

Fiber Supply Assessment and
Spatial Analysis Research
Consortium
at the University of Georgia

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The General Idea

1. Is to take advantage of all the data that might be available -- public and private
2. Use all the data for modeling on satellite images the fiber availability
3. Automate this process through development of various algorithms
4. Implement the algorithms into a regular annual production
5. Integrate R&D into the production process

Summary of Benefits

1. Common timeline annual inventory;
2. Improved sub-county resolution estimates;
3. Annual and semi-annual estimate outputs;
4. Multi-source data fusion on satellite images;
5. Individualized customizable estimates;
6. Scalable information outputs -- public/members;
7. Estimates enhanced by works of other groups in USA and other countries (Sweden, Finland);

Methods

1. kNN analysis of available data (FIA, industry plots with known biomass estimates, public data with known biomass estimates) applied to satellite imagery to initially populate the current images with the available inventory data;
2. Analysis of the kNN estimated inventory and modeling efforts to improve the estimates (e.g., modeling of productivity based on reconstruction of ages);
3. Analysis of uncertainties associated with each pixel assessment and processing of the inventory to remove the biases from each Landsat scene and related inventory assessment using the “*weighted mean balancing approach*” (i.e., depending on the identified uncertainties the assessments are adjusted throughout the area to match the mean of the FIA survey).
4. Production of maps for public distribution, and databases of the inventory assessments for the consortium members with customization depending on data ownerships.
5. Production of reports and publications.
6. Research conducted on methodologies related to the production process.
7. Associated analyses of relevant data and topics (e.g., past disturbances and ages).

What do others do?

- Whatever they do will be used if available (e.g., GAP)
- There is more need for R&D in Fiber Supply Assessment than all the groups can provide
- We will be working only on elements that are unavailable

Thank you