

# Health Impacts of Climate Change



**Climate change** is the shift in Earth's long-term weather patterns. Climate change affects the balance of ecosystems that support life and biodiversity and impacts people's health. It causes extreme weather events, including increases in intense hurricanes, floods, heat waves, droughts, forest fires and coastal erosion. Shifts in weather patterns and temperature are natural, but humans have been responsible for the changes in our environment for the past 200 years.

As the global average temperature increases, we will continue to experience extreme weather events, heat waves, rising costs in coastal cities, increased health problems and costs and many more issues.

## Health impacts of severe weather

Extreme weather caused by climate change poses safety hazards and health risks.

Severe storms and other extreme weather can result in injuries and fatalities while also contributing to long-term mental health issues.

Severe weather events deeply affect public health. Areas that experience wildfires and harsh drought conditions suffer from reduced air quality, resulting in respiratory and cardiovascular hospitalizations for lung illnesses, bronchitis and other breathing problems.

## Factors that impact health

- **Severe weather:** Injuries and fatalities due to extreme weather events, which can cause adverse mental health impacts.
- **Air pollution:** Increased prevalence of asthma and other respiratory diseases due to heightened levels of air pollutants and elevated risk of cardiovascular diseases.
- **Changes in vector ecology:** Rising incidence of vector-borne diseases, including malaria, dengue fever, encephalitis, hantavirus, Rift Valley fever, Lyme disease, Chikungunya and West Nile virus.
- **Increasing allergens:** A surge in respiratory allergies and asthma due to the increase of allergenic pollens and moulds.
- **Water quality impacts:** Increased cases of cholera, cryptosporidiosis, campylobacter, leptospirosis and harmful algal blooms.
- **Water and food supply impacts:** Shortages in food supply leading to malnutrition and an increased risk of diarrheal diseases due to contaminated water sources.
- **Environmental degradation:** Forced migration and civil conflict stemming from resource scarcity and competition causing profound mental health impacts on affected populations.
- **Extreme heat:** A higher incidence of heat-related illnesses and fatalities.





## Who is most at risk?

Everyone feels climate change impacts, but certain groups face greater risks due to climate and non-climate factors. [That includes people living on coastlines, floodplains or in poverty,](#) who may struggle to prepare for extreme weather events.

Children, older adults, pregnant, breastfeeding and postpartum women, as well as Indigenous peoples, those with chronic medical conditions and those with disabilities, [are also at increased risk of health effects](#) from climate change.

## Weather-related illnesses

Urban heat islands, combined with an aging population and increased urbanization, are [projected to increase the vulnerability of urban populations](#) to heat-related health impacts in the future. Although climate change has brought milder winters, underserved populations continue to suffer an increased susceptibility to cold weather. Housing, age and baseline health [all affect someone's vulnerability to heat or cold-related illnesses.](#)

## Extreme weather events

The Environmental Defense Fund says, “It’s hard to pinpoint whether climate change has caused a specific weather event but the trajectory is clear” [It’s highly likely that human-caused global warming is making extreme heat waves and heat islands more frequent.](#) Higher temperatures also boost evaporation, bringing on droughts, storms and flooding.

## Environmental Racism

Environmental racism is a type of inequality where people of colour, of lower income or belonging to a minority group, experience a disproportionate [risk of exposure to climate change and its related health conditions.](#)

Environmental racism is a form of systemic racism rather than individual racism. That means it [is the result of institutional policies and practices](#) rather than individual beliefs and actions.

## Vector- borne diseases

Climate change also contributes to an increase in vector-borne illnesses. Organisms that [transmit pathogens are becoming more prominent](#) as temperatures rise and winters become more mild, increasing the risk of vector-borne illnesses in our communities.



## Respiratory health and air quality

Other pollutants are released at the same time as greenhouse gases, affecting our air quality. These include:

- **Nitrogen oxide:** This compound is a by-product of fossil fuel combustion. Nitrogen oxide is a lung irritant and exacerbates respiratory problems.
- **Ozone:** As global temperatures rise, increased ground-level ozone exposure can lead to respiratory inflammation.
- **Particulate matter:** These minuscule particles in the air originate from various sources, including vehicle emissions and industrial processes. Particulate matter can penetrate lung tissues, causing adverse health effects.
- **Allergens:** Rising temperatures and longer growing seasons can benefit pollen, mould and mildew, leading to extended allergy seasons.

## Mental health impacts

Climate change can also affect our mental health, increasing pressure on our health services. Extreme weather events can cause destruction, displacement and death, leading to mental health problems like anxiety, depression and post-traumatic stress disorder. Climate change can also cause indirect mental health effects from worsening living conditions and the disruption of health services.

**Eco-anxiety** is a chronic fear of environmental doom surrounding issues like climate change, pollution and overpopulation, as defined by the American Psychological Association.

## Food and water security

The number of people suffering acute food insecurity increased from 135 million in 2019 to 345 million in 82 countries by June 2022, as the war in Ukraine, supply chain disruptions and the continued economic fallout of the COVID-19 pandemic pushed food prices to all-time highs.

Our food system is estimated to be responsible for a third of the global greenhouse gas emissions. Climate change will increase adverse effects on agriculture production from rising temperatures, severe storms and floods and growing pests. Above the 2 C threshold for global temperature increase, adapting crops will become more expensive and challenging.

Especially in the world's most insecure regions, crop yields will fall without solutions and continue to push people into poverty.





## Calls to action

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Climate change is a worldwide health emergency that threatens health, development and economic systems. Leaders must reaffirm their dedication to addressing climate change amid extreme heat, fires and storms. Health professionals and organizations urge policymakers to mitigate the effects of climate change. Doing so can significantly enhance health and promote sustainable development for everybody.

If we are going to achieve the [ambitions of the Paris Agreement and Sustainable Development Goals, the health sector must do more.](#) With the right policies and investments today, we have the opportunity to realize our vision of healthy people in healthy places on a healthy planet.

### How municipalities can foster climate action

Municipalities can take a range of actions to implement effective climate action initiatives, including:

- Investing in renewable energy sources to reduce greenhouse gas emissions.
- Promoting energy-efficient buildings and transportation systems.
- Developing comprehensive recycling and waste management programs.
- Creating green spaces and urban forests to enhance carbon sequestration.
- Fostering sustainable public transportation and bike-sharing programs.
- Encouraging water conservation through efficient infrastructure and public awareness.
- Supporting local food production and reducing food waste can help lower emissions.
- Enforcing green building codes and incentivizing eco-friendly construction practices.
- Promoting environmental education and awareness among residents.

By integrating these initiatives, [municipalities can contribute significantly to climate action, social justice and community resilience,](#) creating a more sustainable and equitable future.

Established in 1969, the Conservation Council of New Brunswick is the province's leading public advocate for environmental protection.

A member of the United Nations' Global 500 Roll of Honour, we work to find practical solutions to help families and citizens, educators, governments and businesses protect the air we breathe, the water we drink, the precious marine ecosystem and the land, including the forests, that support us.



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