



## GLOBAL CLIMATE CHANGE

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*USAID has an extensive environmental program in Brazil that encompasses many imperative and current issues. Support to the Government of Brazil, as well as other interested parties, has helped Brazil address climate change through various energy and land use activities. In addition to capacity-building measures in Brazil, USAID has facilitated beneficial partnerships that help in achieving the goal of sustainable development in this extremely biodiverse country.*

**Background.** Brazil, located in east-central South America, occupies nearly 50% of the South American continent. With an area of 8,511,965 square kilometers (3,290,000 square miles), this Portuguese-speaking country is slightly smaller than the United States and ranks fifth in the world in national population with 177 million inhabitants.<sup>1</sup> Brazil has traditionally been a leader in the inter-American community and played an important role in collective security efforts and economic cooperation in the Western Hemisphere. As Brazil's domestic economy has grown to the 12th largest in the world, the country has become increasingly involved in international economic and trade policy discussions. Brazil's economy is highly diversified and has one of the most advanced industrial sectors and sophisticated services industries in Latin America. Brazilian agriculture is also well diversified, and the country is largely self-sufficient in food. Agriculture accounts for 9% of the country's gross domestic product (GDP) and employs about 20% of the labor force. Agribusiness as a whole accounts for about one-third of Brazil's GDP. Over half of Brazil is covered with forests, which include the Amazon Rain Forest – the largest in the world.<sup>2</sup> The country has eight river systems that carry approximately 20% of the world's fresh water<sup>3</sup> and is home to the continent's largest wetland in the Pantanal region.

The USAID Mission in Brazil supports Brazilian efforts to work toward sustainable development. Shared democratic values and a common open market/private sector economic policy framework have provided the foundation for an increasingly close partnership between the United States and Brazil, the leading economic and political power in Latin America. Common interests in stabilization, modernization, and increasing collaboration on transnational issues such as the environment, counter-narcotics, antiterrorism, and human rights have strengthened cooperation between the two countries. Working in close cooperation with other bilateral and multilateral donors to maximize the use of technical and financial resources, USAID/Brazil seeks to strengthen civil society as one mechanism to find innovative and cost-effective solutions to development problems.

1 U.S. Department of State, "Background Note: Brazil," <http://www.state.gov/r/pa/ei/bgn/1972.htm>

2 USAID, "Congressional Budget Justification: Brazil," [http://www.usaid.gov/policy/budget/cbj2004/latin\\_america\\_caribbean/brazil.pdf](http://www.usaid.gov/policy/budget/cbj2004/latin_america_caribbean/brazil.pdf)

3 Brazilian Embassy, "Brazil at a Glance," <http://www.brasilemb.org/profile1.shtml>

**USAID's partners in climate change activities in Brazil include\*:**

- Amazonas State Environmental Agency (IPAAM)
- Institute of Environment Research for Amazônia (IPAM)
- Amazon Institute for Man and the Environment (IMAZON)
- American Wind Energy Association (AWEA)
- Bank of the Amazon (BASA)
- Brazilian Environment Agency (IBAMA)
- Brazilian Forest Stewardship Council (FSC)
- Brazilian Institute for International Education (IIEB)
- Brazilian Institute for Training in Sustainable Business (IBENS)
- Brazilian Ministry of Agrarian Development (MDA)
- Brazilian Ministry of the Environment (MMA)
- Brazilian Network of Civil Organizations for Renewable Energy (RENOVE)
- Cikel Brasil Verde S.A.
- Conservation International (CI)
- Dutch Embassy
- E&Co.
- Ford Foundation
- Global Energy Concepts (GEC)
- Group for Research and Extension in Agroforestry Systems of Acre (PESACRE)
- Instituto Eco Engenho (IEE)
- Instituto Floresta Tropical (IFT)
- National Indian Foundation (FUNAI)

USAID's priorities in Brazil concentrate on environment and health, encompassing the protection of globally important issues of biodiversity and climate change and supporting major challenges in the areas of HIV/AIDS prevention, tuberculosis, malaria, services to at-risk youth, and child labor prevention and eradication. In addition, USAID seeks to strengthen the U.S.-Brazil relationship by facilitating and funding the implementation of regional programs and the establishment of partnerships in areas such as education, hemispheric free trade, and control of the spread of infectious diseases. In Brazil, USAID works primarily through U.S. and Brazilian nongovernmental organizations (NGOs) – such as the Brazilian Network of Civil Organizations for Renewable Energy and the Brazilian Forest Stewardship Council – in close collaboration with various government organizations and national programs. Ongoing cooperation and leveraging of funding and activities with a range of nongovernmental agencies, industry, multilateral banks, universities, and government agencies have contributed to a dynamic and successful program in Brazil.

**Sector-Specific Climate Change Activities.** USAID/Brazil's environment and energy programs address two important environmental priorities – addressing global climate change and conserving biological diversity. USAID activities promote sound land use in the Amazon, the Atlantic Coastal Rain Forest, the Cerrado and, more recently, the Pantanal. Due to serious risk of accidental fires in these ecosystems, USAID has directed special attention to fire-preparedness and prevention. As a result of USAID's contributions to the G-7 Pilot Program to Conserve the Brazilian Rain Forest, fire-preparedness efforts supported a successful awareness raising campaign with local small agriculturists. USAID efforts in this area are also increasingly focused on local community-based alternatives to the use of fire in traditional agriculture. On the energy side, USAID programs seek to support Brazil's ability to detect and mitigate energy sector climate change impacts by reinforcing renewable, clean, and efficient energy use throughout all aspects of the Brazilian energy sector, focusing on policy, regulation, and financing mechanisms critical to ensuring environmentally sustainable energy use.

*Addressing Climate Change Through Land Use and Protected Area Management.* USAID/Brazil actions are designed to increase protection and assure sustainable use of the natural resources base in key Brazilian ecosystems, including the Amazon, Atlantic forest, and Cerrado/Pantanal regions. This is achieved through:

- Protected area management
- Reduced-impact forest management
- Agro-forestry systems for restoration of productivity to degraded lands
- Fire-preparedness

**USAID's partners in climate change activities in Brazil include\*:** (Contd.)

- The Nature Conservancy (TNC)
- PA Consulting, Smithsonian Institution
- National Institute for Amazon Research (INPA)
- SOS Amazônia
- U.S. Department of Energy's Lawrence Berkeley National Laboratory (LBNL)
- U.S. Forest Service
- Woods Hole Research Center (WHRC)
- Winrock International
- World Bank/Global Environment Facility (GEF)
- World Wildlife Fund (WWF)

\* Because partners change as new activities arise, this list of partners is not comprehensive.

- Training and technical assistance
- A pilot program to conserve the Brazilian rain forests

In collaboration with the Woods Hole Research Center (WHRC), the Institute of Environmental Research for Amazônia (IPAM), the Amazon Institute for Man and the Environment, Instituto Floresta Tropical, the Brazilian Ministry of the Environment, and other agencies, USAID is carrying out numerous forest management activities that have the goal of conservation and preservation. These activities include:

- Forestry-related policy formation, such as standardization and simplification of forestry management requirements, as well as stricter requirements for deforestation permits
- Technical cooperation for the certification of wood species, reviews of forest surveys, and the design of a program to deal with non-timber forest products
- Studies to identify priority areas for the creation of national and state production forests
- Support for the establishment of a permanent forest management training center for the whole Amazon region, which is expected to become the centerpiece of a Global Development Alliance in Brazil aimed at channeling market forces to link buyers and producers of certified sustainably managed tropical wood products

Furthermore, due to USAID's support for the development of detection and monitoring technology in Brazil, routine federal- and state-level enforcement of forest fire regulations are being institutionalized. USAID continues to sustain the largest rural fire mobilization activity in Brazil through the G-7 Pilot Program to Protect the Brazilian Rain Forest, equipping tens of thousands of small farmers and forest dwellers throughout the Amazon to combat accidental fire with simple tools and agricultural practices that diminish the use of fire in land preparation. According to a study completed by IPAM/WHRC, the largest economic losses attributed to fire in the Amazon are those related to the economic value of CO<sub>2</sub> emissions.

*Addressing Climate Change Through Energy Sector Activities.* USAID plays a major role in the creation of Energy Service Companies (ESCOs) in Brazil through capacity-building activities and adaptation and dissemination of effective performance contracts. In one year alone, the USAID-supported Brazilian ESCO Association designed and negotiated over 50 Brazilian energy efficiency projects valued at \$7.24 million. Through the "Watergy"<sup>4</sup> program, USAID has achieved outstanding results in energy and water

4 "Watergy" is a term used to describe the linkage that exists between water and energy in the context of municipal water utilities. This linkage of water and energy exists given the part that energy plays in transporting water to the end user as well as its role in potable water disinfection and wastewater treatment. When water is wasted in a municipal water system, energy is almost always squandered as well. (Alliance to Save Energy, "Watergy," <http://www.watergy.org/activities/activities.html>)

efficiency. USAID/Brazil's energy program contributions in the policy arena resulted in new legislation restructuring the energy sector (Law 10438). Through the PROINFA program, it guarantees the purchase of electricity produced from renewable energy sources (wind, small hydropower, and biomass).

USAID supports a series of additional energy programs in Brazil which include:

- The Brazil Rural Energy Enterprise Development program, which helps rural entrepreneurs finance renewable energy projects that result in reduced carbon emissions
- The Brazil Clean and Efficient Energy Program, whereby clean energy policy is promoted, renewable energy is advocated, ESCOs are strengthened, and financing issues are discussed
- The Brazil Energy Training and Outreach Program, which is instrumental in delivering outreach activities on clean energy policy and regulation, energy efficiency concepts, project finance, etc.
- The Energy Technology Innovation Program, an initiative that provides technical assistance to promote improved electrical energy use in Brazil
- A special energy adviser provided to the Brazilian Ministry of Mines and Energy (MME), who helped design a management and financial structure for MME's Program for Energy Development

*Capacity Building.* Capacity building is an essential component to effective and sustainable resource management and climate change mitigation. USAID is supporting a wide range of capacity-building activities that help Brazil meet the goals of the United Nations Framework Convention on Climate Change. With its many partners, USAID supports training opportunities and implements a variety of capacity-building activities that raise awareness of the effects of climate change and mitigation options.

Examples of such activities include:

- Support to NGOs that comprise the Climate Observatory that tracks climate change mitigation projects in Brazil
- Training conservation professionals and assisting them in obtaining advanced environmental degrees
- Publishing climate change newsletters and promoting public awareness
- Providing courses, conferences, and practical training on a huge spectrum of environmental issues, such as geographic information systems, climate change, and environmental impact assessment, among others
- Supporting training in ProForm, a spreadsheet-based software tool to assess the environmental and financial impacts of renewable energy and energy efficiency projects
- Performing in-country training events in areas such as community forest management and conservation strategies for management of public and private protected areas

- Hosting workshops about community forest management in the Amazon and the use of thermal infrared remote sensing to detect forest fires

All these capacity-building activities have helped reduce Brazil's vulnerability to the potential impacts of climate change. USAID-generated public awareness is responsible for averting harmful beachfront development and attracting sound investments in ecotourism. Capacity building is furthermore equipping local NGOs to meet new environmental challenges, such as dealing with formerly disputed land and the lack of biological data to prioritize conservation areas.

*Public-Private Partnerships.* Funding for the aforementioned activities in Brazil comes not only from USAID but a variety of sources, including private foundations, foreign governments, NGOs, and other interested groups. Such support has allowed for the continuation of long-term research grant programs, the creation of vegetation maps of environmentally protected areas, and the development of consultative committees. Protected area management activities have been supported by significant additional matching funds from foundation and Global Environment Facility grants to various NGOs.

Engaging private investors in forest conservation efforts is another central objective of USAID and its partners. The Bank of the Amazon has pledged to change lending criteria, granting community forestry projects greater access to loans. Furthermore, the annual FLORA forest products fair is attracting unprecedented numbers of investors from throughout Brazil.

For more information on USAID's climate change activities in Brazil, visit the USAID Web site at:

- <http://www.usaid.gov>