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Extractive Reserves

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EXTRACTIVE RESERVES

Extractive reserves are territories dedicated to environmental protection and the sustainable use of nature resources by traditional populations. Reserves follow a traditional land tenure model based on individual family and communal property rights to common areas, such as forest trails used to extract or harvest nontimber forest products. Although the extractive reserve concept originates in the tropical forests of the Brazilian Amazon, reserves have also been created in aquatic, floodplain, and savanna landscapes throughout Brazil. There are now 50 extractive reserves covering more than 10 million hectares, an area larger than Portugal, and more continue to be created. Despite their growing areal extent, the success of these areas for reconciling conservation and development is still being debated. However, the reserves remain popular with policymakers in part because they address both the land tenure concerns of the local people and the environmental concerns of conservationists. This entry focuses on the forested extractive reserves of Amazonia.

The extractive reserve concept originated with the struggle of Amazonian rubber tappers, harvesters of the latex of the rubber tree (*Hevea brasiliensis*), against the encroachment and deforestation practices of cattle ranchers moving into the Brazilian Amazon in the 1970s and 1980s. Tappers developed a resistance strategy combining nonviolent confrontations with the promotion of standing forests as viable development

alternatives and themselves as keepers of valuable forest knowledge. The methods and message of the tappers attracted environmental and human rights groups, who in turn brought international attention to the cause. The rubber tapper movement gained even greater notoriety with the tragic assassination of their internationally known leader, Chico Mendes. Two years later, in 1990, the first extractive reserve, Reserva Extractivista Alto Juruá, was declared.

The creation of extractive reserves generated immediate debate over the economic and conservation viability of both extractivism and organizational units built on the sustainable use of nontimber forest products. Pro-extractive reserve researchers and conservationists found the reserves with great economic and ecological potential for long-term sustainable development, including maintenance of standing forest, biodiversity, and environmental services. Meanwhile, the rubber tappers themselves focused more on the social potential of reserves to generate employment opportunities, preserve subsistence livelihoods, foment local participation in national policy decisions, and support cultural values and local knowledge. Early critics of extractive reserves warned against the idealization of reserves as a panacea for Amazon conservation and cited concerns with the economic sustainability of extractivism (e.g., inelastic supply of the extractive product and low demand), the spatial nature of the targeted resources (extensive nature, low density, and distant from markets), and ecology (potential biotic impoverishment through overharvesting and the deforestation potential of extractivists also pursuing agriculture and animal husbandry). Despite these concerns, extractive reserves gained credence as a means of preserving standing forests and protecting traditional livelihoods.

The complex land tenure arrangement of the reserves, combining public property, community management, and private resource use of designated forest areas, has provided an important refuge for both the forest and the extractivists in the face of continued deforestation and development in the Brazilian Amazon. As road networks, commercial agriculture, and cattle ranching expand into the Amazon basin, extractive reserves increasingly stand out in satellite imagery as



forested islands. However, a closer analysis of the forested reserves reveals some fragmentation taking place as the livelihoods and land use of rubber tappers adjust to new opportunities and constraints.

The traditional livelihoods of rubber tappers included the collection of latex, nuts such as the Brazil nut (*Bortholletia excelsa*), oils such as that from the copaiba tree (*Copaifera* spp.), and even subsistence agriculture and animal husbandry. The collapse of the rubber economy simultaneous to the creation of the reserves forced many tappers to focus on other nontimber forest products and to begin selling agricultural and animal products. Concomitantly, the reserves' united goals of conservation and social justice encouraged international agencies, governments, and nongovernmental organizations to invest resources and research on improving the economic viability of the reserves through initiatives focused on marketing networks, technical innovation, management, and the search for new and diversified extractive products. These initiatives have provided valuable support to residents seeking to continue the extraction of nontimber forest products in the face of alternative income-earning pursuits such as cattle ranching, logging, and farming.

However, extractivist livelihoods, as in Amazonian forests, are characterized by heterogeneity and dynamism. Thus, while the social value of extractive reserves for rubber tappers and the superior conservation value of reserves in comparison with the expanding cattle ranches that spurred their creation are undisputed, some residents are not practicing the same livelihoods envisioned by reserve proponents. In some reserves, this runs counter to the management plan established for the extractive reserve. This begs the question of who should enforce the management plan: reserve residents or the Brazilian environmental agency. To date, enforcement has been infrequent, raising concerns about the long-term future of reserves. Extractive reserves provide an important opportunity to study the dynamism of Amazonian livelihoods and the challenges to reconciling conservation and development within static organizational units. Perhaps most important, these forested units serve as home and workplace for their residents, even as the reserves

become increasingly important to mitigating deforestation and conserving biodiversity in a rapidly developing Amazon basin.

David S. Salisbury

See also Biome: Tropical Rain Forest; Conservation; Environmental Protection; Environment and Development; Forest Fragmentation; Indigenous and Community Conserved Areas; Indigenous Environmental Knowledge; Indigenous Environmental Practices; Indigenous Forestry; Indigenous Reserves; Indigenous Water Management; Political Ecology

Further Readings

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