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## Weathering the Storm: Navigating the Aftermath of Natural Disasters Part 1

The rising tide of environmental crises poses a risk to many regions around the world. This first article in our two-part feature examines the impact that natural disasters have on individuals, homes and communities.

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PHOTO Deltec builds hurricane-resistant homes

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The flames that have torn through the hills of Los Angeles early this year have left a trail of devastation in their wake. For those who call this region home, the scent of smoke and the ash that settles on their cars are reminders of how fragile life can be when nature turns violent. Across the globe, similar stories unfold: hurricanes batter coastal towns, floodwaters rise in unexpected places, and earthquakes shake communities to their core. While disasters have long been a reality, more people are experiencing them with greater frequency and severity, forcing communities everywhere to confront the growing challenges of an unpredictable world. While we use the term 'natural disaster', at WLLW we acknowledge that human activity – through urban development, deforestation and climate change – has intensified many of these events, shaping their impact in ways that are anything but natural.

According to the [United States Census Bureau](#), more than [3 million Americans](#) were displaced from their homes in 2023 due to natural disasters, which is around 1 in 70 people. Rebuild by Design's [Atlas of Accountability](#) states that [90 percent](#) of the 3,144 counties in the United States experienced federally declared weather disasters, such as flooding, wildfires, hurricanes and earthquakes, between 2011 and 2021. These events leave not only physical scars but also emotional and communal ones, reshaping how people live and connect in their aftermath. Yet, amid the destruction, recovery is possible and understanding the challenges and considerations involved is the first step.

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When dealing with the emotional toll of a natural disaster, it's critical to recognize the immediate and long term health risks that can arise. Exposure to contaminated water, hazardous debris, poor air quality and extreme environmental conditions can have lasting effects if not addressed quickly. Time is often of the essence – black mold, for instance, can grow in 24-48 hours in damp, humid conditions, increasing the risk of respiratory illness. Likewise, chemical exposure from burned materials, waterborne diseases and structural hazards can quickly escalate into serious health and safety concerns. Understanding these risks and taking swift action can help protect both individuals and communities as they begin the recovery process.

#### **Waterborne illnesses:**

Floodwaters contaminated by agricultural runoff and sewage overflows can transmit pathogens like E. coli, hepatitis A and cholera. Symptoms range from gastrointestinal distress, including diarrhea and vomiting, to more severe complications like liver inflammation (in the case of hepatitis A) or life-threatening dehydration from cholera.

#### **Foodborne illnesses:**

Prolonged power outages can spoil refrigerated food, creating an environment for bacteria such as salmonella, listeria and E. coli to thrive. When perishable food remains over 40 degrees for over 4 hours, harmful bacteria can multiply rapidly. In severe cases, foodborne illnesses can cause dehydration, kidney complications and neurological effects.

#### **Mold exposure and bacterial growth:**

Mold thrives in damp environments and can worsen indoor air quality, triggering respiratory problems, allergic reactions and sinus infections. Damp conditions following flooding or storm surges can accelerate the spread of harmful microorganisms. For example, in the aftermath of Hurricane Katrina, repair workers reported respiratory illnesses, including sinusitis, toxic pneumonitis, and "Katrina cough".

#### **Respiratory issues:**

Prolonged exposure to fine particulate matter (PM<sub>2.5</sub>) and lead from wildfire smoke can worsen asthma, bronchitis and other lung conditions. Earthquakes can generate large amounts of dust and airborne particles, including asbestos, silica and mold spores from damaged buildings. Inhalation of these substances can trigger respiratory issues.

#### **Chemical exposure:**

Wildfires release toxic pollutants such as burned plastics, synthetic materials and treated wood which emit benzene, dioxins, formaldehyde, and Polycyclic Aromatic Hydrocarbons (PAHs) – all linked to cancer, respiratory issues and endocrine disruption. These toxins linger in airborne particles, surface residues, and contaminated soil, compromising indoor air quality.

#### **Structural and infrastructural hazards:**

Unintentional injuries are most common among the direct health effects of hurricanes and earthquakes. Unstable walls, ceilings, and fallen trees pose risks of injury and electrocution is also a hazard. 'Crush syndrome' following injury is a life-threatening condition where muscle damage releases toxins into the bloodstream. Lastly, carbon monoxide poisoning is a common health risk during power outages, if generators are not operated correctly.

#### **Mental health:**

The trauma of losing a home, possessions or loved ones – combined with the uncertainty of recovery – can lead to anxiety, depression, PTSD and chronic stress. Displacement disrupts routines, strains social support systems, and can cause survivors to feel isolated or powerless. Children and vulnerable individuals are especially at risk.

### **The Ripple Effect: Community Impact of Disasters**

Natural disasters rarely strike in isolation; their effects reverberate across entire communities. Flooded roads cut off access to essential services. Displaced families

strain temporary shelters. Wildfires not only destroy homes but also devastate air quality for miles. Displacement can separate families, strain support networks, and force difficult decisions about whether to rebuild or relocate. Economically, businesses shut down, infrastructure requires costly repairs and livelihoods are upended, especially in industries like agriculture, tourism and local commerce. Low-income communities often face the harshest consequences, lacking the resources to recover quickly.

Communities play a vital role in the recovery process. Neighbors band together to share resources, provide emotional support, and rebuild. Local organizations, governments, and volunteer groups also step in to coordinate relief efforts.

Building community resilience means investing in shared infrastructure, fostering social networks and promoting awareness about disaster preparedness. Strong communities recover faster and emerge more united after a crisis. Here's how individuals and communities can make a difference:

- Share Resources: Donate supplies like clean water, food, and clothing to neighbors in need. Establish community stockpiles for future emergencies.
- Offer Emotional Support: Disasters can take a toll on mental health. Organize gatherings to share experiences and provide mutual encouragement.
- Volunteer or Donate: Contribute time or funds to local organizations working on relief efforts. Initiatives like rebuilding homes, distributing aid or offering child care can ease the recovery process.
- Plan for the Future: Advocate for climate-conscious policies and improved disaster infrastructure, such as flood barriers and firebreaks.

The second part of our feature will cover how to safely manage the aftermath of different disasters and restore your home without compromising your health and wellbeing.

*Feature Image: Deltec builds hurricane-resistant homes across the US that can withstand winds of up to 190 mph. Photo courtesy of Deltec*

#### FURTHER INFO

[Community Recovery Management Toolkit](#)

[Disaster Resiliency and Recovery Resources: A Guide for Rural Communities](#)

[Rural Communities Face Unique Challenges in Recovering](#)

[Wellbeing in Disaster Recovery](#)



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