Research to Applications:
CSD’s Leadership and Contributions In Scientific Assessments
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CSD and Assessments: A Large and Diverse Effort

The Bridging Function
Translate from the language of science to the language of stakeholders
“State of scientific understanding”
- Periodic or one-time Reports
- “Rapid Science Synthesis” communications based on targeted laboratory or field work

Policy relevant
- Engagement with stakeholders is crucial

Policy neutral
- Maintains credibility

A wide range of roles: Leaders – Authors – Contributors – Reviewers – Coordination – Communication
Covering all 3 major environmental issues: Stratospheric Ozone Layer – Climate – Air Quality
Reaching a full spectrum of Stakeholders: local → global
With impacts that are far-reaching in space and time: local → global now → future

• World Governments
• US Decision-Makers:
  o Federal
  o State
  o Localities
• Industry Decision-Makers
• Educators, Students, Public
• Scientific Community

CSD Research
Assessments
Stakeholders

Climate
Stratosphere & Ozone Layer
Air Quality
The Constellation of CSD’s Assessment Leadership and Contributions: 2008-2015

Bottom Line: CSD’s Work on Assessments Impacts Societal Decisions Now and in the Future (A few examples)

- Montreal Protocol Parties: Considering possible new provisions (HFCs; N₂O)
- State and local AQ officials: Developing approaches to addressing national AQ standards that make use of findings of CSD-led field campaigns (CA, NV, CO, UT, TX)
- Industry leaders: Making investment decisions regarding new compounds they propose for applications (e.g., refrigerants, etc.) EXAMPLE: R316c = No!
A Look Ahead

CSD is well positioned to continue leading and contributing to assessments that will inform decisions of the 21st century.

### Some Examples

<table>
<thead>
<tr>
<th>Already in progress…</th>
<th>Time Frame</th>
<th>CSD roles</th>
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<tbody>
<tr>
<td>SPARC 2nd Water Vapor Assessment (WAVAS-2)</td>
<td>2008 to ~2016</td>
<td>K. Rosenlof (co-lead)</td>
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<tr>
<td>Regional Assessment: SONGNEX (Shale Oil and Natural Gas Nexus)</td>
<td>2015 deployment</td>
<td>J. de Gouw (lead)</td>
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<td>Regional Assessment: FIREX (Fire Influence on Regional and Global Environments Experiment)</td>
<td>2015-2019 deployments</td>
<td>J. Roberts, C. Warneke, and J. Schwarz (co-leads)</td>
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<td>Laboratory Assessments of Replacement Compounds (HFO-1234ezy, HCFC-133a, ...)</td>
<td>ongoing</td>
<td>J. Burkholder (lead) with several CSD co-investigators</td>
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<table>
<thead>
<tr>
<th>Expected</th>
<th>Time Frame</th>
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<tr>
<td>WMO/UNEP Ozone Assessment</td>
<td>2017-2018</td>
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<tr>
<td>IPCC AR6</td>
<td>TBD</td>
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<tr>
<td>JPL Kinetic Data Evaluation</td>
<td>Fall 2015</td>
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<tr>
<td>Aviation</td>
<td>TBD</td>
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