

# Vulnerability and Resilience Metrics (VaRM)

**Founding Date:** August 2013

**Location:** Hazards & Vulnerability Research Institute, University of South Carolina

## Core expertise:

- Tools and approaches for measuring social vulnerability and disaster resilience
- Loss and damage databases at national and sub-national scales
- Primarily US-focused with applications/usage in other countries

# Training/Professional Ties and Partnerships

**External Advisory Committee:** Kathleen Tierney (University of Colorado, Director, Natural Hazards Center, and Chair, IRDR USA National Committee), Walter Peacock (Texas A&M University, Director, Hazard Reduction and Recovery Center, USA), David Johnston (Massey University, Director, Joint Centre for Disaster Research, and Director IRDR ICoE in Community Resilience, New Zealand), Omar Darío Cardona (Universidad Nacional de Colombia, Director IRDR ICoE in Understanding Risk & Safety), Jörn Birkmann (University of Stuttgart, Director Institute for Spatial Planning and Regional Development)

**CO-DATA Task Group:** Linked Open Data for Global Disaster Risk Research (LODGD)

**Technical Advisor:** OFDA/CRED EM-DAT

**Member:** UK DFID Research Advisory Group

**US FEMA:** Risk Index (Social Vulnerability element)

**US HUD:** Support South Carolina 2015 Flood recovery plan

**US National Academies of Science, Engineering, Medicine:** Resilient America Roundtable; Study Committee on Measuring Disaster Resilience

## FORIN

- Member of initial team drafting FORIN
- Editor of the IRDR pamphlet for 2015 Sendai meeting, *The FORIN Project, Understanding the Causes of Disasters*

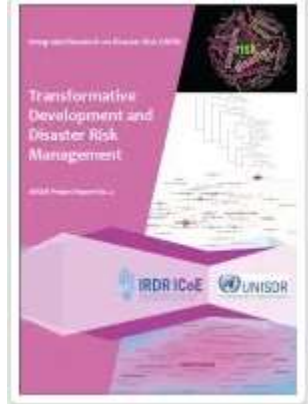
## DATA

- Original leader
- Continued engagement with international DATA issues especially geo-referencing disaster losses and implementing peril classification
- Maintain US Hazard Events and Loss Database, SHELDUS
- Important publications: Cutter, S. L. and M. Gall, 2015. "Sendai Targets at Risk," *Nature Climate Change* 5 (August):707-709.

## AIRDR

- Conceived and implemented initial project
- Developed bibliometric approach for integrated research
- Important publications:
  - Gall, K. H. Nguyen, and S. L. Cutter, 2015. Integrated research on disaster risk: Is it really integrated? *International Journal of Disaster Risk Reduction* 12: 255-267
  - Cutter, S. L., A. Ismail-Zadeh, I. Alcántara-Ayala, O. Altan, D. N. Baker, S. Briceño, H. Gupta, A. Holloway, D. Johnston, G. A. McBean, Y. Ogawa, D. Paton, E. Porio, R. K. Silbereisen, K. Takeuchi, G. B. Valsecchi, C. Vogel, and G. Wu, 2015. Pool knowledge to stem losses from disasters, *Nature* 522:277-279.

# Highlights IRDR ICoE-branded Activities



## **Opportunities:**

- Access to global research and practice community
- Potential partnerships for collaboration
- Platform for recognition of international DRR

## **Challenges:**

- Branding of outputs as “IRDR” (need guidance)
- Awareness of IRDR/ICSU opportunities for engagement
- Relevance of and distinguishing between IRDR “whole”  
and the individual parts

# Next Steps

- ❑ Need more focused connectivity with IRDR generally and SC specifically for possible co-engagement
  
- ❑ ICoE VaRM to communicate more effectively about science to policy activities
  - ❑ Evaluation of metrics for Rockefeller's 100 Resilient Cities
  - ❑ Use of Social Vulnerability Index to support post-flood recovery resources in South Carolina (and in Louisiana)