

# Sustainable Development in the Brazilian Amazon: A Tale of Two Community-Based Organizations

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*The following narrative has been written as a foundation for case-based class discussions in such economics courses as Economic Development, Natural Resources Economics, the Economics of Tourism, and the Economics of Non-Profit Organizations. It may also be appropriate for a wide range of disciplines, including Anthropology, Sociology, Geography, Business, Marketing, Environmental Studies, Latin American Studies, and Women's Studies.*

After a four-hour van ride followed by a one-hour motorized boat ride from the closest major city, Manaus, I land on Silves Island in the Brazilian Amazon. I had been to the Ecuadorian Amazon before and thought I knew what to expect here, but I was wrong. I remembered the Ecuadorian Amazon being a lush forest with a high tree canopy and the sounds of insects and animals so deafening at night that it was hard to sleep. Don't get me wrong. In the Brazilian Amazon, the birds were no less exotic and the stars in the shared southern sky shined no less brightly. The nearby Amazon River was magnificent and even had freshwater dolphins.

Still, I was overwhelmingly disappointed. The forest canopy seemed not only lower in this part of the Amazon, but the trees themselves appeared to be secondary growth rather than old growth. Some swatches of land had no trees at all. Where the trees once stood, slash and burn techniques had converted the land to pastures. I suppose in retrospect I should not have been surprised by all of this. With Silves Island on Lake Canaçari, so near to the Amazon River, human impact had taken its toll. Little did I know though, I would soon find even more reasons for concern, but also reasons for hope.

Upon docking, I climbed a large hill to the lodge at which I would be staying, *Aldeia dos Lagos*. The lodge is owned by a community association, *Associação de Silves pela Preservação Ambiental e Cultural* (ASPAC), and has an interesting history. Some years ago, a Catholic missionary came to Silves Island and noticed that the people ate canned meats. She wondered about this because of the large lake surrounding the island community. As it turns out, the lake had been over fished, primarily by commercial fishermen from Manaus. So, the missionary began a process that led to the community establishing a fishing agreement that would govern the type and size of fish that could be caught, as well as the fishing season and the type of fishing equipment that could be used.

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Fortunately in Brazil, such community agreements become official law if proper procedures are used to ensure that the agreement reflects the will of the community. The World Wildlife Fund helped the community meet the requirements to make their agreement law by providing technical advice and financial support. Unfortunately though, no funds were provided by the Brazilian government to enforce the agreement. The government of Austria, however, stepped up to help in an interesting way. It donated money to the community to build a lodge for tourists, the very lodge at which I was staying. With the revenue from the lodge, the community was able to hire four men from within the community to enforce the fishing agreement. During their term as enforcement officers, these men were not allowed to fish to avoid any appearance of impropriety. Instead, the community provided an allocation of fish for the enforcement officers and their families.

The lodge also provides a variety of excursions for its guests, including hikes through the Amazon forest, night-fishing with local fishermen (using spears), and tours of local cocoa farms. The locals whose services or land are employed in these excursions are paid according to the number of guests who participate in the excursion. Accordingly, the lodge generates income for the Silves community beyond those who work directly for the lodge as cooks, guides, and boat operators and those who enforce the fishing agreement.

A number of women from Silves Island were so inspired by the success of the fish management association that they came together in May 1999 to establish a cooperative of their own, *Associação Vida Verde da Amazônia* (AVIVE), to produce and sell green pharmaceutical products. The ingredients for the pharmaceuticals were harvested sustainably from the plants and trees of the surrounding Amazon. They were aware of these medicinal plants and trees because their families had used them for generations to cure stomach aches, ear aches, and headaches. One of these women, Maria da Conceição Ruso de Almeida, told me that before they began making these pharmaceuticals, they had not valued the forest around them. She also said that with the success of the women's cooperative, the women have more self confidence and are less shy, their children have become involved in the cooperative, and their husbands respect them more. Maria da Conceição exemplifies the positive impact of AVIVE. She is 45 years old with five children and a second grade education. Yet, as one of the 20 founders of AVIVE and its manager of production, she has won a national entrepreneur award for her efforts and has traveled around Brazil speaking on entrepreneurship.

AVIVE's success in poverty reduction and environmental protection has not gone unnoticed at the international level either. In 2002, AVIVE won the United Nations sponsored Equator Prize for "sustainable community innovation". Nonetheless, the women of AVIVE continue to face at least three major challenges despite the national and international recognition of their work. The first challenge came when the state government of Amazonas shut down AVIVE's operations because regulations dictated that only certified pharmacists could sell pharmaceuticals. The women of AVIVE faced this challenge head on. With the help of a missionary, they learned to make soaps and essential oils to sell in place of the pharmaceuticals. As with the pharmaceuticals though, the ingredients for these soaps and essential oils were harvested sustainably from the

forests around them. To ensure the safety of their products, they even tested the products on themselves and sent the results to a pharmaceutical expert to be analyzed.

AVIVE's second major challenge concerns property rights, just as it did for the fishermen of Silves Island. In this case, though, AVIVE claims ownership to land that contains 2500 valuable Brazilian rosewood trees, from which AVIVE harvests its branches and leaves sustainably to make its sweet smelling *Pau-Rosa* soap and essential oil. However, as one of the women notes, "powerful people want the land."<sup>3</sup> Accordingly, AVIVE has sent a representative every month for the last three years to the state capital, Manaus, to obtain a formal title to their land.<sup>4</sup> Despite their efforts, a neighbor recently cut down one of their rosewood trees. AVIVE took the case to the land register in Manaus, where the judge ordered technicians to survey and gather information from the land to help him decide the case. AVIVE is hopeful that the survey will make it easier for them to receive a formal title to the land. They have not made and do not plan to make any investment in the land until they have a formal title.

Even with a formal title, though, AVIVE may not invest sufficiently in the land due to the remaining challenge they face: market access. The municipality of Silves only has a population of 8211<sup>5</sup>, which by itself would be too small of a market for AVIVE to employ many women and benefit from economies of scale.<sup>6</sup> So, they also sell their products in São Paulo, the largest city in South America. However, AVIVE is not reaching crucial international markets because their size and location limit the amount of marketing they can undertake and red tape they must process to trade across borders. Imagine how their fortunes might change if a large number of socially and environmentally conscious U.S. bed and breakfast owners bought their fine aromatic products in bulk.

I left Silves Island with a sense of hope. Certainly, economic, geographic, and institutional factors have hindered the sustainable development of the Brazilian Amazon, and many challenges remain. Yet, many people in the Amazon understand that their fates are tied to the fate of the Amazon itself and that they must work together to overcome the economic, geographic, and institutional constraints they face in order for their children to have better lives. *Boa sorte*, Silves.

#### Discussion Questions:

1. Beyond what you read in this case study, what do you know about the Amazon?
2. Who might benefit from the preservation of the Amazon and why might they benefit?

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<sup>3</sup> The Brazilian rosewood became famous in 1921 as an ingredient in Chanel No. 5 and continues to be harvested (often illegally and unsustainably) for fragrances, flooring, furniture, and musical instruments.

<sup>4</sup> As expensive and time-consuming as land titling has been for the women's association, one member notes that an individual would not have had the resources to do this on her own.

<sup>5</sup> City-level population data can be found at the Brazilian government website [www.ibge.gov.br](http://www.ibge.gov.br).

<sup>6</sup> The market in Silves may be a little larger than the population size initially implies. Locals not only buy AVIVE's products for hygiene purposes, but also for medicinal purposes, despite government regulations that prevent AVIVE from marketing its products for those purposes.

3. What is sustainable development?
4. What economic, geographic, environmental, and institutional factors have helped or hindered the sustainable development of Silves?
5. Would tourism help or hinder the sustainable development of Silves?
6. What role did the community groups play in the social, economic, and environmental progress made by Silves? Who else had a role, and what role did these “outsiders” play? What should be the role of community groups and “outsiders” in the process?
7. Given what you have read, how should the community of Silves Island proceed from here?
8. Precious Woods, an international firm devoted to the “sustainable management and use of tropical forests”, has provided AVIVE with 60,000 acres of forest for 20 years. To access this forest from Silves Island, one would need to travel by motorized boat for one hour and then over land for an additional distance. In what way(s) does the additional acreage solve some of the problems AVIVE faces? In what way(s) does it complicate some of the problems AVIVE faces?