# SCIENCE ACTION NETWORK:

## Enabling scientific collaboration for disaster planning and response

**The Science Action Network enables cross-sector disaster preparedness and response through novel academic-agency partnerships and resource sharing.**

The Deepwater Horizon disaster of 2010 was the largest marine oil spill in U.S. history. Three years later, Superstorm Sandy swept the North East, leveling buildings and destroying critical infrastructure in New York City. Both disasters highlighted a shared weakness in the system of emergency response: the slow uptake of non-governmental science and scientific expertise into critical local, regional, and national response planning and decision-making. Low trust between academic scientists and responders hinders critical collaboration.

As environmental disasters become increasingly frequent and more severe due to climate change and extractive resource use, a more efficient system of coordination between science and decision-making in preparation and response to these disasters is imperative.

The **Science Action Network** is a solution uniquely powerful in addressing these scientific collaboration challenges by creating a network of academic and professional scientists that are linked to regional government planning and response bodies to coordinate and streamline scientific input for disaster preparedness and decision-making.

## WHO WE ARE


**PROJECT ADVISORS:**

Jane Lubchenco (Oregon State), Thad Allen (former USCG), Steve Murawski (USF), Marcia McNutt (Science), David Kennedy (former NOAA), Chris Reddy (WHOI)

**IMPLEMENTATION TEAM:**

Scott Lundgren (USCG), Gary Machlis (Clemson), Bob Haddad (NOAA), Debbie Payton (NOAA), Nancy Kinner (UNH), Dana Tulis (EPA), Kris Ludwig (USGS), LaDon Swann (SeaGrant), David Westerholm (NOAA)

**PROJECT TEAM:**

Lindley Mease (Center for Ocean Solutions), Theo Gibbs and Tara Adiseshan (ChangeLabs)


ChangeLabs.

CENTER FOR OCEAN SOLUTIONS

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The Science Action Network would be a network of Regional Academic Hubs, each associated with a federal emergency response region. Through the Hubs, non-governmental scientists from academic institutions, professional societies, and scientific NGOs could contribute to pre-incident preparedness efforts and develop new collaborative research initiatives relevant to fill knowledge gap that emerge during drills and scenario-testing. During a disaster response effort, if necessary, government agencies can access Hub members' scientific expertise in a rapid, streamlined manner because collaborative, high-trust relationships would already be in place. A light-touch leadership council composed of representatives from federal response agencies, relevant industry and NGO stakeholders, and academic institutions would guide the Network.

**THREE GOALS OF THE SCIENTIFIC ACTION NETWORK:**

1. **Bridge cultural gaps between response agencies and academic scientists and create new norms for scientific collaboration**
2. **Drive disaster-relevant and interdisciplinary scientific research through novel academic-agency partnerships and funding opportunities**
3. **Catalyze cross-disaster and cross-institutional scientific exchange**

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### Where We Started

Science Partnerships Enabling Rapid Response (SPERR) was initiated by Jane Lubchenco (Under Secretary of Commerce for oceans and atmosphere and NOAA Administrator) and two Stanford University Institutes, the Center for Ocean Solutions and ChangeLabs, in late 2013. Together, with a team of high-level advisors from academic institutions and federal response agencies, they conducted over 100 in-depth interviews with key stakeholders in academia, government, and industry to understand the obstacles to and enablers of effective scientific collaboration across the crisis planning and response system.

### What's Next?

Under the implementation leadership of the Center for Spills and Environmental Hazards (at UNH), we are piloting the core functions of the Network in two regions, with focus on extreme storm events and oil spills. We actively seek partners and academics from across the country and disciplines to help test the Network over the course of the 16 month pilot. **To join the effort, please contact us!**