# Meeting Minutes of the Subcommittee on Disaster Reduction

1 December 2011, 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) Dennis Wenger (NSF) **OSTP Liaison** Tamara Dickinson (OSTP)

#### **Designated Representatives**

BLM Edwin Roberson Daniel Lechefsky CDC Mark Keim DHS Bruce Davis (T) DHS/FEMA Sandra Knight DHS/USCG Austin Gould DOD Al Johnson DOT Kelly Leone Sheila Duwadi EOP/OMB Grace Hu EOP/OSTP Tamara Dickinson EPA Peter Jutro Stephen Clark

#### **Other Attendees**

DHS Denise Kruse FEMA Candice Abinanti Doug Bellomo Alyssa Newton NASA Frank Lindsay NIST Marc Levitan FERC Pamela Romano (T) HUD Dana Bres NASA Craig Dobson NGA Paul Lewis NGB TBD NIH Allen Dearry (T) NIST William Grosshandler NOAA Margaret Davidson Laura Furgione NPS Marcy Rockman NSF Dennis Wenger OPHS Sven Rodenbeck

USACE Bill Curtis (T) NOAA Nell Codner Mary Erickson Maria Honeycutt (T) Jacob Sutherlun Chris Strager State Nicholas Suntzeff Fernando Echavarria USACE Steven Cary Dimitra Syriopoulou USAID Sezin Tokar USDA TBD USFS Carlos Rodriguez-Franco USGS David Applegate USNRC Brian Sheron

USNRC Christie Denissen Jeanne Dion Bill Ott Secretariat Ross Faith Barbara Haines-Parmele Guest: Gerald McSwiggan

#### Agenda

- 10:00 Welcome and Introductions
  10:05 U.S. Chamber of Commerce Activities on Disaster Resilience
  10:35 Presentation: Report from the SDR Coastal Inundation Working Group
  11:00 Presentation: U.S.-EU dialogue on bilateral cooperation for disaster rescue and relief
  11:15 Report from the Co-Chairs and Approval of Minutes
  11:40 Report from the OSTP Liaison
- 11:55 Close and Next Actions

Handouts

- Agenda
- Draft November Meeting Minutes
- Charter for SDR Coastal Inundation Working Group
- U.S.-EU Space Dialogue Conclusions

# I. Welcome and Introductions

Subcommittee on Disaster Reduction (SDR) Co-Chair David Applegate (USGS) called the meeting to order at 10:00 a.m., and participants introduced themselves.

#### II. Presentation: U.S. Chamber of Commerce Activities on Disaster Resilience

Gerald McSwiggan of the U.S. Chamber of Commerce spoke to the SDR on what the Chamber's Business Civic Leadership Council (BCLC; <u>http://bclc.uschamber.com/</u>), a 501c3 affiliate, was doing to enhance the role of the private sector in disaster assistance and recovery. The BCLC was founded over a decade ago and from its inception has been working on disaster reduction. McSwiggan is Senior Manager of the BCLC's Disaster Assistance and Recovery Program, and under his leadership over the past four years, the program has expanded to provide best practice recovery information, as well as critical on-the-ground support during times of disaster. McSwiggan organizes the BCLC's disaster recovery workshops and forums, heads up research projects and on-the-ground recovery teams, and creates information exchange platforms so that lessons learned from pervious disasters can be applied to reduce risk.

The BCLC is the corporate citizenship/corporate social responsibility arm of the Chamber. It engages corporate foundations and corporate social responsibility staff within companies that are looking to do good works in their communities. In terms of the disasters program, the BCLC has three main objectives:

- Sharpening and Clarifying the Business Role in Disasters
- Helping Businesses be Effective in Disaster Giving and Community Investment
- Telling the Story of the Good Works of Businesses

To accomplish its mission, the BCLC's Disaster Assistance and Recovery Program employs a number of mechanisms, including:

- Holding issue forums, workshops, and webinars, and authoring annual reports and white papers on disaster best practices.
- Working with local chambers of commerce on disaster preparedness activities as well as with social media.
- Organizing and supporting coordination conference calls after disaster events to help businesses understand the situation on the ground so they can provide assistance most effectively.
- Maintaining a corporate response tracker that tracks and catalogues what businesses have done in their communities.
- Maintaining a helpdesk into which local, small businesses in disaster affected areas can call and receive assistance.
- Mapping.
- Organizing corporate delegation trips to disaster areas.
- Liaising between the businesses, government, and nonprofit sectors.

McSwiggan cited data on disaster losses to underscore the point of why preparedness and resilience are important for the business community. According to the Centre for Research on the Epidemiology of Disasters (CRED), disasters losses in the U.S. averaged \$22 billion per year between 1989 and 1998. Even when adjusted for inflation, losses for the following decade (1999-2008) were significantly higher, measuring in at \$38 billion annually.

While some businesses have taken the positive step of incorporating community improvement initiatives – including disaster risk reduction efforts – into their corporate missions for altruistic or values-driven reasons, there is also a strong, multifaceted business case to be made for companies to promote disaster preparedness and resilience. Perhaps the most obvious benefit is that prepared and resilient companies experience less interruption in supplying their goods or services following a disaster, and ensuring business continuity has traditionally been the focus area for companies vis-à-vis disasters. Less

appreciated perhaps is the risk to businesses resulting from reduced demand following a disaster. With the exception of building materials and some other goods and services, demand generally falls following disasters, and businesses that sell their goods and services primarily or in significant part to an area struck by disaster are likely to see their revenues fall in the aftermath. The BCLC is attempting to drive home to businesses the important message of mitigating this demand side risk: i.e., since their financial health is directly tied to the economic resilience of their communities, investing in overall community resilience helps to protect their bottom line.

The BCLC is working on several fronts to facilitate coordination on disaster risk reduction among various stakeholders, including businesses, non-profits, and government. McSwiggan noted that the BCLC had been advocates of FEMA's "Project Impact: Building Disaster-Resistant Communities." Initially launched in 1997, the program has since been discontinued, but McSwiggan indicated that its value as a vehicle for multi-stakeholder engagement argued for undertaking a follow-on effort that, if not national in scope and federally-funded, might be pursued as a set of regional initiatives funded by private foundations. Such initiatives can provide forums for stakeholders to discuss what gaps exist and need to be bridged in order to make their communities and regions better prepared and more resilient. The BCLC, for example, will be holding a regional forum in February in San Diego on emergency independence with a particular focus on energy supply following a major earthquake. The only major power generating facility on the San Diego side of the San Andreas Fault Zone is the San Onofre Nuclear Generating Station, so businesses have a real interest in determining how reliable their power supply may be following an earthquake and what steps can be taken to prepare for and mitigate those circumstances.

Beyond the local and regional scales, the earthquake and tsunami in Japan underscored just how interdependent the global economy and global supply chain have become in the 21<sup>st</sup> Century. McSwiggan stated that there is a growing realization that risk reduction had emerged as a major aspect of competitiveness in the "new economy," and that businesses have a key role to play in reducing risk. Another key priority of the U.S. Chamber is improving America's infrastructure, and especially its transportation infrastructure, which in many areas is not ready to handle the commerce of a 21<sup>st</sup> Century economy and remains significantly vulnerable to hazard impacts. McSwiggan also identified environmental sustainability as an area where private-public partnerships can have an impact.

Due to the major disasters in Haiti and Japan, the BCLC has also turned its attention abroad. It has partnered with InterAction, the largest alliance of U.S.-based international nongovernmental organizations focused on disaster relief and sustainable development programs, to map areas in Haiti where InterAction member organizations were conducting projects on water, food, health, sanitation, etc. The layered data on these maps allow users to identify gaps in humanitarian needs relative to services being provided, such as the dispersion of cholera treatment programs throughout the country in comparison to where cholera cases and deaths are actually occurring.

More recently, flowing from the Asia-Pacific Economic Cooperation (APEC) meeting in November in Hawaii, the BCLC partnered with the U.S. Pacific Command, University of Hawaii, USAID, and other organizations to establish a Pacific Rim Coordinating Center (PRCC) to address disaster risk in the region and help coordinate response. The PRCC will allow for real-time sharing of information and best practices to help communities and governments better prepare for and respond to disasters. One of the center's first initiatives is a mapping tool, similar to that used for Haiti, which can overlay current disaster assistance efforts, historical disaster trends, and programs that are helping to build disaster resilience. Also at the APEC meeting, leaders from the public and private sectors signed an historic statement of intent to work together on disaster risk reduction and resilience (DRRR) in the Asia-Pacific region. Private sector signatories, which are underwriting some of the organizational efforts to date, include the Ford and Rockefeller Foundations. Margaret Davidson (NOAA) also credited the BCLC's leadership over the past decade for successfully urging many of their corporate donors, like Fedex, Coca-Cola, Siemens, and Office Depot, to develop community disaster resilient initiatives within their affiliated foundations.

# III. Presentation: SDR Coastal Inundation Working Group: past activities and future plans

Mary Erickson (NOAA) is a Supervisory Physical Scientist at the Coastal Survey Development Laboratory in the National Ocean Service. She spoke to the SDR about past activities and future plans of the SDR Coastal Inundation Working Group (CIWG). The CIWG was formed in 2009 as an ad hoc group and met about every six weeks through June 2010, when the Deepwater Horizon Oil Spill put efforts on hold. The group is now back up and running, and was formally chartered in November. The working group's co-chairs are Mary Erickson, Bruce Ebersole (USACE; to be replaced upon retirement in December by Bill Curtis, also of USACE), and Jerad Bales (USGS). Erickson welcomed additional agencies and individuals to participate in the group. Currently, the participating agencies include:

- Centers for Disease Control and Prevention
- Environmental Protection Agency
- Federal Emergency Management Agency
- Federal Highway Administration
- National Institute of Standards and Technology
- National Institutes of Health
- National Oceanic and Atmospheric Administration
- U.S. Agency for International Development
- U.S. Army Corps of Engineers
- U.S. Coast Guard
- U.S. Forest Service
- U.S. Geological Survey
- U.S. Navy
- U.S. Nuclear Regulatory Commission

Other groups identified for participation by the CIWG Charter include:

- Council on Environmental Quality
- Office of Science and Technology Policy
- Subcommittee on Infrastructure (NSTC)
- Subcommittee on Ocean Science and Technology (NSTC)
- U.S. Global Change Research Program

As one of its first efforts, the CIWG surveyed participating agencies about what they were doing with regard to inundation modeling and then inventoried that information. The objective was to get a better understanding of what individual agencies were working on, where federal investments were going, and where there might be opportunities for synergies. The inventory effort included coastal inundation models as well as derivative products from those models.

Following the inventory exercise, the group produced a white paper for the Office of Science and Technology Policy (OSTP) which identified the areas where interagency coordination would be particularly beneficial.

Several agencies have mission-driven models and tools for inundation risk assessment, forecasting, and related outputs, and while many of the products are good, Erickson noted that there is still a gap between what can be said scientifically and technically and what customers really want to know. Stated another way, there is a difference between what the customers are asking for and what the science-driven products

are supplying. So finding ways to bridge that gap in order to communicate actionable, audience-specific information has been a key focus of the working group.

In July 2011, the working group met for a two-day workshop at NOAA Headquarters in Silver Spring, MD. The four key areas that the group focused on were:

- Data Sharing
- Integrating Messages and Products
- Measuring Effectiveness
- Integrating Science and Technology Development

The science of coastal inundation is a heavily data-driven enterprise, and Erickson noted that of the key areas identified above, the group had arguably made the most headway on data sharing. Subsequent to conducting its inventory of models, the group had taken the next step of setting up a model grid sharing tool. This tool allows users to access archived grid models and avoid starting from scratch. The group has also been able to share model run outputs, which required an investment of computing power, intellectual power, and analysis. When a hazard event now occurs, these outputs can be pulled into a statistical backdrop to identify possible outcomes for the event and reduce the need for new, real-time runs that require high levels of computing "horsepower."

Erickson also noted that the inundation modeling community had made significant progress in coordinating investments. From identifying models for joint investment, to parsing areas of responsibility for a given model according to agency mission, to partnering with academics, the synergy and interoperability created through coordinated efforts of the working group will allow the community to move forward more rapidly.

Erickson stated that the legwork and relationships built through the CIWG had made coordination in dealing with Hurricane Irene smoother than would have been the case otherwise. There were success stories of data from an academic testbed (which the working group had been involved with) being helpfully passed along to the National Hurricane Center during the storm. Erickson noted that these pre-existing technical level relationships and knowing who was making decisions on where agency assets were being pre-positioned were very beneficial.

The second key focus area of the July CIWG workshop was integrating messages and products. Erickson was optimistic that outreach activities like NOAA's hurricane awareness tour, in which FEMA and USACE this year participated, would become annual multi-agency undertakings for coordinating federal messaging and demonstrating to the public that the agencies are working together on disaster impact reduction. The group is exploring the creation of jointly-sponsored informational booklets, handouts, and PowerPoint presentations to be used at community meetings for consistent messaging. FEMA had also approached the group with its national outreach strategy to discuss ways that the agencies would be able to coordinate efforts for community engagement. The next horizon is integrating technical products, and the CIWG has recently begun work in that area. The key question is whether agencies will be willing to produce a unified product that can serve overlapping missions and shared customers. FEMA's RiskMap project offers an intriguing pathway to explore mapping with layered data to that end.

The third key focus area of workshop was measuring effectiveness. The group discussed how progress in reducing economic damage could be measured given the Nation's expanding economy, wealth, and population. The challenge is to accurately measure and portray the costs and benefits of disaster reduction efforts, and properly value the role that science and technology played in yielding those results. The group also discussed at length the improvements that are needed to confidently reduce the size and scale of evacuations. That capability is enabled by science-driven tools and the accuracy of forecasts, but

also by planning and preparation that would allow certain people to shelter in place instead of taking to the highways.

Dennis Wenger (NSF) stated that transformational change was needed in how evacuation, risk communications, and warnings are approached and researched. He noted that the social science models that inform present day operations in these areas are long overdue to be updated. He added that some promising research which eschews the idea of clearance time, but instead integrates vertical along with horizontal evacuation, was currently underway at the University of Delaware, and he stressed the need for additional, innovative research in these areas.

The fourth key focus area was integrating science and technology. The group discussed what information and tools, and specifically visualization tools, the inundation community needs in order to better assess and convey risk, and whether that includes probabilistic information. They also talked about what tools are required to convey information to customers who need to know about extremely rare events.

Marc Levitan (NIST) stated that the engineering community needs tools for planning, engineering, mitigation, and particularly probabilistic mapping which include not just inundation water levels but also velocity and wave information. Surge velocity and wave characteristics are key factors in determining the extent of damage to the build environment during an inundation event. Having this information would inform engineers ahead of time whether, for example, structures in an impacted area had likely suffered only superficial damage or had been subjected to forces capable of carrying them off their foundations.

Applegate suggested that the working group consider as a next step using its white paper as a springboard to develop a follow-on document that would lay out the best practices needed to move the inundation modeling discipline forward and also serve as a successor document to the Grand Challenges Coastal Inundation Implementation Plan.

# IV. U.S.-EU dialogue on bilateral cooperation for disaster rescue and relief

Fernando Echavarria works for the Office of Space and Advanced Technology in the Department of State's Bureau of Oceans and International Environmental and Scientific Affairs (OES). He spoke to the SDR about the U.S.-European Union Dialogue on Space Cooperation, on which the latest set of talks occurred on June 14, 2011. Flowing from that discussion, there appears to be an emerging opportunity to advance international cooperation as it relates to disaster risk reduction. The joint conclusions from the June 14<sup>th</sup> meeting state:

"The earthquakes and tsunamis which struck Japan in March 2011 highlighted once again the central role of Earth Observation data in disaster relief. The International Charter on Space and Natural Disasters has proved an invaluable tool to expedite the availability of Earth Observation data to emergency and other humanitarian authorities. In preparation for a EU-U.S. Workshop or digital video conference to assess scope for bilateral cooperation which goes beyond the Charter and which ensures synergies of EU and U.S. Earth observations facilities regarding rescue and relief efforts in connection with man-made or natural disasters, the US requested time to coordinate an internal meeting with US agencies to assess on going synergies and gaps within the US's ability to respond to International disasters."

The SDR is one of the mechanisms through which the State Department is seeking to consult federal agencies on what areas appear ripe for bilateral cooperation. Echavarria invited agencies to contact him (echavarriafr@state.gov) to contribute to the process of identifying suitable areas and initiatives. He also noted that the nature of the bilateral discussions is still rather fluid, and that the scope of ideas and efforts being considered may be broader than that presented in the passage excerpted from the joint conclusions

and quoted on the preceding page.

Echavarria stated that one possible area for U.S.-EU cooperation may be on tsunami early warning systems. He reported that he had passed along to NOAA an EU proposal for the establishment of a collaborative agreement with NOAA on tsunami early warning systems. He also reiterated that the opportunities for collaboration should not be viewed as limited to tsunami issues.

Applegate stated that the reference to going beyond the International Charter pointed to possible interest in cooperation on systems that would directly benefit third countries. The International Charter has certainly been an important tool, but it is also a limited tool in many ways, and Applegate suggested that having a dialogue on the topic would likely be of interest to a number of the federal agencies. During recent years there has been discussion on how the Charter could be expanded to provide scientists with additional information that, while not directly related to disaster response, still ultimately contributes to disaster risk reduction efforts.

Doug Bellomo (FEMA) stated that the Czech Republic, Germany, and others had reached out to FEMA as a result of an EU directive mandating that all countries in the EU identify their flood hazards, quantify the risks, and develop plans to reduce risks associated with flooding. Like the U.S., many of the EU countries are facing challenges associated with effective risk communication.

Bruce Davis (DHS) stated that DHS had underway a very extensive international activity relevant to the U.S.-EU dialogue and looked forward to discussing the matter with the State Department.

By way of additional background, Echavarria provided a summary of the key players and institutions involved in the dialogue. The U.S. delegation has been normally led by the Deputy Assistant Secretary for Science in State's OES Bureau. Currently, the acting DAS is Jonathan Margolis. The European delegation is lead by Paul Weissenberg, who is the European Commission's Director of Space, Security, and Global Monitoring for Environment and Security (GMES). The European Commission is on a long trend of major investment, including the GALLIEO global navigation satellite system and a new constellation of Earth observation satellites known as the Sentinel Series. Paul Lewis (NGA) stated that the Sentinel satellite constellation, in particular, had the impressive capability to produce a new map product covering a landmass the size of the U.S. every five days. He also noted that the European community is making considerable headway in efforts to make science and technology affordable and available for use at the state and local levels. Echavarria added that the European Commission's involvement in high-level research, science, and technology, with corresponding resource commitments, behooved the U.S. to bring a robust response back to the dialogue.

#### V. Report from the Co-Chairs and Approval of Minutes

Applegate noted that the EU-U.S. dialogue is just one of many examples of ongoing activities for which it would be advantageous to reconstitute an SDR working group focused on international issues, and to that end, the SDR co-chairs were presently looking into scheduling a January-timeframe kickoff meeting at which the working group would consider a draft charter and begin to tackle some of these topics. One of the main efforts for the working group to handle on an ongoing basis will be coordinating the SDR's role as the U.S. National Platform for the UN International Strategy for Disaster Reduction (ISDR). Details on the meeting and a request for agency participation will be circulated to the SDR once a time and location are determined. Applegate stated that Sezin Tokar (USAID) and Dennis Wenger (NSF) will co-chair the working group.

Tokar reported that the UN International Panel on Climate Change (IPCC) had recently released the Summary For Policymakers (SPM) of its Special Report on Managing the Risks of Extreme Events and

Disasters to Advance Climate Change Adaptation (SREX). The SPM is available at <u>http://ipcc-wg2.gov/SREX/</u>. The full SREX report is due to be released in February 2012.

Applegate reported that there was a noteworthy synopsis of the SPM in the November 25, 2011 News & Analysis section of *Science* magazine. Subscribers can access the article at http://www.sciencemag.org/content/334/6059/1040.summary.

Echavarria highlighted the recent series of meetings held by the Asia-Pacific Economic Cooperation (APEC) as being of potential interest for the SDR. He offered to give a presentation on the subject to the SDR in 2012. Subsequent to the December SDR meeting, the following informational items were circulated electronically to SDR Members.

- APEC Ministerial Statement on the High Level Policy Dialogue on Disaster Resiliency, which was chaired by the U.S. Secretary of State, and is available at: <u>http://www.apec.org/Meeting-Papers/Ministerial-Statements/Annual/2011/2011\_amm/2011\_disaster.aspx</u>.
- Recommendations and other documents produced in conjunction with an October workshop of APEC's Emergency Preparedness Working Group, available at: <u>http://www.apec-epwg.org/</u>.

Frank Lindsay (NASA) stated that NASA is seeking hazard experts from across the federal agencies, as well as from industry, academia, etc., in forming a diverse group to assist with the review of proposals received in response to a recent Research Opportunities in Space and Earth Science (ROSES) program solicitation. The objective of this particular review is to select applied research and applications projects to improve disaster forecasting, response, and mitigation. Subsequent to the meeting, Lindsay provided the following additional details to the SDR via the Secretariat.

Persons with expertise/experience in one or more of the five topics listed below would be particularly helpful to the review process.

- Flood prediction, mapping, analysis, and mitigation;
- Landslide prediction, mapping, analysis, and mitigation;
- Earthquake prediction, mapping, analysis, and mitigation;
- Volcanic effluent detection and monitoring, particularly in regard to impacts on aviation;
- Post-disaster assessment associated with the aforementioned disasters or other disasters where access and availability of actionable disaster-related information can be effectively provided.

Names and contact information of nominees to the ROSES review panel should be sent to Michael Goodman (<u>michael.goodman@nasa.gov</u>) and Frank Lindsay (<u>francis.lindsay-1@nasa.gov</u>). The panel itself is likely to meet during January or February 2012 in Washington, DC. Additional details about the solicitation are available at

http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={348A5B58-B685-A25A-D447-02181138C762}&path=closed

Applegate noted that the version of the SDR November meeting minutes that was circulated with his email to the SDR on Monday, November 28, had been subsequently revised to include a summary of a workshop on the subject of ongoing research related to the Deepwater Horizon Oil Spill. The workshop was organized by the NSTC Subcommittee on Ocean Science and Technology (SOST) and was held October 25-26 in St. Petersburg, Florida. This revised version of the minutes was distributed to SDR members at the meeting and was approved with no changes.

#### VI. Report from the OSTP Liaison

Tammy Dickinson (OSTP) indicated that she did not have any additional topics for discussion.

#### VII. Adjournment

The meeting adjourned at 11:47 a.m.

#### VIII. Future Meetings

SDR meetings 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.

### 2012

Thursday, January 5	Thursday, May 3	Thursday, September 6
Thursday, February 2	Thursday, June 7	Thursday, October 4
Thursday, March 1	*Thursday, July 12	Thursday, November 1
Thursday, April 5	**Thursday, August 2	Thursday, December 6

\*We are shifting the July meeting to the second Thursday of the month to avoid proximity to the July 4th holiday.

\*\*Subject to cancelation

#### IX. 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 Ross Faith (ross.faith@mantech.com).

#### X. Contact Information

#### **SDR Leadership**

-				
David Applegate	Co-Chair	703-648-6714	applegate@usgs.gov	
Margaret Davidson	Co-Chair	843-740-1220	margaret.davidson@noaa.gov	
Dennis Wenger	Co-Chair	703-292-8606	dwenger@nsf.gov	
Tamara Dickinson	OSTP Liaison	202-456-6105	tdickinson@ostp.eop.gov	
Secretariat				
Ross Faith	703-388-0308	Ross.Faith@ManTech.com		
Barbara Haines-Parmele	703-388-0309	Barbara.Haines-Parmele@ManTech.com		

#### XI. Summary of December Actions

Action	Lead	By When
Send names and contact information of nominees to the ROSES review panel should be sent to Michael Goodman ( <u>michael.goodman@nasa.gov</u> ) and Francis Lindsay ( <u>francis.lindsay-1@nasa.gov</u> ). The panel itself is likely to meet during January or February 2012 in Washington, DC.	SDR Members and Federal colleagues	ASAP
Contact Fernando Echavarria ( <u>echavarriafr@state.gov</u> ) to engage on the EU-U.S. Dialogue on Space Cooperation.	SDR Members and Federal colleagues	ASAP
Contact Tammy Dickinson (tdickinson@ostp.eop.gov) to pass along issues, concerns, and information from your agency to the White House Office of Science and Technology Policy	SDR Members	Standing

Action	Lead	By When
Contact Tammy Dickinson (tdickinson@ostp.eop.gov) if it would be helpful for OSTP to issue a letter to your Department requesting new (or re-affirmed) designation of representatives. Ideas for other entities that should be represented on the SDR are also welcome.	SDR Members	ASAP
Contact Dennis Wenger (dwenger@nsf.gov) if your agency is able to provide funding support to the University of Colorado-Boulder's Natural Hazards Center.	SDR Members and Federal colleagues	ASAP
Contact the Secretariat (ross.faith@mantech.com) if you are interested in participating in the SDR Coastal Inundation Working Group.	SDR Members and Federal colleagues	Standing
Contact the Secretariat (ross.faith@mantech.com) if you are interested in participating in a task force that will be drafting a lessons learned report covering the earthquakes and tsunami in Japan, New Zealand, Chile, and Haiti.	SDR Members and Federal colleagues	Standing
Contact the Secretariat (ross.faith@mantech.com) if you are interested in participating in the SDR International Working Group.	SDR Members and Federal colleagues	Standing
Send Sezin Tokar (stokar@usaid.gov) your ".gov" e- mail address to receive USG-only updates from USAID on global disaster response activities.	SDR Members and Federal colleagues	Standing
Contact Ross (ross.faith@mantech.com) to receive copies of the Grand Challenges for Disaster Reduction Implementation Plan packets or CD.	SDR Members	Standing
Let Dave (applegate@usgs.gov) or Ross (ross.faith@mantech.com) know how you use the implementation plans, including when you link to the plans from your agency websites. Send Ross or Dave additional distribution suggestions, including relevant contact information.	SDR Members	Standing