

Southern Center for Urban Forestry Research & Information

USDA Forest Service

320 Green Street

Athens, GA 30602-2044

Web Site [HTTP://WWW.URBANFORESTRYSOUTH.USDA.GOV/](http://www.urbanforestrysouth.usda.gov/)



Memorandum

Date: Monday, September 20, 2004
To: Region 8 U&CF Coordinators
From: Dudley R. Hartel, Technology Transfer Specialist
USDA Forest Service
320 Green Street
Athens, GA 30602-2044
CC: Region 8 U&CF Program (Atlanta)
Subject: U&CF and the Forest Inventory Analysis (FIA)

Comments from both Neil and Brian are attached to this summary.

I also spoke with Nancy Stairs who attended an FIA briefing; her comments are also incorporated in the following discussion.

Observations and thoughts about the FIA:U&CF connection for Region 8 include (Neil, Brian, Nancy, Dudley):

1. Forest Inventory Analysis (FIA) information at <http://fia.fs.fed.us/>.
2. The objective of the FIA is to provide strategic information at the state and sub-region (multiple state) level:
 - a. Consistency of measurement & analysis is a primary goal;
 - b. FIA currently assesses species, size, and health of trees; in total tree growth, mortality, and removals by harvest; in wood production and utilization rates by various products; and in forest land ownership;
 - c. Although other data collection does include: soil, understory vegetation, tree crown conditions, coarse woody debris, and lichen community composition on a subsample of plots;
 - d. Ozone damage 'assessments' are also made but not necessarily on the FIA plot or subplots.
3. Sampling technique in urban (developed) areas may have to be considerably different than what is practiced in industrial forest settings (e.g. stratification by landuse-NS).
4. Because of consistent under-funding of FIA, funding would have to be provided from another source to cover U&CF sampling.
5. Current sampling intensity may not provide significant information for U&CF issues (i.e. canopy gains and losses, interface tracking).
 - a. 1 plot per hexagonal 6,000 acre area



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- b. sub-plots taken
6. There may be potential uses of Phase I information (remote sensing and classification for initial stratification).
7. However, aerial data is usually very old (11 years!).
8. There are no technical obstacles to incorporating a regional U&CF inventory into the FIA protocol (see considerations or steps that follow).

Important considerations to discuss among Region 8 U&CF coordinators (Neil, Brian, Nancy, Dudley):

1. SGSF involvement;
2. Within a state agency, who can best collect this data...
 - a. Same as other FIA
 - b. Specialized training needed
3. What are specific objectives for a regional inventory...
 - a. Landuse changes
 - b. Species diversity/health
 - c. Age distribution
 - d. Canopy
 - e. Others?
4. At what scale should this data be reliably available...
 - a. Region
 - b. Multistage
 - c. State
 - d. Region (multi county/parish)
 - e. Other
5. What specific data will need to be collected...
 - a. (follows from stated objectives)
6. How reliable does the data need to be;
7. What data collection protocols need to be developed...
 - a. UFORE protocols where appropriate
 - b. Research and testing new protocols
8. What frequency of sampling will be needed (optimal);
9. Need for U&CF Coordinators to 'test' these inventory (and analysis) ideas within their states (variety of "urban" settings);
10. Funding mechanism.



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REPORT
“FIA User Group Meeting”
July 29, 2004
Atlanta, GA

Neil Letson
Alabama Cooperative Extension System

I am in full support of Brian Waldrep's comments regarding the FIA Users (See below).

Here are a few more observations from me.

- There is an apparent willingness from the FS Southern Region (RO8) FIA Team to consider ways to include U&CF in the data collection protocol. I spoke with John Kelly after the meeting about this and he is very open to exploring this. When we get our act together, I suggest a representative group from the U&CF Coordinators, etc. meet with John Kelly and his team to investigate reasonable possibilities.
- There is already an initiative underway by the Northeastern Region (U&CF Coordinators and Robin Morgan - FS) to develop a U&CF component in FIA. A meeting is scheduled for September (?). Is anyone from the Southern Region going to attend? We certainly need to know what other regions are doing on this and coordinate.
- I think it would be worthwhile to see if the current FIA protocol is already collecting data that can be useful to the U&CF program. It seems the Phase 1 category may have potential.
- I want to reinforce Brian's observation that the greatest obstacle may be political. We need the backing and support of the SGSF if we are to be successful. At some point, let's involve the State Forester liaison.

Brian Waldrep
Alabama Cooperative Extension System

I learned a lot about FIA, actually what FIA really is, at the meeting in Atlanta yesterday. I believe that the FIA program has the potential to produce forest statistics that would be beneficial to the Urban and Community Forestry group. It is my understanding that the FIA program is dissected into 3 phases in its current form. Phase 1 uses aerial and satellite imagery to stratify the landscape based on use into a hexagonal grid and assign 1 random plot per hex (6,000 acres) panel. Phase 2 assigns a uniform coverage of field tally methodology across the region, with 20% of plots surveyed each year and a final analysis report for each state generated on 5 year intervals. Phase 3 incorporates Forest Health information into Phase 2 data, which currently requires some additional measurements to be taken on plot and subplot levels (grading, invasive species presence, crown data and other mensuration data). In addition, ozone damage is surveyed on randomly selected forest sites that permit the investigation of leaf area. The FIA program is currently tallying 88% of the regional forestland while operating at 84% (\$14.7 million) funding.

OPPORTUNITIES

- 1) Use of U&CF regional funding (\$\$\$) to encourage U&CF data collection (they should be interested since they are under funded).
- 2) Imagery is old (some cases 11 years). This is an opportunity, if we supply some urban imagery, to get in phase 1 of the program. This is where land use stratification occurs. It will be crucial for U&CF to get in at this level or we may fall prey to sampling biasness.
- 3) Urban plots would create a new level of opportunity to monitor forest health issues – ozone and possibly other pollutants, invasive species occurrence patterns, etc. Also, urban plots would allow analysis of other forest issues such as timber availability.
- 4) Software currently used by FIA is outdated and they are looking to enhance or upgrade. This would be a great time to adjust program to include plot parameters for urban plots.
- 5) The FIA program partners with mapping organizations to develop visual interpretations of their data. The possibilities and benefits of incorporating urban information in to this data would be limitless for urban planning and smartgrowth issues. Example: combining FIA data with Census data could generate a map that could delineate or define the WUI area around communities.

LIMITATIONS

- 1) The competency level and interest across the gradient of FIA participates is greatly unknown. Example: Would the State Foresters support this? Would field foresters, whom collect the data, willfully and wantonly collect information in an urban environment? Do they currently have the KSAs to collect this information? Overall resistance to change? Without the blessing of all participates, this would not be something worth our time and effort.
- 2) The U&CF regional group does not have, to my knowledge, statistical expertise on hand to interpret and analyze FIA raw data so to insure production of usable information. The benefit of the program would be critically handicapped until this would be addressed.
- 3) Policy limitations. Example: Access and permission to access urban properties, availability of privacy information to a new level of decision makers, etc. This would also make or break the production of usable information for urban clientele.
- 4) Make sure that any addition to the FIA (urban forestry or not) would produce usable information and provide services to all users of FIA. Example: Enhancing timber or product availability to market, benefits of trees, etc.