

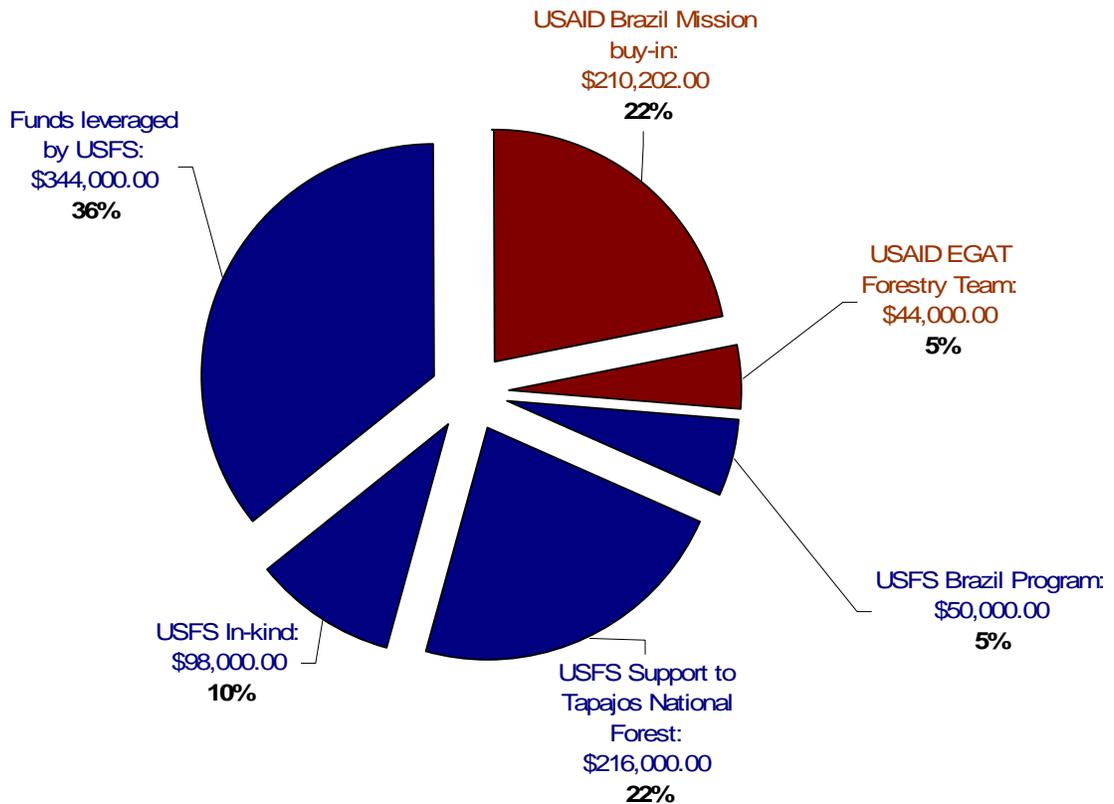
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For over a decade, the US Forest Service (USFS) has worked in partnership with the U.S. Agency for International Development (USAID) in Brazil. Together, they have addressed many crucial issues concerning the country's vast natural resources including fire and environmental change, and the promotion of sustainable forestry practices. Forest Service involvement has ranged from targeted technical assistance with Non-Governmental Organizations (NGO), to developing proposals and implementing joint activities with the Brazilian government and private institutions. By promoting sustainable forestry management, the partnership also supports forest conservation. Improved forestry policies and practices—forest planning and silviculture, reduced-impact harvesting, and criteria and indicators of sustainability—have all proven to be important conservation tools in Brazil.



**In 2005, 20 USFS technical experts traveled to Brazil to provide technical assistance to the Brazilian Government, NGOs, institutes and communities.**

### USAID -US Forest Service Partnership Funding Fiscal Year 2005



**Total USAID – US Forest Service Funding: \$962,202 USD**

## THE USAID ~ US FOREST SERVICE PARTNERSHIP

### **SUPPORTING AMAZONIAN FOREST COMMUNITIES:**

In Brazil, rural communities are increasingly managing and using their natural resources, including producing and marketing timber and non-timber forest products, to improve social and economic conditions. The Forest Service (USFS) is collaborating with USAID and local Brazilian NGOs to develop an understanding of the economic factors surrounding these issues for communities in the Amazon Basin, thereby increasing the potential to generate income and improve employment opportunities.

#### **Key Results**

- A USFS forest economist traveled to Brazil to meet with collaborators and provide support for a consortium of USAID supported NGOs (ALFA Consortia) by building capacity in economic analysis of tropical forest management by traditional and colonist communities in the Brazilian Amazon.
- USFS assisted in the establishment of natural resource economics courses for Brazilian students, professors and natural resource managers near the Tapajos National Forest. The courses will be held in the summer of 2006.

### **IMPROVING SUSTAINABLE FOREST MANAGEMENT:**

The Forest Service continues to work with the Government of Brazil and USAID consortia partners in improving natural forest management practices. The partners include the Brazilian Ministry of the Environment's National Forest Program, the Brazilian Natural Resources Institute (IBAMA), and the Instituto Floresta Tropical (IFT).

The Forest Service supports the entire forest management process in Brazil—from pre-harvest to post-harvest of both timber and non-timber forest products. The Forest Service is collaborating with IFT and the Brazilian Government to strengthen ongoing forest management training at a center for Amazon Basin Countries. At the Center, applied research and training courses address each aspect of the process, targeting participants from local forest communities, as well as forestry technicians, government officials and mill owners. Training is focused on improving sustainable forest management through reduced-impact logging techniques.

#### **Key Results**

- In fiscal year 2005, IFT trained 120 female and 234 male individuals in sustainable forest management practices. The individuals trained included Brazilian forest-based community members, government officials, timber industry personnel and University students.
- In 2005, 524,000 hectares of forested lands were under improved forest management.
- Two USFS engineers traveled to Brazil to establish best management practices for rural road construction and rehabilitation in the eastern Brazilian Amazon.
- The Brazilian Government's National Center for Forest Management (CENAFLO) collaborated with the USFS and IFT to develop training for trainers in sustainable forest management.

## **THE TAPAJOS NATIONAL FOREST AND FOREST POLICY:**

The Forest Service is supporting applied research and assistance to the Brazilian Government and NGOs to analyze potential future environmental and socioeconomic impacts of current and alternative land use trends. Through our long cooperation with IBAMA, the Forest Service has supported development of effective forest policies in Brazil. The Forest Service, the National Forest Program of Brazil's Ministry of the Environment and IBAMA have worked together to develop forestry technical assistance activities focused on policy development, forest management, and capacity building.

In addition, the Forest Service is supporting long-term measurements of Amazon ecosystem functions in the Tapajos National Forest. These forest measurements provide critical information on the forest's response to disturbance and drought brought about by human intervention. Findings have a direct impact on Brazilian policy in regards to harvest cycles, forest management plans and overall management of tropical forests.

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| <b>Key Results</b> | <ul style="list-style-type: none"><li>➤ The Forest Service and USAID sponsored an International Union of Forest Research Organization (IUFRO) workshop to define principles and practical recommendations for developing best management practices in tropical humid forests.</li><li>➤ A recent study, "Selective Logging in the Brazilian Amazon," was published in the October 21<sup>st</sup> issue of <i>Science</i> magazine. Forest Service and university researchers involved in the study developed a new remote-sensing methodology, which allows for scientists to identify areas which have been selectively logged. The results show that more areas of the Brazilian Amazon have been disturbed than previously thought.</li><li>➤ The Forest Service is providing critical funding to maintain data gathering antennae to continue the important monitoring of atmospheric carbon exchange of the Tapajos National Forest.</li></ul> |
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## **FIRE ECOLOGY AND MANAGEMENT:**

The USFS is working with several partners in Brazil on the Fire and Environmental Change in Tropical Ecosystems program. Specifically, USFS and Brazilian fire ecologists have developed a component of this large-scale research, entitled *The Stereo Photo Series for Quantifying Cerrado Fuels in Central Brazil*. A tool for assessing biomass loading and flammability in the Cerrado, the Photo Series can also be used as a quick and economical way to evaluate different fuel and vegetation conditions. In 2005, two 3-day train-the-trainer workshops were held in Brazil for land managers to develop the field use of the Cerrado photo series. The workshops demonstrated how to use the photo series in several field sites. The course also focused on fire behavior and the effect of fire on vegetation.

|                    |  |
|--------------------|--|
| <b>Key Results</b> | <ul style="list-style-type: none"><li>➤ In this fiscal year, 60 people were trained in two 3-day workshops. The trainees included Brazilian land managers, fire-fighters and ecologists from IBAMA, Brazilian Universities, and NGOs.</li><li>➤ The Cerrado Photo Series has been distributed worldwide.</li></ul> |
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## **OTHER US FOREST SERVICE ACTIVITIES:**



- ❖ The **USFS Pacific Northwest Research Station** has developed a long term relationship with the Brazilian Government, universities and other research organizations to develop fire flammability models. The models determine thresholds for sustained fire spread in primary forest, selectively logged forests, and cleared areas. The goal is to build towards a unified decision support and communication system that will allow people across the globe to have a consistent approach to fire management, ecosystem restoration, and global change.
- ❖ The **USFS Pacific Southwest Research Station's** expertise in deploying remote sensing technology has helped IBAMA create a Hot Spot monitoring system and a world-class remote sensing laboratory to address the PROARCO demands. Daily reports are released with the number and location of fire occurrences, classified as green, yellow, or red alerts depending on the risks.

### **Highlights from USFS and Brazil's Cooperation on Fire**

- Over 100 firefighters trained
- 20 Master's and PhD theses completed
- More than 50 papers published in international journals
- Important policy changes impacted by this project during the last 13 years of collaboration

- ❖ The **USFS Pacific Southwest Research Station** also collaborates with Brazilian universities and research institutes to develop effective bio-controls of invasive weed populations.
- ❖ The **USFS Rocky Mountain Research Station** is working to provide science and technical leadership support to Brazilian institutions and private companies in developing several projects to describe and test factors that determine the growth and productivity of *Eucalyptus* plantations.
- ❖ The **USFS cooperates with the Brazilian Ministry of the Environment** to address a variety of training needs ranging from administration of public forests to specific management requirements.
- ❖ The **USFS supports Ducks Unlimited** and a variety of other NGO and government partners from Brazil, Bolivia and Paraguay are in the final stages of a conservation assessment in the Pantanal ecosystem, one of the world's largest wetlands, which is shared by the three countries. By analyzing satellite images and gathering data on the ground, researchers stratified the information and generated a shared database, which public and private sector institutions can now use to detect ecological changes and complete impact assessments for use in conservation planning.

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## LIST OF PARTNERS

- ⊞ Natural Resource Agency (IBAMA)
- ⊞ National Center For Forest Management (CENAFLOR)
- ⊞ Ministry of the Environment – National Forest Program (MMA)
- ⊞ Brazilian Space Agency (INPE)
- ⊞ Agriculture Research Agency (EMBRAPA)
- ⊞ The University of Brasilia (UnB)
- ⊞ Amazon Institute of People and the Environment (IMAZON)
- ⊞ Tropical Forest Institute (IFT)
- ⊞ International Institute for the Education of Brazil (IEB)
- ⊞ The Nature Conservancy's Amazon Program (TNC)
- ⊞ Environmental Research Institute for the Amazon (IPAM)



## FINANCIAL OVERVIEW

In Fiscal Year 2005, \$270,084 in USAID funding was available to support activities in Brazil; the funding has been used to leverage a total of \$708,000 in Forest Service funding and in-kind support.

| ACCOUNT                         | CARRY-OVER      | FY05 FUNDS RECEIVED | TOTAL AVAILABLE  | TOTAL EXPENDED as of 9/30/05 | REMAINING FUNDS |
|---------------------------------|-----------------|---------------------|------------------|------------------------------|-----------------|
| <b>USAID</b>                    |                 |                     |                  |                              |                 |
| Brazil Mission – buy-in         | \$26,084        | \$200,000           | \$226,084        | \$210,202                    | \$15,882        |
| EGAT Forestry Team              |                 | \$44,000            | \$44,000         | \$44,000                     | \$0.00          |
| <b>Total USAID</b>              | <b>\$26,084</b> | <b>\$244,000</b>    | <b>\$270,084</b> | <b>\$254,202</b>             | <b>\$15,882</b> |
| <b>USFS</b>                     |                 |                     |                  |                              |                 |
| USFS Brazil Program             |                 |                     | \$50,000         | \$50,000                     | \$0.00          |
| Tapajos National Forest Program |                 |                     | \$216,000        | \$216,000                    | \$0.00          |
| USFS In-kind                    |                 |                     | \$98,000         | \$98,000                     | \$0.00          |
| USFS Leveraged                  |                 |                     | \$344,000        | \$344,000                    | \$0.00          |
| <b>Total USFS</b>               |                 |                     | <b>\$708,000</b> | <b>\$708,000</b>             | <b>\$0.00</b>   |
| <b>GRAND TOTAL</b>              | <b>\$26,084</b> | <b>\$244,000</b>    | <b>\$978,084</b> | <b>\$962,202</b>             | <b>\$15,882</b> |

### USAID FUNDS:

- ❖ In fiscal year 2005 the USFS received \$200,000 from the USAID Brazil Mission to support the existing environment strategy and further developing the collaboration with the Brazilian Government on sustainable forest management and administration. In addition, a total of \$26,084 was brought forward from FY2004. At the end of the 2005 fiscal year, \$210,202 had been expended with \$15,882 remaining.
- ❖ The USAID Brazil Mission provided \$100,000 for the Instituto Floresta Tropical and forest management training in the Amazon. At the end of 2005, all of \$100,000 had been expended.
- ❖ A total of \$44,000 in USAID/EGAT funds went to support forest management training and indicators as well as salary.