
Participatory Development and the Decentralization of Environmental Authority for a Sustainable Future of the Brazilian Amazon

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Abstract

Development efforts and environmental issues are two of the most prevalent concerns regarding the Brazilian Amazon. The Brazilian government is faced with the dual responsibility of promoting economic development and protecting the environment. These conflicting roles have a complex and often tortuous history that has been the focus of intense debate. Although Brazilian environmental policy is generally advanced, the implementation, enforcement and delegation of environmental responsibility is far from ideal. This article suggests a further decentralization of Brazilian environmental policy authority that includes the participation of a variety of non-governmental actors and institutions. These suggestions are contextualized within the recent situation about the repaving of the Brazilian highway known as the BR-319. Also stressed is the critical need to recognize the interrelations between environmental issues, economic development, and social policy.

INTRODUCTION

The Brazilian Amazon is a vast landscape of diverse ecosystems that spans over 5 million km² and is home to the largest remaining area of tropical forest biome. Most concerns about the Brazilian Amazon stem from the vast amounts of deforestation that have been occurring since its discovery by Europeans in the 16th century. These concerns have traditionally highlighted the sheer amount of environmental destruction and subsequent carbon dioxide emission that results from the clearing of the natural landscape. This destruction is often the result of large-scale development projects such as highways, hydroelectric dams and agricultural clearings. Recent debate however has equally focused on the social deterioration that accompanies such development projects. Brazilian environmental law was gradually developed, as Lindenbojm articulates, "...as a consequence of the necessity of creating a *system* of rules whose scope is the protection of the integration of natural, artificial and cultural elements as well as the assurance of a balanced and sustainable development of human life" (2001, emphasis added). Lindenbojm's articulation is positive and sensible. Unfortunately, however, this *system* is often challenged by

economic development initiatives that deemphasize the social, cultural and environmental effects that they spur. This paper attempts to highlight ways that the implementation and enforcement of environmental policies can be adjusted to account for the social implications inherent in development projects. Economic development is not discouraged, but rather, a new *model* of development that is sensitive to both local communities and their lands is suggested. This new model must include participatory development and the decentralization of environmental authority.

POLICY STRATEGIES

Participatory Development

The Brazilian Amazon encompasses an area roughly the size of Western Europe. This region includes over 200 indigenous communities, many rural villages and several urban areas, such as the city of Manaus. Given the variety and cross-cultural breadth of human population groups in this region, it is natural to assume that policies will affect different people in different ways. Furthermore, the ecosystem range of the Amazon includes landscapes as diverse as the woody savannas or *cerrado* in the southeast, to the dense tropical forest *terra firme* of the northwest. This range also encompasses the highest level of biodiversity than anywhere else on the planet. Therefore, concerning environmental issues, location is a crucial variable. Thus, a participatory development approach to designing both environmental policies and economic development projects is a means to ensuring that regional and local perspectives are considered. Community leaders are often knowledgeable about local ecosystems and social systems and have the capacity to advise on policy-making on a variety of levels.

Descriptions and definitions of participatory development can be found in a variety of works (Sachs 1992; Vainio-Mattila 1997; Burkey 1993). What is central to all of these however is that local people are engaged in the designing process. More importantly, as Campbell and Vainio-Matilla recognize, is that rather than the participation process as just a “means” to an end, the final result, when achieved, will have stemmed from the “long-term engagement by those involved in the process of solution finding” (2003: 420). Successful examples of participatory development models are evident across Amazonia and include projects such as biosphere reserves (Zimmerman et al. 2001) and tourism within environmentally protected

areas (Oliveira 2002).

However, caution and strategic planning must be emphasized when dealing with local populations in an area as diverse as the Amazon, or anywhere. Cultural appropriateness and social sensitivity are important factors that can lead to either the success (Schwartzman and Zimmerman 2005) or demise (Chernela 1995) of development projects and new policies, especially if a monetary element is involved. Cross cultural studies show that the success of participatory projects is largely dependent on the degree to which the participant groups parallel the traditional social structure (Cernea 1992; Kottak 1991). Participatory development is often one of the results of a centralized federal branch of government entrusting local leaders and citizens with more authority and choice in official decision-making. This process is known as decentralization.

Decentralization

Since the 1970s, decentralization has been at the core of the debates about Latin American governance, and it is occurring in over eighty percent of developing and former communist countries (Manor 1999). In its broadest terms, decentralization is a tool for promoting development (Rondinelli and Cheema 1983; Ribot 2001). In developing countries like Brazil however, economic development is generally of the highest priority, while non-development agendas, such as those of environmental agencies, receive little or no funding (Oliveira 2002). However, a combination of decentralization and participatory development reveals that economic development and environmental agendas can operate in mutual support of each other, and must indeed do so if a sustainable future for the Amazon is to be achieved.

In the context of this discussion, a more elaborate definition of decentralization is appropriate because of its application to an improvement of local, regional and national well-beings:

Decentralization, or decentralizing governance, refers to the restructuring or reorganization of authority so that there is a system of co-responsibility between institutions of governance at the central regional and local levels according to the principal of subsidiarity, thus increasing the overall quality and effectiveness of the system of governance, while increasing the authorities and capacities of sub national levels. [UNDP 1998]

As Mendoza-Botelho (2008) has pointed out, this definition of decentralization highlights the

institutional links created by the act of restructuring authority. As explained shortly, it are these types of linkages that can support both the environment and the economy of the Brazilian Amazon.

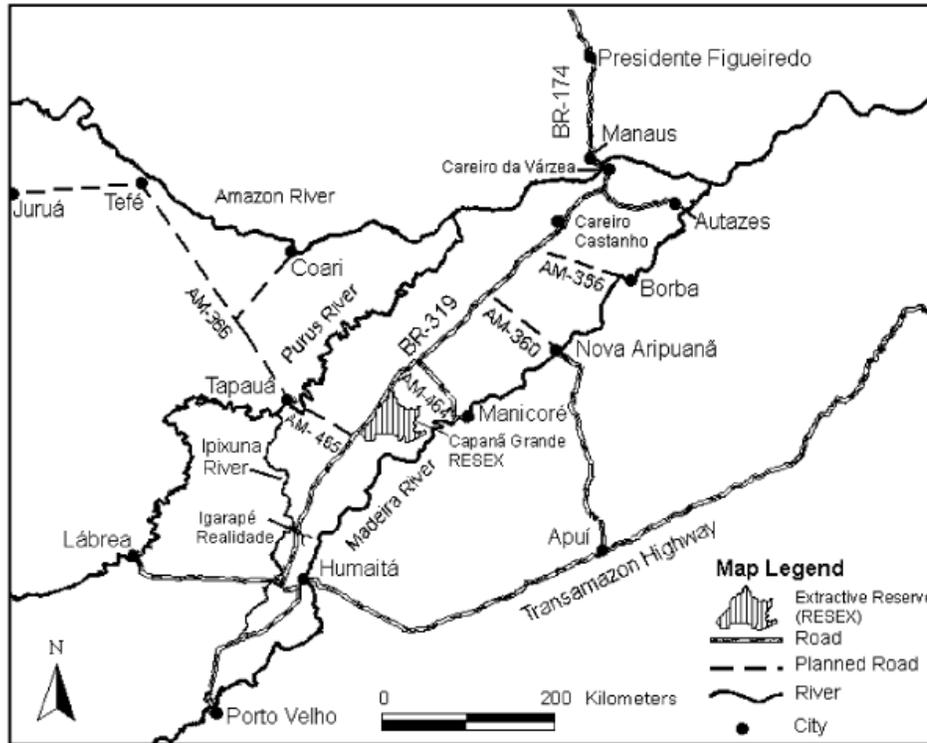
Literature on decentralization describes three forms that, in respective order, allow for a more complete transfer of responsibility to lower autonomous units, and thus a more independent governing authority: deconcentration, delegation and devolution (Mendoza-Botelho 2008; Rondinelli et al. 1983; Campbell 2003). Simply stated, complete devolution is difficult to achieve while a combination of these three forms is most commonly the most successful. This combination however, could benefit from a fourth dimension—that of horizontal decentralization. Horizontal decentralization is “decentralizing the same task to several agencies at the same government level” (Costa et al. 2002: 1714). In regards to this discussion, an example of horizontal decentralization would be the simultaneous implementation of a particular environmental policy by several agencies in different locations. The case of a highway that cuts straight through the heart of the Amazon is a good example of how a combination of horizontal and other dimensions of decentralization can prove effective.

THE CASE OF THE BR-319

The most pervasive problem in the Brazilian state of Amazonas is deforestation. As mentioned, this often results from development projects of various types. Infrastructural highway construction, in particular, can spawn waves of deforestation because it opens up areas to unregulated traffic and population influx that eventually stimulates further reasons for forest clearing (Fearnside 2006). The BR-319 is a highway path that spans nearly 1000km and connects the city of Manaus in Amazonas to the smaller city of Porto Velho in Rondônia. This path was hastily approved and constructed under the military dictatorship in 1972 and 1973, with the incentive of creating a faster and cheaper route to facilitate trade between São Paulo and Manaus, via Porto Velho. By 1988, lengthy sections of the BR-319 became impassable due to the heavy rains (22 meters annually) that characterize the region. Although two small stretches at each end have been somewhat maintained, reconstruction and repaving of the entire highway has been repeatedly planned and postponed; reluctance being the result of the high cost of maintenance in an unfavorable landscape and because of the existence of alternative transit along

the Rio Madeira (fig.1), which runs almost completely parallel to the highway path (Ibid.). However, in the 2004–2007 *Plano Plurianual* or PPA, launched under President Luiz Inácio Lula da Silva (Brazil, MPOG 2004) the BR-319 project appeared listed as expected for “after 2007,” but actual development is still pending.

Fig. 1 The BR-319 Highway



(Map courtesy of Fearnside, Environmental Management (2006) 38:709)

Implications

The beginning of the BR-319 in Porto Velho is in close proximity to what is known to many scholars as the Amazonian “arc of deforestation” (Fearnside 2006; Barreto et al. 2005). This is a heavily deforested crescent-shaped stretch of land from eastern and southern Pará state through northern Tocantins and Mato Grosso, cutting through Rondônia and reaching into eastern Acre. The repaving of the BR-319 would link this area to the central Amazon, a region much more protected because of natural land barriers and lack of easy access. A newly paved highway would be a literal gateway to new frontiers for illegal incursion and environmental destruction. The predicted impact of repaving the BR-319 and opening up both the north and

south of the Central Amazon to heavy traffic is too extensive to recount here (see Fearnside 2002, 2006). These impacts not only include environmental destruction, but also social problems such as massive migration (Fearnside 2006). The primary justification for the repaving of the highway is to decrease the transportation costs between south and central Brazil, specifically between Manaus and São Paulo, as is the justification for the construction of the BR-163 from Santarém to Cuiabá as well (Simonetti 2005; Brazil, SUFRAMA 2005: as cited in Fearnside 2006). This strategy of linking regions through highway construction however, is aimed at increasing the competition of industrial products in urban markets such as São Paulo and other population centers. What is strikingly apparent is that this project's main goal is to foster the economic development of regions *outside* of the Amazon. A sustainable future for the Amazon must relinquish the notion that the development of the Amazon is the solution to social and economic obstacles of *other* regions of Brazil, and of the world.

CONCLUSIONS

A New Development Model

A new development model for the Brazilian Amazon must be characterized by sustainable systems that involve local populations and includes economic benefits from environmental services, rather than from destructive large-scale development projects. Inherent in Amazonia's ecological richness is a variety of environmental services, such as the maintenance of biodiversity conservation, water cycling and carbon storage. The economic potential of these services has yet to be fully realized within policy discourse. However, non-government organizations (NGOs) and research institutions such as the Instituto Nacional de Pesquisas da Amazônia (INPA) have been at the vanguard of promoting this type of development. The tools of decentralization and participatory development can help incorporate environmental services into the official development agenda of the Amazon.

Decentralized Participatory Environmental Authority

Following the UNDP's definition of decentralization as mentioned above, the transformation of authority must also include a more communicative linkage, not disconnection, to broader and more diverse institutions. Recent research and policy about strategies to protect the environment and conserve biodiversity have focused on employing the services of such

institutions, as well as academic disciplines, for example, the biological sciences community, ecological communications and ecosystem management (Pickett et al. 1997). Other reports recommend emphasizing social context, local cultural values and a community-integrated approach (Warren et al. 1995; Hanna et al. 1996). A new development model for the Amazon however, would benefit from decentralizing authority to all of these institutions and including participation from locals in the process. Decentralization techniques need to also include a restoration or development agenda that would assist the newly assigned units of government in creating a sustainable and transparent infrastructural base, with ties to international and national establishments. Horizontal decentralization accompanied by participatory development strategies are useful especially in large scale developments such as the BR-319. Because of the range of territory and the variety of different local populations that this highway effects, horizontal decentralization would ensure a uniform implementation of policy. Once a policy is drafted and approved by various local populations through participatory development, horizontal decentralization can provide a guideline for regional governments to follow. This is important because there is much support for the BR-319 by corporate executives and the business community in Manaus, but little by the smaller populations near Porto Velho (Fearnside 2006). Through participatory development strategies, NGOs and research institutions such as INPA, can help develop economically-sustainable environmental service alternatives. Both participatory development and decentralization are two useful techniques to reverse the destructive trend that Amazonian developments projects have taken.

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