

GEOG Researchers Win Renewal Grant to Advance Campus Forest Carbon Project

Congratulations to Ph.D. Candidate [Rachel Lamb](#) and Professor [George Hurtt](#) for their recent grant award from the [UMD Sustainability Fund](#)!

This \$50,000 renewal grant will be used to further advance the University of Maryland's goal to become climate neutral by including land-based carbon into its annual estimate of the campus carbon footprint. While much progress has been made to lower the University's carbon footprint across multiple energy sectors, tree conservation or restoration could further enhance these goals with high-resolution and accurate measurements of forest carbon gains (or losses) at 90 square meter resolution. As a living document, the University's Climate Action Plan can also be further developed to demonstrate our commitment to maintaining or increasing our natural carbon storage capacities via informed land-use decisions.

The University of Maryland's leadership on this effort parallels the incorporation of this science into the State of Maryland's plan for achieving the goals of the Greenhouse Gas Reduction Act as part of [NASA's Carbon Monitoring System](#) and serves as an example for other universities interested in holistic carbon accounting.

Over the past year, Lamb and Hurtt have worked with a strong group of undergraduates to develop a novel forest monitoring process and identify strategic areas for reforestation. The team has also developed important relationships with multiple campus partners, including the Office of Sustainability, Campus Arboretum, and statewide Agriculture and Natural Resources Centers. This December, the team also presented their work at AGU in a special session looking at the role of transformative partnerships and knowledge coproduction to advance decision-relevant science.

In year 2 of the project, students will also have an opportunity to work directly with the Maryland Department of Natural Resources and the Chesapeake Bay Foundation to pilot an innovative forest carbon offset protocol. The current supply of verified carbon credits from projects in Maryland is extremely low relative to University demand. Project certification and annual verification of credits generated by a given project can be very costly for potential project developers to secure given that traditional protocols focus on regular field-based measurements. While such practices are currently considered the "gold standard" due to accuracy, utilizing high-resolution remote sensing may help the University to achieve reliable estimates at a lower cost.

A special thanks and congrats to all the current and former undergraduate student team members:

- Maddy Albee, Junior, ENSP/GIS
- Rieley Auger, recent ENSP/GEOG alumna
- Camille Hoffman Delett, Senior, ENSP/GEOG
- Jordan Nicolette, recent ENSP/GEOG alumnus and current MSGIS student
- Hilary Sandborn, Senior, GEOG/ANTH