

FINAL AGENDA

**NASA CMS Applications Workshop  
Linking CMS Products to Decision Makers and Stakeholders  
Double Tree Hotel, Bethesda Maryland  
Wednesday, November 12, 2014**

**NASA Carbon Monitoring System (CMS)**

**Goals of the CMS Applications Workshop:**

- Identify the challenges and needs of communities that are interested in carbon Measurement, Reporting and Verification (MRV) products, and provide information on value of CMS applications – including exploration of key “what?” and “how?” questions for carbon data.
- Link CMS community to policy end users, decision makers and regulatory agencies to ensure maximum benefit of the projects to society.
- Identify products that are relevant and ready for use by stakeholders and decision makers.
- Review the CMS Data & Products Fact Sheet and identify CMS data products that align with stakeholders (identifying potential Early Adopters).

**Expected Workshop Outcome:**

- Expose the Science Team members to decision makers and regulatory data users.
- Define a community of CMS scientists who are willing to serve as collaborators with future CMS Early Adopters.
- Identify potential Early Adopters (stakeholders) to demonstrate how CMS products may impact decision processes or what CMS products are needed in terms of carbon data at their facilities.

**Wednesday, November 12<sup>th</sup> 2014**

**Workshop in Grand Ballrooms C & D on 2<sup>nd</sup> level**

<b>8:30am</b>	<b>Registration</b>	
<b>9:00am</b>	George Hurtt, <i>CMS Science Team Leader &amp; Peter Griffith, Chief Scientist of NASA Carbon Cycle &amp; Ecosystems Office</i>	CMS Science Team Meeting Welcome
<b>9:15am</b>	Diane Wickland & Kenneth Jucks, <i>NASA HQ</i>	Welcome, Introduction of carbon cycle and CMS congressional direction
<b>9:30am</b>	Vanessa Escobar, <i>Missions Applications Deputy Coordinator</i>	CMS Applications Activity Welcome, CMS Applications Program, Early Adopters and the value of engagement of users for CMS science
<b>9:30am - 10:00am</b>	Brief around-the-room introductions facilitated by Vanessa Escobar <ul style="list-style-type: none"> <li>• Introduction of all stakeholders in the room</li> <li>• Stakeholders state their need/desired outcome(s) for CMS engagement.</li> <li>• Define the work you do and the decision you are trying to make. How/What type of carbon data from the CMS (potentially) provides decision support?</li> </ul>	

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<b>10:00-10:15am</b>	<b>Morning Break</b>	
	<b>Speaker</b>	<b>Topic</b>
<b>10:15am</b>	Robert Feldt, <i>Maryland Department of Natural Resources Forest Service</i>	<p><b>“Current and Potential Uses for CMS Products in Maryland Forest Management and Policy”</b></p> <ul style="list-style-type: none"> <li>• <i>Example of an existing local biomass data user and the decision biomass products will support</i></li> </ul> <p><i>(PIs: Dubayah, Ganguly, Hurtt, Saatchi, Williams, Windham-Myers, Imhoff-West)</i></p>
<b>10:35am</b>	Bart Croes, <i>Research Division of California Air Resources Board</i> [Remote Presentation]	<p><b>“Data Needs for California’s Air Quality and Climate Policies”</b></p> <ul style="list-style-type: none"> <li>• <i>Examples of carbon data needed for air quality policy</i></li> </ul> <p><i>(PIs: Graven, French, Jacob, Collatz, Baker, Bowman, Pawson, Ott, Andrews, Huntzinger)</i></p>
<b>10:55am</b>	Tom Robinson and Karen Gaffney, <i>Sonoma County Agricultural Preservation and Open Space District</i>	<p><b>“Climate and Conservation: Tools and data at the scale of land use decision-making”</b></p> <ul style="list-style-type: none"> <li>• <i>Example of multi-CMS products integration for decision making at the local scale</i></li> </ul> <p><i>(PIs: Dubayah, Greenberg, Saatchi, Ganguly, Williams, Kennedy, Graven, Jacob, French, West, Imhoff-West, Windham-Myers)</i></p>
<b>11:15am</b>	Kent Elliott, <i>Asia-Pacific Program at USDA Forest Service</i>	<p><b>“The Carbon Stocks and the OneMap of Indonesian Peatlands”</b></p> <ul style="list-style-type: none"> <li>• <i>Example of REDD+ MRV use of biomass data</i></li> </ul> <p><i>(PIs: Hagen, Cochrane, Houghton)</i></p>
<b>11:35am</b>	<b>Panel: Q &amp; A with Speakers</b>	
<b>LUNCH 12:00pm-1:30pm</b>		
<b>Posters in Room Harmony (across the hall)</b>		
<b>1:30pm</b>	Sarah Cooley, <i>Ocean Acidification Program of Ocean Conservancy</i>	<p><b>“Informing Decision Making about Ocean Acidification”</b></p> <ul style="list-style-type: none"> <li>• <i>Example of what ocean flux data can be used for decision support</i></li> </ul> <p><i>(PIs: Lohrenz, Verdy, Bowman, Ott, Baker, Pawson, Behrenfeld, Balch, Shuchman, Fatoyinbo, Windham-Myers)</i></p>
<b>1:50pm</b>	Leif Hockstad, <i>Climate Change Division of US EPA</i>	<p><b>“Policy End Users and CMS Project Collaborations”</b></p> <ul style="list-style-type: none"> <li>• <i>Example of how flux data will support greenhouse gas inventory efforts.</i></li> </ul> <p><i>[32 Projects: Flux &amp; Biomass]</i></p> <p><i>22 Land-Atm Flux (Emissions): Jacob-01, Jacob-02, French-03, Collatz-02, Saatchi-02, Williams-C-01, West-03, Imhoff-West-04, Graven-01, Nehr Korn-01, Lohrenz-04, Lohrenz-05, Windham-Myers-01, Baker-01, Bowman-01, Bowman-02, Ott-01, Pawson-01, Andrews-02, Andrews-03, Huntzinger-01, Dubey-01</i></p>

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		<i>8 Land Biomass (Sinks) + [2 Additional if including Alaska]: Ganguly-01, Dubayah-03, Dubayah-04, Hurtt-03, Kennedy-01, Cohen-02, Greenberg-01, Hudak-01 [Loboda-02 and Morton-02]</i>
<b>2:10pm</b>	Christine Dragisic, <i>REDD+ Focal Point of US State Department</i>	<b>“Linkages between U.S. Climate Policy and Carbon Science”</b> <ul style="list-style-type: none"> <li>• <i>Example of data needs for land sector (PIs: Hagen, Cochrane, Vargas, Healey, Houghton, Kellndorfer, Keller, Fatoyinbo, Morton, Walker, Nehr Korn, Andrews, Baker, Bowman, Ott, Pawson, Ganguly, Williams, Jacob, Imhoff-West, West, Lohrenz, Windham-Myers, Collatz, Dubey, Miller, Stehman)</i></li> </ul>
<b>2:30pm</b>	<b>Panel: Q &amp; A with Speakers</b>	
<b>3:00pm</b>	<b>Afternoon Break</b>	
<b>3:15pm - 4:00pm</b>	<b>Break Out Session - Groups by Theme</b>	
	<p>Discuss the details of individual CMS products and how they will/will not satisfy groups and policies. Address what do stakeholders need/want?</p> <ol style="list-style-type: none"> <li>1. Subnational MRV      <i>Room Lavender on 3<sup>rd</sup> level</i></li> <li>2. National MRV      <i>Grand Ballrooms C &amp; D on 2<sup>nd</sup> level</i></li> <li>3. International MRV      <i>Room Juniper on 3<sup>rd</sup> level</i></li> <li>4. Oceans MRV      <i>Room Jasmine on 3<sup>rd</sup> level</i></li> </ol> <p><b>Questions for each working group to address:</b></p> <ul style="list-style-type: none"> <li>➤ What are the specific stakeholder needs that could potentially be addressed by current or future CMS data products?</li> <li>➤ What <b>actions can stakeholders take with NASA</b> to evaluate and/or incorporate CMS data products into decision making?</li> <li>➤ What are the main challenges to expressing uncertainty for each theme?</li> </ul> <p><b>Outcomes:</b></p> <ul style="list-style-type: none"> <li>➤ Each group should create a list of challenges, opportunities, data format and requirements, uncertainty considerations, and a plan for implementation (if appropriate).</li> <li>➤ Each group must <b>report at least two action items</b> (one designated for CMS, the other for the stakeholder) that identify the next step forward in helping connect the science to the decision process.</li> </ul>	
<b>4:00pm</b>	Reports back from groups (5 minutes each)	<b>Designated reporter with 1 page report and action items moving forward</b>
<b>4:30pm</b>	Open discussion and identification of actions forward for each policy MRV scale – Facilitated by George Hurtt and Vanessa Escobar	
<b>5:30pm</b>	Vanessa Escobar	<b>Summary of workshop and actions moving forward. Closing remarks.</b>
<b>5:40pm</b>	<b>CMS Applications Workshop Adjourn</b>	