

Re-understanding Property Rights, Land Invasions and Deforestation in the Brazilian Amazon: The Case of Western Maranhao

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This research examines the main causes of agrarian land invasions and conflicts in the Brazilian Amazon frontier, and how, in some cases, these conflicts can become related to uncontrolled deforestation. Some of the literature has mentioned that insecure property rights over land are possible causes of land conflicts¹² and deforestation.¹³ After analyzing the data and evidence that I have collected from my field research, I show how land invasions are caused not only by insecure property rights over land, but also by abrupt social changes and insecure property rights over timber, which result from the insecurity over land rights and poor enforcement of environmental regulations. In the case of Buriticupu, Brazil, the problems of insecure property rights over land and over timber, under certain social conditions, give incentives to land invasions and then deforestation.

The paper also takes a different look at the most common explanations of deforestation in the Brazilian Amazon. The conventional wisdom in the literature generally assumes the process of deforestation and environmental degradation in the region are caused by independent private

¹² (i) Alston, Lee J.; Libecap, Gary D.; and Schneider, Robert (1995). "Property Rights and Preconditions for Markets: The Case of Amazon Frontier." *Journal of Institutional and Theoretical Economics*, Vol. 151, No. 1, pp. 89-107. (ii) Alston, Lee J.; Libecap, Gary D.; and Schneider, Robert (1996). "The Determinants and Impact of Property Rights: Land Titles on the Brazilian Frontier." *Journal of Law, Economics & Organization*, Vol. 12, No. 1, pp. 25-61. (iii) Mueller, Bernardo; Alston, Lee J.; Libecap, Gary D.; and Schneider, Robert (1994). "Land Property Rights and Privatization in Brazil." *The Quarterly Review of Economics and Finance*, Vol.34, Special Issue, pp. 261-280.

¹³ (i) Binswanger, H. (1991). "Brazilian Policies that Encourage Deforestation in the Amazon." *World Development*, Vol. 19, No. 7, pp. 821-9. (ii) Mahar, Dennis J.; Schneider, Robert (1994). "Incentives for Tropical Deforestation: Some Examples from Latin America." In: *The Causes of Tropical Deforestation*, eds. Brown, Katrina; and Pearce, David. UBC Press: Vancouver.

actors - construction companies, loggers, farmers- stimulated by different government policies.¹⁴ Examples are the construction companies building large government-sponsored infrastructure projects, agro-industrialists implementing extensive agroindustrial projects subsidized by the government, timber exploiters acting without adequate inspection by the environmental agencies or small producers from failed colonization projects practicing slash-and-burn agriculture. In contrast with common view, my research shows that the various private actors responsible for the deforestation in the Amazon are actually interacting among themselves in their search for scarce resources such as land and timber. One of the main causes of this interaction is the insecure conditions of the property rights over land and timber.

Agrarian land invasions involve organized landless people and their allies invading large private or public properties, claiming that they are unproductive land (so susceptible to expropriation by the government for agrarian reform purposes according to Brazilian laws). Invasions can lead to conflicts between landless and landowner allies, when the latter resist to the invasion. Agrarian conflicts have occurred frequently in Brazil since the 1960s. They are often the result of the struggle of landless peasants to get access to land rights versus the resistance of landowners to give up their land rights, in an unclear legal environment. In the Brazilian Amazon, some of these land invasions result in widespread deforestation.

The area of study is the municipality of Santa Luzia in the state of Maranhão, more specifically, the region around the town of Buriticupu.¹⁵ I chose this region because the region presents the highest number of land conflicts in the state and related deforestation problems, which are

¹⁴ (i) Binswanger, n.d; (ii) Gillis, Malcolm; and Repetto, Robert (1988). Deforestation and Government Policy. Cambridge University Press: London. (iii) Hemming, John, editor (1985). Change in the Amazon Basin, Volume II: The Frontier after a Decade of Colonization. Manchester University Press: Manchester, U.K. (iv) Mahar, Dennis J. (1989). Government Policies and Deforestation in Brazil's Amazon Region. The World Bank: Washington, D.C.. (v) Moran, Emilio F. (1981). Developing the Amazon. Indiana University Press: Bloomington. (vi) Moran, Emilio F., editor (1983). The Dilemma of Amazonian Development. Westview Press: Boulder, Colorado. (vii) Moran, Emilio F. (1993). "Deforestation and Land Use in the Brazilian Amazon." Human Ecology, V. 21, No. 1, pp. 1-21.

¹⁵ The distances of the areas studied vary from 0 to 40 kilometers from the center of the town. Buriticupu at the time of this research (1996) was part of the municipality of Santa Luzia. Today, Buriticupu is an emancipated municipality.

considered priorities for the state government.¹⁶ Santa Luzia is located in the western part of the state, 300 km southwest from the capital of the state, São Luís. It has a population of 116,195 inhabitants, 85% living in the rural areas.¹⁷ The town of Buriticupu has an estimated population of 5,000 inhabitants.¹⁸

Some of the recent literature suggests that the problem of insecure property rights over land in the Amazon frontier is one of the main causes of land conflicts¹⁹. The authors say that lack of effective land titling and secure tenure over land spur land conflicts when some government action or policy²⁰ take place, pushing land prices up. This increase in land prices gives people incentives to try to title their land, in general very difficult due to the government agencies' lack of organizational capacity for a large increase in the demand for titling. This environment of insecure rights and increases in land prices give people incentives even to use violence in the fight for land rights.

A similar environment, like the one described above, has been in place in Buriticupu since the last decade. However, in my discussion, besides the factors that lead to land conflicts described in the literature, I add the presence of insecure property rights over timber and landless organization as accentuating factors in driving land conflicts and deforestation. Furthermore, the same factors can also lead to interaction between the landless and settlers with local loggers and landowners.

My analysis shows that the occurrence of a high number of land invasions and agrarian conflicts in the Buriticupu is related to the existence of five determinant factors: a) the existence of vast apparently unproductive land properties; b) a large number of landless rural workers; c) distorted distribution of land resources; d) the existence of a large momentum of social organization among the workers and landless; and e) the existence of unclear and insecure property rights over land

¹⁶ According to Maranhão Environmental Agency's report (SEMA - Secretaria de Meio Ambiente e Recursos Hídricos do Maranhão (1996). *Plano Estadual Ambiental*. Report (March, 1996)).

¹⁷ IPES (1993). *Sinopse Estatística Municipal do Maranhão*. IPES: São Luis.

¹⁸ Number estimated through talks with local politicians. There is no official census for Buriticupu.

¹⁹ Alston et al., 1995, 1996; and Mueller et al., 1994 (n.d).

²⁰ Like government subsidies for agropastoral projects or infrastructure building.

and timber, driven by conflicts between government agencies, by unclear laws or regulations, or by lack of enforcement.

The result of this research also shows some distortions in the Brazilian policies for agrarian reform and environmental protection, such as lack of criteria for land expropriation, difficulties in the process of land titling, conflicting policies between INCRA (Brazilian National Agency for Agrarian Reform) and IBAMA (Brazilian Environmental Agency) and poor enforcement of environmental laws. These policies spur an environment of insecure property rights whose consequences include i) the lack of incentives for private investments on land improvements, ii) rent dissipation in organizing invasions (in the case of the landless) and in protecting properties against invasion (in the case of the landowners), iii) waste of public resources in conflict resolution and hurried and, sometimes, unfair land expropriations, iv) violence and social unrest in some cases, and finally iv) uncontrolled deforestation and land degradation.

In sum, distorted governmental policies can generate insecure property rights over land and timber. In turn, these insecure rights, allied to rapid social changes, can cause conflicts and environmental degradation, especially where there is a lack of enforcement of environmental law. However, the same distorted policies can induce the main private actors in the process of deforestation resulted from land invasions (landless people, loggers and landowners) to interact between themselves, such as the case of Buriticupu region. This interaction challenges the common wisdom existent in the literature on the Brazilian Amazon, which describes those actors behaving independently in the process of deforestation.