

Meeting Minutes of the Subcommittee on Disaster Reduction

2 June 2016, 10:00 a.m. to 12:00 p.m., White House Conference Center Lincoln Room

Italics indicate absent members. "T" indicate members participating via teleconference.

Co-chairs

David Applegate (USGS)
Margaret Davidson (NOAA)
Jack Meszaros (OSTP)

Designated Representatives

BLM Georgette Fogle
CDC Mollie Mahany
DHS Mary Ellen Hynes (T)
DHS/FEMA Roy Wright
DHS/USCG Robert Thomas
DOD Al Johnson
DOE Patricia Hoffman
DOT Sheila Duwadi
EOP/OMB Michael Clark
EOP/OSTP Jack Meszaros
EPA Greg Sayles (T)

FERC Marsha Palazzi
HUD Dana Bres
NASA Craig Dobson
NGA Brian Cameron
NGB TBD
NIH Aubrey Miller
NIST Steve Cauffman
NOAA Margaret Davidson
Laura Furgione (T)
NPS Marcy Rockman
NSF Greg Anderson

OPHS Estella Jones
State Fernando Echavarria
USACE Tony Niles
USAID Sezin Tokar
USDA TBD
USFS Matt Rollins
Carlos Rodriguez-Franco
USGS David Applegate
USNRC Edwin Hackett

Other Attendees

CDC Alison Brooks
Scott Deitchman (T)
Rosemary Pearson-Clarke
DHS Mitch Erickson (T)
Erin Walsh (T)
DHS/FEMA Kevin Long
DOI Bryan Rice (T)
EOP/CEQ Madeleine Boel
Carey Whitehead
Rhonda Montgomery
EOP/OMB Sean Porse
EPA Brendan Doyle (T)

HHS Brittney Seiler
NASA Gerald Bawden
NIH Alexander Jones
NOAA Gerry Bell (T)
NPS Ann Hitchcock
OPHS Tracy MacGill (T)
State Michael Hamburger
USACE Alex Renaud
USFS Mike Cherry
USGS Kris Ludwig (T)
Charlie Mandeville

USNRC John Nakoski
NAS Adam Sobel
Amanda Staudt
Katherine Thomas
STPI Chris Clavin
SDR Secretariat
Bret Schothorst
Barbara Haines Parmele (T)

Agenda

10:00 Welcome, Introductions, and Approval of Minutes
10:05 Co-chairs Report
10:15 Presentation: NAS Climate Change and Extreme Weather Report
11:00 Briefing: NOAA 2016 Hurricane Season Outlook
11:30 Update: SDR Task Forces and Working Groups
11:55 Close and Next Actions

Handouts

- June Meeting Agenda
- Draft May Meeting Minutes

I. Welcome and Introductions

National Science and Technology Council (NSTC) Subcommittee on Disaster Reduction (SDR) Co-chair David Applegate (USGS) called the June meeting to order at 10:01 a.m. in the White House Conference Center Lincoln Room, and participants introduced themselves.

II. Report from the Co-chairs and Approval of Minutes

The draft of the May monthly meeting minutes was approved with no changes.

Applegate led the Report from the Co-chairs by noting an announcement for the kickoff meeting for a new Federal Fire Science Coordinating Committee, which is planned for Wednesday, June 8. The group is chartered by the Fire Executive Council, and its establishment was a principal recommendation in the SDR *Wildland Fire Science and Technology Task Force Final Report* that was released this past November. Please reach out to the SDR Secretariat (bret.schothorst@mantech.com) to be connected with Jim Douglas at DOI or Carlos Rodriguez-Franco at the U.S. Forest Service to participate.

Also on the wildfire front, Applegate mentioned that the National Security Council (NSC) hosted a roundtable discussion on Wednesday, May 18 as a follow-on to last November's White House "Fire Chiefs Roundtable on Climate Change Impacts at the Wildland-Urban Interface" event. At the roundtable, it was announced that President Obama signed an Executive Order on *Wildland-Urban Interface Federal Risk Mitigation*, which will mitigate wildfire risks to Federal buildings located in the WUI, reduce risks to people, and help minimize property loss to wildfire. For new buildings and alterations to existing buildings greater than 5,000 square feet on Federal land within the WUI at moderate or greater risk to wildfire, the Executive Order directs Federal agencies to apply wildfire-resistant design provisions delineated in the 2015 edition of the International Wildland-Urban Interface Code promulgated by the International Code Council. Federal, State, local, tribal and non-Government leaders from over 39 agencies and jurisdictions at the event additionally committed to a multi-scale, collaborative approach to address the challenges posed by wildfire in the WUI. A White House Fact Sheet on the event is located at: <https://www.whitehouse.gov/the-press-office/2016/05/18/fact-sheet-mitigating-risk-wildfires-wildland-urban-interface>.

Applegate highlighted that on May 10, the National Security Council, OSTP, CEQ, OMB, and the National Economic Council hosted a White House Conference on Resilient Building Codes to discuss the critical role of building codes in furthering community resilience, explore the economic benefits of resilient design, and consider actions that the Federal government and the private sector can take to advance resilience in the built environment. The event was held in coordination with the National Institute of Building Sciences and coincided with National Building Safety Month in May as declared by President Obama. As part of the event, the Administration highlighted Federal and private sector efforts aimed at advancing the principles of resilience in building codes and standards, and building design. A White House Fact Sheet on the event is online at: <https://www.whitehouse.gov/the-press-office/2016/05/10/fact-sheet-obama-administration-announces-public-and-private-sector>. More information on National Building Safety Month can be found at: <https://www.whitehouse.gov/the-press-office/2016/04/29/presidential-proclamation-national-building-safety-month-2016>.

Following up on an item from our May SDR meeting, Greg Anderson (NSF) reminded SDR members to please email David Mendonca at NSF (mendonca@nsf.gov) to coordinate a Federal funding contribution to support the Natural Hazards Center at the University of Colorado Boulder. Those interested in participating in a Funders' Panel at this year's 41st Annual Natural Hazards Center Workshop (July 10-13, Omni Interlocken Resort, Broomfield, Colorado) should also contact Mendonca.

Marcy Rockman with the National Park Service provided a quick readout of the Wednesday, March 9 workshop held by the U.S. National Committee of the International Council on Monuments and Sites (USICOMOS) on “Disaster Risk Management and Protecting Our Cultural Heritage: Understanding Disaster Risk Management and the U.S. Implementation of the *Sendai Framework for Disaster Risk Reduction 2015-2030*.” As part of the workshop, SDR member Sezin Tokar (USAID) joined an associated expert roundtable on “U.S. Engagement in the Development of the Cultural Heritage Theme in the Sendai Framework” on the following day on Thursday, March 10 that included UNISDR, international experts, and NGOs that played key roles in the development of the cultural heritage theme of Sendai Framework. Also represented were those who played leadership roles in the development of the Cultural Heritage Words to Action Guidance, the Advisory Council on Historic Preservation, and representative leaders from national, state, and local levels working at the intersection of cultural heritage and disaster risk reduction.

Marc Levitan (NIST) passed along that the National Windstorm Impact Reduction Program (NWIRP) is planning to hold a one-day strategic planning stakeholder’s workshop on Friday, June 17, at the National Science Foundation in Arlington, Virginia. The workshop will focus on determining the Nation’s needs and priorities in research and implementation of ideas that reduce losses of life and property in windstorms. SDR members are being invited as part of a broad cross-section of experts from a variety of technical disciplines. The invited experts come from academic institutions and other research organizations, the private sector, including insurance, consulting, industry, and government. Participating Federal government agencies include NIST, NSF, NOAA, FEMA, FHWA, HUD, DOE, and USACE. This workshop will solicit stakeholder input to help identify and prioritize NWIRP research, development, and implementation activities for inclusion in the NWIRP Strategic Plan. Please contact Levitan (marc.levitan@nist.gov) and Josie Lecuyer (josefine.lecuyer@nist.gov) by Thursday, June 9 to RSVP to attend.

Laura Furgione (NOAA) mentioned that Capitol Hill Ocean Week (CHOW) 2016 is coming up next week June 7-9 sponsored by the National Marine Sanctuary Foundation. CHOW annually reaches more than 600 national and global policymakers, scientists, scholars, business and conservation leaders in attendance as well as thousands of people online who are passionate about the ocean. More information about the event is online at: <http://www.marinesanctuary.org/chow/>.

April Bennett (NIH) noted that SDR members are invited to attend an upcoming NIH Disaster Research Response (DR2) Program workshop on Tuesday, July 19 in Boston, Massachusetts, at the Thomas P. “Tip” O’Neill Federal Building. For more details about the meeting and to register, please visit: <https://tools.niehs.nih.gov/wetp/events.cfm?id=2552>. Registration closes at 5:00 p.m. Eastern on Friday, July 1. Bennett can be reached at april.bennett@nih.gov with any questions about the event.

III. Presentation: NAS Climate Change and Extreme Weather Report

Applegate introduced Adam Sobel from the National Academy of Sciences Committee on Extreme Weather Events and Climate Change Attribution that authored the report, *Attribution of Extreme Weather Events in the Context of Climate Change* (<http://www.nap.edu/catalog/21852/attribution-of-extreme-weather-events-in-the-context-of-climate-change>). Sobel is a professor at Columbia University’s Lamont-Doherty Earth Observatory and Fu Foundation School of Engineering and Applied Sciences and an atmospheric scientist who specializes in the dynamics of climate and weather, particularly in the tropics, on time scales of days to decades.

According to Sobel, because climate change has led to changes in the observed frequency, intensity, and duration of some types of extreme events, the report aimed to examine the science of attribution of specific extreme weather events to human-caused climate change and natural variability (i.e., determine how much human-induced climate change (or another factor) has affected an individual event’s

magnitude or probability of occurrence). Sobel noted that the definition of attribution in this sense is to draw the explicit connection between climate science as a whole and a specific event, making the science concrete in a way that statements about broader trends and future projections do not. He added that the primary reasoning behind investigating the causes of extreme events is that it can increase the understanding of how and why extremes have changed over time and help inform choices about assessing and managing risks and adaptation strategies.

Through model simulations and the observational record, Sobel stated that the report also assessed current scientific understanding and capabilities for attribution, provided guidance about the robustness of extreme event attribution science, and identified research priorities for further development of the approaches. The observational record was used to determine the change in probability or magnitude of events through the statistical analysis of observed change in events as well as observed circulation analogues to determine how meteorologically similar events have changed. Model simulations were drawn from to compare events in a world with human-caused climate change to that in a world without. Specific types of models used as underlined by Sobel were: Coupled Climate Models; Atmosphere-Only Models; Studies Conditioning on Seasonal Forecasts; Downscaling; and Highly Conditioned Simulations.

Sobel highlighted that the science of event attribution has advanced to the point where it is now possible to estimate the general influence of climate change on some types of specific extreme events, in particular heat waves, extreme cold events, droughts, and heavy precipitation; however, there is little or no confidence in the attribution of severe convective storms and extratropical cyclones. A definitive answer to the commonly asked question of whether climate change “caused” a particular event to occur still cannot usually be provided, but Sobel underscored examples of questions framed in a way that attribution science can more readily answer: 1) Are events of this severity becoming more or less likely because of climate change?; and 2) To what extent was the storm more or less intense because of climate change?

As Sobel noted to close his presentation, a selection bias exists in that events that have been selected for attribution studies are not a representative sample – which means that counts of attribution studies with either positive, negative, or neutral results are not expected to give a reliable indication of the overall importance of human influence on extreme events. Ways to improve extreme event attribution science capabilities include:

- Systematic criteria for selecting and defining the events to be studied;
- Transparent, community standards for attributing classes of extreme events; and
- Research on model characteristics required to reproduce extreme events of different types and scales, changes in natural variability and the interplay with climate change, and the influence of conditioning on study results.

For questions about his briefing or the recently released report, please contact Sobel (ahs129@columbia.edu).

IV. Briefing: NOAA 2016 Hurricane Season Outlook

Applegate introduced Gerry Bell, the Lead Seasonal Hurricane Forecaster in the Climate Prediction Center at NOAA/NWS, who provided NOAA’s outlook on the 2016 hurricane season.

NOAA issues seasonal hurricane outlooks for the Atlantic basin, the central North Pacific, and the eastern North Pacific Ocean. According to Bell, with a 70 percent likelihood of occurrence, the 2016 Atlantic outlook predicts that the season will likely be more active than the last three seasons (2013-2015) with near normal hurricane activity expected (10-16 named storms, 4-8 hurricanes, 1-4 major hurricanes), while the 2016 central North Pacific outlook anticipates near to above normal hurricane activity (4-7 tropical cyclones) and the 2016 eastern North Pacific outlook predicts near normal hurricane activity (13-20 named storms, 6-11 hurricanes, 3-6 major hurricanes).

Bell noted in his briefing that since 1995, the U.S. has averaged almost two hurricane landfalls per season, nearly a 50 percent increase from 1971-1994. Historical records show alternating 25- to 40-year periods of increased, and then decreased, hurricane activity. The Atlantic Coast (and Gulf Coast) have far more land-falling major hurricanes during a high-activity era. Exponential growth along the Atlantic and Gulf Coasts has put far more people and property in harm's way, with over 80 million people considered Atlantic or Gulf Coast residents. Due to these factors, Bell stressed that preparedness should remain consistent regardless of the season outlook, noting that it only takes one storm making landfall in the U.S. to make for a bad year.

Regarding the motivating basis behind seasonal hurricane outlooks, Bell stated that while hurricanes are ultimately a weather phenomenon, the regional conditions that control the number, strength, and duration of hurricanes often last for months and seasons at a time and have strong climate links. Climate patterns strongly influence regional atmospheric and oceanic conditions in many hurricane basins. As a result, regional atmospheric and oceanic conditions that affect hurricane activity can persist for months or seasons at a time. Therefore, by predicting key climate patterns, NOAA can often predict these regional hurricane-controlling conditions, and therefore predict the strength of the upcoming hurricane season.

If SDR members have questions about NOAA's 2016 outlooks or about the upcoming hurricane season in general, please contact Bell (gerry.bell@noaa.gov).

V. Update: SDR Task Forces and Working Groups

As the final item on the June agenda, Applegate led a short discussion of updates on the activities of several SDR task forces and working groups.

Applegate mentioned that the SDR International Disaster Risk Reduction (IDRR) Working Group has been meeting bi-monthly with its next meeting planned for Thursday, June 2. The agenda for June included: 1) an update on progress and deadlines of the UNISDR Open-ended Intergovernmental Expert Working Group (OEWG) on targets, indicators, and terminology for the Sendai Framework; 2) a discussion of U.S. participation at upcoming UN Office for Disaster Risk Reduction (UNISDR) meetings, including the "First Meeting of Ministers and High-Level Authorities on the Implementation of the *Sendai Framework for Disaster Risk Reduction 2015-2030 in the Americas*" that will be held June 8-9 in Asunción, Paraguay; and 3) a planning discussion for the U.S. National Platform listening session on the Sendai Framework that will be held Sunday, July 10 at the Natural Hazards Center Annual Workshop.

Applegate also noted that over the past few months, CDC, EPA, and NOAA pulled together a document marking progress on short-, medium-, and long-term strategic actions of the SDR Grand Challenges *Heat Wave Implementation Plan*, which was included as a resource for a NSC-led webinar on Thursday, May 26 focused on building community preparedness to extreme heat as part of FEMA's PrepareAthon! "Extreme Heat Week." The final document has been uploaded to the SDR.gov website and is also available online through the joint NOAA/CDC National Integrated Heat Health Information System (NIHHIS) portal at: <http://cpo.noaa.gov/AboutCPO/IntegratedInformationSystems/NIHHIS.aspx>.

Chris Clavin (STPI) stated that over the past month, the six SDR National Preparedness S&T (NPST) Task Force interagency hazard review teams have reconvened to complete the S&T national preparedness gap assessment activity with the development of a NPST-authored Strategic Report. The working title is the "National Preparedness Science and Technology Strategy Report." To facilitate this work, OSTP and STPI have requested that the hazard review teams author hazard-specific chapters that address cross-cutting categorical gaps that were identified during an analysis of the Task Force's gap identification work. The six teams, covering meteorological, geological, space, chemical, nuclear & radiological, and biological hazards and threats, will describe their respective gaps and recommended activities to address

the identified needs within the following six cross-cutting categories: 1) Advance Public Communication of Warnings or Advisories; 2) Enhance Fundamental Understanding of Hazards; 3) Science and Technology for Event Characterization and Risk Assessment; 4) Increased Observations, Enhanced Modeling, Data Management; 5) Response or Recovery Technology Needs (including protocols and guidelines); and 6) Scientific Integration for Improved Decision Making (including decision support tool development). The timeline for the development of content to the NPST Strategic Report is ongoing through June, with the assembly of the report and editing and writing of content integrating the hazard chapters to take place in June and early July. Interagency technical concurrence review, including the opportunity for NPST and SDR feedback, is targeted for July-August, and the targeted publication is in September, which coincides with National Preparedness Month.

A separate NPST Task Force sub-group on post-event S&T has moved forward with convening its first two interagency discussions to capture short- and long-term S&T capabilities, lessons learned, and effective mechanisms for collaboration as the sub-group considers ways to improve the coordination, access, and visibility of the S&T resources being brought to bear during disasters. The sub-group has been initially focused on the topic area of “Informing the Disaster” (i.e., S&T reachback during response and recovery), and its next meeting is scheduled for Thursday, June 9 in the White House Conference Center Jackson Room. Items for consideration at the meeting include a briefing from FEMA outlining its “Pre-Scripted Mission Assignments” process that tasks and reimburses other Federal departments and agencies providing direct assistance during disasters, as well as a breakdown of the interagency S&T activities cataloged by the SDR during Hurricane Sandy to test whether the group is capturing the right categories of agency S&T roles and responsibilities during disasters and to find areas where agency S&T capabilities add value currently and where S&T capabilities could add value in future events. Email the SDR Secretariat (bret.schothorst@mantech.com) to participate in this effort. Also of note, the NPST is engaged in a collaborative effort with FEMA and the NSC to incorporate S&T language into the recent update of the Federal Interagency Operational Plans (FIOPs). As part of this activity, the NPST plans to lead a writing team to draft a broader “S&T Annex” document for the FIOPs.

To close the discussion, Brittney Seiler of the HHS Office of the Assistant Secretary for Preparedness and Response (ASPR) went over some brief updates on the SDR Technology and Innovation for Disaster Preparedness (TIDP) Working Group regarding recent actions the group has taken and directions it’s moving towards. The group has moved away from weekly calls and instead scheduled monthly calls going forward with an in-person meeting option available. It plans to focus its upcoming Wednesday, June 22 meeting on agency tools and innovation being deployed in the fight against the Zika virus outbreak. Contact Seiler (Brittney.Seiler@hhs.gov) to connect with the TIDP Working Group.

VI. Adjournment

Applegate adjourned the SDR June meeting at 11:54 a.m. and noted that the group’s next meeting will be held on Thursday, July 7 in the White House Conference Center Lincoln Room.

VII. SDR 2016 Meeting Calendar

SDR meetings in 2016 will be held from 10:00 a.m. to 12:00 p.m. on the dates listed below in the Lincoln Room of the White House Conference Center unless otherwise noted:

2016

- ✓ Thursday, January 7*
- ✓ Thursday, February 4
- ✓ Thursday, March 3
- ✓ Thursday, April 7
- ✓ Thursday, May 5
- ✓ Thursday, June 2

- ✓ Thursday, July 7
- ✓ Thursday, August 4**
- ✓ Thursday, September 8***
- ✓ Thursday, October 6
- ✓ Thursday, November 3
- ✓ Thursday, December 1

* January meeting will be held in Room 430ABC of the White House Eisenhower Executive Office Building (EEOB).

** August meeting subject to cancellation.

*** September meeting shifted to the second Thursday of the month to avoid proximity to the Labor Day Federal holiday.

VIII. Agenda Items and Other Communications with the Subcommittee

Please send proposed agenda items and any other items intended for distribution to the full Subcommittee to the SDR Secretariat (bret.schothorst@mantech.com).

IX. Contact Information

SDR Leadership

David Applegate	Co-chair	703-648-6600	applegate@usgs.gov
Margaret Davidson	Co-chair	843-740-1220	margaret.davidson@noaa.gov
Jack Meszaros	Co-chair	202-456-6020	Jacqueline_R_Meszaros@ostp.eop.gov

Executive Secretariat

Bret Schothorst	703-388-0312	bret.schothorst@mantech.com
Barbara Haines-Parmelee	703-388-0309	barbara.haines-parmelee@mantech.com

X. Summary of June Actions

Action	Lead	By When
The next SDR meeting will be held on Thursday, July 7 in the White House Conference Center Lincoln Room.	SDR Members	For Information
Email David Mendonca at NSF (mendonca@nsf.gov) to coordinate a funding contribution to support the Natural Hazards Center at the University of Colorado Boulder. Those interested in participating in a Funders' Panel at this year's Natural Hazards Center Annual Workshop should also contact Mendonca.	SDR Members and Federal Colleagues	ASAP
Reach out to the SDR Secretariat (bret.schothorst@mantech.com) to be connected with Jim Douglas at DOI or Carlos Rodriguez-Franco with the U.S. Forest Service to participate in the Federal Fire Science Coordinating Committee.	SDR Members and Federal Colleagues	ASAP
Reach out to Gerry Bell (gerry.bell@noaa.gov) with questions about NOAA's 2016 outlooks or about the upcoming hurricane season in general.	SDR Members	Standing
Contact Adam Sobel (ahs129@columbia.edu) for questions on his briefing or the report, <i>Attribution of Extreme Weather Events in the Context of Climate Change</i> .	SDR Members	Standing

Contact Marc Levitan with NIST (marc.levitan@nist.gov) to have your agency linked into the strategic planning activities of the revamped National Windstorm Impact Reduction Program (NWIRP).	SDR Members and Federal Colleagues	Standing
Email the SDR Secretariat (bret.schothorst@mantech.com) to participate in the NPST Task Force sub-group on post-event S&T.	SDR Members and Federal Colleagues	Standing
Reach out to Brittney Seiler (Brittney.Seiler@hhs.gov) if interested in connecting with the activities of the TIDP Working Group.	SDR Members and Federal Colleagues	Standing
Send Dave Applegate an email (applegate@usgs.gov) if you are interested in contributing to the work of the SDR and would like additional documentation or an agency-specific letter.	SDR Members	Standing
Email the SDR Secretariat (bret.schothorst@mantech.com) to suggest external DRR stakeholder groups to invite to present at quarterly SDR meetings on behalf of the U.S. National Platform for UNISDR.	SDR Members	Standing
Submit additional agency suggestions of SDR plans and priorities for consideration in 2016 to the SDR Secretariat (bret.schothorst@mantech.com).	SDR Members	Standing