

SSWIM

**S O C I A L S C I E N C E**

*woven into*

**Meteorology**



## Placing Social Science in the Nationwide Network of Networks

@ the National Weather Center,  
sponsored by University of  
Oklahoma & NOAA

Dr. Eve Gruntfest

Dr. Heather Lazrus

**American Meteorological Society  
Summer Community Meeting**

Norman, OK - August 11, 2009



Weaving Social Science into Weather & Climate Research & Practice



**Dr. Eve Gruntfest (geographer)**  
**Served as the social scientist on the  
National Research Council Committee**

Presently at WAS\*IS workshop in Boulder, CO

**Social sciences are increasingly involved  
in weather, climate, & hydrology research  
& applications**

**We must learn more about the  
value of information, how it is best  
communicated, and how people respond  
(or don't respond) to information**



## Report recommendation (page 13)

The stakeholders should commission *an independent team of social & physical scientists to conduct an end-user assessment for selected sectors*

The assessment should

- quantify further the **current use** & value of mesoscale data in decisionmaking &
- **project future trends & the value associated** with proposed new observations.

Upon implementation & utilization of improved observations --periodic assessments should be conducted to quantify the changes in mesoscale data use & their added societal impacts & value

**We need adaptive approaches to many questions about utility, value, and efficacy of weather and climate information.**

## **Some key questions for “meeting multiple needs”**

- **Who uses weather information?**
- **When is weather information used?**
- **Who *could* use weather information?**
- **What is weather information worth?**
- **How is weather information best communicated?**  
i.e. twitter
- **How is weather information and uncertainty**
- **understood? i.e. cultural models and linguistic barriers**
- **How is trust established? How is legitimacy judged?**
- **How do people respond to weather information?**
- **How is risk perceived?**
- **How can behavior be motivated to reduce risk?**
- **What makes people vulnerable to hazards?**

## **The social sciences comprise diverse academic disciplines that are concerned with the study of social life of human groups**

- **Anthropology** – community & culture
- **Geography** – society & place
- **Demography** – people & place
- **Communication studies** – making & conveying meaning
- **Psychology** – cognitive & social processes
- **Political Science** – power & politics in society
- **Economics** – behavior & values
- **History** – people in the past
- **Education** – how & what is taught/learned
- **Others...**

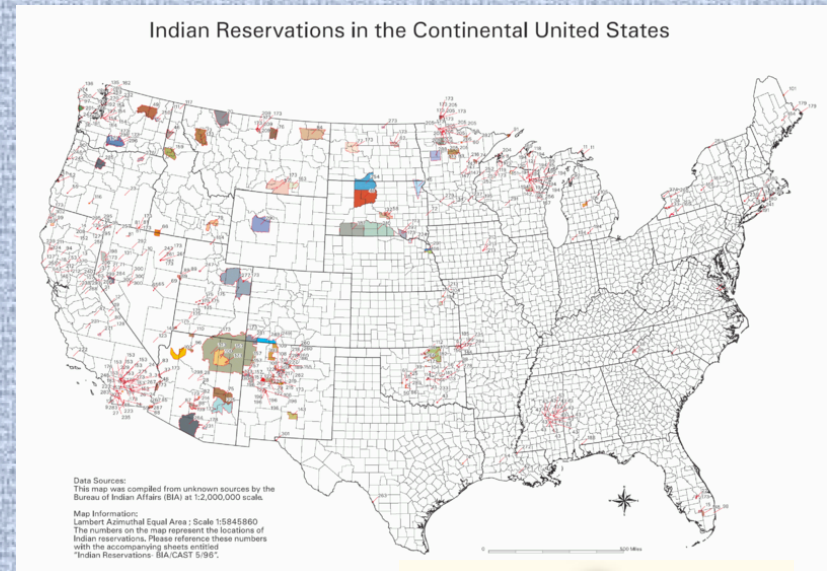
## **Social scientists employ different methodologies that are rigorous quantitative & qualitative ways to collect data, & are appropriate to the discipline, research questions, & study populations**

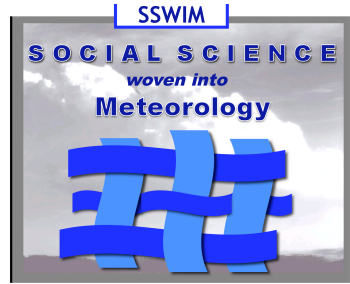
- **Interviews** – protocols & questionnaires
  - Structured
  - Semi-structured
  - Open interviews - i.e. stories
- **Surveys** – systematically administered to a defined sample
- **Direct observations** – researcher is embedded with group
- **Participatory activities** – researcher participates with group
- **Focus groups** – guided activities in group
- **Text analysis** – breakdown of verbal or written texts
- **Others...**

# How can we bring social science into the iterative process from information generation to end user and back again? It's a two-way street!

## Should the Network of Networks

- take advantage of existing network technology such as chat & twitter?
- use enhanced decision support such as next generation warning tools?
- respond to current & future demographic, economic, & political trends?  
How can demographic data be incorporated?
- address special needs populations, land tenure, & governance? i.e. tribal lands





# **SSWIM – Social Science Woven into Meteorology**

**[www.sswim.org](http://www.sswim.org)**

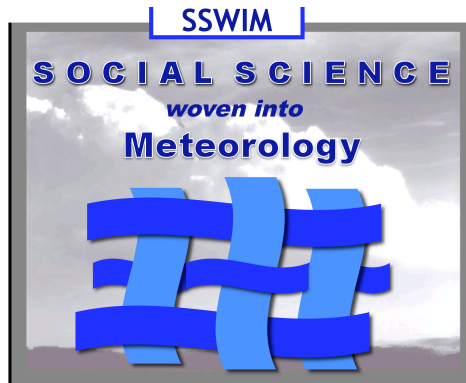
## **Vision**

**Collaborative research & partnerships between the social sciences & meteorology, climatology, & hydrology to enhance societal relevance of research & practice, & reduce risks from atmospheric & other hazards**

## **Mission**

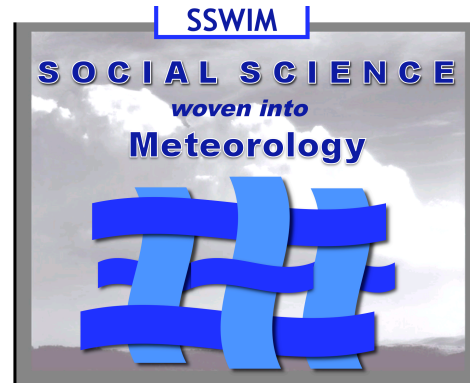
**Creatively and sustainably weave social science concepts & methodologies into the fabric of weather & climate research & practice through academic & professional activities locally, nationally, & globally**

**Weaving Social Science into Weather & Climate Research & Practice**



## SSWIM's four main goals

1. To **weave** social science into the activities of the National Weather Center & elsewhere – not an “add –on”
2. To **earn** a reputation as a center of social science research & practice in weather & climate work in Norman, in the U.S. & internationally
3. To **reflect & actualize** the NOAA vision “to make the best social & economic decisions” & mission “to meet the Nation’s economic, social, & environmental needs”
4. To **revolutionize** the research to operations equation – so it’s no longer top-down and all partners play equal roles – **decision-makers, forecasters, product designers & researchers**



## SSWIM's objectives are innovative research & capacity building

- ... by increasing the appreciation of the value of *qualitative as well as quantitative approaches* including archival, ethnographic, & participatory methods
- ... through partnerships with public, private, & academic sectors, including students, practitioners, & policymakers *across the spectrum of stakeholders*

**We want to accompany  
you on the voyage to the  
development of the  
Nationwide Network of  
Networks**



**Social science footprint  
is growing - we have  
essential roles to play**

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