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**ROADS IN RONDÔNIA: HIGHWAY
CONSTRUCTION AND THE FARCE OF
UNPROTECTED RESERVES IN BRAZIL'S
AMAZONIAN FOREST**

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INTRODUCTION

Throughout the Brazilian Amazon, reserves of every category have been bisected by roads and/or reduced in size to allow quicker and cheaper economic exploitation of resources. Best known is the loss of a substantial portion of the Xingu Indian Park in 1971, to make way for the construction of the BR-080 Highway (Davis, 1977: 59-60). In 1982, Maria Tereza Jorge Pádua, the head of the National Parks Department, resigned her post when President João Figueiredo together with the highest levels of IBDF (Brazil's National Institute for Forestry Development, which includes the National Parks Department), granted approval for construction of a highway through the Araguaia National Park (Veja, 1982). In both cases, Brazilian laws guaranteeing the integrity of parks and reserves were simply ignored when the reserves proved inconvenient for road-building plans. These examples illustrate a persistent problem in Amazônia; the rapid proliferation of road-building guarantees that similar conflicts of interest will arise on many future occasions.

Nowhere are such conflicts more evident than in Rondônia, a newly-created state bordering on Bolivia in the southwestern corner of the Brazilian Amazon. Rondônia is the gateway to the Amazon for migrants being expelled from Brazil's southern states, where large estates with mechanized soybeans, wheat and sugar cane are replacing labor-intensive small farms producing coffee and food crops. The Cuiabá-Porto Velho Highway (BR-364) is being asphalted as a part of the massive POLONOROESTE regional development plan, with completion scheduled for 1984 (see International Bank for Reconstruction and Development, 1981). A loan from the World Bank contributes one third of the program's total costs, budgeted at the equivalent of US\$ 1.1 billion at January 1981 exchange rate (IBRD, 1981: iii).

Many of the ambitious plans for Amazonian highway construction that appeared on maps in the early 1970s remain unbuilt. In Rondônia today the situation is different: as a result of the availability of funds and the relentless pressure generated by the flood of immigrants (as well as by speculators and investors of seemingly every possible description) a vast network of highways is, in fact, being built.

ROADS IN RONDÔNIA

In conjunction with the Cuiabá-Porto Velho Highway (BR-364), the POLONOROESTE program provides funds for improvement of side roads in existing colonization areas, as well as in several new areas such as Urupá, Machadinho, Capitão Silva and Marmelo, to be financed under the program. Other colonization areas--such as Bom Princípio, Conceição and Samaúma--are planned with financing from the FINSOCIAL program. All planned settlement areas are under the direction of the National Institute for Colonization

and Agrarian Reform (INCRA). In addition, unplanned spontaneous settlements outside of official colonization zones are, frequently, later given legal status and incorporated into INCRA programs. The long-standing tradition of legalizing squatter claims makes future repetition of this pattern likely (see Fearnside, 1979). Currently planned access roads will link the various official and other developments to the major trunk roads.

The planned roads follow straight lines to points on the existing road network, thereby cutting across any reserves that may be located in their paths.

THE FARCE OF UNPROTECTED RESERVES

Brazil has a variety of types of forest reserves, each with legal protection against invasion and forest clearing (Brazil, Ministério da Agricultura, IBDF, 1982). Reserve types include national parks, biological reserves, and forest reserves under the administration of the Brazilian Institute for Forestry Development (IBDF); ecological stations under the administration of the Special Secretariat of the Environment (SEMA); Amerindian reserves under the administration of the National Indian Foundation (FUNAI); and various other types of reserves administered by research and other entities.

Reserves in Rondônia on land in the public domain include the Guaporé Biological Reserve, created 20 September 1982 with 600,000 ha (see map, Fig. 1). The reserve had been planned for several years prior to its official creation, during which time the boundaries were moved--first shifting the southern boundary to the north to avoid the strip of occupied land along the Guaporé River (which forms the border between Brazil and Bolivia), and then further shrinking the reserve on the eastern and western boundaries to avoid conflicts with already existing land claims there (NB: the southern boundary shown on the map reproduced in Fig. 1 is apparently in error, since the Rondônia Delegate for IBDF claims that the reserve no longer reaches the river's margin).

The shrinking of the reserve from its edges, however, is insignificant in comparison with the losses implied by road building plans. Rondônia's Department of Roads and Highways (DER) (Brazil, Governo de Rondônia, DER, 1982) and Company for Agriculture and Cattle Ranching Development of Rondônia (CODARON) (Brazil, Governo de Rondônia, CODARON, 1983) have both published maps showing three planned highways crossing the Guaporé Biological Reserve: RO-383 linking Santa Luzia to Pedras Negras, RO-377 from the Rio Guaporé to the BR-429, and RO-370 from Cerejeiras to the BR-439 (Fig. 1). The roads would assure substantial losses for the reserve's forests in two ways: (1) the direct loss to road construction, and (2) the rapid entry of squatters once highways are constructed--such as has been the

inevitable result of similar road-building experiences throughout Amazonia.

The Jaru Biological Reserve, originally decreed as a forest reserve in 1961 with 1,085,000 ha (see Pires, 1978) has suffered various reverses. Incorporation of much of the reserve into the Burareiro Directed Settlement Area, a project where 500 ha estates were sold through sealed tenders (licitação) for development of cacao plantations, left the reserve with an official area of 268,150 ha when its designation was changed to that of a biological reserve in 1979 (Decree law 83.716, see Brazil, Secretaria de Planejamento, IBGE, 1979: 44). The reserve has never had a forest guard or staff of any kind, and an undetermined number of squatters are now clearing within its boundaries. A highway is also being projected to bisect the reserve: the RO-357 linking Ariquemes with the state of Mato Grosso.

Amerindian reserves cut by projected roads include (1) the Posto Indígena Rio Branco, cut by the RO-370 Highway between Colorado do Oeste and the BR-429; (2) the Posto Indígena Roosevelt cut by the RO-387 Highway between Espigão do Oeste and the state of Mato Grosso; (3) the Posto Indígena Karitiana cut by the RO-010 Highway linking the BR-424 and the BR-364; (4) the Posto Indígena Kariruna cut by both the RO-370 Highway between the BR-364 and the BR-429, and by the RO-257 Highway between the RO-010 and the RO-370; (5) the Posto Indígena Rio Negro cut by the RO-370 Highway between the BR-429 and the BR-364; and (6) the Posto Indígena Tubarão cut by the RO-391 Highway between the BR-364 and Laranjeiras.

One type of reserve is within property owned by private individuals and corporations. These are the reserves of 50% of the forested area that Brazil's Forestry Code (Decree Law 4771, Article 44) requires be kept in natural vegetation. However, in practice there is no enforcement whatsoever of this provision of the Forestry Code (see Fearnside, 1979). Many colonists in older government colonization projects in Rondônia and elsewhere have cleared their entire lots, with no legal consequences. In the colonization projects now being implanted or planned, the reserves within each property have been replaced by a communal reserve representing half of the land area of the entire project.

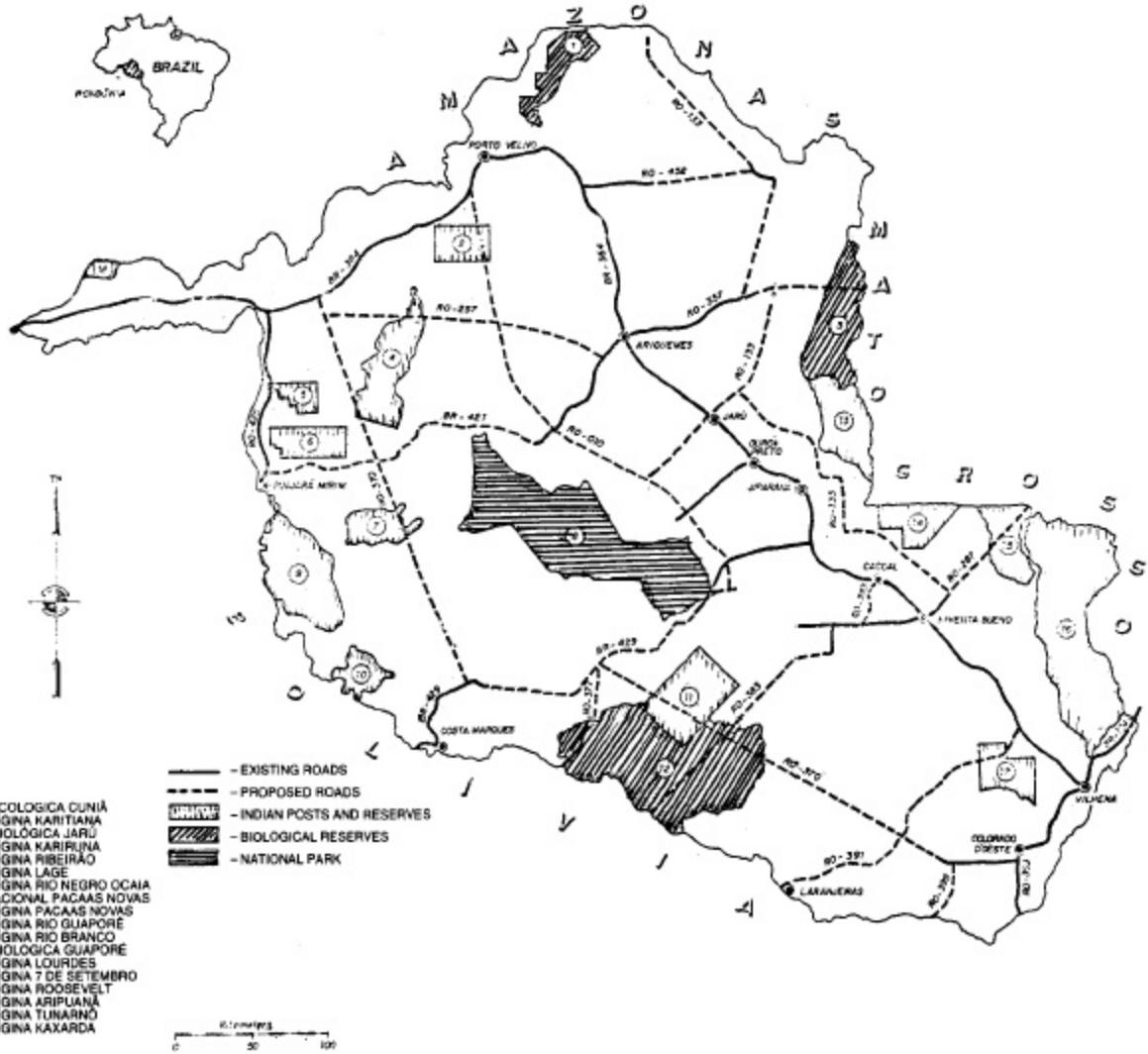
In the case of the Urupá project, begun in 1982, approximately 200 squatters had already established themselves within the communal reserve by 1983. Many of the legally-settled colonists who have not yet completed clearing the above-mentioned 50% of their land outside of the reserve area talk of plans to continue clearing in the reserve area once their separate agricultural plot has been cleared and converted to cattle pasture.

The ubiquitous excuse for non-enforcement of forestry laws is that IBDF has only a minimal staff and budget. This situation, of course, reflects national priorities that consider

reserve protection far less worthy of funding than projects such as roadbuilding or colonization. In the case of Rondônia, the excuse of lack of funds is, in itself, inadequate to explain the total lack of enforcement, given the funding included in the POLONOROESTE budget. Funds are even included to patrol reserves by helicopter.

DISCUSSION AND CONCLUSIONS

Reordering of priorities is needed in the Brazilian government's planning of development. An end must come to the present pattern of any reserve losing as soon as a conflict of interest arises with other uses. In order for this to occur, the value of reserves for future generations of Brazilians must be appreciated, and planners must give greatly-increased weight to the well-being of future generations. Brazil can ill afford to continue the practice of relegating such concerns to the lowest of planes, regardless of how clear the future negative consequences of a given development scheme may be. The rapid pace of road construction and settlement in the Brazilian Amazon, particularly in the state of Rondônia, means that decisions to effect such changes must be taken immediately, and at the highest level, if the farce of unprotected forest reserves is to be halted while the reserves still remain in existence.



- 1 - RESERVA ECOLÓGICA CUNIÁ
- 2 - POSTO INDÍGENA KARITIANA
- 3 - RESERVA BIOLÓGICA JARU
- 4 - POSTO INDÍGENA KARIRIJÁ
- 5 - POSTO INDÍGENA RIBEIRÃO
- 6 - POSTO INDÍGENA LAGE
- 7 - POSTO INDÍGENA RIO NEGRO OCAIA
- 8 - PARQUE NACIONAL PACAAS NOVAS
- 9 - POSTO INDÍGENA PACAAS NOVAS
- 10 - POSTO INDÍGENA RIO GUAPORE
- 11 - POSTO INDÍGENA RIO BRANCO
- 12 - RESERVA BIOLÓGICA GUAPORE
- 13 - POSTO INDÍGENA LOURDES
- 14 - POSTO INDÍGENA 7 DE SETEMBRO
- 15 - POSTO INDÍGENA ROOSEVELT
- 16 - POSTO INDÍGENA ARIPIUANA
- 17 - POSTO INDÍGENA TUNARÃO
- 18 - POSTO INDÍGENA KAXARDA

— EXISTING ROADS
 - - - PROPOSED ROADS
 — INDIAN POSTS AND RESERVES
 — BIOLOGICAL RESERVES
 — NATIONAL PARK

