NASA Science Mission Directorate (SMD)
Wildfire Stakeholder Engagement Engagement
Workshop: Key Findings

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Presented on behalf of the NASA Wildfire Team

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**Format:** Two virtual half-day sessions in February included 6 panels followed by 2 hours of breakout discussion. Around 800 registered participants, 120 from NASA.

- Panelists represented a variety of local, state, and federal organizations engaged in different aspects of wildfire management
- Panelists were asked to identify the major barriers or information needs that they faced related to wildfire management (note that these were *not* intended to be NASA specific)
- Breakouts and meeting allowed all participants to share their perspectives
- Findings summarized by panel and breakout discussion moderators
- Draft summary available (including ability to comment) at [https://nari.arc.nasa.gov/smdwildfire](https://nari.arc.nasa.gov/smdwildfire)
Key Findings: Overarching Themes

• **Data requirements**
  - Demand for higher spatial resolution, more rapid updates, and application-ready data

• **Data services**
  - Improved interoperability of datasets, reliability, access, and coordination of data distribution and analysis tools

• **Communications**
  - Improve coordination across federal agencies, administrative levels, with general public (working closely with social scientists), and incident teams in the field

• **Research to Operations (R2O)**
  - Validate new techniques, ensure new capabilities are communicated at upper management levels, and support technical capabilities that facilitate collaboration

• **Lack of personnel, resources**
  - Need for sustained funding, workforce development and training, and effective coordination of wildfire efforts
<table>
<thead>
<tr>
<th>Weather and Climate</th>
<th>Fuels and Ignitions</th>
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<tbody>
<tr>
<td>• Research-to-operations integration</td>
<td>• Communication and trust</td>
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<td>• Leverage agency partners for coordinated, centralized, and consolidated information</td>
<td>• Operational: latency, refresh, formats, ease of use, training</td>
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<td>• Data: Decrease latency and increase data resolution and computing capabilities</td>
<td>• Key risk metrics, biophysical infrastructure and social, near and long term</td>
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<td>• Antiquated Communications</td>
<td>• Information content: do we really have the tools to assess the delta risk for any given mitigation</td>
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<td>• Preparing for the future: Prescribed burning, risk, and balance with Air Quality (AQ)</td>
<td>• Values—individual values, communities, and wilderness values</td>
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## Key Findings: Active fire

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<thead>
<tr>
<th>Fire Detection &amp; Tracking</th>
<th>Emissions, Air Quality, &amp; Fire Weather</th>
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<tr>
<td>• Data interoperability, to maximize the utility of fire detection data</td>
<td>• Improved data access and services</td>
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<td>• Close communications gaps between data producers and users</td>
<td>• Data products with improved spatial and temporal resolutions</td>
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<td>• Support the transition from Research to Operations</td>
<td>• Continued work understanding user needs, communicating to diverse audiences</td>
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<td>• Leverage emerging data sources and complementary remote sensing data</td>
<td>• Improving the R2O pipeline</td>
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<td>• Improve fire tracking and forecasts of fire spread</td>
<td>• Information on plume height, PBL dynamics, and plume composition</td>
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<td>Landslides and Water Quality</td>
<td>Ecosystems and Infrastructure Impacts</td>
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<tr>
<td>• Data access</td>
<td>• Data, Tools, and Approaches – higher resolution data, more frequently updated, decision support systems</td>
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<td>• Data harmonization</td>
<td>• Management – engagement with social scientists, unified remote sensing strategy, R2O, sustained workforce and funding levels</td>
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<td>• Data discoverability</td>
<td>• Vegetation - need to understand pre-fire conditions and rapid post-fire assessment</td>
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<td>• Lack of personnel and resources</td>
<td>• Infrastructure – need better information on buildings, particularly in wildland-urban interface (WUI)</td>
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<td>• Communication within scientific community</td>
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<td>• Communication to the public</td>
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For a more detailed summary and to provide comments, please visit: https://nari.arc.nasa.gov/smdwildfire