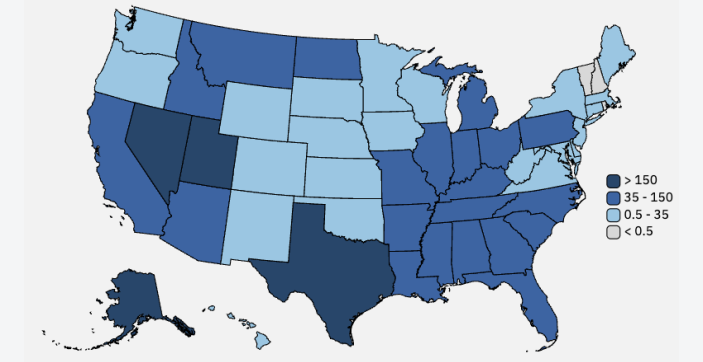
Environmental Justice

Environmental Justice (EJ) is defined as the just treatment and meaningful involvement of all people in environmental decision-making to ensure full protection from disproportionate environmental and health impacts, and equitable access to a healthy, sustainable, and resilient environment.[1] Inspired by the Civil Rights movement, EJ became widespread in the 1980s at the intersection of environmentalism and social justice.[2] Environmental injustice is experienced through heightened exposure to pollution and corresponding health risks, limited access to adequate environmental services, and loss of land and resource rights.[3] EJ and sustainability are interdependent and are both necessary to create an equitable environment for all.[4]

Built Environment

- The changing demographics of urban areas, loose permitting requirements, and exclusionary zoning laws have funneled racial and ethnic minorities into areas of greater environmental degradation and reduced support.[3] Residents of degraded areas do not or cannot move due to sense of place, and lack of financial resources and land ownership.[3]
- Although people of color make up 42% of the overall population of the U.S., they are 52% of the population in counties with unhealthy levels of air pollution, and 63% of the residents in counties with the worst air quality.[5]
- Drinking water contaminated by PFAS is a widespread public health concern. Community water systems (CWS) with detectable PFAS served a 1.5-2 times higher proportion of Hispanic/Latino residents compared to CWS without PFAS.[6]
- In 2010, 45% of the population in the host area of toxic waste facilities was made up of people of color as compared to 28% elsewhere.[7]
- The Toxic Release Inventory (TRI) supports emergency planning and provides information about toxic releases.[8] On average, people of color make up 56% of the population in neighborhoods with TRI facilities, compared to 30% elsewhere in 2000.[10]
- Negative environmental factors can compound social and economic conditions and lead to higher levels of chronic health problems such as asthma, diabetes, and hypertension for minorities and low-income communities.[11] Minorities in the U.S. have an increased risk for infection, hospitalization, and death from COVID-19 compared to non-Hispanic white persons.[12]
- Availability of cheap land in disadvantaged urban centers has led to gentrification, an increase in property values that often[13] leads to displacement, as well as social, economic, and cultural stress.[3, 14]

Toxic Release by State, 2022 (M lbs)[9]

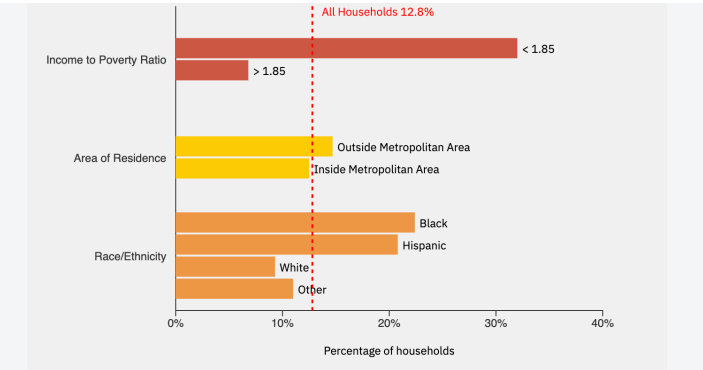


- Due to uneven distribution patterns, minority and low income communities have far less access to green spaces than white, affluent communities and have limited resources to maintain the green spaces they do have.[15]

Food

- In 2022, 12.8% of U.S. households experienced food insecurity. Food insecurity rates for Black and Hispanic households were consistently higher than the national average and higher in rural versus urban areas.[16]
- Food prices are higher and quality is lower in high poverty areas.[17] In 2022, the average U.S. household spent 13% of income on food; low-income families spent about 31%.[18]
- Hispanic and Black children have higher obesity rates than White and Asian children.[19]
- About 53.6M people (17.4% of U.S. population) have poor access to a supermarket due to limited transportation and uneven distribution of supermarkets.[20]

Prevalence of Food Insecurity in the U.S. 2022[16]



Energy

- The presence of power plants and fuel resource extraction operations place a significant environmental burden on neighboring communities. Minority and low-income communities are directly and disproportionately affected by these facilities and are rarely included in decision-making.[21]
- The average income of residents living within three miles of a coal power plant in 2000 was 15% less than the national average.[22]

- Households self-identified as Black, Hispanic, or multiracial experience energy insecurity at disproportionately higher rates than households self-identifying as White or Asian.[23]
- U.S. clean energy tax credits have been less accessible to low-income households due to affordability barriers.[24, 25, 26] In 2023, taxpayers with incomes under $50k received 6% of residential clean energy credits and 9% of energy efficiency home improvement credits, while taxpayers with incomes over $200k received 27% and 23% respectively.[27]

Hydropower and Dams

- Dams threaten vulnerable populations such as indigeous people, through food insecurity, increased morbidity, and the loss of land and water access, jobs, and houses.[28]
- Dam construction often displaces low income communities due to financial pressure from wealthier groups or investors.[28]

Energy Poverty

- In 2022, 685M people globally lived without electricity, 80% of them in sub-Saharan Africa. 2.1B people still use polluting fuels for cooking, largely in sub-Saharan Africa and Asia.[29]
- Energy poverty results from inequalities in income, energy prices, housing, and energy efficiency.[30] Low-income households spend 3 times as much of their income on energy than non-low-income households, despite using less energy.[31] Nearly 37M U.S. families suffer from energy poverty,[31] making them vulnerable during periods of intense heat or cold.[30]

Materials

Mining

- Roughly 3% of U.S. oil and NG reserves, 15% of coal reserves, and 37-55% of uranium reserves are on Indigenous land.[3]
- The U.S. imports more than 90% of the elements critical to advanced energy generation, transmission, and storage.[32]
- Artisanal and small scale mining (ASM) accounts for 15-20% of global mineral and metal production. ASM often has unsafe working conditions (e.g., child labor) and bad environmental practices (e.g., high mercury emissions).[33]

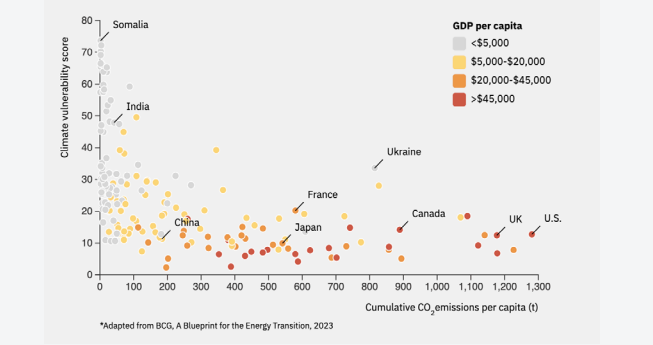
Electronic Waste

- In 2022, 62M kg of e-waste were generated globally. China was the top e-waste generator overall, while Norway had the highest E-waste generation per capita.[34]
- An estimated 6-29% of the 40M computers retired in the U.S. were exported in 2010.[35] The U.S. exported 7% of its used electronics by value in 2011.[36]
- Nearly 13M women and 18M children globally work in the informal labor sector to manage e-waste, potentially exposing them to toxic chemicals.[37]
- Improper recycling and recovery procedures can lead to exposure to carcinogenic and toxic materials, which often occurs in developing nations where recycling regulations to limit worker exposure are lax or nonexistent.[38] A review found increased DNA damage in those living in e-waste recycling towns, along with increases in still and premature births.[39]

Climate

- Though wealthy, developed nations like the U.S. continue to emit larger amounts of GHG per capita, developing nations experience the worst effects of climate change[4] due to their limited resources and ability to adapt.[40]

Climate Change Emission and Vulnerability[41-46]



- People living in low-income communities, or closer to the coast and small island nations, are more vulnerable to climate change threats, such as flooding, severe storms, sea level rise, and storm surges.[40]
- Indigenous populations that rely on subsistence farming practices for food have limited options for adapting to climate change threats.[40]
- Areas with poor healthcare infrastructure will be the least able to cope with catastrophic effects of climate change such as heat waves, droughts, severe storms, and outbreaks of waterborne diseases.[47]

Solutions

- The U.S. Justice40 Initiative set a national goal in 2021 that disadvantaged communities will receive 40% of the benefits provided by federal investments into areas like climate change and clean energy.[48]
- The Inflation Reduction Act provides resources for disadvantaged and minority communities to reduce pollution, improve clean transit, make clean energy more affordable and accessible, and strengthen resilience to climate change.[49]
- Engage in and support bottom-up models of research that are responsive to the environmental concerns of communities. Advocate for the inclusion of local knowledge in research in addition to observations obtained from scientific methods.[21]
- EJ Data and Grant information can be found here:

  U.S. EJ indicators: EJScreen
  U.S. EJ Grants: EPA EJ Grants
  Data for global EJ issues: EJAtlas

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Sources for this factsheet are here, help with units and abbreviations is here.