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Social Movements and Large-Scale Tropical Forest Protection on the Amazon Frontier: Conservation From Chaos

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Abstract

Amazon social movements arose, like many others globally, in conflicts with political and economic elites over land use and resource extraction. Amazon social movements have moved beyond protest to protagonize large-scale forest protection. The article examines the history of the Transamazon highway colonists' movement and its articulation of an alternative vision of regional sustainable development, leading to successful advocacy for the creation of a 5.6 million-hectare reserve mosaic in the Xingu river basin. The mosaic connected two blocks of indigenous territories ultimately forming a 30 million-hectare protected forest corridor, halting frontier expansion. While much recent conservation literature critiques international environmentalist agendas in tropical forest conservation, the Transamazon movement's alliance with environmentalists was mutually beneficial. Amazon social movements' substantial role in a global increase in protected tropical forest areas since the 1970s merits more attention from both international conservation organizations and scientists.

Keywords

Amazon, forest conservation, social movements, protected areas

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Introduction

Social movements such as Brazil's Transamazon social movement discussed in this article have become increasingly visible and vocal actors in disputes and conflicts over large-scale infrastructure development, control over natural resources, and land use in recent years (Brysk, 2000; Escobar, 1998; Keck & Sikkink, 1998). From contesting the terms of oil and gas development in Peru (Chase-Smith, 2005) to protesting dam construction in India (www.narmada.org/) and blocking illegal timber extraction in Indonesia (Fried, 2000), social movements have developed alternative methods of resistance and channels of influence in opposition to economic and political elites and outside of state structures. While resistance and protest remain social movements' tonic globally, movements in some regions have successfully influenced land use policy.

In the Amazon, social movements have become part of a major global shift in land use. Legally protected areas—indigenous lands, sustainable use areas, and strictly protected natural areas—in the Brazilian Amazon account for a significant part of the very substantial global increase in protected areas over the last 30 years, particularly in developing countries (Naughton-Treves, Holland, & Brandon, 2005). Amazon protected areas in 2003—nearly all established in last three decades since the opening of the Amazon agricultural frontier—accounted for roughly a third of the area of the world's tropical protected areas in only about 15% of the area of the biome.[1] Amazonian social movements—organizations and networks of initially politically disenfranchised and economically marginal minority populations—successfully proposed and advocated for the preponderance of these, typically collaborating with nongovernmental organizations (NGOs) to secure the intervention of government environmental and indigenous agencies (Instituto Socioambiental [ISA], 2000, 2009; Schwartzman & Zimmerman, 2005).

A recent example is the Brazilian federal government's creation of a 5.6 million-hectare reserves mosaic, including indigenous lands, strictly protected and sustainable use forest reserves in the *Terra do Meio* ("land in the middle," between the Xingu and Iriri rivers in Pará state) from 2004 to 2008, based on a proposal formulated and successfully advocated by the Movement for the Development of the Transamazon and Xingu (Moviemento Pelo Desenvolvimento da Transamazônica e Xingu [MDTX], 2001), a grassroots network of small farmers' and colonists organizations on the Transamazon highway, with national and international NGO support. Creating the mosaic, strategically positioned between two blocks of officially recognized indigenous lands, de facto established a continuous 26 million-hectare protected forest corridor, lying directly across, and impeding the advance of, the most rapidly expanding agriculture frontier in the Amazon (Alencar et al., 2004; Figure 1).

The trajectory of the Transamazon movement, and its success in promoting large-scale landscape conservation in an active agricultural frontier, is not an isolated phenomenon. Over the same period, corresponding to the opening and expansion of the agriculture frontier, indigenous peoples in the Brazilian Amazon went from having generic constitutional rights to the land they traditionally occupied and virtually no

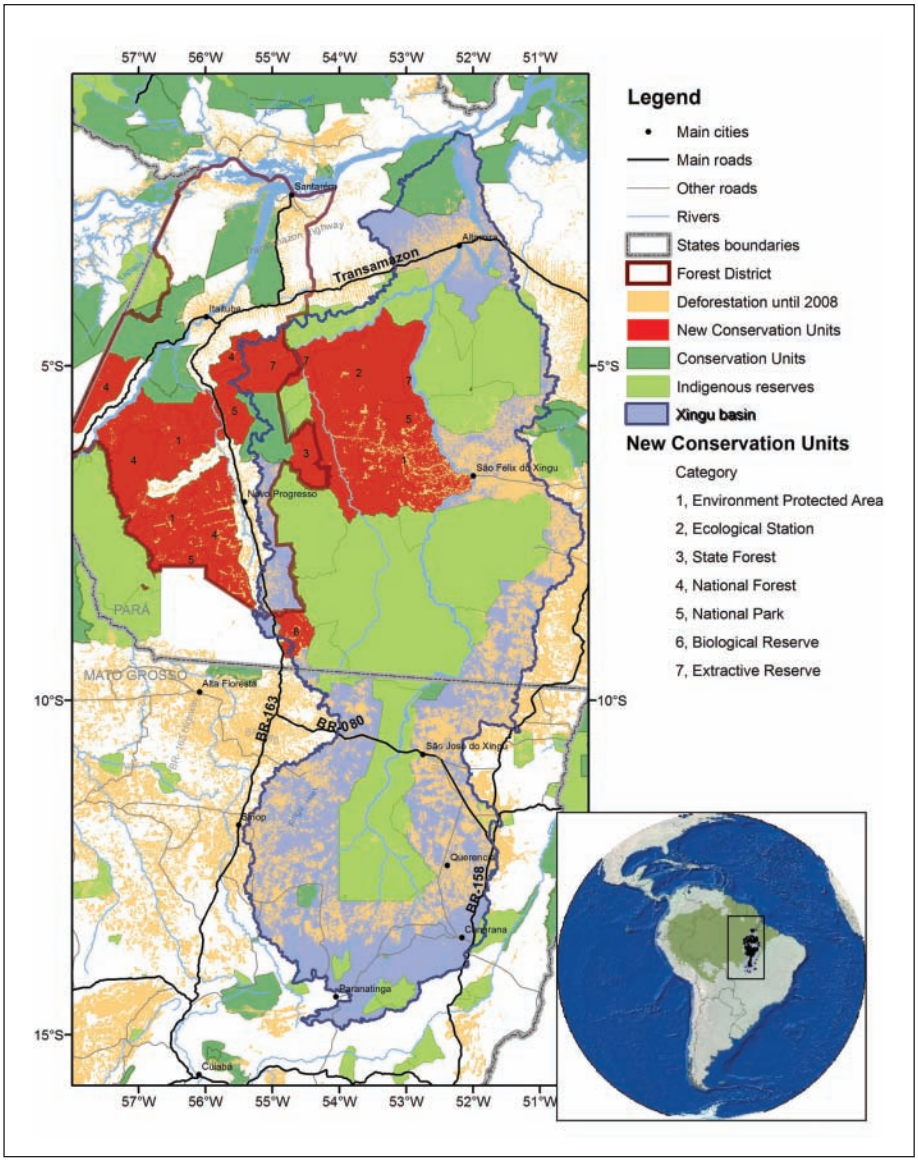

Figure 1. Terra do Meio mosaic and Xingu Basin protected areas corridor.
Source: Alicia R., Instituto Socioambiental (2009).

legally recognized territory, to official recognition of about 21% of the region, more than 1 million km². Since 1985, rubber tappers not only formulated an entirely new category of protected area and had it adopted as national policy but also won the

creation of 99 reserves covering more than 200,000 km² (ISA, 2009). Nor is this dynamic confined to Brazil: In roughly the same time frame, indigenous peoples in the Amazon regions of Columbia, Ecuador, Peru, and Bolivia have also made major gains in winning official recognition of their land rights (Rojas, 2009).

These developments raise questions for academic and scientific discussion of social movement participation in conservation. Recent conservation literature includes extensive discussion of conflicts between international conservation agendas and local, particularly indigenous, peoples' struggles as well as local and national conservation agendas in developing countries (Chapin, 2004; Colchester, 2000; Romero & Andrade, 2004; Zhouri, 2004). Scientists and environmentalists have questioned the efficacy of globalized conservation led by international conservation organizations (ICOs) out of concerns that preservationist agendas and top-down decision making "will abort local social processes that could contribute to conservation" (Romero & Andrade, 2004, p. 578). Many have also raised issues about who controls representations of social movements and local, particularly indigenous, communities in alliances with international conservation organizations and policy discourses, to what effect (Conklin & Graham, 1995; Slater, 2000; Li, 2005). The extensive and rich literature on Community-Based Natural Resource Management (CBNRM) critically examines the assumptions behind and consequences of more than a decade of experience in which "NGOs and their allies have sought to bring about a fundamental rethinking of how the goals of conservation and effective resource management can be linked to the search for social justice for historically marginalized peoples," (Brosius, Tsing, & Zerner, 2005, p. 2). CBNRM is undoubtedly the most sustained effort on the part of conservation organizations, bilateral and multilateral aid agencies, and sectors of government to reconcile conservation of biodiversity and the rights and needs of local peoples, and the literature addressing it focuses closely on questions of power, equity, and representation asking who benefits from specific conservation initiatives at whose cost (Agrawal, 2005; Berkes, 2004; Li, 2005; West, 2005; Zerner, 2000). Janice Alcorn, in a comprehensive and nuanced discussion of CBNRM (2005), captures many of the most persistent themes and antinomies that run through this literature—local versus international control, species conservation versus local peoples' rights, political versus technical priorities—by drawing a distinction between Big and Little Conservation. Big Conservation is global, centered in large, international conservation organizations with multimillion dollar budgets, and multiple links to bilateral and multilateral aid agencies, foundations, and government agencies, while Little Conservation "occurs when individuals make choices in their day-to-day lives, in the places where they live," (p. 39) usually based in traditional knowledge and typically invisible to outsiders.

The experience of the transamazonian movement, as well as the larger process in which it participates, is clear evidence that something important is going on beyond these frameworks. Clearly, in light of the last 30 years history of social movements' influence on government land use policy in the Amazon, the "local social processes that lead to conservation" researches reference are no abstract or

ideological conceits. From a purely instrumental conservationist perspective, the creation of protected areas led by Amazonian social movements[2] has effectively halted the expansion of agricultural frontiers and prevented deforestation on an unprecedented scale (Nepstad et al., 2006; Soares Filho et al., 2006). Amazonian social movements are nonetheless, with few exceptions (Allegretti, 2002; Carneiro da Cunha & Almeida, 2004; Campos & Nepstad, 2006; Fearnside, 2003; Schmink & Wood, 1992), little discussed in the conservation literature. Alcorn quite accurately represents the dynamic of CBNRM projects in the focusing on the polarity between large international conservation organizations on one hand, and local communities on the other. Forest or rural peoples' own organizations, particularly large, representative organizations such as the National Council of Rubber Tappers (CNS) or the Movement for the Development of the Transamazon and the Xingu (MDTX) have in fact been largely absent from the interinstitutional dance Alcorn describes. The Transamazon movement is neither Big nor Little Conservation in spite of leading tropical landscape conservation on a scale seldom achieved by Big Conservation and in spite of negotiating the conditions for its members to more effectively practice Little Conservation on a macro-regional scale.

This manifest influence of social movements on land use and frontier expansion also counters dramatically some traditional conservationists' view of social movements' adoption of environmental values as opportunistic posturing seeking social goals essentially at odds with conservation (Terborgh, 2000). Some social science literature as well gives scant credence to their articulation of conservationist values in the construction of new identities in response to dilemmas and opportunities created by the frontier, tending instead to see outside imposition of representations of local peoples' relations to nature and natural resources that leave forest and rural peoples vulnerable when outsiders' expectations are (inevitably) disappointed (Conklin & Graham, 1995; Slater, 2002, but see Escobar, 1998 and Li, 2000 for more nuanced views.) The Transamazon movement has, however, effectively controlled its own self-representation, and this has been central to its trajectory from resistance movement to interlocutor for regional development policy (this has also been the case of other Amazon social movements, more often than they have been given credit for—see Allegretti, 1998; Arnt, 1998). This, like other Amazonian social movements, is a visible political presence to governments and the regional private sector (Souza, 2006; Toni, 1999).

One reason that there is relatively little discussion of these movements and their institutions in conservation literature is, as Alcorn very aptly describes, that most conservation funding has historically flowed to Big Conservation, which finds doing projects with communities, government agencies, or subordinate service providers less risky and more amenable than building alliances with social movements. It is only to be expected that Big Conservation wants research on, and evaluation of, what it has funded.

The role of Amazon social movements, their institutionalization, and identities in large-scale topical forest landscape conservation merit more attention from researchers

and conservation organizations alike. These movements, as we will discuss below, have become a significant constituency for frontier governance and sustainability in the Amazon and now substantially control extremely significant expanses of forest by any standard. But threats to these lands—and to the fundamental ecological integrity of the Amazon biome as a whole—are increasing rapidly (Carneiro & Souza, 2009; World Bank, 2010), while forest and rural peoples' living conditions and real economic alternatives vary widely and are typically deficient. Larger-scale incentives and investment in the environmental and social sustainability of lands for which social movements have won protection, forest-based and rural livelihoods, and for reducing deforestation are necessary if large-scale landscape conservation is to remain viable over the long term (Nepstad et al., 2009).

We examine here the history of the Transamazon small farmer colonists' social movement in Pará state in the Brazilian Amazon since the 1970s and discuss the movement's articulation of environmental values and identity based in opposing small farmers' land use[3] to other, competing land uses and reigning Amazon development policy. We trace the movement's trajectory from a locally focused resistance movement to regional and national government interlocutor on development and conservation policy and advocate of large-scale forest landscape conservation.

We discuss the movement's engagement with issues of environment and sustainability to address the questions of how and why a movement of small-farmer colonists came to protagonize large-scale forest conservation.

The authors of this article include researchers who have conducted fieldwork over the last 7 years in the Terra do Meio reserves mosaic and Xingu protected areas corridor, with riverine (*ribeirinho*) families and with small family farmers and community leaders on the Transamazon. Several of us participated directly as scientists, NGO staff, environmental advocates, and social movement leaders in designing, advocating for, and implementing the Terra do Meio reserves mosaic. The article, in addition, draws on participant observation in meetings and events and structured interviews with movement leaders in Altamira as well as 33 interviews with riverine families and community leaders on the Anfrizio, Iriri, and Xingu rivers between 2003 and 2008. The article also uses archival materials on the Transamazon movement in the Fundação Viver, Produzir e Preservar (FVPP) and published literature.

The Terra Do Meio Reserves Mosaic: Large-Scale Forest Conservation and Amazon Social Movements

In November 2004, the government of Brazil created two Extractive Reserves in the Amazon state of Pará—the 1.2 million hectare *Verde para Sempre* reserve at the mouth of the Xingu River and the 736,000 hectare *Riozinho do Anfrizio* reserve in the lawless frontier region known as the *Terra do Meio* (Land in the Middle; Figure 1). On February 12, 2005, the day that Environment Minister Marina Silva came to Pará to inaugurate the reserves, hired gunmen shot and killed American nun Dorothy Stang in the town of Anapú. Sister Dorothy, a longtime land rights activist and organizer had

for years received death threats for her role in promoting a "Sustainable Development Project," or land reform project intended to promote environmentally sustainable land use, for small holders on land in part claimed by large ranchers. Social movement leaders opined that the timing of Sister Dorothy's assassination was hardly accidental. National and international media drew immediate parallels between sister Dorothy's killing and the assassination of rubber tapper leader Chico Mendes 17 years earlier in a similar conflict over land and forest between traditional rubber tappers and encroaching ranchers. The federal government sent 2,000 troops to the conflict-ridden region and immediately declared about 4 million hectares of new protected areas, including strict protection and sustainable use areas, in the disputed *Terra do Meio* region. Creating this "reserve mosaic" formed a continuous protected forest corridor unique in scope and ecological diversity in the Amazon and the world: 26 million hectares, running from the savanna-forest transition in northern Mato Grosso to dense moist forest in central Pará (Figure 1). It covers half of the Xingu River Basin and has about 13,000 legal inhabitants, nearly all members of 24 indigenous tribes and traditional riverine families. The corridor includes indigenous territories, extractive reserves, strict protection areas, and a national forest. The creation of Terra do Meio mosaic and Xingu protected areas corridor marked a decisive moment in the history of the Transamazon dating to the mid-1970s.

The Transamazon Movement

"What Road?"

The story of the opening of the Transamazon highway and its ill-fated colonization program has been recounted and analyzed many times (Leroy, 1991; Moran, 1984; Souza, 2006; Toni, 1999; Velho, 1972). Because the program became, for many observers, synonymous with massive, ill-conceived, environmentally destructive, and socially inequitable or "pharaonic" development, the level of optimism and enthusiasm that surrounded the opening of the Transamazon highway are often forgotten (Gomes, 1972; Smith, 1982). Some compared the undertaking to U.S. moon landing for its scope and for the level of uncertainty associated with it—initial projections called for the resettlement of 100,000 families in 3 years in the remote and inaccessible region. Famously conceived by General Médici as the vehicle for opening the "land without people" (the Amazon) to the "people without land" (poor and drought-stricken northeasterners), the program was announced in 1970 and inaugurated by Medici in 1972. Colonists recruited by the National Institute for Colonization and Agrarian Reform (INCRA) began arriving at once. Only 7,000 came and some 30% of these left in the first few years. Colonists' experience differed radically from the expectations government created with promises of housing, roads, services, and access to markets. Conditions were severe—colonists faced isolation, disease, conditions unsuited for the agriculture they knew, little or no access to basic services or markets, and ultimately abandonment by the government that brought them there.

In 1974 President Giesel declared small farmer colonization on the Transamazon a failure and official policy shifted to support for large landholdings and cattle ranching. The core membership of the Transamazon social movement consists in small farmer colonists originally from Rio Grande do Sul and Paraná in southern Brazil who moved to the newly opened Transamazon highway in the1970s and experienced this betrayal of the hopes that government had itself created. Paulo Medeiros, today 49, Transamazon colonist, former rural workers' union leader and coordinator of the *Fundação Viver, Produzir e Preservar* (Foundation for Life, Production and Preservation, FVPP), the core institution of the Transamazon movement, recounted his own, emblematic story of the early colonists' experience.

> My father, my brother and I arrived at the Transamazon June 8, 1976. We came to the town of Uruará first. The next year my father went back for my mother and unmarried sister. We were going to go to Alta Floresta [in Mato Grosso state], we had bought land there with the indemnification from Itaipu[4] in 1974. Then INCRA turned up in the south inviting people to the Transamazon—[they said] there was land, a house, a road. Depending on how you were classified by INCRA, you could get from 100 to 500 hectares. We were offered 500 hectares each. We had bought land in Alta Floresta, but here it was free—500 hectares, for people who had never had more than 50 in the south, so we sold the land in Mato Grosso and took the land here . . .We bought a car, chain saws, and we came in May 1976. We went to the INCRA office in Brasil Novo, they said the road was open [to our lots]. We got there, and there was nothing. We got to Kilometer 180, they were starting to build a Church, and a school. The priest was like, "What road?" There was a track off of the highway for 2 ½ kilometers, where a company had taken out mahogany, then another 2 ½ kilometers the families had done, then nothing, just a trail...We rented 10 burros from a northeasterner and left at 6.30 in the morning. I hired six men to clear forest. We got to where our land was, 8 kilometers in, at 5.00 in the afternoon. The trail had grown over, so we had to clear a path for the donkeys to get through. We made a hut and covered it with palm thatch, and we cleared 25 hectares for rice, the three of us and the six hired hands. A month later two more families arrived, and between us we planted 50 hectares of rice. We got 50 or 60 sacks of rice a hectare, and we hired people and made a road. By 1979 the money from the indemnification ran out, and we were working with credit from the bank. Then some squatters from Maranhão [state] came on my lot. I felt sorry for them, they had a lot of kids, so I gave them some land, half my lot, 250 hectares. My dad was mad . . .[5]

This abrupt collapse of expectations inflated by official misrepresentations was by all accounts a core-shared experience of the early colonists, followed, for the families that stayed in the region, by mutual assistance and cooperation to try to fill the gap between the programs' promises and reality. (Leroy, 1991; Toni, 1999) Another

shared experience was the failure of southern Brazilian, temperate zone smallholder agriculture under Amazonian conditions.

Organizing

Catholic clergy oriented by liberation theology, on the Transamazon as elsewhere in Brazil, started community organization in the late 1970s, founding Ecclesiastical Base Communities[6] and identifying community leaders. Colonists became increasingly angered by the widening gap between government promises and services INCRA actually delivered. INCRA failure to demarcate colonists' lots, provide seed, open roads or issue land titles were constant points of contention. In the early 1980s activist clergy promoted the first collective organization—buyers' clubs (*revendas*), communal gardens, and collective work parties.

Church and community leaders, here as elsewhere in the interior, came to see the Rural Workers' Unions (*Sindicato dos Trabalhadores Rurais*—STR) as a potential institutional base from which to press colonists demands' more effectively—the STRs were part of the officially sanctioned labor bureaucracy even under the military dictatorship. But because the whole Transamazon region belonged to a single county (Prainha), with a single Rural Workers' Union, the colonists first had to open new delegacies of the Prainha STR. In 1982, Uruará and Medicilândia created delegacies. This experience led movement leaders to identify "emancipation," or the official creation of new counties from the existing, extremely large counties, as a way to achieve more effective and accountable governance, by creating municipal rural workers' unions and the structures of local government where the colonists lived. In 1986, the emancipation of the Transamazon towns was put to a referendum and Prainha was subdivided. By the early 1990s, 15 new counties had been created from four original counties, each with its own mayor, city council, and budget. The colonization projects along the highway from Novo Repartimento and Altamira in the Xingu basin west to Itaituba on the Tapajos river became the bases of successive grassroots mobilizations.

Efforts to democratize and wrest control of the STRs from leadership allied with regional political elites and the military government yielded slow but steady progress. The case of the Santarem STR (Leroy, 1991), where the movement won control in 1980 after an 8-year effort, became well known nationally. And, in line with broader civil society mobilization to resist the military government and return Brazil to democracy, the STRs of the Transamazon through the 1980s affiliated themselves with the Single Workers' Center (CUT), the independent national trade union confederation created in opposition to the official, state-controlled trades unions, and aligned with the left Workers' Party (PT). In 1987, movement-controlled and CUT-affiliated unions won control of the state federation of agriculture workers' unions (FETAGRI; Toni, 1999, p. 150). Movement leader and current PT state legislator Airton Faleiro noted, "The participation and influence that the rural union movement from Pará has exercised on Brazilian unionism is undeniable." (Faleiro, 1994) Rural workers' union leaders and organizers from the Transamazon movement would go on to become national

leaders in the rural department of the CUT as well as to win mayoral and federal Congressional elections as well as seats in the state legislature and city councils across the region and appointments to state and federal government positions. These gains on one hand demonstrate the efficacy of the movement's organizing strategies over time, but successive victories in increasingly broader spheres of action led at each stage to intense internal debate over the actual benefits accruing to colonist families, and at times over individual leaders' personal agendas (Faleiro, 1994; Toni, 1999)

Over time, the movement's goals and focus broadened, and it became clear that key issues on the ground—access to credit, services, infrastructure development—could only be addressed at the state or federal level. A key moment came in 1984, when INCRA sold a failing ethanol refinery built by the government to a private company. When the company stopped paying the refinery workers, the workers closed the Transamazon highway and police violence ensued.[7] Church and union leaders decided to mount a national protest and 365 colonists and refinery workers mounted a caravan to Brasília. The caravan was surrounded by military police before it reached Brasilia and camped in the City Park for 22 days. When President Sarney received state governors for the first time, the Transamazon delegation managed to surround the governor of Pará's car in sight of the national press. The governor agreed to negotiate. "We selected a commission of 8 refinery workers and 4 colonists, and ended up staying for 63 days," recalled Paulo Medeiros. As a result, state and federal governments approved resources to continue operating the refinery as well as for schools, hospitals, and improvements to feeder roads. The tactic of demonstrations en masse in urban centers to force negotiations with government became a mainstay of the movement.

In 1989, after the assassination of union leader Expeditio Ribeiro in Rio Maria in southern Pará, the Transamazon movement joined with the Rio Maria Committee (including local unions, church groups, and NGOs) to protest the killing in the state capital of Belém and called the event the "Cry against Violence" (*Grito Contra Violencia*). The idea of multiorganization mass protests and negotiations were semiinstitutionalized through the 1990s, when "Gritos da Terra" involving FETAGRI from Pará, the National Confederation of Agriculture Workers (CONTAG), CUT, the National Council of Rubber Tappers, and others would deploy yearly delegations to regional capitals and Brasilia. Not only did the Pará model go national but also FETAGRI succeeded in negotiating changes to the rules for official agriculture credit from the Constitutional Fund for the North (FNO), so that the funds were, in principle, accessible to small family farmers for the first time. By the time of these negotiations, in the early 1990s, the movement argued that small, family farmers, previously denied access to credit, used the land far more sustainably than the large cattle ranchers for whom the rules were written and who monopolized its use (Toni, 1999).

Movement leaders point to several moments when environmental issues came to fore on the Transamazon. At first, environmental issues caught the movement by surprise. In 1989, the meeting of indigenous peoples of the Xingu basins was convened by Kayapo chiefs (and dominated by the Kayapo) to protest government plans for a series of hydroelectric damns on the Xingu (Schmink & Wood, 1992) in

Altamira, the movement's heartland. Several hundred indigenous people, and at least that many NGO activists and journalists, converged on Altamira. Local businesses and landowners responded with a large march supporting the dam. The movement found itself in the awkward position of not having a position on the dam. The other was the 1992 Rio de Janeiro United Nations Conference on Environment and Development, or "Earth Summitt," which drew thousands of environmentalists, scientists, and policy makers. "Everyone was discussing deforestation," recalled an Altamira Pastoral Land Commission (Comissão Pastoral da Terra, [CPT]) activist, "but the Transamazon wasn't."[8]

At the same time, by the end of the 1980s the movement was undertaking an extensive evaluation of its trajectory to that point as well as of the situation of the Transamazon colonists. Movement leaders and advisors carried out a house-to-house survey throughout the colonization projects in 1988, reaching alarming results: For a population of 500,000 along 1,000 km of the highway there were nine doctors; more than 70% of the adult population was illiterate or semiliterate; people at the ends of the feeder roads to the Transamazon lived in subhuman conditions, without access to transportation or medical assistance. (Souza, 2006, p. 72) It was on the basis of this analysis that the movement launched the cycle of "Gritos," in an attempt to reach levels of decision making capable of more effective responses, and took two further, related, steps. At a meeting in Ruropolis in 1989, leaders concluded that a broader mobilization was needed to force the government to invest once more in the colonization project and founded the Movement for the Survival of the Transamazon (MPST). A delegation of leaders went on a national tour, meeting with state legislators, university faculty, unions, NGOs and in ministries in Brasilia.

> We decided we had to make public opinion aware of what the Transamazon was. People thought the Transamazon was a white elephant, we wanted to understand why they said that. It was here that the question of deforestation came in.[9]

Following a wider trend in social movements nationally, leadership proposed to move from a reactive, denunciatory mode to formulating positive proposals and this, in their view, entailed broader alliances and a wider, regional, vision. State legislator Airton Faleiro recalled,

> It wasn't enough to criticize the State, it was necessary to have proposals . . . . The struggle for land reform and agricultural policy could no longer be treated as in the interest of only the rural communities (*camponeses*), but rather of the whole of society. (Faleiro, 1994, pp. 51-52)

> We understood that we had to go beyond localism, to articulate struggles at several levels, because only in this way would we be able to attack the central policies that determined our lives. This articulation implies re-dimensioning the space of struggle, introducing the idea of regionality. (Faleiro, 1994, p. 53)

With the move to a regional vision, came the concept of sustainability.

> At that time [1987-1990, when participation in the unions was in decline], our proposals did not take into account the national and international context and the debate on environmental issues, in which family agriculture was erroneously seen in various sectors as depredating nature. It was necessary to create a new culture of the relations between economy and environment in the rural union movement. (Faleiro, 1994, p. 51)

Following this logic, the Movement for the Survival of the Transamazon (MSPT) set out to redefine the common view of the Transamazon and position the colonists—and family agriculture—as a positive alternative to environmentally destructive and socially inequitable cattle ranching and illegal occupation of public lands. In 1991, the movement created the Foundation for Life, Production, and Preservation (*Fundação Viver, Produzir e Preservar*_-FVPP), with some 113 local unions, associations, women's organizations, and cooperatives affiliated, representing 20,000 families, as the institutional base of support for the movement.

Movement leaders including Airton Faleiro, Ademir Federicci (Dema), Bruno Kempner, Antonia Melo, and others began to construct this culture in the late 1990s. Faleiro, as national coordinator for agriculture policy of CONTAG, led negotiations with the Banco da Amazônia (BASA), the administrator of FNO (federal tax-derived fund intended to support regional development in the Amazon), to design an innovative program to make subsidized credit accessible, for the first time, to small farmers. Small farmers viewed this as a victory (Souza, 2006), although it stimulated an increase in cattle raising on the Transamazon (Toni, 1999, p. 225). Based on this experience, the movement subsequently negotiated a credit line specifically for sustainable forestry, reforestation, and payment for ecosystem services (Proambiente), which, while environmentally far better designed, was chronically underfunded (Campos, 2006). Antonia Melo and Dema took up the issue of the State electrical energy company's (Eletrobras) resuscitation of the Xingu river hydroelectric development plan, in the form of the Belo Monte dam—projected as the first of six for the basin. In 2001, MTDX coordinators formulated a cogent and detailed critique of the hydroelectric development plan, entitled "SOS Xingu—A call for good sense on the damming of rivers in the Amazon" (MDTX, 2001), which brought the attention of national and international NGOs and activists to the plan and served as the manifesto for a 2002 mobilization on the Belo Monte dam, which drew some 2,000 people—very largely small farmers from the Transamazon, in opposition to the 1989 protest of the same dam proposal—to Altamira to protest the plan.

The idea for the Terra do Meio reserves mosaic, according to Paulo Medeiros, came out of a hunting trip in about 2000, when a few movement leaders realized that "colonization fifty kilometers in from the highway had no future. We needed containment areas, to preserve the environmental equilibrium and stop illegal occupation of public land (*grilagem*) and deforestation." In 2000, during the annual "Grito da Terra," Dema

and other leaders presented Environment Ministry Amazon Secretary Mary Allegretti a proposal for the protection of the "lungs of the Transamazon"—two large complexes of protected areas flanking the highway to the north and south, outlined on a hand-drawn map (Campos & Nepstad, 2006). The Amazon Secretariat contracted the nongovernmental Instituto Socioambiental (ISA) to carry out a preliminary survey of the Terra do Meio region (the southern "lung") and prepare a proposal for its protection.

The Terra Do Meio

ISA coordinated a group of regional NGOs, carried out the survey in 2002, and delivered a preliminary proposal to the Environment Ministry in 2003. The survey revealed a complex, paradoxical picture of frontier chaos. Although entirely ignored by municipal authorities in the county seat of Altamira, and barely known even to the Church or the social movement, traditional riverine communities (*ribeirinhos*) were living along all of the major river—some 140 families, spread over hundreds of kilometers along the Xingu, Iriri, Anfrizio, and Curuá rivers (ISA, 2003). Living from subsistence agriculture, hunting, fishing, and collecting and trading Brazil nuts or fish for market goods with river-borne traders on starkly unfavorable terms, the riverine communities were on one hand, extremely isolated. The households on the Anfrizio river closest to the county seat of Altamira were 4 to 6 days by boat, depending on the water level. Isolation, lack of services and extreme poverty had driven many families to leave the region over the preceding 20 years—a census of riverine families on the Xingu and Iriri conducted by Father Angelo Panza of the Xingu Prelacy in 1984-1986 showed that population had declined by about 2/3 by 2002 (ISA, 2003). The expedition met people who had never seen electric light, or money, who had never been to the town of Altamira (A. V. Boas, personal communication, November, 2003). On the other hand, owing to expansion of soy and cattle ranching, increased illegal logging, government's repeated promises to pave the 163 highway (running the length of the Terra do Meio on the west; Figure 1), and attendant increased deforestation and illegal occupation of public lands, the previously remote communities were increasingly subject to incursions, pressure, and threats from land grabbers' (*grileiros*) gangs to sell out or leave. Herculano Porto, lifelong resident on the Anfrizio river, recounted how one day in the dry season of 2002 he was tending the Brazil nut trees in the Brazil nut grove where his father was buried, when four men with guns came through the forest and told him, "You have to get out of here. This isn't yours. Dr Julio [allegedly a judge from Mato Grosso state] bought this, and we're cutting it down this year."[10]

Since the late 1990s, dozens of families on the Anfrísio, Iriri, and Xingu rivers had sold or been forced out. In the Anfrísio, five groups of land grabbers were active by 2003. On the Xingu, Cecilio Rego de Almeida, owner of Brazil's third largest construction company, claimed some 7 million hectares, and his local companies prohibited riverine families (many in the region for generations) from fishing, hunting, or planting gardens and in some cases burning down houses and driving out families

with support from the military police (Environmental Defense Fund [EDF], 2005; ISA, 2003).

Lawlessness and land conflicts in the Terra do Meio reflected larger scale regional dynamics. Expansion of soy production in Mato Grosso displaced cattle ranching to new frontiers such as the 163 and the municipality of São Felix do Xingu, intensifying illegal logging and illegal occupation of public lands and land speculation (Alencar et al., 2004). The Transamazon region, largely settled by small farmers and previously relatively exempt from the chronic rural violence characteristic of southern Pará (Sauer, 2005) was no longer an exception. MDTX leaders Ademir "Dema" Federicci and another organizer, Bartolomeu Morais da Silva, were killed in August of 2001 and July 2002, respectively, probably because they denounced misappropriation of development funds and were organizing small farmers to resist large-scale land grabs. The idea that some level of governance in the lawless Terra do Meio was in fact in the interests of the small farmers and colonists hundreds of kilometers away on the Transamazon was shown to be tragically correct.

Following the 2002 survey, FVPP undertook to support and organize the riverine families. With support from the Environmental Defense Fund, FVPP, and the Altamira branch of the Catholic Church Pastoral Land Commission (CPT), began circulating in the riverine communities of the Terra do Meio, monitoring the situation, reporting threats and human rights abuses to the federal government, as well as explaining the legal procedure for creating Extractive Reserves to the local communities. The NGOs informed families along the Anfrísio River that, if formally requested, the government could create an extractive reserve to ensure their rights to the land and its resources. While most families seized on the idea of reserves as a defense against land grabbers, the immediate result was to exacerbate threats against emerging leaders supporting the extractive reserve. A local leader reported that Raimundo Pereira, head of one of the *grileiro* gangs operating in the Anfrísio, told him, "The first person to bring a federal government representative up here will be the first to die." Rather than merely pressuring people to sell or leave, land grabbers' gangs began threatening leaders' lives.[11] As threats multiplied, CPT and FVPP prevailed on the Environment Ministry to bring a delegation of three leaders from the Anfrísio to Brasília in October 2004 to meet with Environment Minister Marina Silva and President Luis Inácio Lula da Silva and explain the situation first-hand. In November 2004, the Minister and the President created the Anfrísio Extractive Reserve and the Verde para Sempre Extractive Reserve at the mouth of the Xingu (Figure 1).

The federal government created the Iriri Extractive Reserve in June 2006. The Federal Attorney General's Office (*Ministério Público*) filed and won two lawsuits prohibiting IBAMA from compensating C.R. Almeida's companies for protected areas created on land he claimed and subsequently annulled the entirety of their claims (Noticias Socioambientais, 2006) as well as winning court orders calling for the removal of invading ranchers in the Serra do Pardo Park. The state government, in keeping with its agreement with the Environment Ministry, prepared and conducted public hearings for an Environmentally Protected Area (APA) of São Felix do

Xingu, and the Iriri State Forest in July 2006 and subsequently created the areas in early 2007. In June of 2008, the government created the Middle Xingu Extractive Reserve after FVPP and ISA brought local leader Herculano Silva to Brasília to denounce illegal deforestation, invasions, and death threats against him and other local leaders in consequence of protracted delay in creating the reserve. With the creation of the Xingu Extractive Reserve, the entire Terra do Meio mosaic was officially protected.

Environmental Discourse on the Transamazon

Souza (2006), based in extensive research in the archives of the MPST and MDTX, as well as dozens of interviews with local union leaders and members of the local organizations affiliated with the FVPP, highlights important contrasts and cross-currents in her discussion of discourse on socioenvironmental development on the Transamazon.

> The discourse that sought to balance development and environment came to the Transamazon at the end of the 1980s, influenced by the international environmental movement and especially by the decisions of the Rio Earth Summit in 1992. The Catholic Church in the Xingu was the principal disseminator of this discourse in the region; its historic work with the indigenous populations of the Xingu and its influence with the farmers' organizations through the Ecclesiastical Base Communities were decisive factors in its playing this role. (Souza, 2006, p. 126)

It was however, the growth of the farmers' own organizations (the STRs, FETAGRI, MPST, and FVPP) that allowed the most substantial gains in the forms most immediately apparent to the farmers: Access to credit from the Special FNO for example is widely considered as the government's most significant investment in family agriculture in the region and is highly regarded for having, in a moment of economic crisis, allowed families to keep their farms (Souza, p. 129). At the same time, farmers and researchers alike have noted that an increase in cattle raising and consequently deforestation on small famers' lots was one result of the program (Toni, 1999). Inability to pay off loans was widespread and dispossession was only averted by the farmers' organizations renegotiating the debt. The Proambiente program, directly focused on payment for ecosystem services was similarly generally well received, but of the pilot programs originally projected, only one, with NGO funding, continues to operate. Movement membership largely agrees in principle with socioenvironmental discourse, but "preservation for a large part of the farmers only makes sense if it generates income." (Souza, 2006, p. 129) At the same time, the farmers are "unanimous in agreeing that, in creating Protected Areas the government is 'moralizing' the use of the land, by taking it away from land grabbers"(p. 130). Winning the creation of the Terra do Meio reserves mosaic is thus regarded by leaders and farm families alike as an

important victory, albeit one that contributes more to farmers' future security than it addresses immediate needs. This contrasts markedly with the riverine communities for whom reserve creation was an immediate alternative to dispossession.

For the riverine communities, creating extractive reserves effectively put an end to invasions and burgeoning land conflicts although on the Xingu and Iriri several ranches established before the reserves were created remain points of contention. C.R. Almeida's land claims have been extinguished and his companies have left the area. After Sister Dorothy was killed, the army "sent a bunch of men to the Anfrizio and disarmed everybody. Then when they figured out who was who, they gave the *ribeirinhos* their arms back."[12] IBAMA has carried out various enforcement operations in the Protected Areas, notably seizing 3,000 head of cattle from illegal occupation in the Terra do Meio Ecological Station during the "Pirate Cattle" operation of the dry season of 2007. Deforestation in Extractive Reserves and strictly protected areas alike is down (EDF, 2009). With support from FVPP and ISA, the residents of each of the three Extractive Reserves have organized a Residents' Association, and the Brazilian Institute for Environment (IBAMA) has instituted management councils. FVPP and ISA, with representatives of the Extractive Reserves, have pressured municipal authorities to deliver health and education services in the reserves and, with support from EDF and other sources, are developing economic alternative projects. While both government and NGO support for the riverine communities are still far from meeting the local communities' needs and demands, the communities are in a real sense much more able to formulate broader aspirations because the land invasion crisis has, with the creation of the reserves, abated.

Discussion

The history of the Transamazon movement, and its incorporation of an environmental identity and values, confounds multiple expectations and discourses. There is little that could be more generally accepted in tropical conservation and development literature than that the Transamzon colonization program failed (Fearnside 1985; Hecht & Cockburn, 1989; Skidmore, 1988; Smith, 1982). The Transamazon movement, however, at the pivotal moment of its history, repudiated the idea that the program had failed, reaffirmed family agriculture as productive and viable, and identified government subsidies for large-scale cattle ranching and failure to provide adequate technical assistance, infrastructure, and credit as the real causes both of the impoverishment of the Transamazon communities and of the large-scale deforestation, illegal occupation of public lands, lawlessness, and violence characteristic of expanding cattle ranching frontiers (Faleiro, 1994; Souza, 2006). It is on the basis of rejecting both the official and popular view (particularly the common-sense understanding of most environmentalists) of the Transamazon program as a failure, and launching the Movement for the Survival of the Transamazon (MPST) that the movement positioned itself as embodying values of sustainability. The national leaders' tour that coincided with the launch of the MPST in 1990 allowed the movement to take control of the representation of

Transamazon colonists and position itself as the protagonist of sustainability regionally. This broadened the movement's alliances in the critical struggle for access to agriculture credit. Having thus secured the survival of the Transamazon project, the movement became the Movement for the Development of the Transamazon and the Xingu (Souza, 2006) and began to specify what kind of development it wanted—agroforestry projects, payment for ecosystem services programs (Proambiente), and ultimately the protection of the "lungs of the Transamazon," the Terra do Meio reserve mosaic and the Verde para Sempre Extractive Reserve.

A number of factors condition the Transamazon—and other Amazonian—social movements' effectiveness in changing land use and land use policy in the Amazon. The social movements' ability to pressure and negotiate with government is premised first of all on Brazil's becoming, over the period in question, a democracy, however imperfectly. This is itself in large measure a reflection of broader civil society mobilization in resistance to the military dictatorship and in favor of redemocratization through the 1970s and 1980s, in which the social movements, and the Workers' Party with which many leaders are aligned, had significant participation. (Keck, 1992). In addition, the environmental movement in Brazil, particularly its socioenvironmental wing, has grown steadily in capability and influence (Hochsteler & Keck, 2007) and both state and federal government environmental agencies have drawn from NGOs and social movements to fill key positions. President Lula's selection of Marina Silva, former rubber tapper and colleague of Chico Mendes in the fight against deforestation in Acre, is only the most prominent example. Alliances with those national and international NGOs willing to ally with the social movements have on the whole been mutually beneficial—NGOs have brought visibility, resources, and access to local conflicts that would otherwise have remained completely invisible outside of isolated local arenas (FVPP bringing threatened leaders from the Anfrizio to Brasilia to meet the President and Environment Minister in 2004 is exemplary), while social movements have legitimated NGO goals and values in places and communities that they would themselves not reach.

The creation of the Terra do Meio reserves mosaic starting in 2004 connected in several ways with broader socioenvironmental processes that signal a potential transformation in the dynamics of frontier land use in the Amazon and that highlight the salience of the Transamazon movement and its civil society networks for regional development policy. In response to government's commitment to paving the 163 highway through Pará, a broad coalition of networks came together in 2003 to launch a participatory process to propose "measures to guarantee an ordered process of occupation of the region." (O Desenvolvimento que queremos, 2004) After a series of four regional meetings including social movements, NGOs, and local governments, the coalition presented the "Social Movements Development Plan for the 163" to Ministers Marina Silva (Environment) and Ciro Gomes (National Integration) in March, 2004. Creation of the Terra do Meio mosaic, advocated by FVPP, appeared as a major priority, as were measures to prevent illegal occupation of public lands and deforestation along the highway. Because the broadly representative 163 coalition prioritized the

Terra do Meio mosaic, when Sister Dorothy was assassinated in February, 2005, the federal government had already negotiated an agreement with the Pará state government, and decrees creating the core of the mosaic were ready. When the National Space Research Institute (INPE) reported 2004 deforestation rates in excess of 27,000 km², the second highest annual total on record, part of the federal government response was the "administrative limitation"(legal interdiction of any new occupation or transaction) of more than 40,000 km² along the 163 in Pará, which was subsequently transformed into six protected areas, adjacent to the Xingu protected areas corridor (Figure 1) and formed a cordon of legally protected lands along most of the highway. While government has to date made little effort to implement or effectively control of these areas, their legal creation removes a very strong incentive for illegal occupation and deforestation because they are no longer *terra devoluta*, "empty land," public land to which no specific use has been assigned, or, effectively no man's land. The civil society mobilization around the 163, in which the Transamazon movement played a leadership role, may still significantly affect the outcome of paving a major road in the Amazon (begun only last year).

The Terra do Meio and 163 protected areas were also part of a still broader process of reserve creation in the context of the Action Plan for the Prevention and Control of Deforestation, initially designed by the Environment Ministry, but coordinated by the President's staff and involving 13 ministries and the Federal Police and the Armed Forces (EDF, 2009a; Presidência da República, 2004). Originally launched in 2003, as a weak currency and rising commodity prices drove deforestation from 18,000 km² in 2000 to a peak of 27,000 km², the plan's achievements include very large-scale reserve creation, jailing of some 700 people for illegal logging and deforestation, and measures to curb land fraud. From 2003 to 2008, federal and state governments created 640,000 km² of new protected areas, largely in active frontier regions (Nepstad et al., 2009). Deforestation declined about 60% from 2004 to 2007, rose slightly in 2008, and in 2009 declined to under 7,000 km², the lowest on record. A strengthening currency and low commodities prices were major factors—but new reserves in regions such as the Terra do Meio clearly halted frontier expansion. As a result of relative success in controlling deforestation, Brazil was moved to adopt a national deforestation reduction target, first announced in the United Nations Framework Convention on Climate Change Conference of the Parties 14th Conference in December, 2008. The target, an 80% reduction below the 1996-2005 annual average by 2020, was passed into law in January, 2010. The highest levels of Brazilian government would appear to believe that controlling Amazon deforestation is achievable. The prospect of large-scale incentives for tropical countries that reduce deforestation through a possible international climate agreement, or U.S. emissions control regime, as well as changing market preferences, may point the way to the eventual end of Amazon deforestation (Nepstad et al., 2009).

Amazonian social movements, and the broader civil society networks they have built, have created the political basis for a potential sea change in land use in the Amazon. The idea that ecological destruction—Amazon deforestation in particular—is

the price of progress, common sense 20 years ago, is all but politically indefensible today (Hochstetler & Keck, 2007; Schmink & Woods, 1992). Beyond the fact that Amazon social movement leaders are now in legislative and executive positions at local, state, and federal levels, the movement's discourse of sustainability has become ubiquitous—to cite one example, Katia Abreu, conservative Senator from Tocantins state, president of the National Confederation of Agriculture (CAN) and leader of the notoriously antienvironmentalist Agricultural Caucus (*Bancada Ruralista*) of the Congress recently published an opinion piece in Brazil largest newspaper entitled, "Zero deforestation, without conditions." (Abreu, 2009) It is all the more telling that this article appeared as Abreu was leading a concerted effort to seriously undermine environmental legislation in the Congress (Telles de Valle, 2010)—rhetorically and politically, conservation and sustainablity have captured the high ground and in the Amazon especially, this has only been possible because the social movements have incorporated and thus legitimated these values.

This discursive turn toward sustainability may either presage a fundamental transformation in land use in the Amazon—or constitute an historical irony of massive proportions. Increasing demand for agricultural commodities (soy and beef in particular), extensive planned infrastructure development, and mineral and hydrocarbon extraction as well as the effects of global climate change, fires, and changing regional rainfall regimes fundamentally threaten the ecological integrity of the region. Recent research suggests that the region may be approaching an ecological "tipping point," beyond which irreversible large-scale ecosystem change is inevitable, possibly after as little as 20% of the region is deforested (World Bank, 2010). About 18% of the original forest has already been cleared. A comprehensive survey of planned and existing infrastructure and resource extraction projects and threats to indigenous lands in the Amazon (Carneiro & Souza, 2009) finds that of 247 planned hydroelectric dams in the Amazon, nearly half would affect indigenous peoples, while there are some 5,000 mining claims, requests for mineral research, and licenses to mine in 125 indigenous territories. At the same time, federal socioenvironmental policy, after two decades of steady gains, has suffered recent setbacks and is coming under increasing pressure. The congressional Agricultural Caucus's ongoing efforts to roll back the Forestry Code are an important example, but only one among several. (Telles de Valle, 2010) In no small measure, the future of the forest will depend on the possibilities for consolidating the lands the Amazon social movements have won protection for over the last two decades and creating the bases of socioenvironmental sustainability in and around them.

Conclusion

The history of the Transamazon social movement and its influence on land use in western Pará is, recalling Alcorn's discussion of Community Based Natural Resource Management (2005), neither Big nor Little Conservation. Although originating as a local movement, it has established a regional presence and national political

representation. While negotiating better conditions for its members to practice Little Conservation, it has become the protagonist of forest landscape protection on a scale seldom attained by Big Conservation. Alcorn correctly portrays the central dynamics and tensions in CBNRM as between large conservation organizations on one hand and communities on the other. Forest or rural peoples' own organizations—or social movements—have to date had little part in this story. The Transamazon movement's role in what Airton Faleiro has termed "the war for the occupation of space" in western Pará fits in this theoretical landscape largely as an exception. Yet Amazon social movements' trajectories in winning official recognition and, largely, effective control of 1 million km² of indigenous territory and 200,000 km² of Extractive Reserves have fundamentally changed the shape of the Amazon frontier in ways that few imagined possible 20 years ago. The claim that "From the sixties until today the entire Amazon has been convulsed by an enormous enclosure movement easily rivaling the conversion of public land to private property in early modern Europe" (Hecht & Cockburn, 1989, p. 129), is difficult to sustain as officially protected lands today total some 50 % of the region, as against less than half that in private property. The social movements have in a real sense become an effective constituency for frontier governance, notwithstanding increasing pressure on these territories, often drastically deficient living conditions, and abundant conflicts. But these movements and their leading role as protagonists of large-scale forest protection in the Amazon are still rarely discussed in conservation literature.

The Amazon social movements and their trajectory from resistance movements to institutional interlocutors for frontier land use policy and constituency for frontier governance suggest promising avenues for further research, including such questions as, "Under what conditions or parameters can tropical social movements ally with international and national NGOs effectively and equitably?" In light of the numerous programmatic statements and proposals produced by the social movements on forest and rural peoples' needs, "What will it cost for these populations to achieve social inclusion and sustainable, equitable access to markets?" "Which lines of research are most likely to contribute to creating the basis for sustainable, equitable development in current and future Amazonian protected areas?" Beyond this, conservation organizations might usefully examine expanding the possibilities for alliance with social movements, beyond project-level investments with particular communities, that is, considering them as institutional interlocutors.

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Notes

1. Calculation based on data in Instituto Socioambiental, (2000) and S. Chape, Blyth, Fish, Fox, and Spalding (2003).
2. The history and dynamics of indigenous land struggles, identity, and relations with the State are socially and culturally complex and can only be termed a "social movement" in a very general sense (Hemming, 2003; Viveiros de Castro, 2006).
3. This process is sometimes referred to as "territoriality," or "the collective effort of a social group to identify with, occupy, use and establish control over the specific parcel of their biophysical environment that serves as their homeland or territory." Little, (2001, p. 4).
4. An important early contingent of the first settlers on the Transamazon was made up of small farmer families displaced for the construction of the Itaipu binational (Brazil-Argentina) hydroelectric dam in Rio Grande do Sul.
5. Interview with Paulo Medeiros, Altamira, Pará, June 13, 2005.
6. The Ecclesiastical Base Communities (*Comunidades Eclesiasticas de Base*) were perhaps the farthest reaching expression of Catholic Liberation theology. Clergy organized local reading, study, and prayer groups focused on analyzing and addressing immediate social—and political—problems from a Christian-Marxist perspective.
7. According to Paulo Medeiros (interview, Alatmira, Pará, June 13, 2005), three workers were killed, but Toni's (1999) account omits this.
8. Interview with Tarcísio Feitosa, Altamira, Pará, June 15, 2005.
9. Interview with Paulo Medeiros, Altamira, Pará, June 13, 2005.
10. Interview with Herculano Porto, May, 2003, Boa Esperança community, Anfrizio river, Pará.
11. Interview with Raimundo Dalmiro, Altamira, October 4, 2003.
12. Interview with Tarcisio Feitosa, Altamira, Pará, June 15, 2005.

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