberia holds within its borders nearly half of the remaining Guinean rainforest, a global biodiversity hotspot. The planning process for this effort has been a central part of rebuilding Liberia's forestry sector, which helped fuel past conflict. The process, known as the Liberia Forestry Initiative, is widely considered to have been exemplary with regard to multistakeholder dialogue and policy making. Because the issue of land tenure remains widely contested, however, the initiative risks seriously aggravating land rights problems, complicating the prospects for a durable peace. This article focuses on the process through which land was zoned for strict protection and how this process is likely to exacerbate land tenure conflict in Liberia's priority conservation areas. Although the international conservation community sees postconflict scenarios as opportunities for promoting conservation initiatives, unresolved land tenure issues make for problematic outcomes, including land disputes and legal disarray. Such problems can result in significant volatility and can make the peace process and recovery much more, not less, difficult. *Key Words: conservation, forests, land tenure, Liberia, postwar.*

自 2003 年停止内战，利比里亚政府准备大幅扩大其森林保护区，以保护该国剩余的热带雨林。利比里亚在其境内拥有近一半的全球所剩余的几内亚热带雨林，是全球生物多样性的热点地区。为此举所做的规划进程已经成为重建利比里亚的林业部门的核心部分，其后果也刺激了过去的冲突。在这个过程中，即利比里亚林业动议案，被普遍认为是多方对话和决策的典范。然而，由于土地所有权的问题仍然存在广泛争议，该动议案增加了土地权利问题恶化的风险，使得持久和平的前景变得复杂。本文侧重于分析这些土地是如何被划为严格保护的区域，以及在利比里亚的优先保护区，这个过程是如何可能加剧土地使用权的冲突。尽管国际环保社会认为冲突过后的情况是促进环保动议的机会，那些尚未解决的土地使用权问题会造成有问题的结果，包括土地纠纷和法律混乱。这些问题都可以产生相当大的波动，可以使得和平进程和恢复过程产生更多，而不是更少的困难。*关键词：保护，森林，土地使用权，利比里亚，战后。*

Desde la terminación del conflicto interno en 2003, el gobierno liberiano mantiene su intención de ampliar al máximo su red de áreas protegidas para conservar lo que le queda al país de selva pluvial. Dentro de las fronteras de Liberia se encuentra cerca de la mitad de la restante selva guineana, uno de los puntos álgidos relacionados con la biodiversidad global. La planificación de este esfuerzo ha sido crucial en el proceso de reconstrucción del ámbito forestal de Liberia, dentro del cual se alimentó el pasado conflicto. El proceso, que se conoce como la Iniciativa Forestal de Liberia, se considera por todos como ejemplar en lo que toca al diálogo amplio entre parte interesadas y a la formulación de políticas. En la medida en que la cuestión de la tenencia de la tierra sigue siendo ampliamente debatida, no obstante, aquella iniciativa no deja de ser riesgosa para agravar los problemas de derechos a la tierra, lo cual complica la esperanza de una paz duradera. El presente artículo se concentra en el proceso a través del cual la tierra fue zonificada para darle estricta protección, y sobre cómo este proceso puede exacerbar los conflictos de tenencia de la tierra en las áreas prioritarias de conservación de Liberia. Aunque la comunidad internacional conservacionista mira los escenarios del postconflicto como una oportunidad para promover iniciativas de conservación, las cuestiones de tenencia no resueltos pueden conducir a resultados problemáticos, incluso a disputas por tierras y líos legales. Tales problemas pueden dar lugar a una significativa volatilidad y convertir el proceso de paz y recuperación en algo más difícil de lo esperado. *Palabras clave: conservación, selvas, tenencia de la tierra, Liberia, posconflicto.*

When it comes to the environment, Liberia is a shining example of conservation's role in stability in West Africa.

—Conservation International Web site<sup>1</sup>

The Liberian Forest Initiative (LFI) is a major component of the reconstruction effort undertaken since the end of Liberia's civil conflict in 2003. The postconflict period has provided a critical

window of opportunity for conservationists to develop a transparent and equitable management plan for Liberia's critically important forest resources. Although the country's rainforests were ravaged by years of indiscriminate commercial logging, the country retained 42 percent of West Africa's remaining intact lowland rainforest, which is globally valued for its biodiversity (Republic of Liberia Forestry Development Authority 2006). At the end of the war, much of Liberia's forested areas lacked roads and people, many of whom had been displaced by prolonged violence in rural areas, making these forests significantly attractive for conservation.

When the peace accord was signed, international donor agencies, nongovernmental organizations (NGOs), and governments (e.g., Conservation International, United Nations [UN], United States Agency for International Development, World Bank) immediately began a stabilization and reconstruction effort in Liberia. Following nearly two decades of violence and instability, ongoing reconstruction and reform has taken place in every sector of Liberian society, from physical infrastructure to governance (Sawyer 2005). The end of the war was a historic moment when Liberia would be redefined and rebuilt as rapidly as possible, and international agendas regarding peace, economic opportunity, and conservation would be brought to bear.

Land tenure emerges as a central part of the challenge. As a primary factor contributing to the war (Richards 2005; Unruh 2009), land tenure in Liberia has been the basis of violently antagonistic social relations between the state and rural inhabitants, between several ethnic groups, and between generations within chiefdoms. The current president of Liberia has "expressed fear that the issue of land reform, if not swiftly redressed by the government and its international partners, could crop up into another war in the country" (Daybor 2007). In particular she has noted in recent speeches "that land reform is needed now to contain future troubles," and that "land disputes are a major hurdle in the wake of attaining genuine peace in the country." It was recently estimated that there are several hundred thousand rural youth in Liberia and neighboring Sierra Leone currently vulnerable to militia recruitment, and that "[y]oung people without secure tenancy rights will continue to float in the countryside without stable social commitments, and thus remain vulnerable to both chiefs and militia recruiters" (Richards 2005, 587).

The LFI is a major land reform mechanism encompassing virtually every aspect of the forestry sector through a framework known as the "three Cs":

commercial timber, community forestry, and nature conservation (Republic of Liberia Forestry Development Authority [FDA] 2006). The LFI has successfully coordinated the forest sector interventions of an array of Liberian and external governments and agencies. It also included a consultation process with local communities, nongovernmental authorities, and other members of civil society. This article concerns the LFI-produced land use plan, which has delimited the entire country into zones designated to meet the conservation, community, and commercial objectives defined through the LFI process. We focus specifically on the planned creation of protected areas that will comprise the core of Liberia's conservation strategy. We argue that the conservation component of the LFI land use plan sows the seeds for future land tenure uncertainty and rural injustice, which were major contributors to the war (Richards 2005; Unruh 2009). We focus specifically on conservation and its linkage to renewed conflict for two reasons: (1) conservation organizations working in Liberia frame their work in contradictory terms: as significant contributors to peace and stability in the country; and (2) conservation, more than other land uses, demands territories that are free of people. This demand poses unique problems in Liberia. Large areas of the country that hold conservation value may be perceived as lacking human settlement, but this perception opportunistically ignores key aspects of social history and conflict in rural Liberia, notably, large-scale displacement, contested land claims, and fragmented political authority. Liberia represents a confluence of postconflict land tenure uncertainty, high-value forest resources, and the combined use of geospatial technologies and environmental discourses to articulate and legitimize a large-scale exclusionary land use plan.

The article is organized as follows: A methodological and theoretical overview is followed by three analytical sections covering (1) the role played by remote sensing-based (RS) information and land use modeling in the LFI conservation strategy; (2) how biodiversity and climate change discourses legitimize the land use zones designated by the plan; and (3) the volatility of postconflict land tenure in Liberia. This volatility will greatly complicate attempts by the central government to impose territory-based land use prescriptions. Such top-down impositions, including those with seemingly benign conservation goals, may aggravate rather than reduce the risk of renewed conflict in Liberia.

## Methodology

The field research in Liberia included a series of individual and group interviews and focus group discussions totaling 210 people in the months of December 2006 and February 2007. Those interviewed included smallholder farmers, large landholders, ministry officials, university researchers, NGOs, lawyers, UN personnel, commercial agriculture associations, bilateral and multilateral donors, international legal and development organizations, and a former president of the country (Unruh 2009). The discourse analysis focused on publicly available LFI documents, notably the World Bank Forest Resource Assessment conducted in 2004 and the land suitability analysis carried out in 2006. Interviews with conservation and forest-sector NGOs provided supplemental information.

This article draws from the theoretical tradition in geography of examining the social transformation of nature (Castree 1995; Escobar 1998; Haraway 1997). According to Swyngedouw (2004, 130), “nature becomes a sociophysical process infused with political power and cultural meaning.” In postconflict Liberia, this process is manifested through a territorializing project (Vandergeest and Peluso 1995) at a specific scale that is produced through geospatial technology and scientific discourse. Liberia today is a unique case because its specific historical and socio-spatial conditions (shattered political structures and displaced rural populations) that made the LFI project possible also contain the seeds of its undoing. Further, it demonstrates how new scientific discourses, namely, climate change mitigation, compound existing ones like biodiversity conservation, to strengthen territorial claims to natural resources without addressing the political legacy of the conflict.

## Geospatial Technologies

Geospatial technologies (RS tools and geographic information systems [GIS]) played a critical role in the creation of Liberia’s land use plan. By representing and classifying Liberia’s landscape in a specific way, these technologies were instrumental in the delineation of future protected areas and other zones in which land use will be prescribed and controlled. Our argument concerning geospatial technologies is based on the following premises: (1) By representing Liberia’s forest cover as a gradient of intact dense forest, RS classification implicitly perpetuates the notion of the pristine forest ecosystem, a notion of questionable historical veracity

in West Africa (Fairhead and Leach 1998); (2) classification itself is a political act, the power of which is connected to its visibility and to the degree to which it can be contested as a form of knowledge (Bowker and Star 1999); and (3) RS land cover information privileges spatio-environmental analysis based on certain types of knowledge and information, namely, that which is visually measurable (Turner 2003).

The land use planning component of the LFI relied heavily on a land cover and forest resource assessment produced for the World Bank in 2004. The assessment was based on standard RS analysis of six Landsat scenes from the years 2001 to 2004. We do not question the technical rigor of the geospatial analysis, but we do question the legitimacy of basing a countrywide land use plan on a set of satellite imagery from a contemporary four-year period. The use of contemporary land cover, as classified through RS and scientific discourse, belies a multicentury history of complex population fluctuations and land use patterns in Liberia. As Fairhead and Leach (1998) describe, certain parts of the country were widely assumed to be uninhabited as recently as the eighteenth century; however, at least one scholar (Mayer 1951) has compellingly argued that as early as the seventeenth century far higher population and far less mature forest cover characterized Liberia.

As Turner (2003, 262) argues for the case of the Sahel, the use of a single set of RS information provides a “snapshot of particular times.” In the Sahelian case, RS has been used during a time of rapid population expansion that began in the 1950s, leading to neo-Malthusian interpretations of land use change and resource degradation. In the Liberian case, reliance on contemporary RS data provides a land cover snapshot from a period of extreme social dislocation and much reduced population densities in many areas, thereby reinforcing notions of empty and intact forests that are under threat from agriculture and other types of land use.

The classification scheme used in the 2004 assessment reflects this notion of pristine versus human-disturbed areas in its use of three forest categories: closed dense, open dense (distinguished by signs of recent logging disturbance), and agriculture disturbed. This classification aimed to provide information for the following objectives: country-level land use planning and management, the optimization of forest inventories, and a baseline for land cover monitoring (Bayol and Chevalier 2004). These classes also reflect the objective of measuring forest cover against a previous 1979 inventory known as the Liberia Forest Reassessment to ascertain change. A compelling aspect of the 1979 inventory,

which goes unmentioned in the Bayol and Chevalier (2004) report, is that it was criticized as flawed by a subsequent study conducted in 1985 by the FDA. The FDA report describes inaccuracies in the 1979 inventory that led to exaggerated estimates of forest loss (Fairhead and Leach 1998). Nonetheless, the 1979 inventory by the Food and Agricultural Organization (1981) was and continues to be deeply influential as demonstrated by its use in subsequent reports and in the LFI.

The 2004 classification and inventory reproduce a narrative of unidirectional forest loss in Liberia with significant flaws and inaccuracies that become invisible, particularly to those without the proper training, knowledge, or social connections to access and comprehend its contents, as an uncontested baseline of what is recognized as forest cover, exploitable forest resources, and of who may exploit them as dictated through the LFI process. This type of RS classification also privileges visual information that can be detected through satellite imagery (Turner 2003; Walker and Peters 2007). Bayol and Chevalier (2004) acknowledge the difficulty in distinguishing closed and open dense forest at the spatial scale of their analysis, so they relied on the identification of roads as a visual proxy of logging disturbance used to designate areas as open dense forest. This classification decision, based largely on a single visual feature, carries enormous implications for rural Liberians: More than 2.4 million hectares, roughly 25 percent of Liberia's total area, were classified as closed dense forest, which translates into strict protection and land uses from which smallholders will largely be excluded.

The open–closed forest distinction is also critical to the designation of nearly 1 million hectares for future protected areas. In a 2006 land suitability analysis conducted by a U.S. Forest Service consultant, distance from roads is used as a proxy for “no human settlement” (Nebel 2006, 5). Land located more than three kilometers from roads is assumed to be uninhabited by people and more than eight kilometers to be free of agriculture. According to the consulting report, Liberian forestry officials confirmed this critical assumption, which is problematic given the oppressive history of state forest services in Liberia and the rest of West Africa (Fairhead and Leach 1998). Although a GIS overlay of human settlements was used in the model, UN refugee data show high levels of displacement around certain areas classified as closed dense forest (Internal Displacement Monitoring Center 2007) and officials from two international agencies working in Liberia acknowledged that many forest areas appearing to be uninhabited are likely to be that way as a result of the war. Further, customary land

tenure in Liberia, like much of West Africa, extends far beyond the limits of settled areas. Thus, although smallholder agriculture, small-scale timber extraction, and use of nontimber forest products occur in such areas, more important and pervasive is that virtually all land, settled or not, is claimed by indigenous chiefdoms.

Nonetheless, distance from roads and distance to edge of closed dense forest are two of the key variables used to define suitability for conservation because they positively correlate with biodiversity (Nebel 2006, 9). The suitability analysis ultimately produced a map containing 919,930 hectares of zones “optimally” suitable for conservation as twenty-three new protected areas. Strikingly, the conservation suitability analysis mimicked the land cover classifications produced by Bayol and Chevalier (2004) “to a large degree” (Nebel 2006, 9). Although the consultant emphasizes that the land use model is a tool that does not provide definitive answers, the land use zones produced by the suitability analysis are preserved without change in subsequent forest management documents.

The use of RS land cover classes to zone vast areas for protection (and human exclusion) is the fundamental element in the link between conservation and renewed conflict in Liberia. In the final section, we argue that the application of a comprehensive land use plan in the context of Liberia's volatile postwar land tenure situation is a very risky strategy. First, however, we examine how RS information and knowledge gain power through discourses of biodiversity and climate change mitigation.

## Conservation Discourse and Policy

Globally dominant conservation strategies focus on maximizing the area of land that is (1) designated as intact habitat (i.e., closed dense forest) and (2) protected through the exclusion of people (see Brandon, Redford, and Sanderson 1998; Brooks et al. 2002). By producing national-scale maps of land cover that include classifications such as closed dense forest, RS technologies provide an effective tool that, in conjunction with indicators such as species richness capacity (Defries et al. 2005), is used toward these strategic goals. The policy argument is simple: more intact habitat, more biodiversity.

Climate change mitigation plays an increasingly important role in this logic as national and international policymakers seek large tracts of intact forest to sequester atmospheric carbon. Carbon sequestration

through “avoided deforestation”<sup>2</sup> has been internationally recognized and Liberia is poised to become one of the first countries to benefit financially through the World Bank-led Forest Carbon Partnership Facility. Avoided deforestation dovetails with conservation efforts that seek to maximize *permanent* intact forest cover. International biodiversity and climate change discourse and policy merge as habitat becomes carbon sink. As the political importance of climate change mitigation increases, the growing attraction of financial capital to forested developing countries such as Liberia only compounds the future risk of land tenure conflict in the country. Advocates for smallholder forest inhabitants in Africa already cite the potential for increased land alienation as a primary risk associated with the UN-led Reducing Emissions from Deforestation and Forest Degradation in Developing Countries Programme (Nengo 2008).

The influence of this international conservation policy in Liberia is profound. As part of its goal to maintain the integrity of its forest cover over a twenty-five-year time horizon, Liberia’s National Forest Management Strategy of 2007 (Republic of Liberia Forestry Development Authority 2007) merged the open dense and closed dense forest classes produced by Bayol and Chevalier (2004) into one category labeled “permanent forest” (Republic of Liberia Forestry Development Authority 2007, 11). The new category totals 4.39 million hectares, an equivalent of 47 percent of the nation’s territory, including the 919,930 hectares deemed suitable for strict protection, which represents nearly 10 percent of Liberia’s territory as mandated by the UN Convention on Biological Diversity (UNCBD). The UNCBD, which the Liberian government signed in November 2000, provides the legal anchor for national conservation strategy and the central role played by territorial land use zoning in it.

Liberia’s conservation strategy, guided by the UNCBD article on strict territorial protection, reflects the reality that protected areas are one of the “cornerstones” of nature conservation (DeFries et al. 2005, 19). As the previous section demonstrated, the locations and extent of Liberia’s future protected areas are heavily influenced by a land cover map that is at best decontextualized and at worst part of a flawed narrative of regional deforestation. Despite long-standing efforts to better incorporate people into protected areas (Brechin et al. 2002), the “protectionist paradigm” of conservation is resurging globally and is strongly reflected in Liberia’s strategy. According to Hutton, Adams, and Murombedzi (2005, 347) this

resurgence reflects: “urgency of action, calls to better incorporate biological science in conservation, and the completion of global-scale analysis of biodiversity hotspots.” Brandon, Redford, and Sanderson (1998) argue that “protected areas are the last safe havens for large tracts of tropical ecosystems” (Hutton, Adams, and Murombedzi 2005, 348). As previously noted, justifications for protecting large tracts of land that are classified as intact relate to species richness capacity, which is an accepted measure of a given area’s potential to conserve biodiversity (DeFries et al. 2005).

Although grounded in conservation science, the application of species richness capacity in the policy process depends on the highly political and very problematic act of erasing the social history and human–environment interactions from landscapes targeted for conservation (West, Igoe, and Brockington 2006, 148). This is a necessary step in a twofold process that transforms landscapes into conservation territories. In Liberia’s case, the second step is the creation of a stable land cover category of permanent forest. Although stakeholders can dispute the terms of forest use, its definition and its spatial extent are nonnegotiable. Landscapes that were sites of historic struggle, conflict, and dislocation become naturalized spaces to be defined as intact habitat, free of people and strictly protected.

## Postwar Land Tenure

Because customary land tenure cannot be legislated out of existence, the classification approach sets up extremely contentious relationships about land between the state and rural inhabitants. Because land tenure in postwar Liberia is highly volatile, such relationships detract significantly from efforts within the peace process. Currently the root land tenure problem in the country is the massive confusion that exists on a range of legal, administrative, boundary, claim, and ownership issues. For example, there is confusion about which laws apply where and to whom; there is contradiction within and between laws; there were multiple changes in subnational boundaries and definitions and roles of administrative areas; and large land areas are simultaneously claimed by chiefdoms, the state, private interests, and informal groups. The link between such confusion and wide-ranging land tenure insecurity and conflict is explicit (Bruce and Migot-Adholla 1994; Unruh 2008), and this link plays a large role in postwar Liberia (Unruh 2009). With little clarity regarding rights, authority,

and dispute resolution, a large-scale attempt to redefine land tenure and rezone land use, particularly through territorial exclusion, is perilous.

Approximately half of the country was under the control of armed factions during the 1990s, and the government is just now coming to understand what has transpired with regard to private, political, and administrative change in land units. The fieldwork revealed that the activities of ex-combatants are a particular problem, some still reporting to militia commanders who engage in a variety of extractive activities (Unruh 2009). The administrative and judicial systems required to handle land matters in the postwar context are currently extremely underdeveloped, nonfunctional, or overstretched. Implementing the wide-reaching LFI land use plan in this sociopolitical and institutional environment sets up a potentially volatile dilemma.

Postconflict land tenure and the LFI are embedded in a long history of conquest, claims, and violence that dates to the arrival of the first Americo-Liberians. Armed conflict over land occurred as early as 1822, the year Liberia was established, due to profound conceptual differences in land tenure between Americo-Liberians and indigenous inhabitants (Bruce 2007). With severe suppression of the interior in the early half of the twentieth century, the resulting aggrieved sociopolitical situation grew over time as extensive land appropriation grew into acute grievance, uncertainty, and conflict. By the eruption of the war in 1990, the means of acquiring land had developed into a volatile crisis (Governance Reform Commission [GRC] 2007; Unruh 2009). Riddell and Dickerman (1986, 102), quoting Liberian expert Gus Liebnow in a personal communication, note that during the Doe regime (1980–1990), “[1]and tenure is at the heart of rural discontent.” Subsequent to the war, the Liberian GRC (2007) concluded that access to land was a root cause of the armed conflict. Rural people continue to be skeptical of central authority and it is unsurprising that they are now contesting new territorial claims. Land rights in Liberia after the war are therefore an acute concern (P. Banks, personal communication, 6 December 2006, conversation; Daygbor 2007; K. Johnson, personal communication 12 February 2007, conversation) and the rapid reassertion of centralized control is risky. An additional concern is the potential reinstatement of certain abuses by customary leadership, particularly with regard to land access for migrant youth. Extremely exploitive arrangements existed prior to the war, which fed youth into the militias (IRIN 2007). Indeed “reform of rural rights

seems as urgent an issue as tracking the gun-runners or diamond- and timber-smugglers” (Richards 2005, 588).

The general lack of clarity in land rights is aggravated by the existence of the dual tenure system in the country (statutory and customary). There are constant and persistent clashes in Liberia involving customary versus statutory rights over the management, authority, and control of land resources (GRC 2007). The way that this duality functioned was a significant contributor to the war (Unruh 2009).

The fieldwork revealed that effective boundary demarcation is a large and confusing problem. In a number of cases how much land exists in the various counties and concessions is unknown. In others, mistaken numbers are used to calculate such areas (Unruh 2009). In addition, the fieldwork observed that under Liberia’s deed system, only the number of acres and approximate boundaries are recorded, and there exists no registry. Complicating this situation is the significant purposeful destruction and alteration of deeds during the war. These issues are all fundamentally important for conservation planning and land inventory. Interviews with members of the GRC indicate that there is currently overlap and jurisdictional ambiguity between the state-supported customary units of Clan and Paramount Chieftaincies, and the townships and cities subject to the statutory system. The overall situation is that many boundaries exist in a state of extreme confusion and contestation.

For example, members of the GRC and practicing lawyers estimate that currently up to 90 percent of all cases in all statutory courts are land and property related. Moreover, land disputes are the most frequent cases in local courts (Richards 2005). This is a serious problem after a war when access to justice and the promotion of the rule of law are priorities in the country’s peace process (Unruh 2009). At the same time there is a deep distrust of customary courts and their capacity to decide land issues in a fair manner. Interviews with government and customary communities indicate that there is no legal or institutional mechanism whereby disputes and other issues can be resolved between the statutory and customary tenure systems, and that the interface between commercial holdings and smallholder farmers is the focus of increasing conflict (Unruh 2009). A particular example involves whether the Mandingo ethnic group in the north of the country are to be considered citizens of Liberia and thereby legitimately able to claim and own land. Conflicts are emerging between adverse possession claims via statutory law by Mandingos and traditional claims by other ethnic groups.

In short, customary land rights that exist within the national-scale land use zones are still highly contested. Significantly problematic with regard to the LFI is that key forest management decisions were finalized in 2007. Although the public consultation phase of the LFI had concluded, important elements of Liberian civil society did not fully support the management plan, as indicated in an open letter signed by fourteen Liberian and seven international NGOs on 25 September 2006. The letter states clearly that the Forestry Reform Law, adopted on 19 September 2006, failed to address community land tenure, access and user rights, or meaningful public participation in forest management and sector reform. Nearly two years later, the NGO coalition of Liberia issued a statement in July 2008 identifying three timber contracts issued by the FDA that violate the property rights of local communities. Allegedly the government was fully aware of existing community land claims but chose to ignore its own policy. The statement further describes a larger problem: The reform process and rule of law in the forestry sector are at risk due to opaque procedures.

## Conclusion

Liberia's land use planning process was made possible by the presumed "clean slate" that was the country's rural landscape following the end of hostilities. Although rural Liberia was dangerous and unstable, it was a clean slate in the sense that no customary authorities could counter the territorializing effects of postwar land use planning. Actors seeking to control Liberia's vast and valuable forest resources, including its biodiversity and potential to sequester carbon, have used geospatial technologies and scientific discourse as tools to establish a system of territory-based authority covering the entire country. We have argued, however, that this project ignores issues relating to a problematic political and scientific discourse, technology application, and land tenure at considerable peril.

## Notes

1. [http://www.conservation.org/explore/africa\\_madagascar/liberia/pages/liberia.aspx](http://www.conservation.org/explore/africa_madagascar/liberia/pages/liberia.aspx) (last accessed 30 April 2009).
2. *Avoided deforestation* is the conventional term referring to the ensemble of multilateral initiatives that aim to prevent the conversion of tropical forests into other land covers to reduce greenhouse gas emissions.

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