CLIMATE CHANGE & VULNERABLE POPULATIONS

Climate change threatens human health, including mental health, and limits access to clean air, safe drinking water, nutritious food, and shelter. While all Americans are at risk, some populations are disproportionately vulnerable, including those with low income, communities of color, immigrant groups, those with limited English proficiency, indigenous peoples, children, pregnant women, older adults, persons with disabilities, and persons with preexisting or chronic medical conditions (Figure 1). [1]

Hourly Wage Earners: Those working hourly-wage jobs, two thirds of which are women, are often in a much less secure position than their salary-earning counterparts when it comes to labor lost due to disasters. According to the U.S. Department of Commerce's Report on the aftermath of Superstorm Sandy, significant losses in tourism spending reduced "employment by over 11,000 workers" primarily in sectors that paid hourly wage.

Low Income Households: Those already living near, at, or below the poverty line are especially at risk to climate change. Low income is one of the strongest predictors of compromised health as well as an individual's ability to recover from disasters. Moreover, natural disasters disproportionately impact the poor because of things such as inadequate housing, social exclusion, a diminished ability to evacuate, lack of property insurance, and more acute emotional stress. Low-income populations are also more likely to live or work in areas with greater exposure to environmental hazards.
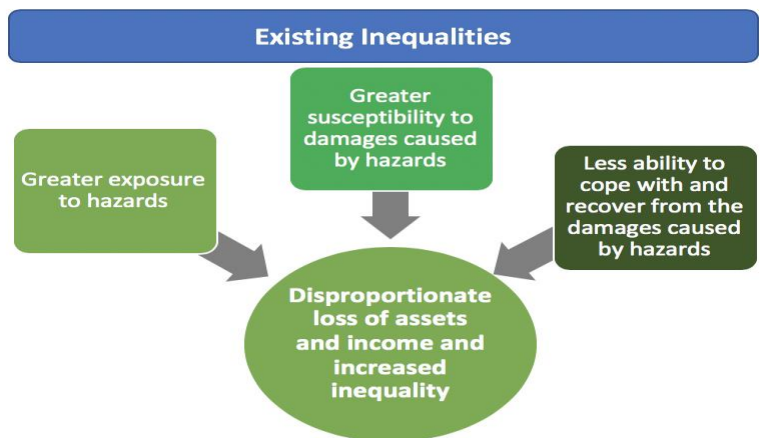
FAST FACTS

Washtenaw County is the 8th most segregated metro region in the country.

There is a 10-year difference in life expectancy between African American and white residents in the County and a 16-year difference between Latino and white residents.

60% of African American residents in Washtenaw County live in low-income areas with limited job growth.

There is a 35-point gap on third-grade reading tests between African American and white students within the County.

As of 2012, five million more women than men were living below the U.S. poverty line; single women are more likely to support an entire household on a minimum wage income than single men.

Since 2008, climate change-induced disasters have displaced an average of 21.7 million people each year — 59,600 people every day, 41 people every minute. Tens of millions of people will be forced from their homes in the next decade as a result of climate change, equaling the biggest refugee crisis the world has ever seen.

Figure 1: Climate change exacerbates existing inequalities and vulnerabilities. Persons who face intersecting inequalities due to discrimination based on gender, gender identity, disability, race, ethnicity, economic status, age, among others, are among those populations with the least ability to withstand the inevitable effects of climate change.

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[1] This document is based on a flyer created by the U.S. Global Change Research Program

Outdoor Workers: Outdoor workers are among the first to be exposed to the effects of climate change through increases in temperature, poor air quality, extreme weather, diseases transmitted by ticks and mosquitoes, industrial exposures, and damage to infrastructure. At risk outdoor workers include: farmers, ranchers, and other agricultural workers; fisher folk; construction workers; paramedics, firefighters, police, and other first responders; and transportation workers.

Those with Limited English Proficiency: Limited English proficiency can limit a person's ability to access support available during a disaster as well as their ability to respond to and recover from disasters. It can also result in isolation from other segments of the population, and social isolation can be a serious health risk.

Older Adults: Age is the single greatest risk factor related to illness and death from extreme heat. Additionally, the elderly are more likely to have pre-existing medical conditions or compromised mobility, which reduces their ability to respond to extreme heat and extreme weather events (which are both likely to become more frequent due to climate change). Moreover, the increased likelihood of chronic disease, combined with the fact that older adults are more susceptible to air pollution, makes them a uniquely vulnerable population.

Youth: Children spend more time outside and have faster breathing rates than adults, increasing their risk for respiratory problems related to things such as ground level ozone, airborne particulates, wildfire smoke, and allergens: all of which will be exacerbated by climate change. Moreover, because their immune systems are not fully developed, children are more susceptible to infectious diseases and are susceptible to significant emotional trauma from displacement, loss of home or school, and direct exposure to a natural disaster.

Minorities: Race and ethnicity strongly correlate with disparities in health, exposure to environmental pollution, and vulnerability to natural hazards. Research consistently finds race-based environmental inequities across many variables, including the tendency for minority populations to live closer to noxious facilities and to be exposed to pollution at greater rates than whites. Moreover, minority communities often have less access to parks and nutritious food, and are more likely to live in substandard housing, all of which can negatively impact health outcomes.

Those with Pre-Existing Medical Conditions: Those with pre-existing medical conditions, such as heart disease, diabetes, asthma, chronic obstructive pulmonary disease (COPD), and poor mental health are particularly vulnerable to the impacts of climate change. For example, increases in heat and extreme weather can cause physiological stress while also limiting access to medicine, medical services, or food.

Pregnant Women: Climate-related exposures may lead to adverse pregnancy outcomes, including spontaneous abortion, low birth weight, preterm birth, and risks to newborns and infants including increased neonatal death, dehydration, malnutrition, diarrhea, and respiratory diseases.

LEARN MORE

The City of Ann Arbor is working with partners to help identify and reduce the vulnerability of our community. Find out more and get engaged at www.a2gov.org/sustainability.