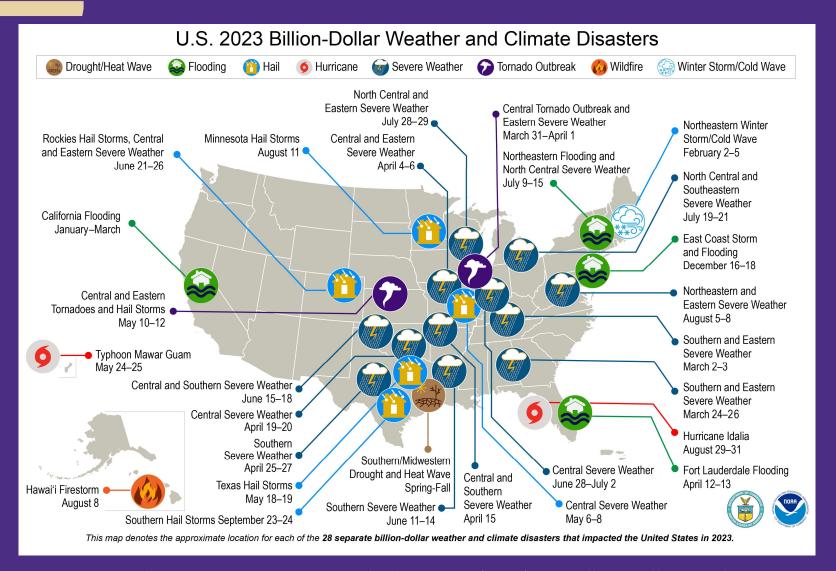
# UW Center for Disaster Resilient Communities (CDRC)

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## **The Problem**



NOAA National Centers for Environmental Information (NCEI) U.S. Billion-Dollar Weather and Climate Disasters (2023). <a href="https://www.ncei.noaa.gov/access/billions/">https://https://www.ncei.noaa.gov/access/billions/</a>, DOI: <a href="https://www.ncei.noaa.gov/access/billions/">10.25921/stkw-7w73</a>



## Center for Disaster Resilient Communities (CDRC)

#### **Depth of expertise**

100+ faculty researchers

#### **Breadth of expertise**

Public health, public policy, planning, healthcare, engineering, hazard processes, & more

#### **Strong foundations**

M9 Project, NIEHS Disaster Research Response

#### Momentum from ongoing transdisciplinary activities

Natural Hazard and Disaster Reconnaissance Facility,
Pacific Northwest Seismic Network, Cascadia Coastlines & Peoples
Hazards Research Hub, Individual Research Projects



















## Center for Disaster Resilient Communities (CDRC)

- > **Vision:** All communities have the knowledge, capacity, and partnerships to anticipate, mitigate, prepare for, respond to, and recover from disasters.
- > Mission: The Center for Disaster Resilient
  Communities brings together the University of
  Washington, government, and community partners
  to create and implement transformational hazard
  and disaster science, build workforce capacity, inform
  equitable disaster risk reduction policy and practice,
  and contribute to more resilient communities.



## CDRC Initial Research Agenda

Communicating Advancing Strengthening Assessing and risk and rightunderstanding of mitigating emergency vulnerabilities in hazard processes sized solutions to preparedness, inspire action and the natural, built, response, and direct change recovery to and social promote health environment and well-being Convene cross-disciplinary collaborations within the University of Washington Cultivate deep, meaningful partnerships with practitioners and communities Innovative development or application of methods, including information gathering, data science, hazard detection, etc. Facilitation of scenario planning, simulations, systems testing, and drills Effective dissemination and implementation through social and behavioral sciences (policy incubator, evidence-informed practice development)

Center for Disaster Resilient Communities. <a href="https://cdrc.uw.edu/">https://cdrc.uw.edu/</a>



### **CDRC Foundational Projects**

- > Build tribal partnerships for disaster resilience
- > Plan for a center on evidenceinformed public health emergency preparedness
- > Launch workshops to begin scoping projects that leverages multidisciplinary expertise
- Assess education and training needs of local health departments



Photo credit: Elizar Mercado



Photo credit: Matias Korfmacher



## Build Tribal Partnerships for Disaster Resilience

- > Foster relationship-building with northwest tribes that are particularly at risk to natural hazards exacerbated by climate change
- > Learn from northwest tribes and tribal organizations about the work they have been engaged in pertaining to disaster resilience, including their information needs related to natural hazard risk and resilience.
- Identify joint areas of interest related to UW CDRC research and training
- > Promote tribal emergency preparedness through a scenario-based exercise that identifies opportunities and challenges for partnering on disaster research.
- > Ensure sustainable engagement of tribal partners throughout the center life cycle





## FEMA HAZARD MITIGATION POLICY EVALUATION



The Federal Emergency Management Agency (FEMA) advocates a "Whole Community" approach to disaster resilience and recovery considering the interests of all private and public stakeholders.

Tribal governments are part of the whole community, but an analysis of FEMA policy documents, grant data, and interviews with hazard management professionals revealed that in practice, Tribes lack equitable access to FEMA assistance.

Barriers include lack of resources to execute mitigation projects; lack of capacity and appropriate assistance to secure grants; and standards that undervalue projects situated on Tribal lands and/or using Indigenous techniques. Tribes also lack a meaningful voice in the direction of federal policy. The <u>published report</u> includes a full discussion of proposed policy changes and workaround strategies.



Scan here for the full report

#### **Proposed Responses**

- Establish an interagency Tribal government task force and reorganize FEMA's Tribal Liaison Offices to improve federal-Tribal engagement.
- Review and revise the Department of Homeland Security <u>Lexicon</u>\* to account for Indigenous concepts, knowledge, and perspectives.
- Change or eliminate the benefitcost analysis requirement that is a formidable barrier to Tribal mitigation projects.
- Include Tribes in all mitigation and preparedness grant programs.

\* The Lexicon is a unified controlled vocabulary that the Dept. of Homeland Security and its sub-agencies use when communicating and sharing data.



- Evaluated how FEMA's grant programs enhances or impedes Tribal hazard mitigation projects
- Identified several policy and institutional factors that prevent Tribal governments from accessing hazard mitigation funding, then recommended fixes
- Follow-up project is examining the role of FEMA-required hazard mitigation plans in Tribal emergency preparedness













### Region 10 PHEPR Center Work Plan

- > CDC contracted with institutions to convene coordinating bodies and facilitate development of five-year work plans for future regional centers focused on <a href="improving the uptake of evidence-based strategies and interventions in public health emergency preparedness and response">improving the uptake of evidence-based strategies and interventions in public health emergency preparedness and response</a> (PHEPR)
- > UW was selected to facilitate development of a <u>Region 10</u> <u>PHEPR</u> work plan, and a <u>Tribal-specific</u> work plan and a <u>regional data ecosystem</u> work plan
- > More information about the project →



# Public Health Emergency Preparedness and Response (PHEPR) Workforce Competencies



### **Collaborative on Extreme Heat Events**

- > A collaborative network led by practitioners from Multnomah County, OR, King County, WA, and Vancouver, BC
- Established in 2023 through the UW Center for Disaster Resilient Communities, with funding from Urban@UW Research to Action Collaboratory
- > Four-part peer sharing webinar series
- Virtual, participatory workshop to co-develop action and research agendas
- More information and ways to stay connected →



#### **Disaster Data Science Lab**

Youngjun Choe, Ph.D. ychoe@uw.edu Associate Professor of Industrial & Systems Engineering, UW

## Goal: Leverage data to help others before, during, and after disasters



Statistics & Machine Learning





#### **Specialties:**

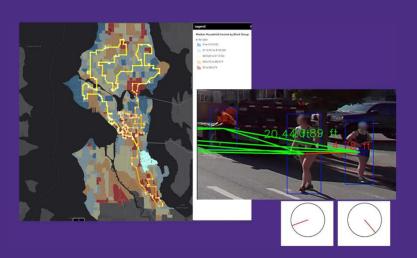
- > Artificial intelligence
- Disaster-related data
- > Critical infrastructure







**Computer vision** 





## Scaling towards sustainability

#### **Evaluating grant opportunities such as:**



 Exploratory Grants for Climate Change and Health Research Center Development



- Humans, Disasters, and the Built Environment
- Leading Engineering for America's Prosperity, Health, and Infrastructure
  - Dynamics of Integrated Socio-Environmental Systems
  - National Research Traineeship



- Building Resilient Infrastructure and Communities



### Discussion

- > What is a priority disaster topic or activity that CDRC should focus on?
- > How can CDRC best collaborate with partner in emergency preparedness across the region, or even across the country?
- > Who else should be involved?



## Thank you!

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https://cdrc.uw.edu/