



GSFC Disaster Working Group

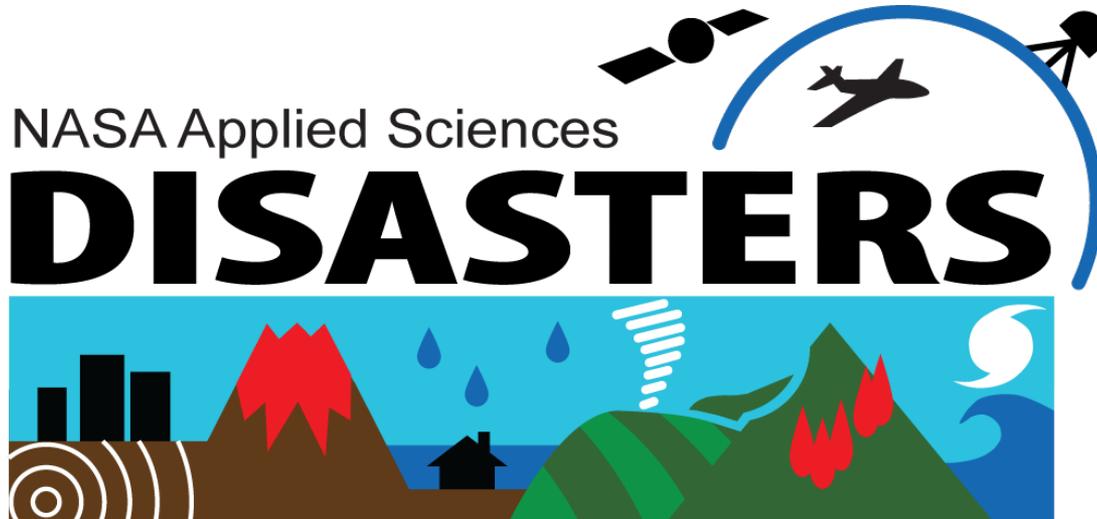
May 16th, 2016

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Agenda

- 3:00-3:15 Updates from NASA Disaster Response, etc. and updates from the group
- 3:15-3:30 John Bolten – Mekong Flood Work
- 3:30-3:45 Discussion of Playbooks and introduction of Vicky Thompson (working with David Green at HQ)
- 3:45-4:00 Discussion of future path of group (what do we want to do, etc.)



Updates

- 2 New hires have been brought to response
 - Scott Porwick
 - Vicky Thompson
- Response Activities:
 - Eagle Horizon – 5/16-17
 - Ecuador Earthquake (no response)
 - Texas (and other) Flooding
 - Ft. McMurray, Alberta Wildfire
 - Severe Weather in southern U.S.
- Website:
 - Building a new website that will be at disasters.nasa.gov
 - Working on the conceptual framework for a “back end” system for data management
- First drafts of Disaster Response Playbooks (more later)
- CEOS Disasters Working Group (next slides)
 - New Landslide Pilot





Ft. McMurray, Alberta Wildfire

11 May 2016

Active Wildfire Smoke, Desert Dust, and Volcano Plume Heights from MISR

Dr. Ralph Kahn (lead) and *Tom Kucsera*, NASA Goddard Space Flight Center.
Professor Timothy Canty, University of Maryland.

Student Digitizers: Ryan Bolt, C.J. Vernon

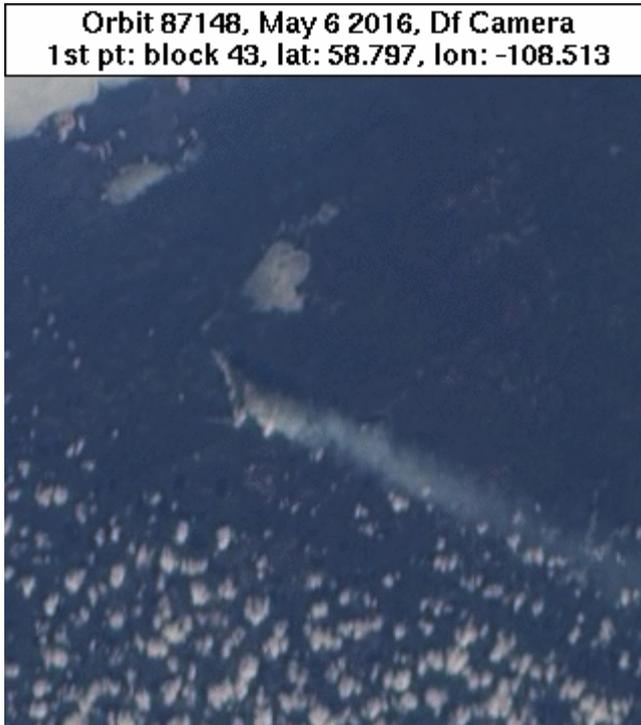
AAP Beta-Release Announcement

The NASA Applications Program is supporting our work on a pilot **Active Aerosol Plume-height (AAP) project**. Two University of Maryland students have been working under our supervision in this effort, to identify major wildfires, volcanic eruptions, and dust storms globally, and to check on a daily basis for coverage of these events in the NASA Earth Observing System's Multi-angle Imaging SpectroRadiometer (MISR) data. Where good-quality MISR imagery is available, they digitize the aerosol plumes within a day or two, using the MISR Interactive Explorer (MINX) software, and the resulting plots and data tables are posted on the prototype AAP web site:

<http://www.atmos.umd.edu/~tcanty/plume/>

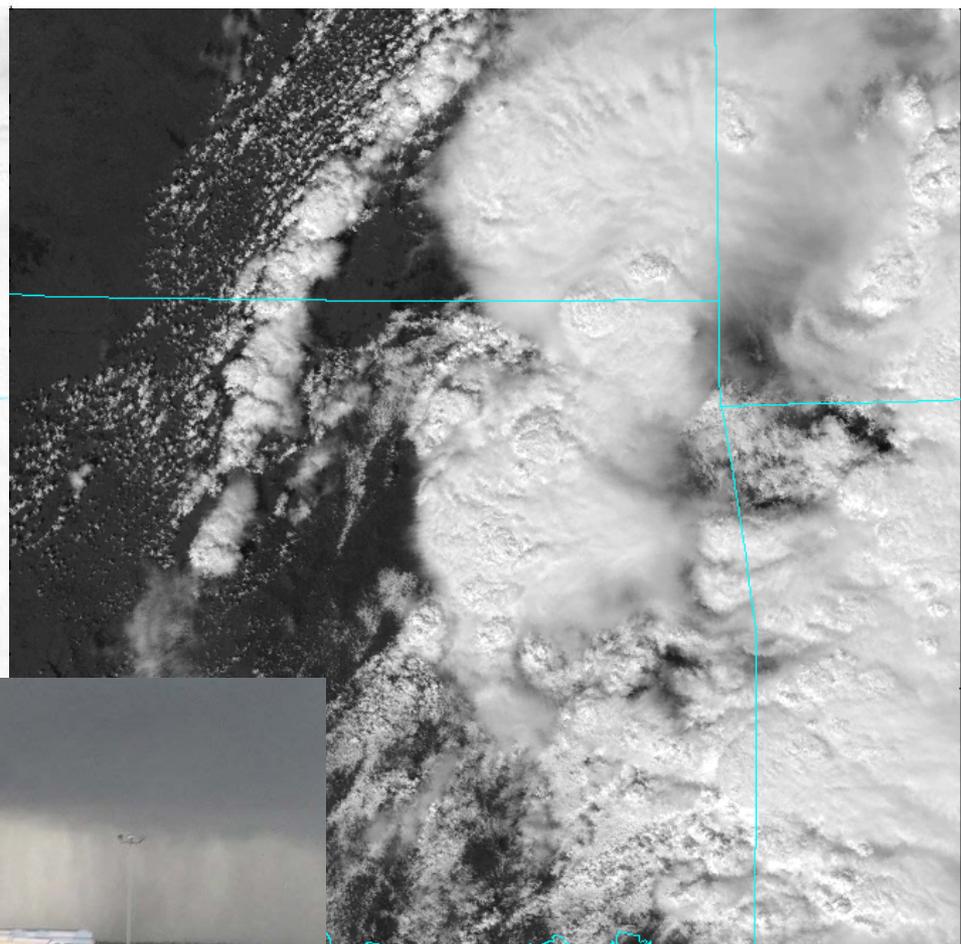
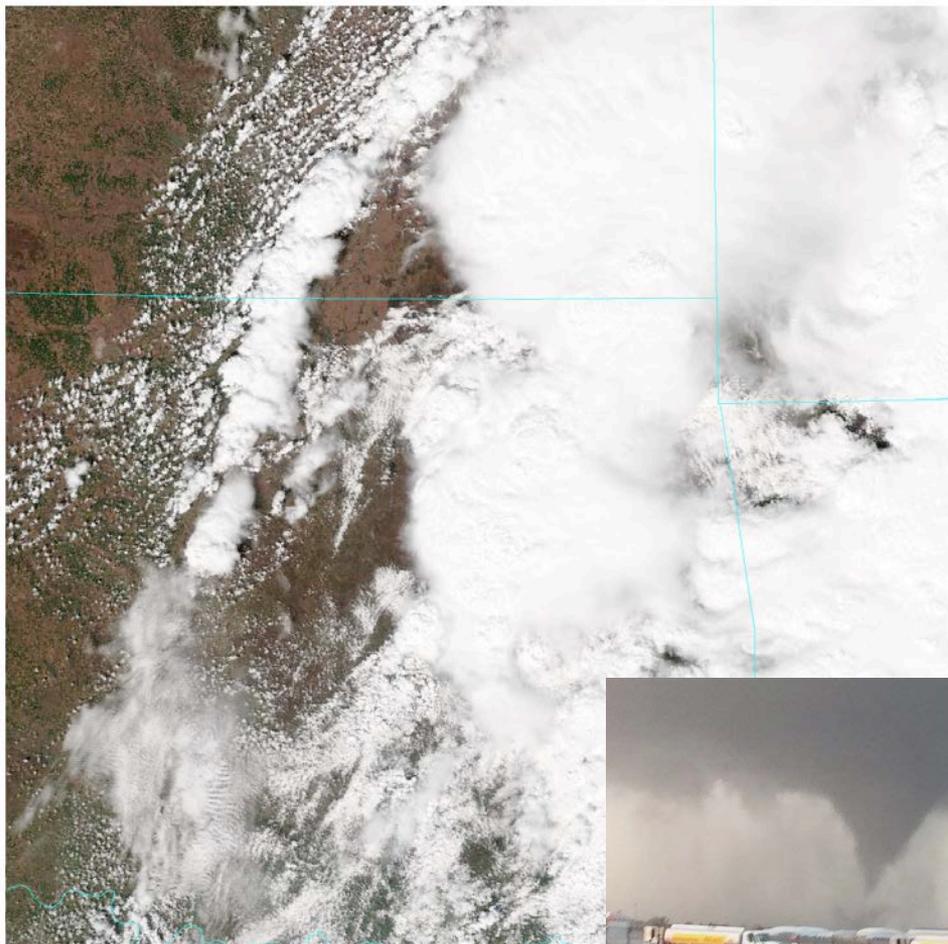
This is the *beta-release* announcement, and we have posted the MINX data for the Ft. McMurray, Alberta Wildfire from 06 May 2016 here:

<http://www.atmos.umd.edu/~tcanty/plume/2016/05/fire/#A087148>



VIIRS Sharpened True Color

VIIRS Enhanced NCC



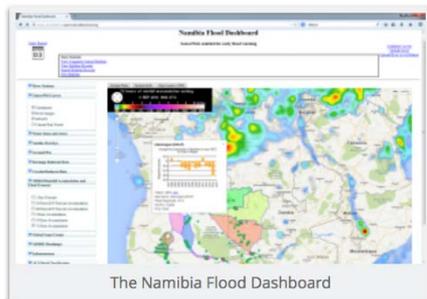


CEOS Working Group on Disasters

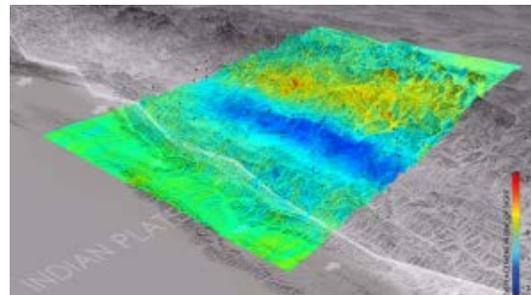
Defined a global satellite observation strategy for DRM (including a detailed assessment of needs, gaps, and satellite Earth observation requirements and the development of a strategy);

- Ensured the appropriate inclusion of satellite Earth observations in the “Sendai Framework for Disaster Risk Reduction 2015-2030”;
- Supported DRM Outreach and Evaluation of DRM
- Developed and strengthened relationships with stakeholder and end-users through a series of concrete actions addressing single-hazard **Pilots projects** (currently *floods, volcanoes and seismic hazards*), multi-hazards projects such as the Recovery Observatory and the GEO Geohazard Supersites and Natural Laboratories (GSNL), and through CEOS capacity building activities for disaster managers.

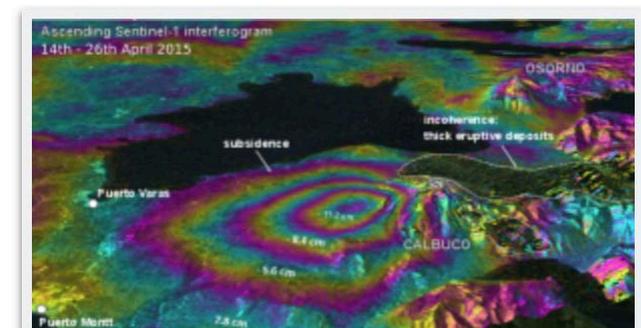
Flood



Seismic



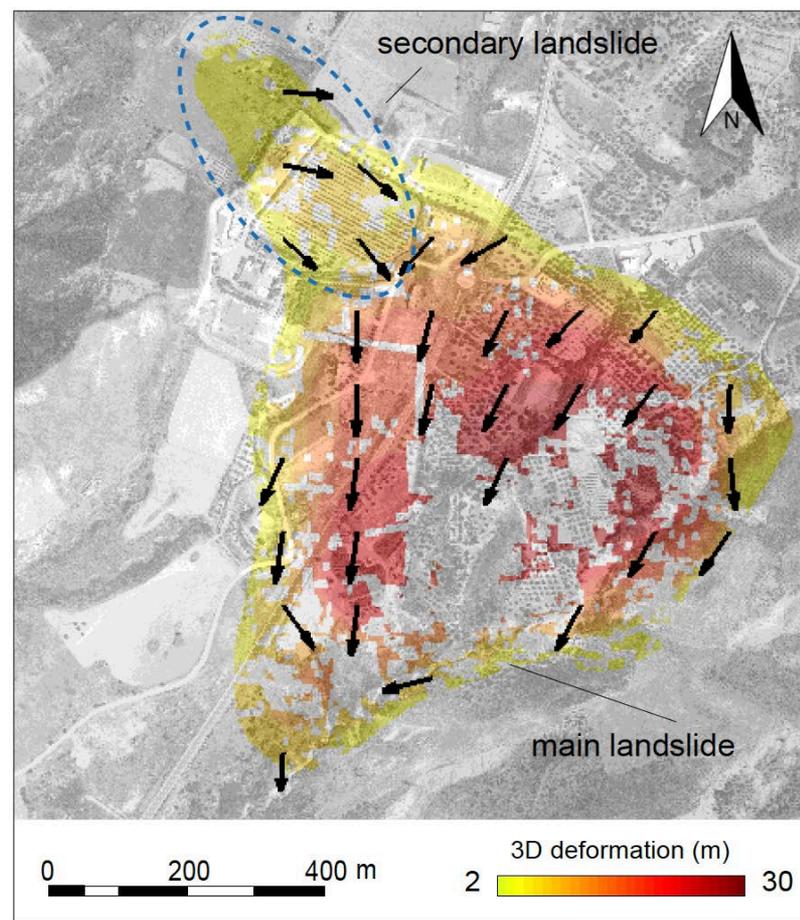
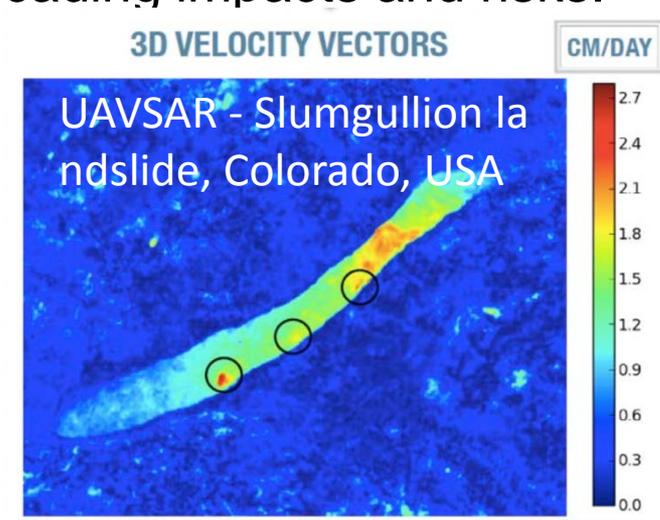
Volcanoes





Landslides Pilot: Goal

- To demonstrate the effective exploitation of Earth observations (EO) data and technologies to detect, map and monitor landslides and landslide prone hillsides, in different physiographic and climatic regions.
- To apply satellite EO across the cycle of landslide disaster risk management, including preparedness, situational awareness, response and recovery with a distinct multi-hazard focus on cascading impacts and risks.





Regional Study Areas

- **Primary:**
 - Nepal
 - Pacific Northwest
- **Experimental:**
 - China
 - Southeast Alaska
 - Norway
 - Caribbean, Central America, South America (Place TBD)
 - Southeast Asia
- Objectives, study areas and path forward will be finalized at the next CEOS Disaster Working Group meeting in Vancouver, WA in early September, 2016



Workshops

- Wrapping up **Volcano Meeting** today in H114 (more R&A focused but may be outcomes relevant for disaster response)
- **Cascadia Rising**: June 7-10th (at present, no GSFC participation)
- **Flood Workshop**, June 14-16th at ESSIC, UMD (Invitation only)
- Workshop to Develop a Portfolio of **Low Latency Datasets** for Time-Sensitive Applications, September 27-29th, 2016. Langley Research Center, Hampton VA



Training

- **ARSET: Using NASA Remote Sensing for Disaster Management**

- Dates: Thursday, June 9, 2016 to Thursday, June 30, 2016
- Times: 11:00 a.m.-12:00 p.m. and 6:00-7:00 p.m. EDT (UTC-4)
- Registration Closes: Monday, June 6, 2016
- <http://arset.gsfc.nasa.gov/disasters/webinars/disaster-overview-2016>

- **GPM Webinar Series**

- **Webinar 3 - June 14, 2016:** Demonstration of Case Studies of Data Import and Analysis in GIS
- <http://pmm.nasa.gov/training> to register and get recordings of previous webinars

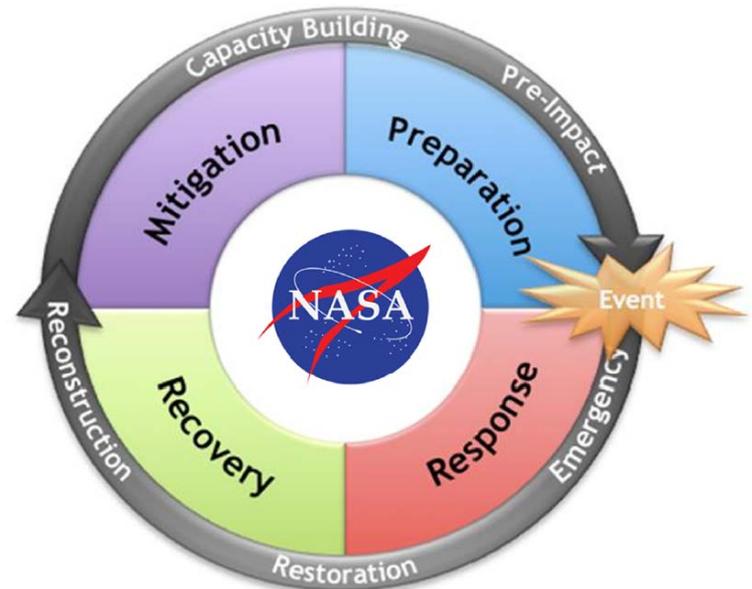


Bolten/Ahamed's presentation



Playbooks Discussion

- Several GSFC Scientists and collaborators have been identified as key points of contact in the NASA-flood playbook.
- Current Goals:
 - Populate the Disaster Response Flood Playbook with as much information as you think makes sense.
 - Highlight experiences from previous flood response efforts to both domestic and international events.
 - Capture core expertise, data products and infrastructure.

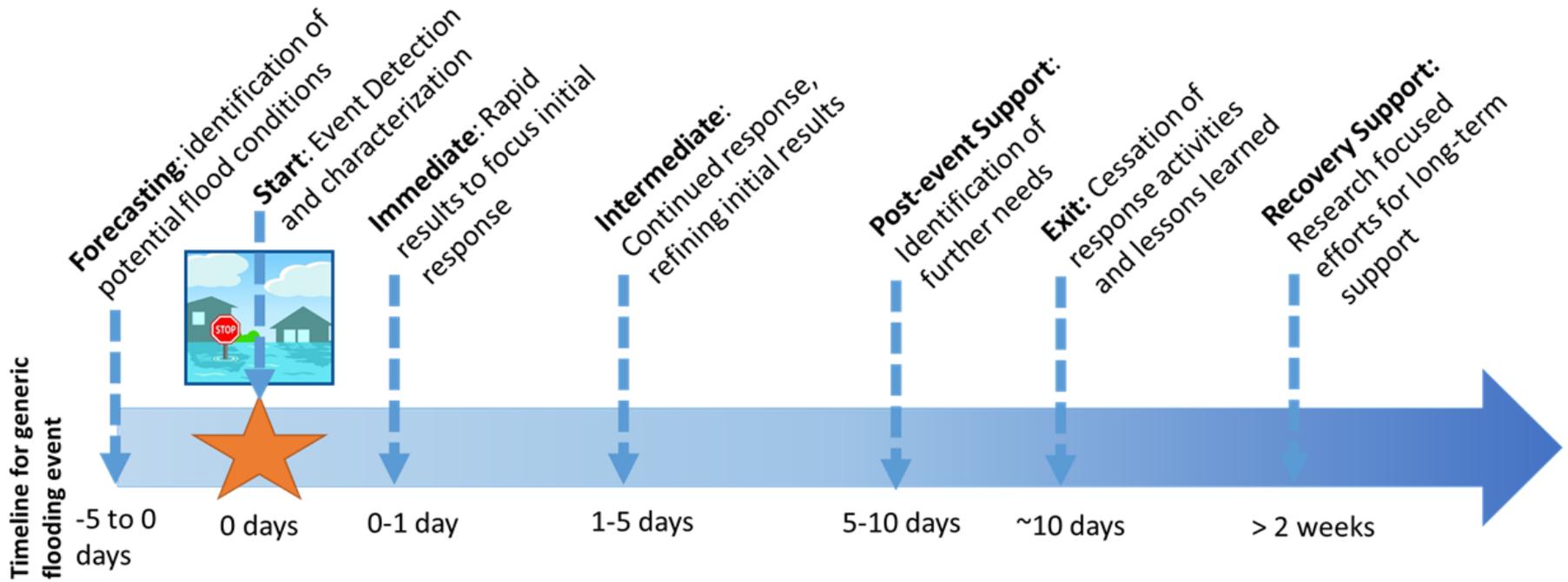


Updates:

The current playbook is a bit repetitive in places. The next version will adapt a more chronological approach based on the different stages of a flood disaster.



Support Timeline





Current Contents

- 1. Operational Support Coordination**
 - 1. Entry and Exit Strategies Checklist
 - 2. Response Coordination Checklist
- 2. NASA Coordination, Data and SMEs**
 - NASA Disaster Coordination Leads (Center(s))
 - NASA Key Subject Matter Experts (SME)
 - NASA Key Data Sources
- 3. Domestic Partner Coordination, Data and SMEs**
 - Domestic (US/CONUS) Disaster Leadership
 - Domestic Partner (US/CONUS) Subject Matter Experts (SME)
 - Domestic Partner (US/CONUS) Key Data Sources, Capabilities
- 4. International Coordination, Data, and SMEs**
 - International (OCONUS) Disaster Leadership
 - International (OCONUS) Partner Key Subject Matter Experts (SME)
 - International (OCONUS) Partner Key Data Sources, Capabilities
- 5. Response Products and Dissemination**
 - Product Table
 - Timeline showing key product latency
 - Product Dissemination, Delivery, Pipeline
- 6. Public Affairs Resources**
- 7. Response Tools and Resources**
 - Website/Web Portal Plan
 - Response Infrastructure
- 8. Playbook Improvement Tracking**



Discussion

- Disaster response – what is “expected” what can *be* expected
- Continue to update summary of Disasters through GSFC White Paper and Data Matrix
- Please send updates on current/future activities related to disaster response (press releases, relevant papers, etc.), highlights are helpful to all
- Two-way feedback on current needs, issues, etc.
- **What else would be helpful?**