Forest Inventory and Analysis Foundation
Forest Service
Research and Development Mission Area

VISION

Where are all the trees in the United States? Are they healthy? Will they help with the changing climate? The Forest Service operates the Nation's forest census—the Forest Inventory and Analysis (FIA) program. FIA is the original source for basic information on the health and productivity of America's forests and landscapes. FIA reports on current conditions and recent trends in the area of public and private forest land in the United States, providing information on past, current, and projected tree numbers by species; the size and health of trees; tree growth, mortality, and removals by harvest; losses of forests due to disturbances, such as hurricanes and wildland fires; wood production and utilization by various firms and their products; and forest landownership. It is the only forest survey in the country that crosses all boundaries: Federal, State and private lands. It also assesses the impact on forests of interactions between humans and their environment, such as the impact on forests from urbanization.

The FIA program supplies the Nation's land managers and private forest landowners with the data needed to make sound investment decisions in forest management activities. FIA data enables the natural resource community to understand the magnitude of changes in forest conditions and trends and to make projections of future conditions—information vital to the long-term health of forests and the multiple uses made of them.

Recently, the FIA program helped identify the amount and distribution of woody biomass, enabling estimates of availability for bioenergy development. The program also provides information on where and how forests will, are, and have adapted to climate change, which is crucial to making the correct adaptation and mitigation decisions to assure the long-term health and productivity of America's forests and the communities that depend on them.

CAPABILITIES

The FIA program has a proven track record of delivering significant information that has provided a report card on American's forests. Specifically, the FIA program:

- Is a global leader in forest inventory and monitoring, detecting and reporting changes in forest vegetation and forested ecosystems.
- Partners with state agencies and others to conduct the inventories, report fresh data each year, and summarize results on a state-wide basis at five-year intervals.
- Utilizes standard protocols and a strong quality assurance/quality control program to ensure the comparability of forest statistics and information throughout the U.S. and with key international reporting requirements.
- Engages in a balanced portfolio of research with university, industry and other partners to find new and better ways of using the latest satellite and other technologies for assessing forest conditions, detecting changes, and understanding what they mean to agencies, communities, and people interested in forests.

DELIVERABLES

The FIA program is part of the foundation for launching the other growth platforms. Scientists are using FIA data to analyze alternative future scenarios to anticipate changes in ecosystems and design future management strategies that better conserve, protect, and use our natural resources. To better deliver the other platforms, Forest Service Research and Development will grow FIA in the following areas:

- *On line FIA information tools* - Deliver maps, tables, charts and graphs of forest resource information as well as raw data on vegetation and attributes to underpin analyses and scientific research for both internal and external clients., including measures of status, historical trends, and recent changes in forest area, volume, biomass/carbon, products, private ownership objectives, fuels, etc.

- *Models to better manage the Nation's forests and rangelands* - Deliver process and statistical models to (1) evaluate forest cover and land use changes, (2) quantify carbon and its cycling through forested ecosystems, (3) improve LANDFIRE models to better manage fire risk and behavior, (4) improve models of forest health risk, and (5) develop, test and incorporate the urban FIA data into online databases to improve models such as Urban Forest Effects (UFORE).
- *Develop and test range land monitoring techniques* - Deliver well-tested rangeland monitoring techniques and ways to compile, summarize, and report on rangeland health and productivity. Prepare to include rangeland information in the online FIA database to assist researchers, ranchers, and rangeland managers in developing strategies for improved rangeland management.

BENEFITS

An expanded FIA program will provide critical information on the following:

- Carbon life cycle and sequestration for quantifying and evaluating adaptation and mitigation management decisions related to changes in greenhouse gases (GHG) and air quality, including annual carbon reporting to Inaaternational Panel on Climate Change (IPCC).
- Wildland and rangeland conditions to assess the effects of natural processes and management alternatives on sustainability of the Nation's rangelands.
- Wood supplies to assess the availability of forest biomass for bioenergy production.
- Forest fuels for improved assessment of fire risk for strategic deployment of fire fighting resources.
- Urban vegetation health and status to provide for better urban planning and stewardship.