Biometrics Working Group Meeting

June 23, 2023

21C Museum Hotel Louisville

Meeting Room: Gallery 3

AGENDA

https://ncasi.zoom.us/j/4911783805?pwd=UnQ3OTRtNEZoa250TnU5Sy9KSFhKQT09

(All times Eastern)

Time	Description	Speaker
7:30	BREAKFAST (*Provided*)	
8:00	Welcome	Holly Munro, NCASI Dale Hogg, Green Diamond
8:05	Review of the agenda Antitrust statement Introductions	Holly Munro, NCASI
8:30	Forest Carbon Modeling Group	Chris Woodall, IMAR, USDA Forest Service
8:45	National Scale Volume and Biomass Implementation	Jeff Turner, FIA-SRS, USDA Forest Service
9:15	National FIA Program Update	Katie Renwick, IMAR, USDA Forest Service Linda Heath, IMAR, USDA Forest Service Renate Bush, IMAR, USDA Forest Service
9:45	BREAK	
10:00	USFS-NCASI Small Area Estimation Project	George Gaines, FIA-RMRS, USDA Forest Service
10:30	R&D Summit Overview	Darren Miller, NCASI
10:45	CAFS Update	Aaron Weiskittel, University of Maine
11:15	TBD	Edie Sonne Hall, Three Trees Consulting
11:30	Discussion: Blue Ribbon Panel on FIA	
12:00	ADJOURN *(Lunch provided)*	

Biometrics Working Group Meeting Notes

Date: June 23, 2023
Location: 21C Museum Hotel Louisville, Meeting Room: Gallery 3, Louisville, Kentucky
Organizer: NCASI Biometrics Working Group

The Biometrics Working Group meeting was held on June 23, 2023, in Louisville, Kentucky. The meeting included updates from the USDA Forest Service Forest Inventory and Analysis (FIA) program, presentations on forest carbon modeling, developments in forest inventory estimation methods, and broader discussions on research coordination across the forest sector. Participants represented industry, academia, and government organizations and discussed technical topics related to forest biometrics, carbon monitoring, and forest inventory systems.

Background on the Biometrics Working Group – Dale Hogg (Green Diamond)

Dale Hogg provided background on the purpose and history of the Biometrics Working Group (BWG). The group serves as a forum for technical discussions related to forest biometrics across industry, academia, and government organizations. While many topics relate to the USDA Forest Service Forest Inventory and Analysis (FIA) program, the BWG also discusses broader issues such as carbon monitoring and sustainable forestry. Past discussions have included topics such as the Timber Products Output (TPO) survey and differences in data collection methods across FIA regions. Hogg noted that the BWG has historically contributed to large-scale improvements and changes to forest inventory systems by providing a venue for technical collaboration across sectors.

Forest Carbon Modeling Group Update – Chris Woodall (USDA Forest Service)

Chris Woodall provided an overview and update on the Forest Carbon Modeling Group (FCMG), a collaborative effort between the U.S. Forest Service and NCASI designed to advance biometric research and modeling approaches that support forest carbon accounting and natural climate solutions. Woodall emphasized the increasing policy and regulatory attention to forest carbon, noting that legislation such as the Bipartisan Infrastructure Law and the Inflation Reduction Act has increased funding and institutional support for protecting and enhancing forest carbon sinks. The FCMG has worked to identify and prioritize research needs related to modeling forest vegetation responses to management and environmental change. Although priorities across sectors largely align, differences exist between federal land managers and private landowners. For example, the National Forest System is often focused on wildfire risk and management tradeoffs in western forests, while private landowners are more focused on topics such as genetics, extended rotations, and belowground carbon dynamics. Across sectors, the Forest

Vegetation Simulator (FVS) was identified as an important modeling tool that could serve as a bridge between climate science and policy modeling frameworks.

National Scale Volume and Biomass Implementation – Jeff Turner (USDA Forest Service)

Jeff Turner discussed the implementation of the National Scale Volume and Biomass (NSVB) equations within the FIA program. This effort originated from a collaborative project initiated in 2011 involving researchers from multiple universities, industry partners, and nonprofit organizations. The NSVB equations represent one component of a broader update to FIA modeling systems and database structures. Several key changes were highlighted, including the addition of decay ratios for biomass estimates, the use of species-specific carbon fractions instead of a single constant value, and new volume estimates for tree components such as stem, stump, top, and bark. Turner also noted significant changes to the FIADB TREE table associated with the update. The revised estimates apply to timber-relevant species across the contiguous United States and Alaska and will affect annual inventory and growth-removal-mortality estimates. The FIA program plans to archive previous datasets while transitioning tools such as EVALIDator to the updated estimates to avoid conflicting outputs.

National FIA Program Update – Linda Heath and Katie Renwick (USDA Forest Service)

Linda Heath and Katie Renwick provided an update on the Forest Inventory and Analysis program. They discussed the development of a Tableau dashboard that will provide improved transparency regarding FIA funding allocations, collaborators, and program activities. The dashboard will also track progress in FIA field data collection, allowing users to compare the number of plots sampled in current and previous years. The presenters also highlighted a new collaboration between FIA and the Society of American Foresters (SAF) to deliver quarterly technical transfer sessions aimed at helping stakeholders better use FIA data and tools. These sessions will allow participants to earn continuing forestry education credits while learning how to use tools such as EVALIDator and the FIADB API. Future sessions are planned to cover additional topics including the National Woodland Owner Survey and the Timber Products Output toolkit.

Partnership for Small Area Estimation – George Gaines (USDA Forest Service)

George Gaines presented an update on the Partnership for Small Area Estimation (PSAE), a collaborative effort between the NCASI Foundation and the U.S. Forest Service FIA program aimed at advancing small area estimation methods for national forest inventory data. The project seeks to expand FIA's capacity to produce reliable estimates of forest attributes for smaller geographic areas and shorter time intervals. Three advisory panels—the User Panel, Science Panel, and Development Panel—have been established to guide the research and development process. The project is intended to transition small area estimation methods from experimental approaches to operational tools within FIA. Early priorities identified by the

panels include developing annual county-level estimates of forest area and biomass, improving methods for bias assessment and change estimation, and advancing multivariate estimation techniques. The partnership recently released a Request for Proposals for Phase I funding to support research aligned with these priorities.

Forest Sector R&D Summit – Darren Miller (NCASI)

Darren Miller provided an overview of the Forest Sector Research and Development Summit held in Washington, D.C., which was hosted by the Society of American Foresters and the U.S. Endowment for Forestry and Communities. The summit reviewed the results of a 2021 survey of research and development needs within the forest sector and discussed plans for a new survey to be distributed in 2023. Discussions at the summit highlighted a reduction in research capacity across many organizations in the forest sector and emphasized the need for stronger coordination of research priorities. One goal emerging from the summit is the development of a consortium of organizations that could collectively identify and communicate R&D priorities for the forest sector to policymakers and other stakeholders.

Center for Advanced Forestry Systems Update – Aaron Weiskittel (University of Maine)

Aaron Weiskittel provided an update on the Center for Advanced Forestry Systems (CAFS), including a history of the program and discussion of its future direction. CAFS began in 2007 and has received more than $15 million in funding from the National Science Foundation through multiple phases of support. The program is expected to graduate from NSF support in December 2024, making it the first program to complete all three phases of the NSF Industry, University Cooperative Research Center program. With NSF funding ending, CAFS leadership must determine the program's future structure within the next six months. Several potential options were discussed, including closing the program, transitioning to a membership-supported model, or combining industry membership contributions with federal funding. Regardless of the specific path forward, Weiskittel emphasized the importance of maintaining a national university–industry research consortium that can connect regional cooperatives, forest industry partners, and applied research organizations such as NCASI.

Forest and Wood Product Carbon Platform – Edie Sonne Hall (Three Trees Consulting)

Edie Sonne Hall provided an update on efforts to develop a comprehensive forest and wood product carbon data platform. The concept originated from a climate-smart commodities proposal submitted by the U.S. Endowment and collaborators in 2022, which was not funded but identified an important need for improved carbon data infrastructure. Hall explained that existing carbon data related to forest flux, harvested wood products, and embodied carbon are fragmented across multiple sources and are not always standardized or easily accessible to users. This fragmentation makes it difficult for landowners, manufacturers, and other stakeholders to effectively measure and report carbon impacts across the forest product value

chain. The proposed platform would serve as a centralized source for consistent, credible, and accessible carbon data that could be used by a variety of stakeholders.

Discussion – Blue Ribbon Panel on FIA

The meeting concluded with a group discussion led by Dale Hogg regarding the potential creation of a new Blue Ribbon Panel for the FIA program. Participants discussed ongoing legislative interest in including language related to such a panel in the Farm Bill and other policy initiatives. Blue Ribbon Panels have historically played an important role in shaping FIA program development, including major changes such as annualized inventory cycles and standardized data collection across regions. Participants emphasized that the current moment represents another period of transition for the program, driven by emerging technologies such as remote sensing and small area estimation. Several issues were raised during the discussion, including concerns about data privacy and the appropriate spatial resolution for publicly available information, the implications of new technologies for FIA plot sampling intensity, and the importance of succession planning within the FIA workforce. Participants also discussed questions about who should convene the panel, who would receive its recommendations, and how stakeholders across sectors could coordinate messaging to policymakers. Dale Hogg noted that he had drafted a statement reflecting the group's discussion and requested feedback from participants to ensure alignment before sharing it more broadly.