



PUERTO RICO

FOREST SERVICE RESEARCH AND DEVELOPMENT

STATE FUNDING HISTORY	Enacted FY 2003 (\$)	Enacted FY 2004 (\$)	Pres. Budg. FY 2005 (\$)
RIO PIEDRAS			
IITF-4151 International Institute of Tropical Forestry – Research	3,633,000	3,692,000	4,015,000
PUERTO RICO TOTAL	3,633,000	3,692,000	4,015,000

RESEARCH & DEVELOPMENT, a division of the USDA Forest Service (FS R&D), strives to be the “go to” organization for information and solutions to sustain forests and rangelands and the values they provide people. FS R&D has the flexibility to address today’s issues effectively and to respond to tomorrow’s needs. Among the world’s leaders in forest conservation research, scientists contribute to the stewardship of land, real property and society by providing research results that help create jobs and affordable homes, and improve the health of trees, forests and forest ecosystems. Innovative research products permit the Forest Service and other public and private land managers to monitor and manage forest responses to environmental change, contributing significantly to the sustainability of the nation’s forests and rangelands and improving human health.

FS R&D operates six research stations, the Forest Products Laboratory, and the International Institute of Tropical Forestry located in Puerto Rico. It employs over 500 scientists and hundreds of technical and support personnel at 67 field sites throughout the nation. The FY 2005 President’s

Budget includes \$280,654,000 for Forest and Rangeland Research.

The **International Institute of Tropical Forestry (IITF)** is located in Rio Piedras, Puerto Rico. The Institute has one Work Unit: IITF-4151. The mission of this unit is to generate and disseminate scientific information in support of the sustainable use of tropical forests. The IITF accomplishes its mission by developing and disseminating knowledge of scientifically sound practices that contribute to sustainable use of forest resources, the conservation of primary forests, the rehabilitation of degraded lands, and the management of wildlife and watersheds. This work is conducted through an extensive network of collaborators both at home and abroad.

RIO PIEDRAS

IITF-Tropical American Forest Management.

Puerto Rico and the Virgin Islands are strategic locations for U.S. research. Of the 547 native tree species found in these forests, 177 are found on other Caribbean Islands, and another 229 occur in Central or South America. These areas are also the

winter homes of North American migrant birds. They are influenced by several global atmospheric circulation systems, and provide a "window into the future" for many tropical areas since the land-use changes that have already occurred in Puerto Rico permit the study of what lies ahead in many other tropical areas and parts of the United States. For example, over 225 alien tree species occur in Puerto Rico and form "new forests" that reflect human effects on the landscape. Providing the scientific basis for sound decisions is critical to the management of these ecosystems and their functions for the benefit of humankind because of the rapid increase of degraded lands and secondary forests in the tropics. The principles discovered in tropical ecosystems provide useful patterns for similar situations in temperate and boreal forests in the U.S..

FY 2005 PROGRAM CHANGES:

- **Science-based Technology Transfer.** Forest Service Research and Development will lead an Agency-wide effort to optimize the delivery and practical use of research findings. This is essential to successful implementation of Forest Service priorities, including the President's Healthy Forest Initiative. Opportunities have been identified that leverage current science and technology applications efforts in healthy forests applied science, watershed management, invasive species, hazardous fuels utilization and management, and community preparedness. New funds in FY 2005 will be targeted to leading-edge technical assistance on a competitive basis.
- **Healthy Forests Initiative.** The President's Budget maintains the Institutes ongoing program of research focused on sustaining healthy forests. In response to the President's Healthy Forests Initiative, an additional \$297,000 is

focused on improving watershed conditions to provide clean and abundant water and addressing the threat invasive species pose to native ecosystems.

SIGNIFICANT RESEARCH PRODUCTS:

- A better understanding of the relationships critical to the carbon cycle and sequestration and improved capabilities to predict and manage the carbon cycle and mitigate global warming.
- Guidelines and methods supporting forest, watershed, and wildlife management in the tropics including carbon sequestration and the recovery of biological diversity for the purpose of sustaining forest use and economic development.
- Application of remote sensing and forest inventory to the understanding of land cover and land use change in tropical forests for the purpose of inventorying tropical forests and supporting land use planning.
- Understanding of biogeochemical processes involved in tropical forest hydrology and disturbance ecology and their relationship to municipal water supplies for the purpose of optimizing the use of water supplies while conserving rivers.

SOME CLIENTS/COLLABORATORS:

Brazilian Institute of the Environment (IBAMA)
Citizens for the Karst
Instituto Venezolano de Investigaciones Cientificas
Island Research Foundation
National Aeronautics and Space Administration.
National Science Foundation
Puerto Rico Department of Natural and Environmental Resources
Scientific Committee for Problems of the Environment
The Nature Conservancy
University of Puerto Rico