

Connecting social science with NOAA's priorities

Executive Summary

In April, Dr. Sullivan established a Social Science Tiger Team (Tiger Team) to recommend ways to fill the most critical social science capacity gaps identified in the draft Social Science Needs Assessment (Needs Assessment). The team was charged to consider, but not be limited, to the following:

- FY14 partnerships: Consider **better leveraging of external grants** (including Cooperative Institutes, Sea Grant, SBIR, SK) to meet mission needs.
- Leveraging existing internal efforts: Consider **intraagency (within NOAA) partnerships** and leverage to meet priority needs.
- Leveraging external partnerships: Consider **interagency leveraging opportunities** including NSF, AAAS Fellows to meet some needs.

The Tiger Team started by identifying and agreeing on the most critical gaps from the Needs Assessment. These gaps are listed below, and are categorized under the three legs of the social science stool - research, operations, and decision-making. We use these functional categories to emphasize that social science gaps encompass a broad perspective that cuts across all levels of the agency's mission. Gaps that appear in more than one functional area (research, operational, decision-making) indicate needs that span across our functional areas.

Research Gaps: Gaps in research

- Understanding Risk Behavior
- Communicating Risk
- Non-Market value information on resiliency and hazards
- Valuing ecosystem services

Operational Gaps: Gaps in our day to day activities

- Fisheries socioeconomic data collection/decision support tools
- Understanding and communicating the value of NOAA's products and services
- Interdisciplinary decision support work for CPO and National Climate Assessment
- Using risk behavior information
- Using risk communication information
- Using non-market value information on resiliency and hazards
- Economic information for resource damage assessments
- Valuing ecosystem services

Decision-making Gaps: Gaps that impede effective decisions

- Understanding and communicating the Value of NOAA's products and services
- Social Science institutionalized across NOAA

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Actions identified to fill those gaps are listed below.

Enhancing Social Science Leadership at NOAA

The culture of NOAA has been slowly evolving toward an understanding of how social science must be integrated into policy in order to achieve the agency's mission. For example, social science is needed to better inform NOAA leadership, congress, OMB, our partners, and our constituents of the social and economic impacts of NOAA's work. Moreover, social science is inconsistently applied across the line offices and not well integrated into NOAA's mission in the broad sense; it is limited in our research and operations and almost entirely lacking in our decision making. If NOAA hopes to meet the societal challenges of the 21st century, it requires both an increase in social science capacity and more efficient use of the social science capacity that currently exists. NOAA must improve the integration of social science into all of NOAA service, science, and stewardship activities and decisions, and that task requires strong leadership across the agency. While NOAA still faces challenges in the integration of social science across the agency, progress made to this point could not have been possible with the strong and consistent support of NOAA Leadership.

Actions include:

- Approve the Terms of Reference for the NOAA Social Science Committee (the Committee) that will report jointly to the Chief Economist and to the Research Council (*complete*).
- Task the Committee with developing and vetting across the agency a Social Science Vision and Strategy. Strategy should include recommendations for filling critical mission and capacity gaps as well as identifying opportunities to leverage internal and external capacity and funds (*in progress*).
- Task the Committee with working with NOAA Budget, PPI, and Line Office Performance Measurement Programs to develop performance measures for measuring and monitoring the efficiency and effectiveness of NOAA at meeting societal goals (*in progress*).

Measuring and Communicating NOAA's Benefit to Society

NOAA needs social science to communicate NOAA's value, to design strategies to guide the work of the entire organization, and to produce NOAA-wide social science information that meets the same high standard as other data at the agency. Understanding and communicating the value of NOAA's programs, products, and services is a critical need that cuts across all of NOAA, and was strongly articulated in the Social Science Needs Assessment.

Actions include:

- As part of the overarching strategy described above, task NOAA Social Science Committee to develop and implement a strategic approach for Valuing NOAA's products and services aimed at insuring maximum ROI for NOAA's investments (*in progress*).
- To support the development of the strategic approach as well as fill other gaps, NWS/NESDIS/OAR/OMAO should immediately agree to share expenses for senior staff-level economist (contractor or FTE) to represent climate, weather, and observational portfolio. This position should be filled during FY14 and would be matrixed with reporting responsibilities to NWS/NESDIS/OAR/OMAO and coordinating responsibilities with NOAA Chief Economist (or equivalent) (*in progress*).
- To support the development of the strategic approach as well as to fill other gaps, NOS/NMFS/OAR use existing capacity, or share expenses for senior staff-level economist to

value the change in value of coastal and ocean ecosystems due to management efforts. This position would be matrixed with reporting responsibilities to NOS/NMFS/OAR and coordinating responsibilities with NOAA Chief Economist (or equivalent) (*in progress*).

- Encourage funding economic impact valuation of projects as part of the FFO and internal research processes, for example, the FFO evaluation criteria could include the language, "Proposals that include funding for an economic valuation of project impacts may be given preference".
- Establish a \$10-\$15K Challenge Grant to implement critical valuation projects, where each office (NMFS, NOS, NWS, NESDIS, OAR, OMAO) commits to matching funds from PPI.

Marine and Coastal Ecosystem Management (Place-based) Socioeconomic actions

NOAA has several key responsibilities related to economics and social science elements of marine and coastal ecosystem management that fall within the purview of fisheries management and coastal management. Marine and coastal ecosystems are the foundation of several NOAA mandates related to NOAA Fisheries and NOAA's Ocean Service, including the following:

- Mandated social impact assessments, economic impact analyses, and economic benefit assessments in support of almost 300 fisheries regulations each year;
- Commercial and recreational economic and socio-cultural surveys and data collections for each of the 47 federal fishery management plans;
- Economic valuation studies underpinning regulations to protect and rebuild marine protected species and restore habitat;
- Socioeconomic research, tools and analysis to improve decision-making and assess management strategies across programs including Coastal Zone Programs and National Estuarine Research Reserves; and
- Social science capability to conduct damage assessment and remediation in coastal and marine ecosystems.

It has been historically challenging to address critical mission requirements due to the limitations in being able to consistently describe how social science elements related to ecosystem management are integrated with natural science and into management and operations.

Actions include:

- Prioritize conducting recreational fisheries economic surveys in Gulf of Mexico. Data will support BLAST, regional economic impact models and other behavioral models (*complete*).
- Hire one recreational fisheries economist (FTE or Contract) in the Southeast Region (*complete*).
- Establish a Virtual Fisheries Economics Laboratory (*in progress*).
- Establish a process with associated social science capacity to identify and address ecosystem management related social science issues to provide greater efficiency in the use of social science capabilities across ecosystem management functions (*in progress*).
- Identify the ecosystems and associated ecosystem services for each region and their relevance to the NOAA mission. For those critical to meeting NOAA's mission: 1) determine the connections and trade-offs between ecosystem services and their relationships to ecosystem function toward a more efficient and effective coastal and fishery management capability, 2) Describe the impacts to society and/or the environment as a result of a change in or loss of an ecosystem function or service. Pilot this approach in the Gulf of Mexico.

Understanding the Socioeconomic Aspects of Environmental Disasters and Hazards for Strategic Decision-making

This area cuts across several of NOAA's strategic goals which cannot be achieved without a strong social science capacity that is integrated with the physical and biological sciences across the Line Offices.

- Weather-Ready Nation - Society is prepared for and responds to weather-related events;
- Resilient Coastal Communities and Economies - Coastal and Great Lakes communities are environmentally and economically sustainable; and
- Climate Adaptation and Mitigation - An informed society anticipating and responding to climate and its impacts.

NOAA's primary responsibilities include helping to sustain a productive, efficient economy through weather and climate products and services, advancing resilient coastal communities that can adapt to the impacts of hazards and climate change by developing and providing coastal decision makers with updated decision-support tools, technical assistance, training, and management strategies related to risk communication, and providing spatially relevant data, including socio-economic data, to support decision-making.

Actions include:

- NWS/OAR use existing capacity, or share expenses for staff-level social scientist (contractor or FTE) to assess and synthesize existing knowledge (with priority on NOAA-funded research: RISA, SARP, Sea Grant, COCA programs) on risk behavior and the communication of risk, vulnerability, and uncertainty (*in progress*).
- NWS, OAR (i.e. Sea Grant) with support of PPI partner with NSF to pursue joint funding of research into communication of risk, vulnerability, and uncertainty through a joint or concurrent call for proposals funded through the Sandy Supplemental (*in progress*).
- WRN and Climate Goals work with the Coastal Goal to develop performance measures relating to societal outcomes, their objectives and ensure attribution to NOAA and establish a strategy for measuring and monitoring these measures (*in progress*).
- NWS, NOS (i.e. CSC), NMFS, NESDIS (i.e. NCDC), PPI, in conjunction with the SS Tiger Team implement recommendations from the NOAA Reports on the Economic Impacts of Weather and Climate Disasters: Recommendations for the Calculation of 2012 Disaster Costs (i.e. develop methods and process) to ensure NOAA-wide accurate and consistent economic impact estimates (*in progress*).
- NWS, NOS and OAR (i.e. CPO) in conjunction with PPI, integrate social science application and methodologies related to Weather and Climate into NOAA research, operations, programming, planning and budgetary (including SEE activities) processes, through annual operating plans and AA, DAA and Program Manager performance plans.