

# Health, Vulnerability, and the Cascading Effects of Climate Extremes: Collaborative Research in the SW

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RISA Annual Meeting  
Charleston, SC Jan 14, 2015

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CLIMAS: Climate Assessment for the Southwest



# Climate Extremes (Heat)

- *Statement of the Problem:* **Acute** events, layered onto **chronic** conditions
  - Social/economic inequality, health disparities, social/structural vulnerability, infrastructure issues, environmental risks



# Key Questions

- Who is most vulnerable to high heat events? and why?
- How sectors/stakeholders prepare for heat events?
- What are the interactions within and across these sectors that amplify risk potential of heat events?
- What are the areas where use-inspired climate research may be useful? In demand?
- Ultimately: Better understanding of the cascading effects of heat waves/climate extremes in the SW



# Objectives

- Develop use-inspired research priorities for CLIMAS
  - Pilot *process* for setting research priorities
- Regional assessment of heat-based vulnerability
  - Outreach activity that feeds into science planning and research priorities
- Expand Collaborative Network
  - Who are the partners? How do we facilitate collaboration?
  - How can we build/expand collaborative partnerships with (underrepresented) regional stakeholders?

# How concerned are you about the following extreme events?

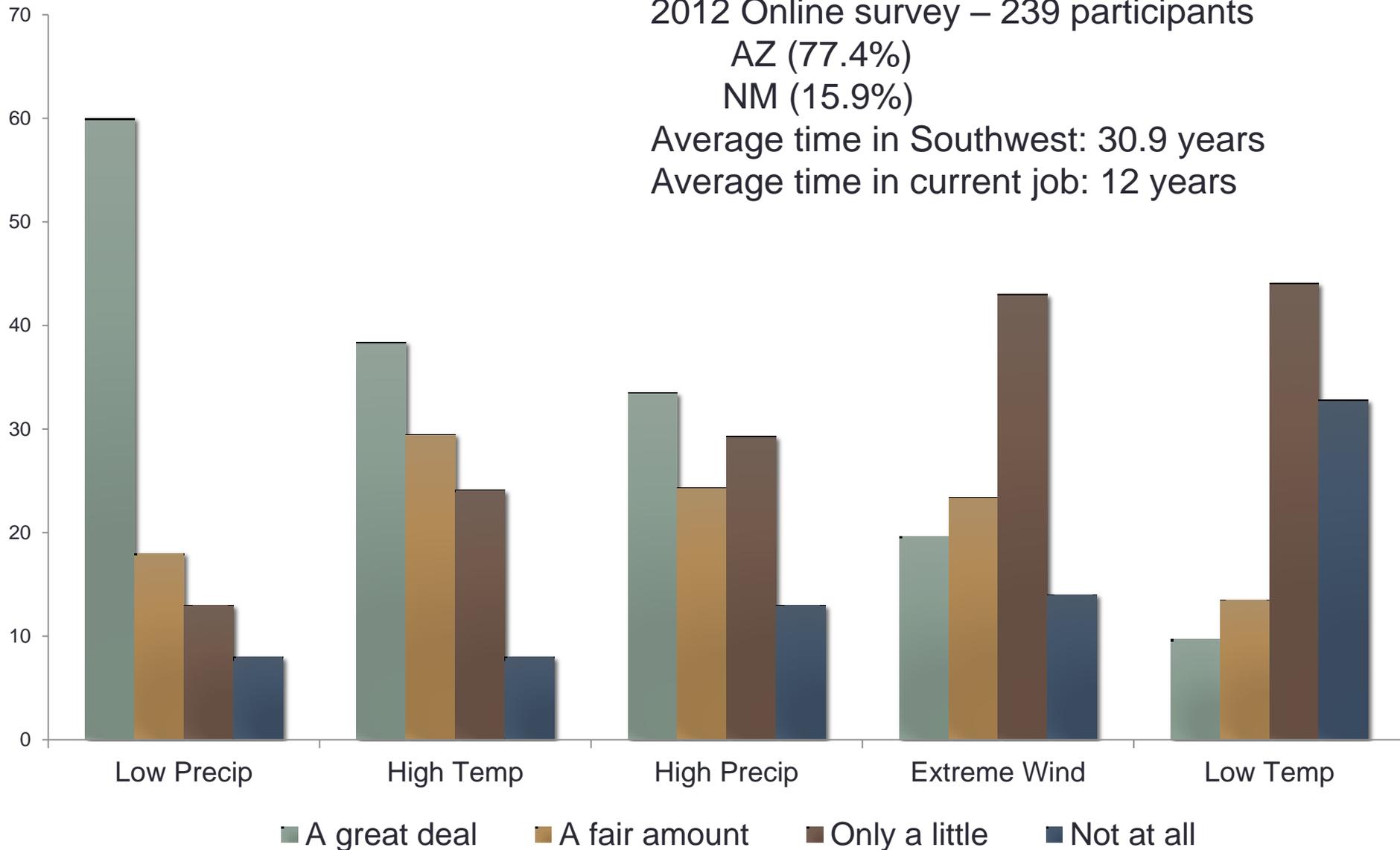
2012 Online survey – 239 participants

AZ (77.4%)

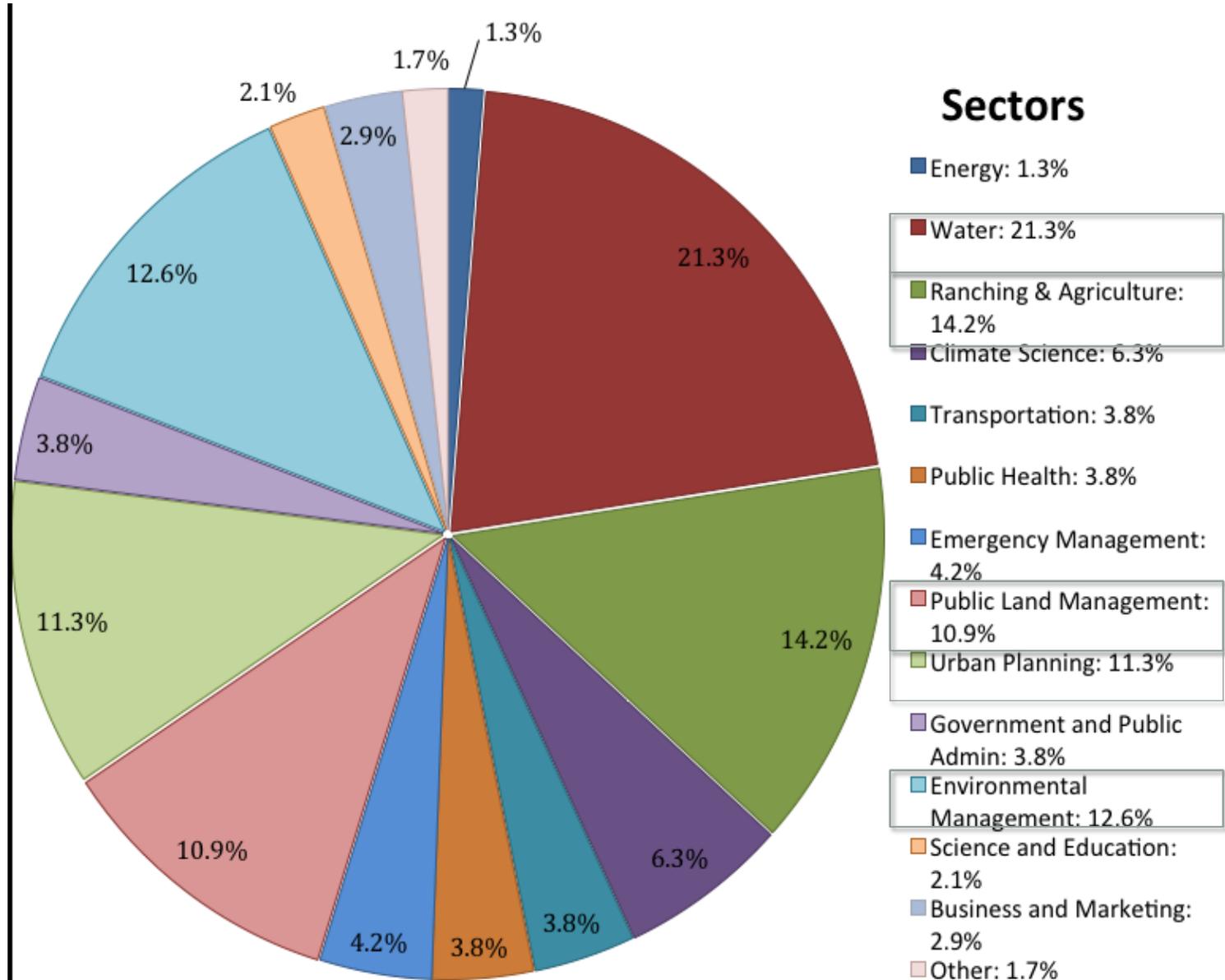
NM (15.9%)

Average time in Southwest: 30.9 years

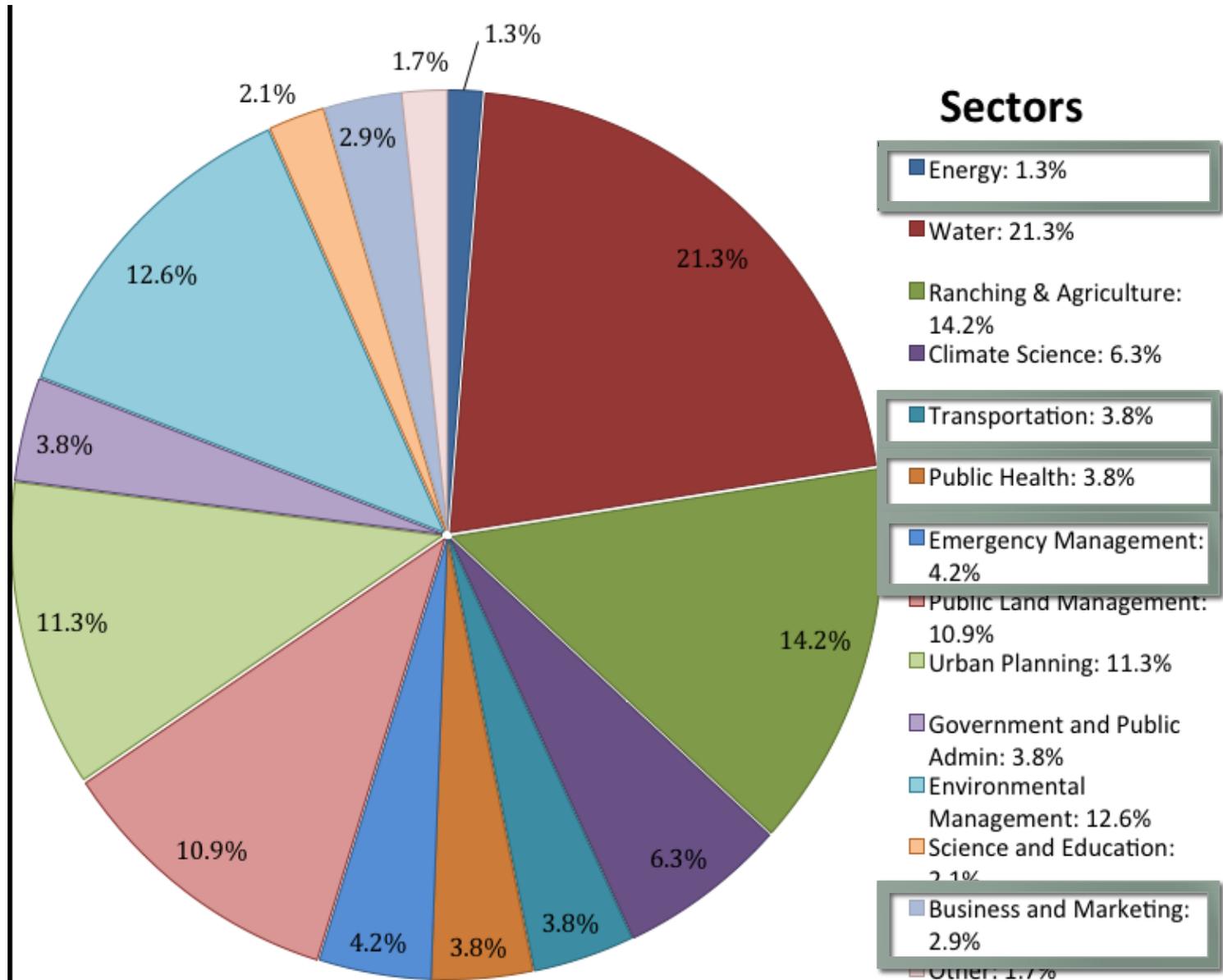
Average time in current job: 12 years



# Which category describes your profession or research interests?



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# Iterative/Flexible Methodology

- *Identify key stakeholders/concerns*
  - Scoping/Key-informant interviews to *document* and explore heat wave planning/concerns/connections across sectors
  - Climate scenarios & past events - prompt further discussion
- *Expand participant pool*
  - Increase engagement with participants in operations/management of our targeted sectors
- *Summarize and Disseminate key findings*
  - Cross-sectoral focus groups/workshops - cascading effects
  - Report - SW Climate (Heat) Extremes Assessment

# Collaborative Partners

- Scope of the issue: bigger than CLIMAS
  - Expanding Existing Partnerships
  - Cultivating New Partnerships
  - Leveraging Other Research Partnerships
- Public health
- Emergency preparedness/management,
- Agricultural and regional business interests,
- Municipal planners (transportation, regional planning, emergency response, etc).
- Regional energy utilities

# Challenges

- Complex Regional Issue: Manageable Project?
  - Key questions we can answer, CLIMAS team
  - Assessment for future work – Information to help others frame questions that are relevant to their goals/interests
  - Leveraging other projects to share workload
- Partners with different timelines/goals/objectives?
  - How do we move forward? How do we prove ourselves to regional partners?
  - Responsive partnership – flexible goals

# Moving Forward

- Holistic focus on climate & health
  - Human Health and Environment
  - Acute & Chronic Conditions within context of Resilience and Vulnerability
  - Collaborative Work: CLIMAS + Regional Stakeholders
- Cascading Effects in a Complicated System
  - Physical effects – Social Impacts
  - Environment & Climate – Social Support & Response Systems
  - Widespread Effects – Amplified by Underlying Vulnerabilities with Disproportionate Impacts

# Questions?

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