

Compound Hazards in California

Climate Ready City



Climate Issue: Hazards

- Climate change is causing high temperatures, unpredictable rainfall patterns, and increasing the frequency of extreme weather events in general
- A changing climate makes land more vulnerable to hazards, such as extreme heat, drought and fire
- Science shows that land affected by one hazard is less resilient to other hazards
- When land is affected by multiple hazards, it is called a compound hazard.

Cities need to know where hazards are occurring to understand which communities are at risk of future hazards, and to ensure future development occurs in safe places.



Compound Hazards in California

Areas of California are affected by multiple hazards. Understanding the location of these hazards can help California prepare for emergency relief.

- Researchers used satellites to collect data on the location and frequency of three types of hazards: extreme heat, drought and wildfires
- They found that the climate is becoming warmer and drier, with an increase in fire events
- Certain areas in California are being affected by multiple hazards at the same time
- This trend is expected to continue with increasing temperature and unpredictable rainfall patterns.

The Value of Data

Data on the location and frequency of compound hazards allows states and cities to:

- monitor areas of high risk
- prepare for emergency relief
- support vulnerable communities
- avoid development in high risk areas.

IN A NUTSHELL

- A changing climate is making California vulnerable to hazards, including heat, drought and fire
- Some areas are experiencing multiple hazards at the same time - what's known as compound hazards
- Understanding areas at risk of compound hazards allows cities and states to improve resilience.

WHAT CAN YOUR CITY DO?

PARTNER with local academic or research institutions to complete a hazard risk assessment

DETERMINE which communities are most vulnerable

SHARE findings with other government agencies and organizations

DEVELOP a coordinated approach to decrease risk and improve resilience

TRACK changes in climate, landscape and infrastructure conditions to consistently monitor risk

To find out more information on this case study, contact Erin Shives at Erin.Shives@yale.edu. This research was supported by a Hixon Fellowship.