Brazilian Villages Go Online With Solar Power

SURUACÁ, Brazil—Suruacá, an isolated community on the Tapajós River, has just built a telecenter with solar-powered computers that have put its 400 residents in contact with the outside world through satellites and the internet.

In a USAID-funded telecenter, Mr. Neres and other residents of a remote Amazon village gets their first look at a computer, one that runs on solar power and has a satellite internet connection.

Alexandre Mancuso, USAID/Brazil

It is a big step for a community that is a six-hour boat ride from the closest city, Santarém.

Suruacá has a diesel generator that runs only on weekends, providing two hours of electricity on Saturdays and Sundays.

Building the telecenter took four months. The community association designed the structure, contributed labor, and used wood from the Amazon forest to build it. In return, the association owns the telecenter and is responsible for its upkeep.

USAID contributed a photovoltaic system that can provide eight hours of solar power daily for four computers, and four hours for power for the operation of a radio station.

The Agency also outfitted the telecenter with printers, scanners, and digital cameras. The Brazilian government provided a satellite internet connection.

The telecenter aims at educating the community, linking it to the rest of Brazil and the world, and getting the village some business.

"Brazil has hundreds of communities like Suruacá, which pretty much live like we lived hundreds of years ago," said Eduardo Freitas, energy program development specialist for USAID/Brazil.

"People here have all sorts of problems, such as lack of information about AIDS prevention."

Villagers will be able to gain access to world markets directly with products such as women's wallets and purses of "ecoleather," made by environmentally friendly, small businesses that USAID helped develop locally.

USAID/Brazil is a small mission. Its energy program includes activities aimed at reducing greenhouse gases through use of renewable resources—such as biomass fuels, solar and wind power, and small-scale hydropower plants.

A secondary goal is to reduce poverty and improve the quality of life of Brazilians lacking access to electricity.

"Most of our work is based on technical assistance at the policy level, and implementing demonstration projects—like the telecenter—which we hope will be replicated by the government," said Freitas.

He also said the centers will be used to distribute information from other mission programs, such as HIV/AIDS prevention and forest management initiatives.

Over three years, USAID gave $200,000 to U.S. and Brazilian NGOs to develop telecenters in eight communities. These were chosen on the basis of need, commitment, and the presence of representative local associations.

The Agency leveraged $400,000 from other groups, including the Brazilian government. ★

www.usaid.gov *Keyword:* **Brazil**

Digital Telecenter - Suruacá

December 2003

US$ 193,000 Invested	Partners: Sandia, Greenstar , Acumen Int. and PSA
US$ 300,000 Leveraged	400 people direct benefited

Background

Summary

USAID/Brazil Energy Program has worked with U.S. - based and local NGOs and equipment suppliers to demonstrate that energy produced by renewable sources represents a viable means to extend power to remote communities, while increasing economic opportunities and the quality of life for their residents.

The Greenstar Community Center Project aims to install two solar-powered internet-enabled telecenters in the Amazon as tools to support a range of health, educational and cultural programs. In the longer term, the goal is to work with local communities to stimulate the development of sustainable entrepreneurial activities. With support from USAID/Washington's Bureau for Economic Growth, Agriculture & Trade (EGAT), Sandia Labs and Acumen International, Greenstar Corporation, and Projeto Saúde e Alegria (PSA), a local NGO, USAID identified two isolated communities in the banks of Tapajós River, Brazil's north region, to install the telecenters. The first of the communities identified, Suruacá, had its Telecenter inaugurated in December 14, 2003.

While Brazil is already the world's 14th largest energy consumer, the lack of access to reliable energy remains a significant barrier to sustainable socio-economic development. This is especially true for those in the lower income strata, for whom access to power is often sporadic or altogether lacking. These people are largely concentrated in the north and northeastern parts of the country.

There is little agreement over the number of Brazilians without access to energy services. According to the Government of Brazil, this number is estimated at 12 million people.
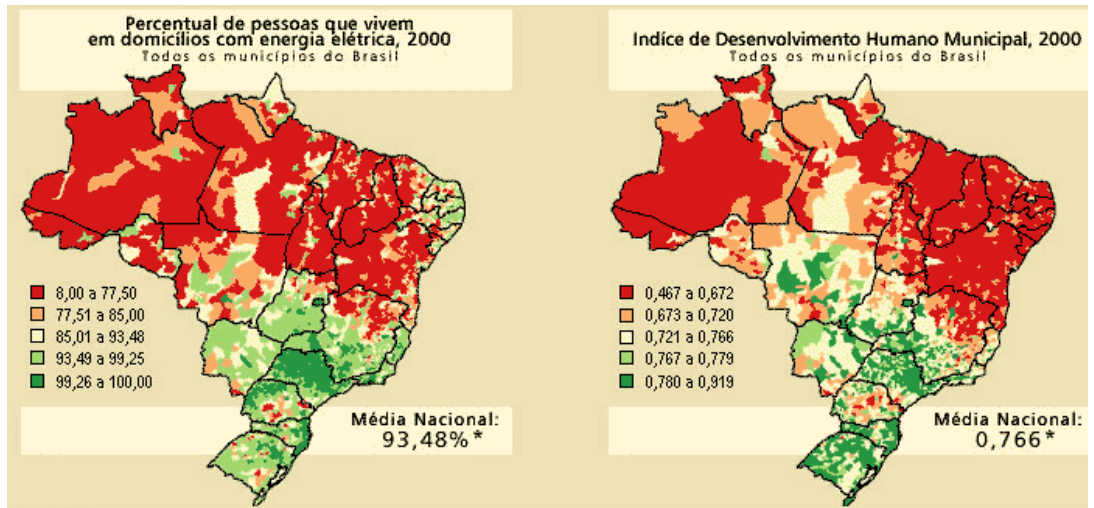
Source: Atlas Desenvolvimento Humano, 2000

Access to power is often sporadic or altogether lacking for the population in the lower income strata

The map of energy services in Brazil indicates huge disparities: states such as Rio de Janeiro and São Paulo, both in the southeast region, have over 99.5% of their population served, while states such as Piauí in the northeast and Pará in the north have less than 75% of their population with access to electrical power. Disparities between rural and urban areas are similar: over 80% of Brazil's unconnected population is located in rural areas.

Since October 2002, USAID/Brazil, with support from USAID/Washington's Bureau for Economic Growth, Agriculture & Trade (EGAT), has financed an energy program that focuses its resources to more effectively reach those millions of Brazilians unconnected to the grid. USAID/Brazil's energy program seeks to stimulate economic growth, reduce poverty and address climate change effects and other adverse environmental impacts in Brazil through increased delivery of environmentally sustainable energy services, capacity building, and technology cooperation. USAID/Brazil supports activities that are multidisciplinary and that use renewable energy and energy efficiency projects as a means for promoting social and economic development while also addressing climate change.

Approach

Suruacá, founded in 1890, is an isolated community located on the west bank of the Tapajós River (6-hour boat trip from Santarém – Pará State). Local population is about 100 families (approx. 400 people, directed by an active and well structured community

Sunrise at the Tapajós River

council). Main economic activities include manioc meal production, fishing, farming and basketry. Despite offering a number of opportunities for entrepreneurial development, the community has very little experience with fair trade.

Through Projeto Saúde e Alegria (PSA) a local NGO, USAID presented the project idea to the community council, who bought into it. While the equipment was provided by USAID, to induce local ownership of the telecenter, the community was given responsibility for designing and building the telecenter building. Over 50 community members participated in planning and construction of the telecenter, which took four months of hard work to get ready.

Suruacá Telecenter Building

The hardware provided by USAID includes a 2.0 kW photovoltaic system, with the capacity to provide energy for four computers to operate 8 hours per day, and a local radio broadcast station to operate 4 hours per day. In addition, the telecenter was also equipped with printers, scanners, digital cameras, and satellite internet connection (provided by the Government of Brazil's Ministry of Communications). Located next to the local community school, it will also be used to improve educational curricula and benefit over 200 children.

Inside the Telecenter

Inauguration of the Suruacá telecenter took place on December 14, 2003. The ceremony was attended by local community leaders, local government representatives, USAID/Brazil energy team members, and also by the head of the GOB Program for Energy Development in States and Municipalities (PRODEEM), who was impressed with the project and the engagement of the community of Suruacá.

Next steps include: (I) the implementation, by march 2004, of another telecenter in the community of Maguary, on the east bank of the Tapajós river. This will also benefit two other communities, Jamaraquá and São Domingos, and (ii) based on the worldwide communication capability provided by the telecenters, implement an entrepreneurship capacity building program for the communities in the Tapajós region.

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