# FIA National Workshop

## Poster Session Abstracts

Las Vegas, NV

March 11 – 14, 2002

# Table of Contents

Table of Contents ..... 2
Phase 1 Inventory ..... 3
Synergistic Use of FIA Plot Data and Landsat 7ETM+ Images for Large Area Forest Mapping ..... 4
Crown Modeling Utilizing FIA Plat Data Facilitating Comparison With Landsat Thematic Mapper (TM) And Other Remotely Sensed Data ..... 5
Replication of the Iterative Guided Spectral Class Rejection (IGSCR) Methodology in Georgia ..... 6
Rapidly Classifying Satellite Imagery Using FIA Data and a Logistic Model ..... 7
Mapping Forest Fragmentation ..... 8
Estimating Volume on "Nonforest" Plots ..... 9
Mapping Tree Species Distribution Using Geostatistics ..... 10
Using FIA-generated maps in National Forest applications in Utah ..... 11
Comparison of Alternatives to Measuring Crown Diameters with Logger's Tapes ..... 12
Adjusting Phase 3 Indicators for Species Differences and Stand Conditions ..... 13
A New Method for Estimating Canopy Structure with FIA Data: Caviar Quality on a Burger and Fries Budget ..... 14
Perceived Declines in Maine's Hardwood Sawtimber Inventory – Is There a Problem? ..... 15
Using FIA Data to Assess Fire Hazard and Treatment Effectiveness in Montana ..... 17
The Vegetation Indicator ..... 18
Soil Erosion Potential on Forest Inventory & Analysis (FIA) / Forest Health Monitoring (FHM) Phase 3 Plots using the Watershed Erosion Prediction Program (WEPP) Model: Some Examples from Idaho ..... 19
A Risk Analysis Approach to Interpreting FIA Soil Indicator Data ..... 21
The Lichen Community Indicator in the Forest Inventory and Analysis and FHM Programs: Using Lichen Communities to Assess Forest Ecosystem Health ..... 22
Wetland Forests of the South Atlantic States ..... 23
The Siege of Weeds: Monitoring Exotic Invasive Plant Pests in Southern Forests ..... 24
Integrated Knowledge Database: A Bibliography of Ideas, Perspectives, and Research Opportunities Associated with FIA Survey Data ..... 26
Who Owns the Forests of the United States? A Summary of the National Woodland Owner Survey ..... 28
Puerto Rico's Forest Inventory and Monitoring Program: Adapting the USDA Forest Service's Forest Inventory and Analysis Program to a Caribbean Island ..... 29
Reporting on FIA's Forest-Land Indicators for the Northeastern US ..... 31
The Southern Forest Resource Assessment ..... 32
National FIA PDR Team: Shaping the Future of FIA Field Data Collection ..... 33
An Introduction to the Indicator Advisor Band ..... 34
Data Acquisition Band – Helping FIA Plot Work Succeed ..... 35
The Analysis Band: Sensing the Questions and Reporting the Answers ..... 36
The Statistics Band of the Forest Inventory and Analysis program ..... 37

# Integrated Knowledge Database: A Bibliography of Ideas, Perspectives, and Research Opportunities Associated with FIA Survey Data

Victor A. Rudis, Research Forester/Landscape Ecologist, USDA Forest Service, Southern Research Station, Forest Inventory and Analysis Unit, Starkville, MS

**Abstract**

A brief historical synthesis and a compendium of over 1,400 published reports that used data from regional, sample-based USDA Forest Service Forest Inventory and Analysis (FIA) field surveys has just been completed. The information constitutes an integrated knowledge base for forest resource assessments published between 1976 to July 2001. All citations are in a fully searchable citation database, i.e., Endnote 4.0 software (ISI ResearchSoft 2000). Selected citations are annotated or include authors' abstracts. Current plans are to make the citation database available on a website in the near future.

Studies that reported using FIA data were included if associated with hydrology, ownership, range, recreation, and wildlife habitat. Also included are citations of collected works concerning integrated assessments and multi-disciplinary surveys, representative citations associated with air pollution, economics, global climate change, remote sensing, sampling designs, tropical forest resources, and traditional timber resource assessments. Also noted are pioneering studies to analyze data from inventories of air pollution, biomass, dead wood, esthetics, geographic information science, operability, ownership, range and livestock use, recreation, satellite remote sensing, water, tropical inventories, vegetative habitat, and wildlife habitat. Example subject matter retrievals provide a list of citations.

The synthesis suggests a variety of approaches and techniques are in use to assemble comprehensive assessments. Studies have been "comprehensive" for issues in selected regions and chosen resources from a number of disciplinary perspectives. The tree-based resource inventory data has achieved multipurpose status. Multidiscipline involvement, multipurpose uses of nontraditional data, and analysis of resources other than timber are variable. Graduate research with documented use of FIA survey data comprise over 100 M.S. theses or Ph.D. dissertations with topics dominated by

economics, geographic information systems, and timber production, and more recent efforts spanning a wide array of subjects.

For further information, see the web site http://www.msstate.edu/dept/Forestry/biblio.html and forthcoming reports:

Rudis, Victor A. Fresh ideas, perspectives, and protocols associated with Forest Inventory and Analysis (FIA) surveys: graduate theses 1975 to July 2001. General Technical Report SRS. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. (51 p.)

Rudis, Victor A. Comprehensive regional resource assessments and multipurpose uses of Forest Inventory and Analysis (FIA) data, 1976-2001: a review. General Technical Report SRS. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. (121 p.).