2023 NASA-CMS Science Team Meeting Summary
September 26-28, 2023 (Pasadena, CA)

From September 26-28, 2023 the NASA Carbon Monitoring System (CMS) Science Team Meeting took place in Pasadena, CA. The goals of the meeting included: update on NASA programmatic goals, stakeholder engagement, presentation of CMS Results (2020 and 2022 projects), advance and share progress of working groups and synthesis efforts, and discussion of science team activities for 2023-2024. The meeting consisted of two major parts: Applications Workshop (Sept. 26) and Science Team Meeting (Sept. 27 & 28). The meeting had 134 registrants, with 94 in-person and 40 virtual participants.

Day 1 provided a welcome from NASA leadership, an overview of CMS application efforts, and featured a series of panel discussions with stakeholders. Panel discussion topics included: International Assessments & Efforts on Carbon, Oceans and Wet Carbon, Atmospheric Flux, and Biomass. A listening session was included on the Goals & Priorities of NASA's Greenhouse Gas Center & Discussion about Agency/Interagency Priorities on Carbon Monitoring.

Day 2-3 focused on science results, working group & synthesis efforts, and discussion of Science Team activities for the year ahead. Science results were presented in oral format (34 presentations) and poster format (96 presentations). A keynote presentation was provided by Dr. Rachel Lamb (Maryland Department of the Environment) entitled, “The Dynamic Future of Maryland's Natural Carbon Sinks: Leveraging CMS Data to Chart a Policy Pathway to Net Zero”, which noted the first remote sensing forest carbon monitoring system in official state use. Working groups (5) met individually and later reported in plenary progress and plans. The meeting concluded with open mic feedback from participants, presentation of next steps from the Science Leader, and Headquarters reflection.

Overall, it was clear that CMS continues to be highly productive and impactful. To date, CMS has produced 645 publications cited >44,000 times, with 45 in top-tier (Science, Nature, PNAS). It has also archived 168 data products downloaded >115,000 times. In the process, it has engaged 861 participants, and >200 stakeholders from 158 organizations. Working groups have produced multiple important synthesis papers. Progress on previously identified challenges included: wet carbon, lateral fluxes, interagency collaboration, and the newly developed website for stakeholder engagement. Throughout, the critical role and integration of remote sensing, field data and modeling together with end-to-end stakeholder engagement were emphasized.

George Hurtt, Science Team Leader
Peter Griffith, Lead, Carbon Cycle & Ecosystems Office

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