

SAB Work Plan Topic 5: Decision support/social science

Champion(s)

Lynn Scarlett, Richard Moss

Description of Planned Work:

This element of the work plan will explore how social science research can contribute to answering the question: “How are NOAA decision support tools making a difference?” It will adopt a case study approach and select a particular decision support tool and examine whether NOAA is applying robust social science methods and approaches for collecting data and evaluating effectiveness. Possible areas for examination include: How does the responsible office/program engage with stakeholders? What data are collected for evaluation? What social science disciplines and perspectives are adopted? What are the research questions about decision support being raised in the broader research community? Are there opportunities for use of new methodologies such as crowd sourcing data and application of machine learning?

Deliverables: (Expected Product or Outcome—note that this may, but need not necessarily be, a report; other outcomes could be a memo, slide deck presentation, etc.)

We will generate a slide deck or short report that suggests potential opportunities for improving evaluation of the impact of NOAA decision support efforts and outlines ways future evaluations of additional decision support activities could improve understanding of decision support processes more generally (i.e., that contributes to advancing social science research on the topic of decision support).

Timetable: Include interim steps, such as presentations by NOAA or outside experts before the full SAB, engagement with working groups, or other key steps.

Timetable uncertain, but possible steps would include:

- Interactions with line offices and social science research committee to select a decision support tool or activity for evaluation
- Staff preparation of materials to characterize the program, its intended benefits, and ongoing evaluation efforts
- Workshop of NOAA and external social science experts in decision support to explore alternative evaluation approaches and broader research questions about decision support processes and outcomes
- SAB synthesis of workshop input into final slide deck or short report

Participants: SAB Members, NOAA liaisons, NOAA Federal Advisory Committees and Other Collaborators Working on this Topic—Please list and explain. Participants will include, but not be limited to:

Lynn Scarlett

Richard Moss

Steve Polasky

Participation would depend on the case study selected but would include the individuals identified above, scientists and participants in the RISA and SARP programs, engagement of relevant SAB working group(s), and other external decision support and evaluation research experts.

Resources needed: Please describe what is needed

Some staff time for organization information on the decision support tool/program and for supporting the workshop

Travel and workshop costs

Engagement from relevant SAB working group (depends on what tool/program is selected for examination)

SAB members' time

Potential Challenges:

Selection of the case study will be challenging – it will be important to select a case that is broadly representative of the state of evaluation of impact pursued across the Agency or results from the process could be non-representative.

Original Topic Description:

Topic 5: Social Sciences and Decision Support in NOAA (relevant both to Priorities 1 & 2)

In July 2015, the NOAA Social Science Committee released *Vision and Strategy: Supporting NOAA's Mission with Social Science*, which set the agency's social science vision and strategy for the next 3-5 years. The document provides opportunities to align office and program efforts with the goals, objectives, and strategies outlined within. Some examples of NOAA social science programs aimed at presenting NOAA data and information tools in a usable format to both private and public partners include:

- Weather-Ready Nation Ambassadors Program;
- Impact-Based Decision Support Services (IDSS);
- SKYWARN Storm Spotter Program;
- Storm Surge Program; and
- Climate Program Office Communication and Education Program (CommEd).

1. Enhance Use of Decision Support Products, Processes, & Tools for NOAA Social Science Projects

The SAB can review one of NOAA's Social Science programs to see how it meets the goals set forth by the 2015 Social Science Vision and Strategy document. A potential focus could be on "impact-based decision support services of decision support products, processes, and tools", in keeping with the SAB identification of enhanced use of decision support as a priority topic. The SAB can also provide comments for consideration in the next iteration of the *Vision and Strategy: Supporting NOAA's Mission with Social Science* document.

In undertaking this review of the 2015 document and anticipation of a next iteration of the social sciences vision document, the SAB will:

- Examine the criteria NOAA uses to evaluate its social science programs to make sure each program meets the Social Science Vision and Strategy goal to strengthen societal decision-making. How can NOAA evaluate its social sciences goals?
- Assess what, if any, goals are missing from the three goals set by NOAA in the social science vision document. Are areas of social science not addressed in the document?
- Consider research opportunities to add to the current state of social science knowledge that would improve support for the goal of strengthening societal decision-making.
- Assess status and opportunities for enhanced use of machine learning and work with the Social Sciences Committee to evaluate progress on the Mission and Strategic Vision.

2. Review of economic impact and economic values reports

- Assess NOAA Social Sciences Projects, including, per the request from the NOAA Chief Economist Monica Grasso at the SAB meeting in October 2017, an assessment of three reports (timeframe determined by completion of reports but likely 3-6 months after that):
 - Cooperative Research and Development Agreements (CRADA) Economic Impact Study
 - Economic Value of Marine Vessel Observations
 - Economic Impact of Space Weather

Summary of Purpose

The SAB can recommend what science is needed to enhance, develop, and facilitate effective use of the basic decision support and social sciences products; recommend robust processes for working with academia, the commercial sectors, and others to develop what is needed to enhance the utility of decision support tools and social sciences applications; engage with decision support tool users and related stakeholders to identify needs; and develop an evaluation protocol embedded as an ongoing process within the spiral creation of the products and tools.

Enhancing the relevance and utility of decision support tools involves technical, scientific, and communications expertise, as well as understanding the processes and ways in which users frame problems, define needs and use information.

SAB Champions: Lynn Scarlett and Richard Moss