Enhancing Decision Support through Social and Behavioral Sciences: A Convergence Science Approach

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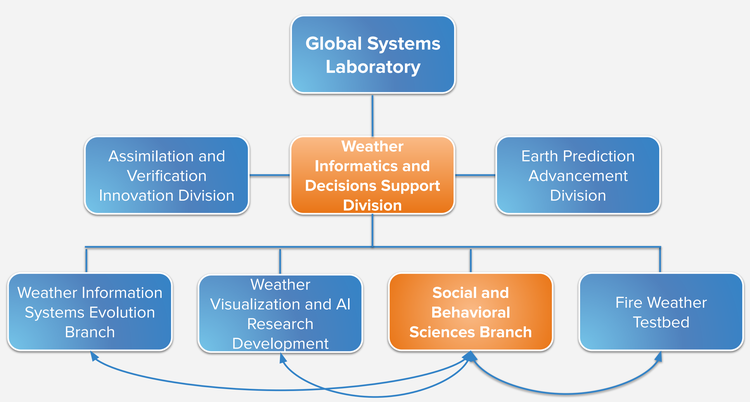
Poster Showcase
#iaem24

Meet the Global Systems Laboratory's Newest Branch!

The Social and Behavioral Sciences (SBS) Branch within the Weather Informatics and Decision Support (WIDS) Division at the Global Systems Laboratory (GSL) in Boulder, Colorado is a newly-developed branch and one of the first of its kind to be integrated into a National Oceanic and Atmospheric Administration (NOAA) research laboratory.

The SBS Branch is uniquely positioned to provide evaluative and research services to improve decision support through product and process evaluations, risk communication and decision science research, as well as social vulnerability studies.

The chart below highlights the integration of the SBS Branch in an effort to advance convergence research to improve forecasts and decision support for key partners, end-users, and the various publics that NOAA serves. This integration is also reflected in the types of ongoing and planned projects that involve close collaboration with other branches and researchers across the laboratory.



SBS Branch Mission

To conduct and communicate social science weather-related research, develop and foster partnerships with key partners, and evaluate the utility and usability of weather products and services to enable informed decision-making among the diverse end-user groups that the Global Systems Laboratory serves.

Core Activities

Researchers within the SBS Branch engage in multiple activities in accordance with the Branch mission, as illustrated above. Our mission and core activities were co-created as a branch and aligned with GSL priorities. We incorporate a convergence science approach throughout these activities.

Current Research

Evaluation of the Dynamic Ensemble-based Scenarios for IDSS (DESI)

This project employs semi-structured interviews with NWS meteorologists to evaluate whether and how they use DESI in their existing workflows, as well as how they communicate forecast uncertainty. Outcomes of this study will inform future priorities for DESI development and advance knowledge of forecaster workflows and forecast uncertainty communication.

Evaluating Fire Weather Products through Partner Lenses

This project aims to understand the decision-making timelines of fire partners leading up to high-risk fire events, evaluate the utility of current fire weather products, explore the potential for new products like fire warnings, and assess the value of incorporating probabilistic information into fire products. This research will result in practical recommendations to enhance fire weather products and services for fire partners and the publics they serve.

Developing a Framework for Extreme Cold Risk Communication

In collaboration with NWS Seattle, Public Health-Seattle King County, and the University of Washington, GSL researchers are participating in a project that will inform the development of a place-specific framework for extreme cold risk communication. Outcomes of this work will inform the development of decision support tools and services created at GSL for emergency management and public health partners.