

# NOAA Earth System Research Laboratory and NCAR Societal Impacts Program Seminar Series

## NCAR Societal Impacts Program (SIP) and Weather and Society Integrated Studies (WAS\*IS)

David Skaggs Research Center (DSRC - NOAA Building)  
325 Broadway  
Boulder, Colorado 80305-3328  
Room GC402 (Multipurpose Room)

Monday, May 19, 2008 2:00 - 3:00pm  
discussion following / refreshments will be served

## The Regional Economic Impact of Disaster: A Rapid Assessment Tool

Hal Cochrane

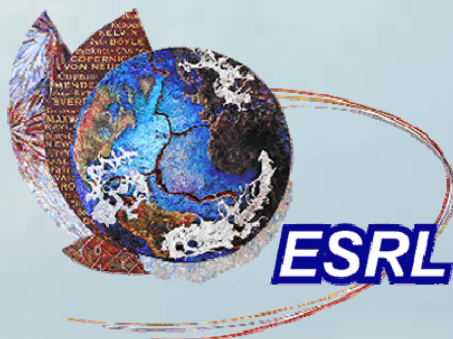
Senior Research Scientist - Cooperative Institute for Research in the Atmosphere (CIRA)  
Colorado State University, Fort Collins, Colorado

### Abstract

A sudden shock to a region's economy can produce losses several times larger than the combined amount of damage to housing, business capital and public infrastructure. The seminar focuses on an operational tool developed at CIRA (Rapid Loss Assessment Tool) designed to quickly estimate regional economic dislocations.

To provide context, the seminar begins with a brief explanation of why loss estimates are key to valuing weather and climate forecasts. In essence, the larger the preventable loss, the greater the value. Therefore, the quantification of regional economic dislocation enhances the tangible benefit of weather related research. The seminar then reviews the tools economists have typically employed in performing such assessments. The shortcomings of such techniques are briefly discussed. CIRA's new approach is laid out in lay terms. A set of twelve proxy economic structures is presented. Each structure captures the inter-industry linkages of prototype economies, varying in employment level as well as type (manufacturing, service, and tourism). CIRA's algorithm for rebalancing a disaster-shocked economy is explained. The influence of reconstruction spending, import flexibility, excess commercial capacity, amount of outside assistance received, and indebtedness are discussed. Typical time paths of recovery are explored and a procedure for totaling all losses provided.

Lastly, the seminar uses *CIRA's Rapid Loss Assessment Tool* to assess the impact of Hurricane Katrina on the New Orleans' economy. The loss sustained as a result of the current slow pace of recovery is contrasted with the results given an accelerated reconstruction effort. To underscore the magnitude of the economic dislocation occurring in New Orleans, the impact of Hurricane Andrew on the Miami-Dade county economy is computed. A number of observations drawn from the model's results relate directly to the value of weather and climate forecasts. Several example studies are proposed. A case is made for the Assessment Tool's consistency and comparability. Furthermore, it is argued that the Tool's results are superior to the generalizations that emerge from case studies and survey research.



Off-Site Guests Attending  
Mention the WAS\*IS Seminar  
when checking in through  
DSRC security.

Questions/Problems  
Contact Julie Singewald  
303-497-6818  
Julie.Singewald@noaa.gov

<b>WAS*IS</b>	CULTURE CHANGE
weather & society * integrated studies	
<a href="http://www.sip.ucar.edu/wasis/">www.sip.ucar.edu/wasis/</a>	
Sponsored by the NCAR Societal Impacts Program	
Changing from what <b>WAS</b> to what <b>IS</b> the future of integrated weather studies	