The Social Science Woven into Meteorology (SSWIM) initiative at the National Weather Center weaves social science concepts and methodologies into the fabric of weather and climate research and applications.

SSWIM considers complex problems at the intersection of weather, climate, and society. We address challenges and opportunities including, but not limited to, improving forecasts and warnings, reducing social vulnerability to natural hazards, and understanding community and cultural adaptations to weather extremes, climate variations, and climate change.

SSWIM's objectives are innovative research and capacity building through

- Increasing the appreciation of the value of qualitative as well as quantitative approaches including archival, ethnographic, statistical, and participatory methods
- Partnering with public, private, and academic sectors, including students, practitioners, and policymakers across the spectrum of stakeholders

Research is essential to examine important questions to enhance societal relevance in weather and climate work.

Social science methods such as focus groups and interviews collect data on cultural beliefs, community priorities, and individual preferences and perspectives. Lazrus ran focus groups on community concerns about climate change impacts on low lying islands in Tuvalu that will be severely influenced by climate change impacts including sea level rise.

Research Example: Integrated Hazardous Service Information

SSWIM researchers worked with NOAA’s Global Systems Division Laboratory and the Hazardous Weather Testbed in Norman to develop a model that illustrates potential connections between all partners in the Research to Operations equation to enhance use and communication of hazardous information (Figure 1). Resulting improvements in decision support can lead to relevant and timely action (Figure 2).

SSWIM’s social science results

- Enhance meaning in communication, e.g. Eosco’s work with the hurricane cone of uncertainty
- Address social vulnerability, e.g., Lazrus’ work on climate impacts in Tuvalu and Zappa’s work on hurricane impacts in Nicaragua
- Examine human behavior, e.g., Gruntfest’s work on flash floods

Selected Research Activities 2009-2010

- Evaluated September 2009 earthquake and tsunami impacts in Samoa and American Samoa
- Participated on Mount Redoubt National Weather Service Assessment team
- Advised on new Tornado “Call to Action” statements
- Held Integrated Hazardous Service Information Workshop
- Considered new ways to convey probabilistic information
- Mapped low water crossings to map flash flood vulnerability

Contact us to stay informed about SSWIM progress, projects, and partnerships
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