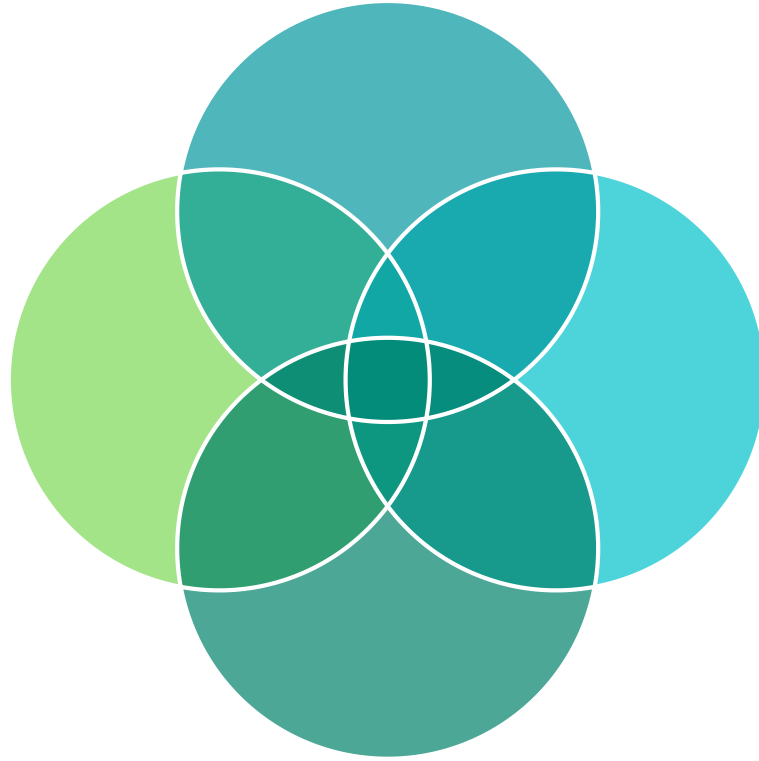


Issue: Climate Change



The Influence of Environmental Toxicity, Inequity and Capitalism on Reproductive Health

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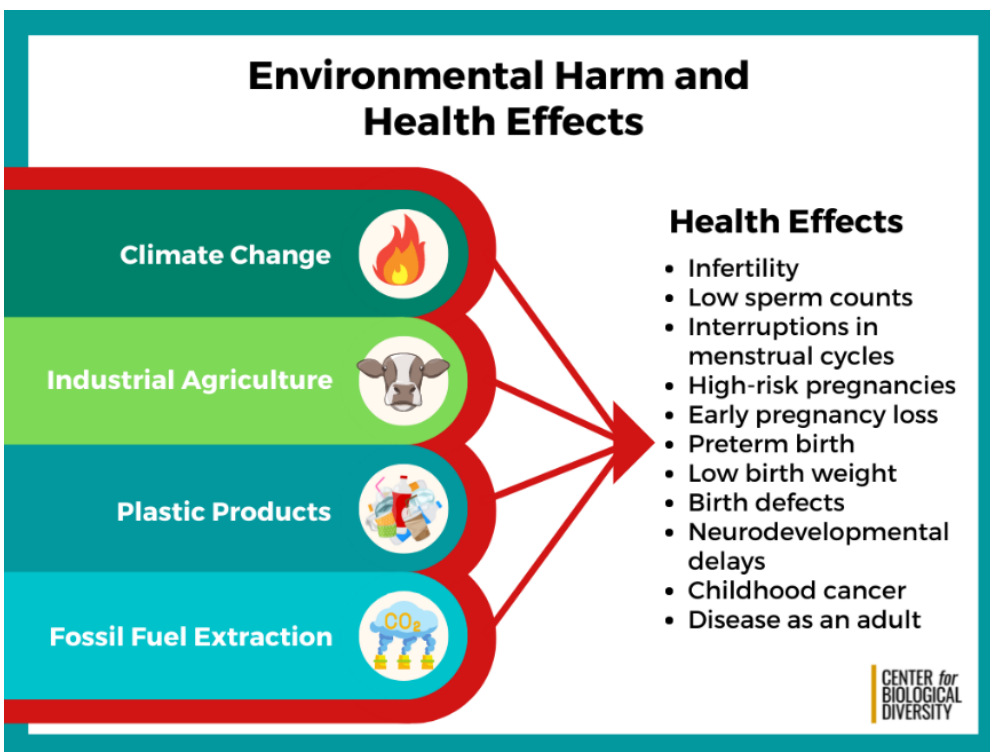
About This Paper

Our health and the environment are deeply interconnected. The exploitation of people, animals, and nature drives the environmental crises we face today and damages the health of the most marginalized people. Reproductive health, specifically, is affected by poor environmental quality, making it difficult for people to have healthy pregnancies and parents to raise their children in safe and healthy communities. Improving environmental conditions results in positive public health outcomes and is essential for achieving reproductive justice.

Many invisible environmental threats — such as toxic chemicals in the air and water and extreme temperatures — impede reproductive justice and cause harm to pregnant people, fetuses, infants and children. This paper explores how climate change — driven by capitalism — effects reproductive health.

This is just one chapter in a much larger report, [The Influence of Environmental Toxicity, Inequity and Capitalism on Reproductive Health](#). The report seeks to help people understand the links between environmental harm and reproductive harm more clearly. It also explores the role capitalist systems play in undermining reproductive and environmental health and hopes to demonstrate that in order to achieve reproductive justice we must overhaul extractive and exploitative systems to help people and the planet thrive.

By exposing the connections between climate change and negative reproductive health outcomes such as infertility, low sperm counts, interruptions in menstrual cycles, high-risk pregnancies, early pregnancy loss, birth defects, preterm birth, and low birth weight, we hope to increase awareness of the invisible threat of climate change, illuminate the role of capitalist growth models in causing harm, and propose solutions for mitigating the ongoing reproductive injustice caused by this environmental crisis.



Visit [the website](#) to view the full report, including the chapters on fossil fuel extraction, plastic products, and industrial agriculture.

Climate Change

The Issue

Human activities have increased the amount of greenhouse gases in the atmosphere, warming the Earth's climate and resulting in changing weather patterns. These activities — including the overconsumption of raw and material goods, deforestation, carbon-intensive agriculture, and the burning of fossil fuels — are [changing how the planet and its ecosystems function](#). Climate change is creating more intense and frequent temperature extremes, wildfires, floods and other [serious weather events](#) that displace and kill people, increase disease risks, and increase pollutants in the air, water, food and soil. One-third of all animal and plant species on the planet could face extinction by 2070 [due to climate change](#).

With the current rate of climate change, [heat waves are predicted to get worse and last longer](#), posing threats to human health and the environment. Climate change also [worsens air quality](#), causing ground-level ozone to form. While ozone in the atmosphere keeps the planet healthy, ground-level ozone can be toxic to humans when inhaled. In addition to air pollution, climate change has increased droughts, flooding, and extreme heat, making certain neighborhoods and regions unlivable. These extreme weather events also threaten food security, reducing the nutritiousness, safety, and production of crops and exposing food that people later consume to [harmful toxicants](#). These public health harms will continue to increase as climate instability worsens.

This paper aims to provide a brief, introductory overview of the relationship between climate change and reproductive justice. It does not intend to cover the complex, comprehensive harms caused by climate change to reproductive justice.

The Reproductive Health Harms of Climate Change

Climate change presents new health risks to pregnant people and babies in utero and exacerbates health risks that are already present, creating harmful outcomes. The American College of Obstetricians and Gynecologists has recognized climate change as an [urgent women's health issue](#).

[Extreme heat](#) is among the most harmful climate change outcomes for people, causing more fatalities than all other extreme weather events combined. Extreme heat exposure is particularly harmful for pregnant people and newborn babies and is [linked to](#) preterm labor, stillborn births, low birth weight, infant mortality and developmental delays. The impact of heat is notable — [several studies found](#) heat exposure increases the risk of preterm birth from 8.6% to 21%. This increase was even higher for pregnant people of color.

Preterm labor and low birth weight are [dangerous for infants and lead to health problems](#) in adulthood, including diabetes, heart disease, asthma and high blood pressure. Newborns are more vulnerable to heat exposure because they have less ability to regulate their body temperature, making high temperatures more dangerous. Heat and humidity have also expanded the geographical range of vector-borne diseases such as Zika and Lyme, which are particularly dangerous for [pregnant people and their babies](#).

Climate change has also increased the duration and intensity of wildfire season, [raising the amount of air pollutants](#). Wildfire smoke affects both pregnant people and fetuses, increasing chances of preterm birth, low birth weight, and psychosocial stress that may [affect fetal development](#). Pregnant people are particularly [at risk from compromised air quality](#) because of the physiological changes they experience during pregnancy, including higher respiratory rates and plasma volumes. Wildfire smoke exposure has also been shown to potentially decrease lung function and worsen cases of asthma in children. This impedes parents' ability to raise children in safe environments — a core tenet of reproductive justice.

Respiratory issues are further exacerbated by the increase of ground-level ozone due to increasing temperatures. Ozone is an air pollutant that can cause respiratory illnesses during pregnancy that lead to low birth weight or preterm labor. Extreme weather events, such as hurricanes and floods, have also been linked with [poor birth outcomes](#) as well as poor nutrition and diarrhea. This is because floods, hurricanes, and wildfire can increase levels of toxics and pollutants in water and food, which can make their way into human bodies [through eating and drinking](#).

The ongoing increase in carbon dioxide concentrations, in addition to driving climate change, is [reducing the nutrient density of food](#). Further, climate change is increasing the likelihood of toxic contaminants and pathogens in food. Rising ocean surface temperatures harm food sources as well, because warmer water temperatures can increase an animal's metabolic rate and their mercury absorption. This can cause increased mercury in the food chain. When mercury is consumed by pregnant people, it leads to a higher risk of fetal developmental delays. The trickle-down effects of climate change on food security are complex and [particularly dangerous for pregnant people](#) because they have specific nutritional needs.

The harms of climate change-fueled severe weather events are long lasting and extend beyond the immediate incident. For example, pregnant women and birth outcomes continued to be affected by Hurricane Katrina [five to seven years after the storm](#). These long-term effects often include people's ability to access obstetric care and nursing support, as seen in the [aftermath of Hurricane Maria in Puerto Rico](#).

Weather-related events have also been linked with worsened mental health outcomes pre- and postnatally, with severe maternal stress increasing the risk of pregnancy complications, such as preterm labor. Severe weather events also lead to increased rates of sexual violence, the implications of which are particularly hard to manage if one loses access to mental and reproductive healthcare.

How Climate Change Is Linked to Capitalism and Inequity

Climate change is clearly and powerfully driven by capitalist systems and behaviors. Fossil fuel development and use, carbon-intensive agriculture, and other industrial processes responsible for the majority of greenhouse gas emissions are driven by profit growth rather than public interest or need. Industry-driven government policies — along with excessive overconsumption of resources and material goods — maintains the systems of oil and gas extraction, factory production, and wastefulness that fuel climate change.



If growth continues to be seen as the primary measure of economic health, humans will continue to be exploited — and the environment pushed past its carrying capacity — to generate private profit. These harms disproportionately fall on communities of color and low-wealth individuals who cannot afford to move to safer environments, access comprehensive healthcare, or otherwise mitigate exposure to toxic chemicals and climate-related harms.

Not only does capitalism perpetuate climate change, but the profit-driven market has also created disparities in who has the necessary resources to care for the health problems it triggers: Some people are harmed by climate change [far more than others](#). The amount of harm is based on a range of factors, including geographical location, economic resources, race, and gender; and those most affected are typically the lowest contributors to greenhouse gas emissions.

Heat Exposure

Low-income communities and Black, Indigenous and people of color are more likely to experience extreme heat and [less likely to have resources like air conditioning](#) to keep them cool. Black and Indigenous people in the United States are 50% less likely to have air conditioning and [spend a greater percentage of their income on it](#) when they do have it. Black, Hispanic and Indigenous households report significantly more energy insecurity than white households. Black homes experience 43% [higher energy burdens](#) than white homes, Hispanic households experience 20% higher burdens, and Indigenous households report about 45% greater energy burdens than white homes. These inequalities make it harder to combat heat exposure.

Low-wealth communities also experience greater exposure to wildfire smoke because they have [less access to technology that would reduce exposure](#), such as air purifiers. Comprehensive healthcare that could mitigate the impacts of climate change on reproductive health are also [less accessible to many vulnerable communities](#). High heat exposure can cause adverse birth outcomes.

Pregnant Black, Indigenous and Asian people are [more likely to have a preterm birth](#) related to climate change triggers like heat exposure than white mothers, and Black pregnant people also have greater rates of heat-related hospitalization than other pregnant people.

This is likely due to multiple systems of structural racism, including disparities in heat exposure and unequal access to healthcare and resources. These outcomes are [worse for pregnant people who work outdoors](#), with pregnant agricultural workers experiencing exceptionally high exposure to climate risks while having less power to take breaks or request accommodation.

Economic and Health Effects

The U.S. capitalist economic framework has left women, and especially women of color, poorer than men. Climate change highlights this disparity because women tend to have fewer resources to rely on during times of [climate change-related crisis](#), such as droughts, floods, heat waves and storms. Women are more likely to be caregivers, which affords them less flexibility to freely respond to and protect themselves from weather crises. The caregiver role also places [more economic](#) and social responsibility on women to care for children or ill family members during times of crisis. During Hurricane Katrina, for example, women were less likely than men to be able to evacuate during the storm or to [recover financially and mentally afterwards](#). In the aftermath of Katrina, there was an increase in domestic violence, mental health problems, and housing crises, which left young, single, Black mothers the most vulnerable.

Black women are already [3 to 4 times more likely to die](#) from pregnancy complications than white women because of racial discrimination and stress-related comorbidities, so risk factors caused by climate change only further threaten the mortality of pregnant Black people. Black people have been found to have [higher rates of post-traumatic stress](#) following a natural disaster than white people. Hurricane Maria in Puerto Rico left women struggling to find reproductive healthcare, [including emergency obstetric services](#).

Extreme weather events can also limit access to abortions and birth control, making reproductive justice and autonomy over whether to become pregnant difficult. Hurricane Katrina caused disruption in family planning services for young women in New Orleans even five to six months after the storm. At that time 40% of young women reported they weren't using birth control and 4% experienced an unintended pregnancy [because they couldn't access care](#). A study on the effects of [Hurricane Ike in Texas](#) discovered that Black women reported greater difficulty than their white or Hispanic counterparts in accessing contraception following the natural disaster.



Access to reproductive healthcare has been shown to increase women's [social and economic opportunities](#) and limit population growth, both of which contribute to increased economic freedom for women, resiliency in times of crisis, long-term greenhouse gas emissions-reductions, and overall better outcomes for people and the planet.

Case Study: Extreme Heat and Redlining

Black women are harmed by climate change at much higher rates than the general population, but their unique experience is often overlooked. Extreme heat elevates [rates of preterm labor and low birth weight](#) for everyone, but these harmful outcomes are worse for Black mothers because of institutional disparities. A 2017 study found that for every 10-degree temperature increase in California, preterm deliveries increased by 8.6%. However, for Black women, the [increase was nearly 15%](#).

These negative outcomes are compounded by unequal access to resources and greater exposure to the harms of climate change. The harms caused by increased heat, wildfires, and extreme weather events are [most likely to affect people of color and low-wealth communities](#). This disparity exists for several reasons, including access to cooling devices and even the temperature of the communities themselves, with temperatures in Black, Hispanic and Indigenous neighborhoods notably higher than in white neighborhoods because of redlining and urban heat island effects. Redlining was a federal government initiative in the 1930s in which predominantly Black neighborhoods were [outlined in red marker](#) as less desirable for mortgage lenders to provide white families loans to move to. Those neighborhoods became [less cared for by civil service projects](#), including the development of parks and the planting of trees that cool streets during hot and sunny days.

While redlining originally targeted Black communities, it now also affects [Latino and Indigenous neighborhoods](#). Today poorer, urban neighborhoods where marginalized groups are more likely to live have fewer trees, less shade, and more buildings, which increases temperatures. Land surface temperatures in communities exposed to the historic racial discrimination of redlining are on average 4.7 degrees Fahrenheit warmer than non-redlined communities, [with some as high as 12.6 degrees Fahrenheit warmer](#). Pregnant people living in these “microclimates” experience far greater impacts from climate change, but the effect of heat on pregnancy and human health is rarely incorporated into city-planning initiatives. Excessive heat has been shown to influence a range of social inequities, including [access to food and learning outcomes in classrooms](#).

The trickle-down effect of excessive heat fuels generational oppression, giving children growing up in these communities less opportunity to thrive. This directly affects the rate at which they continue to be touched by climate change. College-educated mothers, for example, experience fewer adverse pregnancy outcomes from heat because they tend to have higher incomes and [thus often air conditioning](#).

Black families in the United States are [less likely to have sufficient air conditioning or safe housing](#) and more likely to live in counties with [less green space and higher temperatures](#). As a consequence of redlining, from 1971 to 2000, counties with more than 25% Black residents experienced an average of 18 days per year with temperatures above 100 degrees. Counties with fewer than 25% Black residents, on the other hand, only experienced approximately seven days per year with temperatures above 100 degrees. This disparity is expected to worsen if [global goals addressing climate change are not met](#).

America's economic, healthcare and environmental systems overlap to fuel the inequities in pregnancy and birth outcomes experienced by Black people, and a comprehensive overhaul of these systems is imperative for reproductive justice.

Examples of Solutions

Ban Fossil Fuel Extraction and Reduce Emissions Across Sectors

Reducing greenhouse gas emissions and banning fossil fuel extraction are [critical to stopping climate change](#). The Center for Biological Diversity [is calling for](#) an immediate just transition from fossil fuel energy to clean, wildlife-friendly renewable sources and the banning of all new fossil fuel extraction. Even if fossil fuel extraction were stopped immediately, there's already [so much carbon in the atmosphere](#) that temperatures would continue to increase gradually, but temperature rise would be limited and harms lessened. The Center also calls for other climate change mitigation strategies including halting the damaging life cycle of plastic, which relies on fossil fuel extraction for production and [emits dangerous toxicants](#) through both manufacturing and waste management processes, and reducing meat and dairy production, which is a leading cause of land-use change and a major source of methane emissions, a short-lived climate pollutant that [heats the atmosphere 87 times more](#) than carbon dioxide over a 20-year period.

Support Economic Equity Policies

Climate change is further exacerbated by extreme social and economic disparities around the globe, and progressive social changes are necessary to stop the climate crisis from worsening and to help communities adapt. Tax rebate programs, social welfare policies that support wealth distribution, or energy assistance programs would allow low-wealth people to access clean, renewable energy and cooling devices in their homes. Universal access to comprehensive, culturally sensitive healthcare is critical, as health insurance remains inaccessible to all.

Parents are not guaranteed paid parental leave in the United States, making it difficult for pregnant people or parents of newborns to prioritize their health and the health of their infants. The United States remains one of the only post-industrial countries in the world [not to offer paid maternity leave](#).

Increase Safety Measures for Climate Change Health Exposure

Currently there is [no federal mandate](#) protecting those who work outdoors from excessive heat or requiring provisions of rest, shade, water and protective clothing. Though such policies exist in some states, Congress should pass a federal law protecting all workers from heat exposure. It should also [pass legislation](#) that would give explicit safety accommodations to pregnant people during extreme heat such as the Pregnant Workers Fairness Act. It's important that these policies cover all workers regardless of citizenship status, as most outdoor laborers and farmworkers in the United States [were born in other countries](#).

In addition to workers' rights, increased safety measures in communities are needed to mitigate the impacts of climate change on reproductive health. This begins with educating the public about the risks of climate change on pregnancy, which will promote understanding in those who have not yet seen the effects of climate change firsthand and will inform pregnant people about the specific climate-related risks they may face. Next, safety measures in communities can be promoted through the addition of greenspace in low-wealth areas and by increasing accessibility to affordable cooling devices and air purifiers. This will help [decrease temperatures in counties with higher rates of heat exposure](#).

Add Health and Gender Equity to Climate Plans

Comprehensive healthcare would improve access to reproductive health services for most people, but it's particularly important for people experiencing climate-related reproductive health issues. As poor health outcomes from climate change worsen, increased budgeting for climate-related health care issues will be needed to mitigate the [damaging effects on people's reproductive health](#).

It's necessary to invest in fixing the [systemic issues affecting Black women's maternal health](#), including housing, nutrition, vaccinations, perinatal workforce support, reproductive healthcare for incarcerated pregnant women, and climate change-related risks. It must become easier for [immigrant families to access public healthcare](#) or purchase health insurance through the Affordable Care Act; individuals can support policies that improve equity and help mitigate the impact of climate change-related health issues on marginalized groups by supporting the Black Maternal Health Momnibus Act or the HEAL for Immigrant Families Act.

[Prioritizing pregnancy-specific concerns](#) in emergency response planning for weather-related disasters is also needed. This includes emergency access to contraception, obstetric care, and nursing support, as well as ensuring that information about nearby cooling centers for pregnant people is widely circulated. This would allow for safer pregnancies during the climate crises but also ensure that people are not experiencing unplanned pregnancies simply because they are unable to access contraception or abortions due to extreme weather events.

State and local governments should include gender empowerment strategies in their climate plans, which would increase overall community health and equity in climate mitigation and adaptation measures. They can begin by collecting relevant data to allow for more accurate and concrete goals and lobby for a more inclusive and comprehensive plan. Next, educate and train staff on how gender disparities are exacerbated by climate change. Finally, incorporate gender action plans into climate plans which highlight the need for more women leaders, access to equal pay and improved social services. Such efforts would yield climate as well as social benefits.

Notes About the Scope of This Paper

This paper aims to provide a brief, introductory overview of the relationship between climate change, racial inequity, reproductive justice, and their connection to capitalism. It does not intend, nor is it able, to cover the full range of issues relevant to these complex subjects.

In the context of this paper, "capitalism" refers to market capitalist systems predicated on models of infinite growth. While the discussion of capitalism in the paper frequently references

racist, sexist and classist outcomes that perpetuate reproductive injustices, it's not the intention of this paper to collapse racism, sexism or classism into capitalism.

Gender is the behavioral, cultural or psychological traits typically associated with one sex. Gender is viewed along a continuum and includes both binary and non-binary gender identities, including LGBTQIA+. We acknowledge that all people are affected by these issues, and gender-diverse people often face additional challenges due to the lack of inclusive healthcare and other systems of oppression. Within this document we use gender-neutral terms when possible; however, since the literature to date has largely reported results in a binary way — female or male — we have retained some gendered language to accurately represent the best available research.