Rural Social Movements in Latin America

Organizing for Sustainable Livelihoods

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When Social Movement Proposals Become Policy

Experiments in Sustainable Development in the Brazilian Amazon

MARY ALLEGRETTI AND MARIANNE SCHMINK

Thirty years ago, at the height of Brazil's military government's ambitious development policies for the Amazon, few people could have imagined the current advances in control over illegal logging and deforestation, creation of extensive protected areas, and numerous sustainable development projects focused on indigenous peoples and other rural communities. This new landscape can be credited largely to the pressures of grass-roots social movements, NGOs, and the alliances they constructed with researchers, political parties, international organizations, and the government.

This chapter analyzes two examples of innovative social movement development proposals that were adopted as public policy in Brazilian Amazonia. In the late 1980s and early 1990s, the rubber tappers movement that originated in the western state of Acre successfully pressured the government to create a new land tenure category, the extractive reserves, a public area oriented to the sustainable use of natural resources under the management of traditional populations (Allegretti 2002). In 1999–2000, a movement of agricultural colonists on the Transamazon highway developed the Proambiente, a program of land use planning and environmental services compensation for small producers, which was adopted as official government policy in 2003.

However, the social movements have faced an uphill battle for effective implementation of these programs. Despite continued participation in decision making, the programs now depend upon government action and resources, which have been slow to come due to vested interests and resistance to change. The "scaling up" of these innovative, place-based alternative development proposals also has created new vulnerabilities and new political and technical challenges for the social movements themselves.

During the past two decades, a multitude of grass-roots initiatives have challenged the dominant paradigm, constituting a "quiet revolution" in Amazonian development and providing a framework for the development of "productive conservation" practices that support resident livelihoods while promoting conservation of the natural resource base on which they depend (Hall 1997). This is a radical departure from the top-down government-sponsored Amazonian development strategies of the 1960s and 1970s that focused on mining, ranching, and colonization, and that equated progress with deforestation (Hall 1997; Hecht and Cockburn 1989; Schmink and Wood 1992). By the mid-1980s, both domestic and global environmental criticism of these development schemes converged with condemnation from human rights activists who noted that in addition to the negative ecological effects of these planned projects, such projects also blatantly disregarded the rights of indigenous and traditional peoples living in the Amazon Basin. This convergence of environmental and social concerns, along with growing resistance movements among local Amazonian groups, resulted in a search for development alternatives and placed checks on the developmentalist model linked to deforestation and social conflict (Allegretti 2002; Anderson 1990; Arnt 1994; Clusener-Godt and Sachs 1995; Hall 1997; Keck 1995; Campos and Nepstad 2006; Schmink and Wood 1992; Schneider et al. 2000).

Despite a long history of rebellion, Amazonian rural communities remained largely invisible until the expansion of government-sponsored development projects into the region in the 1970s. This chapter analyzes the factors that led to the emergence of these successful bottom-up policy proposals, linking environmental concerns, social justice, and land rights. It also addresses the dilemmas and limitations of scaling up alternative grassroots development policies within a state power structure that is resistant to change and dominated by agro-business interests.

The Extractive Reserves

The rubber tappers' movement emerged in the western Amazonian state of Acre in the 1970s, as these previously isolated forest workers faced expulsion from their traditional areas by investors from southern Brazil, attracted by government-sponsored programs to expand the national economy into the relatively "empty" spaces of the Amazon region. The non-indigenous residents dispersed throughout Amazonia's forests can be attributed to two massive migrations from northeastern Brazil from 1870 to 1920 to supply rubber for the expanding global automobile industry (Bakx 1988; Weinstein 1983), and again from 1942 to 1945 to extract rubber in support of the allied war efforts (Martinello 1988). After the war, the Brazilian government continued to provide some support for natural rubber extraction in response to pressures from Amazonian economic elites and large industrial interests in southern Brazil. However, later policies subsidized synthetic rubber production and reduced barriers to lower-priced Asian plantation imports, undermining the Amazonian rubber industry (Costa Sobrinho 1992; Dean 1987, 108-27; Martinello 1988, 285-312; Rêgo 2002, 369-73). Some tappers abandoned the forest, and others continued their extractive activities alongside expanded subsistence production. Over several decades, these autonomous forest producers-invisible to the larger society and to the state-developed a distinct cultural identity, tied to the forest and to the rubber tapper culture, which would later provide the basis for their alternative policy proposals (Allegretti 2002; Schwartzman 1991).

The isolation and more personalized, though not necessarily friendly, relations between tappers and the local rubber concessionaire "patron" gave way in the 1970s to difficult, violent struggles against outside investors, primarily ranchers, with no appreciation for the forest and its people. Tappers, now facing an enemy who represented the polar opposite of their traditional culture, learned to defend themselves using nonviolent confrontations to stop forest clearing (Allegretti 2002; Esteves 1999). They also formed broad political alliances, and with initial support of the Catholic Church, rural labor unions, and the National Confederation of Agricultural Workers (CONTAG) in the 1970s, they began to organize and articulate their rights to land and to their own cultural heritage (Allegretti 2002; Bakx 1988; Barbosa 2000; Barp and Barp 2002; Costa Sobrinho 1992; Esteves 1999).

During the 1980s, Brazil's gradual political democratization coincided with growing mobilization of resistance movements across Amazonia (Schmink and Wood 1992, 95–135). The rubber tappers' movement emerged as the most innovative force among these movements. One part of the rubber tappers' strategy was to invert the modernist, *paulista* discourse about "empty lands" and "technological backwardness" by promoting themselves as "forest people" whose valuable forest knowledge made the standing forest a viable development alternative (Allegretti 2002; Almeida 2004; Esteves 1999, 130–79). One of their main tactics was *empates*—in which they would collectively stand in the way of workers clearing forested areas for ranches. This strategy generated growing sympathy from national and international environmental groups that began to support the movement with resources and information. These alliances also helped project innovative tapper proposals to a broader audience (Allegretti 2002; Hall 1997, 91–133; Keck 1995; Schmink and Wood 1992; Schwartzman 1991) to the extent that the tapper leader Chico Mendes gained international fame when he was awarded several global environmental prizes and gave depositions in hearings before the World Bank and the Inter-American Development Bank.

The National Council of Rubber Tappers (CNS), which was formed in 1985, with the help and support of key allies in Brazil and elsewhere, served as the means to articulate the rubber tappers' proposal for land reform measures appropriate to the needs and interests of forest people. Incrementally, the rubber tappers' need to preserve the forest in order to ensure their own survival led the CNS to fight for the creation of extractive reserves (Allegretti 2002). Their first great difficulty was to explain the particular characteristics of their livelihoods and cultures to a society and state that believed that the rubber tappers had faded away when Brazil's natural rubber production lost the world market to Asian producers at the beginning of the twentieth century. They had to convince the land reform agencies that individual family agricultural plots were too small for forest production, and environmental agencies that, rather than being expelled from rural areas, forest people could be resident stewards in protected areas. The proposal for extractive reserves-publicly owned areas conceded for use by communities with a tradition of forest-based livelihoods-was inspired by the model of indigenous territories and sought both to protect forest resources and to provide for the well-being of these "traditional" peoples.

In 1987, the National Institute for Colonization and Agrarian Reform (INCRA) created the first Agro-Extractive Settlement Project in the locale where the well-known leader Chico Mendes and his family lived. The measure, intended to halt pressures from land speculators, generated a violent reaction on the part of cattle ranchers, who assassinated Chico Mendes in December 1988. The widespread international outrage at his death increased the pressures on the Brazilian government to respond to the rubber tappers' claims. In 1990 a presidential decree created the extractive reserves as a special category of land reform and environmental protection under the institutional responsibility of the Brazilian Institute of the Environment and Renewable Resources (IBAMA).

The concept of extractive reserves was a significant victory for the rubber tappers' movement, providing an alternative form of land tenure that, for the first time, recognized the rights of traditional populations, their forms of land use and settlement patterns, their traditional knowledge of forest resources, and their potential role in conservation strategies. Unlike other land reform programs that divided up blocks of land into small family properties, the extractive reserves remained intact state lands but were conceded for thirty years to the residents. Families held use rights over large areas (250–300 hectares) and continued to exploit their dispersed forest resources in sustainable ways, as well as agreeing to limits on hunting, fishing, logging, and forest clearing. The contractual limitations on resource use by residents made the extractive reserves a new component of the mosaic of conservation strategies in Brazil's new socioenvironmental environment, later codified in new legislation that created the National System of Conservation Units in 2000.

These hybrid "sustainable use conservation" or "ecological agrarian reform" units expanded the lexicon of agrarian reform in Brazilian Amazonia, significantly affecting the region's rural landscape (Cardoso 2002; Ruiz-Pérez et al. 2005). As the CNS expanded its organizing efforts around the Amazon region, workers who were engaged in forest extraction (such as babassu nuts in Maranhão, palm fruits in Pará) and were supported by various allies, pressured for new extractive reserve areas. In 1992 the Ministry of the Environment created the National Center for the Sustainable Development of Traditional Populations inside IBAMA to administer the extractive reserves, and the CNS was able to raise financial and technical support from international organizations and, more recently, from states governments in Acre, Amapa, and Amazonas for innovative communitybased development initiatives inside the reserves (Allegretti 2002; IAG 2002). From 1990 to 2007 eighty-one federal and state extractive reserves and sustainable development reserves were created, covering 21 million hectares (4.3 percent of the Brazilian Amazon) and benefiting around two hundred thousand people (ISA 2007; CNS 2005). Variations on the concept of extractive reserves were adopted around the globe, such as in the Maya Biosphere Reserve in the Guatemalan region of Petén, for example. During the 1990s, there was a short-lived boom in the literature on extractive reserves (Ehringhaus 2005).

In Acre, the rubber tappers' movement also was successful in creating a favorable state-level policy environment for its alternative development proposals (Kainer et al. 2003). Emerging from a broad base of social movements, including the organized rubber tappers' movement, the Workers' Party (PT) was formed in 1980 (Fernandes 1999, 64, 86). Beginning with modest local wins, by 1992 the PT had consolidated a political niche with the election of the charismatic Marina Silva—whose parents were rubber tappers—to the Senate, and of Jorge Viana, a young forester, as prefect of the capital, Rio Branco. In 1998, he was elected governor of Acre and his brother, Tião Viana, was elected to the Senate. Both brothers were successfully reelected for second terms, through 2006, and Marina Silva was named the Brazilian minister of the environment in 2003.

Proambiente

The Proambiente program arose fifteen years after the genesis of the proposal for extractive reserves, originating among groups of colonist farmers settled along the Transamazon highway in the eastern Amazonian state of Pará (Campos 2006; Campos and Nepstad 2006; Mattos et al. 2001). Unlike the rubber tappers of Acre, these farmers did not fit the profile of traditional, forest-dwelling peoples who had cemented their reputation as conservation allies in the 1980s and 1990s. On the contrary, they were typically viewed as environmental villains due to their practice of slash-and-burn agriculture. However, their strategies evolved within the growing convergence in Brazil on a "socioenvironmental" approach that united local populations, international and national environmental groups, and human rights advocates, an approach for which the struggle for the extractive reserves had helped pave the way (Becker 1990). The movement of the colonist farmers benefited from the experience of the CNS before it, as well as the favorable international climate fostered by the Rio Conference on Environment and Development in 1992, and the resources of the Pilot Program for the Protection of the Brazilian Rain Forest, which emerged from that meeting and which provided crucial funds to support experimentation with innovative resource use by local Amazonian communities.

In 1999, a group of colonists representing the Movement for Development of the Transamazon and Xingu (MDTX) visited Brazil's Ministry of the Environment and presented a surprising proposal: they wanted to protect one of the last large forest reserves in the Amazon, the so-called Middle Lands (Terra do Meio), and requested support for projects that would help them to develop more environmentally sound agricultural practices without the use of fire. These proposals led to the creation of a mosaic of protected areas of more than 5 million hectares, initially proposed in 2001 but implemented only in 2005 after another assassination—of Dorothy Stang, a nun who had lived for decades in the region, supporting rural communities—again led to international pressure on the Brazilian government.

The Transamazon farmers had migrated to the region in the 1970s, attracted by the military government's colonization schemes to defuse land reform tensions in southern Brazil. They were largely abandoned soon after, as government policies quickly shifted to support for large corporate investors (Wood and Schmink 1978; Schmink and Wood 1992). A long history of failed government programs tied to specific crops, supported by the credit program of the Constitutional Fund for Financing of the North (FNO), had induced expansion of cattle, increased deforestation, and left many small producers deeply in debt (Toni 1999). A generation after INCRA's initial settlement of colonists on the Transamazon, the rural workers' organizations were concerned with strategies to address their long-term production needs through more appropriate credit, tied to effective technical assistance suited to their conditions. As in other parts of the region, the movement initially emerged with support from the Catholic Church, and later from the rural labor unions. Colonists later formed the MDTX, which now represents twenty thousand farm families grouped in 113 rural and urban organizations (Campos and Nepstad 2006).

These unprecedented demands by a social movement for the creation of the mosaic of protected areas, and for new forms of credit, led to even more ambitious proposals. In alliance with other social groups, the farmers proposed an innovative new public policy to compensate small farmers in the Amazon for environmental services, called Proambiente, the Program for the Socioenvironmental Development of Family Production.

The first Proambiente proposal emerged from discussions among the state-level rural workers' federations at the first "Cry of the Amazon" (Grito da Amazônia) mobilization in May of 2000 (Proambiente 2003). The farmers focused primarily on the failures of the FNO rural credit program of the 1990s, which had been a significant driver of deforestation and inappropriate land use (Toni 1999). Over the next two years, they mobilized to pressure state and federal governments to create special credit lines (FNO Special). This success led to more complex analyses of agricultural practices, their environmental effects, and the difficulty of shifting to more appropriate production systems without a specific set of policies to support this goal.

The state-level federations of agricultural workers' unions worked with

the Brazilian NGOs, the Amazonian Institute for Environmental Research (IPAM), and the Federation of Agencies for Social and Educational Assistance (FASE), which provided technical support to the process of developing a formal structure to oversee the Proambiente program and helped to seek funding. Other allies included the CNS, the National Fishermen's Movement, the Brazilian Indigenous Peoples Coordinating Organization, and the Amazonian Work Group, the latter a network of more than four hundred Amazonian grass-roots and non-governmental organizations. They created a formal Management Council to oversee ten pilot "poles" and held meetings in every state to discuss the proposal. In 2001 they signed the first formal agreement with the Ministry of the Environment to support the program, which expanded through 2002 until it was institutionalized as part of the Brazilian federal government program in 2003 and incorporated formally into the federal budget for the period 2004–7.

Proambiente was an innovative program that proposed to combine participatory land use planning at regional, local, community, and household levels; farmer-led technical assistance; implementation, testing, certification, and monitoring of alternative agro-ecological practices; and compensation for environmental services (Mattos et al. 2001; Tura and Mattos 2002). This holistic approach was a response to the frustration of farmers with previous government programs that tended to focus on single commodities, with technical support limited to filling out necessary paperwork for farm loans.

The Proambiente proposal recognized both the additional costs that would be incurred by farmers in shifting to more sustainable production systems and the society-wide benefits that this shift would generate. The value of these environmental services was understood to be equivalent to the additional costs of reducing the risks and environmental effects, which would not be internalized in the final price of products sold: that is, the opportunity cost for providing environmental services. Somewhat arbitrarily, the initial payment was set at one-half a minimum salary per month (approximately U.S.\$170 in 2007). Proambiente included six environmental services: reduced or avoided deforestation; absorption or sequestration of carbon; recuperation of hydrological functions; soil conservation; conservation of biodiversity; and reduction of flammability and of fire risk (Proambiente 2003). Specific indicators were developed for each type of environmental service, and a certification system was developed to annually assess direct collective indicators for deforestation and carbon sequestration. Other indicators would be verified through a mixture of individual and collective indirect criteria via community agreements and field audits to be carried out each year.

The approach called for the creation of twelve regional Proambiente poles of approximately four hundred farm families each. At the national level and in each pole, Proambiente management councils brought together government, workers, NGOs, and other representatives of civil society. A Proambiente directorate was appointed in the Ministry of the Environment to coordinate the overall program and provide technical and political support. Usually the local rural workers' unions and their federations selected the families to participate in each pole, nominated community members to work as community agents, and selected the local NGO to serve as the technical assistance coordinator. Technical teams and community agents worked with each family to map and analyze its property and land use, develop individual plans for specific changes in practices, and sign agreements with groups of twenty to thirty families for collective monitoring. The regional council created comprehensive sustainable development plans and provided oversight for activities in the pole and linkages to other programs. According to the original proposal, farmers participating in Proambiente would receive support to develop productive activities that promoted social benefits and were compatible with natural resource conservation. Credit repayment periods were extended, and part of the credit would be paid through a socioenvironmental fund to cover costs of maintenance of permanent production systems and of environmental services to society, while technical assistance, rural extension, and social organization would be financed by the Support Fund (Mattos et al. 2001).

The Proambiente program was innovative in its grass-roots origins, in the articulation of different policy instruments for rural development, and in the establishment of environmental services payments for rural family production (Hirata 2006). Unlike the proposal for extractive reserves, Proambiente came from a social group (migrant farmers) not previously associated with environmental protection in Amazonia. This evolution demonstrated that innovative policy alternatives for rural communities could arise from new cultural identities and concepts, such as agro-ecology, not only from long-standing indigenous traditions regarding the use of resources.

The policy also innovated through an approach that recognized the diversity of systems and the complexity of cross-scale dynamics (farm, landscape, region, and global levels), using an adaptive management framework. The participatory methods adopted with community agents, local organizations, technical teams, and representative organizations provided the potential for linkages between the program and other policy initiatives. Proambiente also innovated in incorporating new environmental mechanisms such as community certification and participation in monitoring of environmental services.

Successes . . .

The successes of these social movement proposals were due to a combination of factors, at different scales, that interacted with the particular historical circumstances of different regions of the heterogeneous Amazon. In Acre, isolation favored the maintenance of an intact forest and forest-dwelling peoples during a period of transition to autonomous producers who later organized to protect their land from outsiders. On the Transamazon, it was farmers' strong connection to the market that led them to organize to address their productive needs through new proposals for alternative credit and technical assistance.

Despite these differences, the two experiences shared certain key characteristics, including the construction of movement identities closely tied to livelihoods and local cultures. Both of these social movements focused on the defense of their natural resource base for future generations and were rooted in local knowledge and livelihood practices (Hall 1997). Both cases illustrate the dynamic nature of socially constructed notions of "traditional people" (Carneiro da Cunha and Almeida 2000). The rubber tappers originally were migrants from northeastern Brazil who developed a form of rubber production adapted to the natural forest. The same appears to be happening among migrants from southern Brazil to the Transamazon highway, who are seeking to shift from agricultural to agro-forestry systems more adapted to the Amazon region.

Both took advantage of important cross-sector alliances and strategic political opportunities to pursue their struggles over several decades. Rubber tappers parlayed their identity as traditional forest dwellers into an enduring alliance with church activists, union leaders, conservationists, researchers, and politicians during a fervent period of political democratization in Brazil when environmental issues entered politics at all levels. Eventually this alliance led to penetration of the social movement into political power at the state and federal levels.

Farmers on the Transamazon benefited from the socioenvironmental

discourse that originated in the alliance between environmentalists and traditional peoples and expanded to a multitude of grass-roots initiatives that challenged the dominant paradigm (Hall 1997, xxiv). They were able to incorporate sustainable land use planning and environmental services compensation into their innovative proposals for programs to support agroecological production systems at a time when a union leader, Luiz Inácio Lula da Silva, took over as Brazil's president, emphasizing social justice.

One of the most innovative ideas in the proposal for extractive reserves was the separation between property rights and use rights, already present with respect to national forests but never applied as a social policy solution. This model is distinct from the classic agrarian reform based on family private property and from classic conservation because it recognizes the right of traditional populations to protected territories. The extractive reserves rely on a new form of relationship between state and society, in which the state retains the responsibility for and ownership of the territory, while the residents adhere to rules defined and agreed upon by both parties. Similarly, Proambiente relies on an innovative agreement between producers and the state, in which the state agrees to compensate producers for environmental benefits they provide to the wider society. The service is remunerated based on proof that the producer is providing it, and this depends fundamentally on a technological change that the state must facilitate.

Another innovation common to the two cases analyzed here is their questioning of the role of scientists and scientific knowledge in the formulation of a new development model. Since the state has proven incapable of mobilizing science in the interest of the majority of the population, the social movements have been responsible for this shift. Both extractive reserves and Proambiente benefited from a high conceptual and institutional investment by research centers and NGOs. The model of shared management requires that the state internalize these public policies and provide continual scientific and technical support.

These enlightened policies at the state and national levels, reflecting the penetration of grass-roots social movements into the political mainstream, began to address the institutional and policy failures that had been the main problem for many community-based enterprises in Latin America (Richards 1997). There is little doubt that the rubber tappers' movement, NGO networks, experimental environmental projects with Transamazon colonists, and international cooperation introduced a new face to Amazon development. These socioenvironmental projects assured land and natural resources and created new opportunities for thousands of people, reduced land conflicts, provided social and economic benefits, and constituted a counterweight in regional and national power struggles. The end result was a reversal of the historical trajectory of disappearance or marginality for these Amazonian social groups.

... and Challenges

Despite these surprising and encouraging successes of grass-roots social movements in promoting innovative socioenvironmental policies, their future implementation faces formidable challenges. For one thing, a daunting array of technical and economic problems still remains to be solved (CNS 2005; Proambiente 2005). The historical lack of research devoted to forest management, and to small-scale production systems in general, means that there is relatively little technical, economic, ecological, and social data to support alternative production systems for small producers in the Amazon (Amaral 2000). Controversies therefore surround many of the social movements' proposals, including the extractive reserve model (Arnt 1994; Browder 1992; Homma 1992). The elimination in the 1990s of federal subsidies that had maintained rubber prices up to three times above the international price drastically undermined the economic base of the extractive reserves in Acre just at the time they were created. Most "tappers" abandoned rubber production as a result (Campbell 1996; Gomes 2001; Hall 1997; Salisbury 2002; Wallace 2004).

This rubber crisis is seriously testing the entire extractive production system, as tapping has been at the core of social, economic, and cultural activities within Acrean forests for over a century. With a few exceptions such as Brazil nuts, non-timber forest products, seen in the 1990s as the potential alternative livelihood basis for extractive reserves, still are in the experimental stages of processing and marketing (Ehringhaus 2005), and proposals for sustainable timber extraction are the subject of intense debate (Barreto et al. 1998; Pearce et al. 2002; Rice and Gullison 1997). Meanwhile, rubber tappers have little choice but to fall back on agriculture and ranching to make a living, further expanding deforestation even inside the reserves (Gomes 2001; Ehringhaus 2005; Wallace 2004). Even in extractive areas less dependent on rubber than in Acre, the absence of markets for non-timber forest products has made survival difficult for rural communities.

Proambiente, meanwhile, is pioneering a comprehensive new approach to participatory cross-sector land use planning and monitoring, management of diverse production systems and conservation landscapes, and measurement and compensation of environmental services provided by hundreds of small farmers dispersed across the region. There is no blueprint for this approach, and since the program was not adequately tested as a pilot program before being transformed into national policy, the demands have multiplied to cover huge settlement areas. More time is needed before the results can be adequately assessed. Although the program was designed to incorporate four hundred families in each of twelve poles, most of the poles lagged behind in the timetable for presenting results that would qualify them to receive community certification and actual payments to farmers (Agência Brasil 2005). This delay contributed to distrust and disinterest among many participants.

The principal obstacles currently facing Proambiente are legal and conceptual. For example, the lack of an organizational structure legally charged with making environmental service payments has made the payments, in practice, more like social subsidies. The lack of government experience in implementing policies with public participation has led to inappropriate and overly bureaucratic tools. The chronic lack of articulation among governmental actions for the Amazon region has led to delays in freeing funds, with these often arriving too late for the agricultural tasks they are meant to support. For Proambiente to succeed, more appropriate operational mechanisms will be needed, along with a legal framework for environmental service payments and expansion of the program beyond pilot areas to reach the whole region as well as other parts of Brazil (Hirata 2006).

Both policies—extractive reserves and Proambiente—depend strongly on state intervention to succeed because of their shared management design, which requires strong institutional relationships and constant adjustments. This is one of the most fragile aspects of the proposals, given the difficulty the Brazilian government has had in implementing effectively its environmental policies and excellent environmental laws. The other weakness is the overwhelming demands placed on rural communities. Because of the historic deficit of social investments in Amazonian communities, families have to divide their energies between problems of day-to-day survival and the shared management of extensive territories, requiring interminable meetings and responses to complex accounting questionnaires, if they are fortunate enough to be literate.

These new development models being implemented in Amazonia, based on balancing conservation and sustainable use, have established a permanent tension with pro-development groups in the government but have not significantly altered the predominant development policies. On the one hand, the social movements formulated, tested, and implemented pilot programs of all types, with varied methodologies. The state, on the other hand, which was responsible for transforming these pilot programs into public policies to benefit the whole society, has not been up to this task, even under the popular government of President Luiz Inácio Lula da Silva. As a result, the programs have fallen far short of their potential to benefit the smallholder populations of the region.

Alongside the ongoing "quiet revolution" of experiments with a grassroots focus, the main thrust of Amazonian development policies continues to reflect the vested interests of agribusiness in the region: road construction; market penetration; expansion of logging and ranching; and conflicts over land and resource tenure. Environmental agencies such as Brazil's Ministry of the Environment (and IBAMA) are relatively weak compared to the development-focused agencies such as the Ministry of Agriculture and INCRA, the main function of the latter being land titling and resolution of rural social tensions. It is no surprise that the extractive reserves and Proambiente have suffered from a lack of government follow-through with policy implementation, technical support, and financial resources.

In Acre, a state government closely allied with the rubber tappers is facing the challenge of supporting the extractive reserves while also implementing a broader vision of alternative development for all of the regions and social groups of the state of Acre, including support for cattle ranchers, commercial timber operations, industrialization, and road paving. The success of the government's experiment in sustainable development will depend on its ability to successfully address these issues concurrently while maintaining the political support to pursue its vision through its many uncertain paths.

At the grass roots, the often precarious nature of implementation of the policies translates into less than effective local governance and community participation (Hall 1997). In the process of "scaling up" to a regional level, extractive reserves and Proambiente, proposals that emerged in particular historical moments and locations, have been introduced throughout the region, including in communities lacking a prior articulation to strong social movements. In effect, these successes have transformed a bottom-up proposal by grass-roots leaders and their allies into more top-down projects expanded to less organized groups. Ironically, the successful shift to policy advocacy at regional and national levels has often come at the expense of local organizing, leaving the social movement weaker at its base and

overly dependent on support from projects by NGOs and the government (Ehringhaus 2005). Finally, the proposals face the challenge of addressing changing needs and perspectives in rural communities, particularly among new generations of workers who did not participate in the political mobilizations, and who may have different perspectives on the forest and on farming than their parents (Esteves 1999; Ehringhaus 2005; Wallace 2004).

Long-term success of these innovative grass-roots policies hinges on the ability of local groups, often with substantial support from national and international allies, to negotiate the changing and often conflictive development policy arena in the region (Hall 1997; Schmink and Wood 1992; Silva 1994). The extractive reserves, Proambiente, and other "productive conservation" initiatives cannot thrive without compatible planning for the broader landscape of which they are a part. This means continued pressure to balance the need for cross-sector strategic political alliances with investments in technical research and grass-roots organizing. Political pressure is required to keep policies on track, while buying time for the necessary learning, adaptation, and expansion of promising alternative approaches to grass-roots Amazonian development.

Notes

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