

NASA CMS Biomass Working Group Breakout Report

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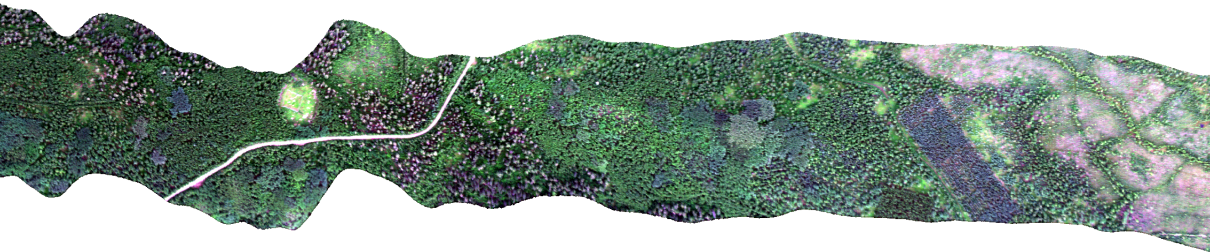
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WHAT WAS ACCOMPLISHED LAST YEAR

- (In Prep) Andrew T. Hudak, et al., *A quantitative evaluation of forest aboveground biomass density map products in Oregon, USA*. Environmental Research Letters (target journal)
 - Compare 10 publicly available AGBD maps over Oregon
 - Airborne LiDAR generally performed best at finer spatial resolutions
 - Landsat-based maps performed better at coarser spatial resolutions
- (2025) Laura Duncanson, et al., *Spatial resolution for forest carbon maps*. Science, 387(6732), 370-371
 - Response to commercial production of very-high spatial resolution carbon maps

WHAT'S NEXT

Paper #1

- Continued interest in comparing AGB/AGC maps
 - California and Mexico (e.g., Hudak CMS, Kennedy CMS, TandemX-GEDI)
 - Beyond simple RMSE contest. Understanding why maps are different in areas.
 - How can we assimilate maps (e.g., model averaging)?
 - Examine agreement across spatial scales.

WHAT'S NEXT

Paper #2

- Diving into uncertainty
 - Understanding how crediting entities (e.g., Verra) calculate and use uncertainty.
 - Understanding uncertainty thresholds creditors use.
 - Work backwards to see where improvements can be made to meet targets
 - Try to come up with a common framework for measuring uncertainty
 - Comparison of design-based and model-based estimators

WHAT'S NEXT

Paper #3

- Andrew Lister model-based estimator tool
 - Break down e.g., McRoberts (2022) to work within e.g., Excel.
 - Try to take complex math speak into something end-users can adopt more easily.
 - Potential to expand do this with other estimators and compare.

WHAT'S NEXT

Not a Paper!!

- Developing a web application to ingest and generate carbon estimates for map products and field data.
 - Many AGB CMS projects have a version of this as a goal.
 - No one is a web developer
 - Try to combine forces
 - Engage with NASA MAAP.