

Forests and people: safeguarding the natural heritage in the Brazilian Amazon

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A family gathering medicinal barks in their forest reserve.
Photo P. Shanley.

In the Brazilian Amazon, deforestation and fragmentation of tropical forest are estimated to affect one third of the region. Despite the attention given to tropical forest loss, rare mention is made of the direct loss of food, medicine and shelter to the local inhabitants, especially to women who are caretakers of the health and nutritional needs of the family. As the arc of deforestation catalyzed by logging spreads across Amazonia, data illustrating how people and valuable species respond under different conditions — and the consequences — become ever more relevant across a broad geographic range.

The Forests and people program¹ documents the changes that deforestation is bringing to the ecology, use and management of non-timber forest products. The goal of the project is to generate relevant scientific and cultural information about the ecology and local value of forests, targeting a broad public from urban citizens to decision makers and agricultural and forestry training programs. Forest communities are the primary audience for research results since they have scant information on which to make critical decisions regarding the sale and use of forest resources.

Cash poor with few economic alternatives, rural communities often sell rights to their timber for relatively little compensation. The consequences for forest reliant families can be severe. Between 1970 and 1990, the number of timber species extracted by the timber industry in eastern Amazonia rose from fewer than 20 to over 300. One third of these 300 species also have value as food, medicine or resin². Nine years of research conducted with forest communities along a frontier region in the eastern Amazonian state of Pará, revealed the impact of timber extraction pre- and post-logging episodes. Early selective logging events had a relatively low impact on locally valued NTFPs; on average, families in the study area continued to consume the equivalent of 25% of their annual agricultural income from game, fruit, and fiber. However, after successive, more intensive logging episodes and fire, the value of NTFPs extracted from forests plummeted to an estimated 5%.



Eating the delicious pulp of bacurí (*Platonia insignis*) along Capim River. Pará, Brazil.
Photo P. Shanley.

To improve the potentially negative effects of forest degradation on local livelihoods, information is needed to assess the changing abundance of plants that serve as food and medicinal plants for locally common diseases. While timber species have been relatively well studied, species that are valuable to communities but lack national and international markets have remained invisible on the research and policy agenda. The program aims to assess the density, distribution, and sustainable production of priority species identified as the most widely used food, medicinal and fiber species in the Brazilian Amazon. The research results will fill in the gap in knowledge on the ecology, management and use of high priority species and provide a basis for developing guidelines for sound management. They will also help to identify locally crafted mechanisms and social processes that counterbalance economic and institutional forces that restrict the use of existing resource processes, such as accretion of knowledge on management of “wild” NTFPs and transmission of knowledge between rural communities.

¹ Formerly called *Mulheres da Mata*, a joint CIFOR (Center for International Forestry Research) - IMAZON (Institute of People and the Environment) program initiated in 1998; the program retains *Mulheres da Mata* as the public outreach component.

² MARTINI A., ROSA N., UHL C., 1994. An attempt to predict which Amazonian tree species may be threatened by logging activities. *Environmental Conservation* 21 (3): 152-162.

To strengthen the capacity of local communities and district-level policymakers to sustain high-diversity forest ecosystems, the program is producing an illustrated manual on the local benefits of biodiversity conservation (*Frutíferas e plantas uteís na vida Amazônica*). Produced at the request of the Brazilian government, the manual synthesizes current research findings from 70 collaborators on managing forests for both timber and non-timber forest products. A strategic approach to dissemination is being developed with governmental and non-governmental stakeholders, including an impact assessment tool targeting key decision makers and federations of forest managers.

The *Forests and people* program also actively participates in several on-going initiatives on community forest management in Latin America, working to integrate a focus on the local value of biodiversity within conceptual frameworks, management plans, and training programs.

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