
Smallholders, The Amazon's New Conservationists

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Parks, biological reserves, and other protected areas located in the middle of expanding agricultural frontiers are the most important elements in strategies to conserve nature (Brandon et al. 1998; Terborgh & van Schaik 2002). The borders of these frontier protected areas are the battle line between economic activities that are replacing the forest with agriculture and cattle pasture, and the environmental movements that defend public interests in native ecosystems (Nepstad et al. 2006). Yet economic considerations (i.e., low land prices) and risk aversion (Peres & Terborgh 1995) have led to the unusual situation in which most protected areas (with the important exception of indigenous lands) are located far from the most destructive human activities, where their effect on human activities may be minimal for decades to come (Nepstad et al. 2006). Indeed, it appears that the world's great tropical rainforests are destined for the same fate as the temperate forests felled over the last 4 centuries: they will persist in remote, rocky, hilly landscapes, where the opportunity costs of excluding agricultural expansion and logging are low (Cronon 1983).

There are important exceptions to this trend of creating reserves in remote tropical rainforests that provide a crucial lesson for conservation science. In one of the most important conservation achievements of the last decade, 5 million ha of forest reserves were created from November 2004 to March 2005 in the hotly contested landscape of central Pará state, in the Brazilian Amazon. With the creation of these reserves, Pará and the adjoining state of Mato Grosso to the south now contain the world's largest mosaic of tropical rainforest protected areas, encompassing 23 million ha (four times the size of Costa Rica) of indigenous lands, extractive reserves, national forests, and biological reserves (Fig. 1).

The latest 5-million-ha addition to this mosaic is the initiative of the smallholder farmers of the Transamazon Highway, who began settling the region in the 1970s, lured by government promises of land, agriculture incentives, technical assistance, schools, and other services. Many of these farmers came from the southern Brazilian agricultural states of Paraná and Rio Grande do Sul, where they had organized against agroindustrial expansion and land concentration. When government promises did not materialize along the Transamazon, they formed the Movement for the Survival of the Transamazon (MPST) to demand support to keep the still-unpaved Transamazon highway trafficable. Faced with similar problems of transportation, technical assistance, lack of credit, and health care at different localities along the highway, the Catholic Church, through the Ecclesiastical Base Communities, promoted political linkages along the highway and a "regional way of thinking" (A. Souza, personal communication).

After several major victories, including the creation of a special credit line for smallholders (FNO Especial), the MPST became the Movement for the Development of the Transamazon and Xingu (MDTX) and had a broader regional agenda that reconciled economic rural development with forest conservation. This umbrella institution, which today encompasses 20,000 farm families and more than 110 grassroots organizations, launched a regional planning initiative in the late 1990s that included two giant forest reserves (Fig. 1). The proposal for these reserves was explained by leader Ademar Federecci (Dema) as a means to guarantee that rainfall would continue to nourish the crops and forests of the region. But the reserves had a second purpose as well: to provide buffer zones against the social disturbances and violence that

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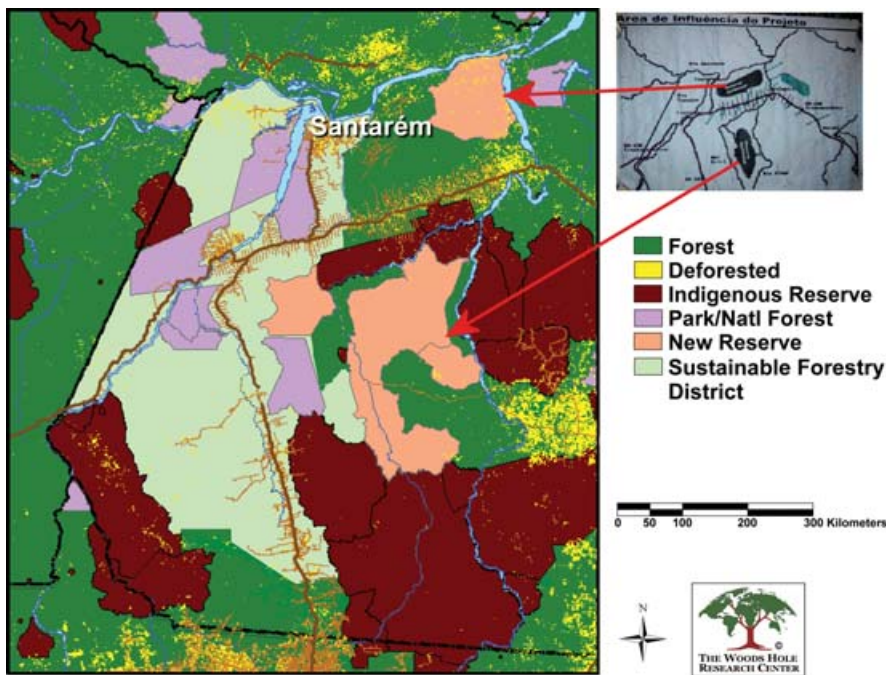


Figure 1. Map of Brazilian reserves in southwestern Pará state. New reserves created by the Brazilian government as part of the *Mosaico da Terra do Meio* are shown. To the right is a first draft of the map of the reserves envisioned by the Movement for the Development of the Transamazon and Xingu (MDTX).

accompany the land speculation that was moving northward from São Felix do Xingu and other cattle ranching centers and threatening the farm communities of the Transamazon highway.

The Brazilian Government embraced the proposal of the MDTX to create giant mosaics of forest reserves along the Transamazon highway and commissioned the nongovernmental organization Instituto Socioambiental (ISA) to study how best to design one of them: the Terra do Meio (Land in the Middle) between the lower Xingu and Tocantins rivers in Pará. The ISA joined forces with another Brazilian nongovernmental organization, the Instituto de Pesquisa Ambiental da Amazônia, and a number of non-Brazilian organizations (Environmental Defense, Greenpeace, and Woods Hole Research Center) to design a mosaic of protected areas in the region. The proposed mosaic was incorporated into the NGO-led regional planning process for the paving of the BR-163 highway (www.br163sustentavel.org.br, Fig. 1)—a process that was also recognized and adopted by the Brazilian government.

In November of 2004, two Transamazon extractive reserves totaling 2 million ha of forested land were announced by the Brazilian government. The government was preparing to declare the creation of additional components of the Terra do Meio reserve complex when assassin's bullets tragically ended the life of the 73-year-old American nun, Dorothy Stang, who had been a land and human rights activist on the Transamazon highway for more than 30 years. In response to the wave of negative international attention, the Brazilian government quickly declared an additional 3 million ha of forest reserve in February 2005 and sent 2000 army troops into the region

to restore order. Throughout this process, leaders of the MDTX were visiting the towns and communities along the highway to enlist the support of local governments and industries in creating the new reserves as they pushed for a speedy investigation and prosecution of Sister Dorothy's murderers.

The events following the assassination of Sister Dorothy did not stop with the creation of reserves. To the west of the Terra do Meio, rampant land speculation and associated violence was stimulated by government announcements of its plans to pave the BR163 highway. A presidential decree subsequently established a moratorium on the granting of land titles and logging permits in a 14.6-million-ha region along the highway, which shut down the land-speculation market overnight (Fig. 1). Much of this region is now under consideration for protection.

This remarkable alliance of human and land rights organizations with institutions devoted to environmental conservation has many precedents, especially in the Amazon. The core of the Pará and Mato Grosso protected-area mosaic is a network of indigenous lands that are the result of alliances between conservationists and indigenous peoples that began in the 1960s (Schwartzman & Zimmerman 2005). Moreover, the Brazilian Amazon has more than 5 million ha of "extractive reserves"—protected areas that permit traditional forest inhabitants (rubber tappers, Brazil nut harvesters, and others) to continue their forest-based livelihoods—which are the result of the independent rubber tappers movement led by the late Chico Mendes, assassinated in 1988 (Allegretti 1990).

The smallholder farmers of the Transamazon represent a departure, however, from previous alliances between social and environmental movements. They have

long been considered either villains or victims of the forest (Hecht & Cockburn 1989; Schmink & Wood 1992). Compared with indigenous groups and rubber tappers, smallholder farmers are Amazon newcomers, who have little knowledge of their forest environment and cannot claim vast territories as their ancestral lands. With more than 3 million people (<http://www.incra.gov.br/sade/>), they occupy the region's expanding agricultural frontiers, outnumbering indigenous people and traditional communities by six to one (M. Allegratti, personal communication, <http://www.funai.gov.br/indios/conteudo.htm>). The smallholders' role in environmental conservation does not derive from the sustainability of their uses of natural resources per se, but from a broader environmental knowledge and their proposals and political ingenuity in advancing sustainable development and conservation at the regional scale. So although they are viewed as villains for cutting down the forest to plant crops and raise cattle, their achievements in the Terra do Meio demonstrate their phenomenal success in obtaining conservation victories at the regional scale. These conservation strategies comprise a new form of environmental and resource control that forest residents are adopting in response to growing pressures and threats on their livelihoods.

The power of smallholders in the Amazon emerges, in part, from their success in occupying strategic political positions. Today the MDTX has put in office three county prefects and two congressional representatives at the state and federal levels. These political successes and their opposition to illegal logging, fraudulent land titles, and the concentration of land in the hands of absentee landholders have helped them overcome considerable pressure, sometimes violent pressure, from local political and economic elites. Three grassroots leaders involved in the creation of these reserves were assassinated by 2001, including Dema (Rohter 2001), and nine murders committed through 2003 were directly related to the creation of the Terra do Meio reserves (CPT Comissão Pastoral da Terra 2004). Today threats to human life in the region are worse than ever (Rohter 2005). In these contested landscapes, it is the "smallholder conservationists" who are at risk.

Their recent successes in establishing enormous forest reserves in a region riddled with rural violence and land wars signify that the conservation community must, once again, expand its concept of conservation partners. Smallholders may be the most important form of social capital on many expanding tropical forest frontiers, and can be critical to conservation strategies that strive to go beyond the establishment of parks and biological reserves (Campos, in press). In these convoluted frontier landscapes, "productive conservation" (Hall 1997) resulting from the power of strong social movements and participation of the local communities may be more effective than conventional conservation strategies that have emphasized

the role of the state and the exclusion of local populations.

The world's powerful conservation organizations have a crucial role to play in conserving the world's natural heritage. The next step in the evolving paradigm of tropical conservation, however, is to find ways of achieving large-scale conservation within contested landscapes—a challenge that will require new alliances and better science. The new scale of conservation, which has ushered in the possibility of accomplishments such as the Terra do Meio, is regional participatory planning along major new economic corridors (Alencar et al. 2004; Nepstad et al. 2002). In these regions of rapid transformation of forested landscapes caused by imminent paving of highways, international conservation groups are just one among many stakeholders in processes in which local economic and political elites are very powerful. Because of their sheer numbers and physical presence on the frontier and the political power they have accumulated from years of organizing, smallholders can help tip the balance of these negotiations in favor of conservation and the public good.

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Literature Cited

- Alencar, A., et al. 2004. Desmatamento na Amazônia: Indo Além da Emergência Crônica. Instituto de Pesquisa Ambiental da Amazônia, Belém, Brazil.
- Allegratti, M. H. 1990. Extractive reserves: an alternative for reconciling development and environmental conservation in Amazonia. Pages 252–264 in A. B. Anderson, editor. *Alternatives to deforestation: steps toward sustainable use of the Amazon rain forest*. Columbia University Press, New York.
- Brandon, K., K. H. Redford, and S. E. Sanderson, editors. 1998. *Parks in perils: people, politics, and protected areas*. The Nature Conservancy and Island Press, Washington, D.C.
- Campos, M. T. 2006. From villains and victims to environmental activists: the case of Amazonian colonos. In press in D. Geiger, editor. *Frontier encounters: indigenous communities and settlers in Asia and Latin America*. International Work Group for Indigenous Affairs (IWGIA), Copenhagen.
- CPT (Comissão Pastoral da Terra). 2004. *Conflitos no campo—Brasil 2003. Relatório anual*. CPT, Goiânia.
- Cronon, W. 1983. *Changes in the land: Indians, colonists, and the ecology of New England*. Harper Collins, New York.
- Hall, A. 1997. *Sustaining Amazonia: grassroots action for productive conservation*. Manchester University Press, Manchester.
- Hecht, S., and A. Cockburn 1989. *The fate of the forest: developers, destroyers, and defenders of the Amazon*. Verso, New York.
- Nepstad, D. C., S. Schwartzman, B. Bamberger, M. Santilli, D. Ray, P. Schlesinger, P. Lefebvre, and E. Prinz. 2006. Inhibition of Amazon

- deforestation and fire by parks and indigenous reserves. *Conservation Biology* **20**:65-73.
- Nepstad, D., D. McGrath, A. C. Barros, A. Aleneir, M. Santilli, and M. C. Diaz. 2002. Frontier governance in Amazonia. *Science* **295**:629-630.
- Peres, C. A., and J. Terborgh. 1995. Amazonian nature reserves: an analysis of the defensibility status of existing conservation units and design criteria for the future. *Conservation Biology* **9**:34-46.
- Rohter, L. 2001. Amazon populists' killing exposes bitter conflicts. *The New York Times* 12 October:A-3.
- Rohter, L. 2005. Brazil's lofty promises after nun's killing prove hollow. *The New York Times* 23 September:A-3.
- Schmink, M., and C. H. Wood 1992. *Contested frontiers in Amazonia*. Columbia University Press, New York.
- Schwartzman, S., and B. Zimmerman. 2005. Conservation alliances with indigenous people. *Conservation Biology* **19**:721-727.
- Terborgh, J., and C. van Schaik. 2002. Why the world need parks. Pages 3-14 in J. Terborgh, C. van Schaik, L. Davenport, and M. Rao, editors. *Making parks work*. Island Press, Washington, D.C.

