

Climate Change and Equity in the Genesee-Finger Lakes Region

Climate change is an injustice accelerator, exacerbating existing inequalities and disproportionately impacting our most vulnerable community members. Those who have contributed *least* to causing the climate crisis will experience the *most* devastating impacts¹. Globally, lower-income countries produce fewer greenhouse gas emissions than wealthier countries, but are less able to respond to climate hazards (e.g., extreme weather events and the increasing scarcity of natural resources) impacting their health and livelihoods².

In the United States, low-income communities and communities of color are disproportionately impacted by environmental health hazards³, including the impacts of climate change, such as temperature extremes, severe storms, floods, and vector-borne illnesses. In the Genesee-Finger Lakes Region, groups that are particularly vulnerable to climate change include children, the elderly, people with a disability, and people without vehicles, resources, or citizenship⁴.

Despite these challenges, the Region has a strong social justice movement, a robust public health network, and many non-profit organizations working to eradicate inequality (see sidebars throughout). Leveraging these assets with equity-focused climate solutions will result in significant co-benefits, such as improved public health outcomes, reduced energy costs, cleaner, more vibrant communities, and job creation and economic development.

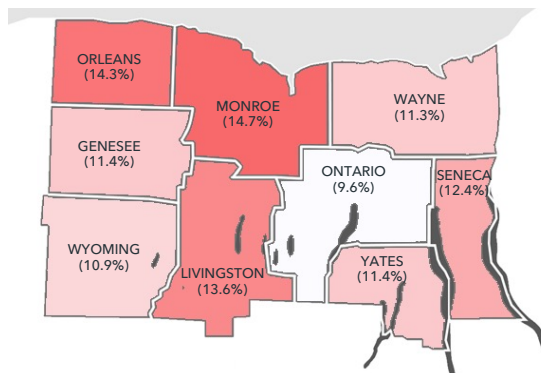


FIGURE 1. Poverty Rate (2019)

Source: data.census.gov/cedsci

How climate change impacts vulnerable populations

The impacts of climate change on various population groups depends on how climate impacts intersect with other aspects of people's lived experiences (see intersectionality sidebar on pg 2). Generally speaking, vulnerable populations are more likely to be exposed to climate change impacts or hazards (e.g., property loss), and less equipped to respond to the adverse effects of climate change⁵.

For example, individuals with disabilities are more susceptible to climate impacts because it can be more difficult to access resources or respond to disasters⁶. The percentage of those with a disability in the Genesee-Finger Lakes Region (12.6%)⁷ is at, or above, the national average, making a sizable part of the community more vulnerable to climate impacts. In the case of extreme weather, individuals with disabilities may face challenges associated with receiving information in an accessible format, operating medical equipment requiring electricity, maintaining medication supplies, or accessing transportation or shelter that can accommodate their needs. Individuals that are institutionalized (e.g., in prison, nursing homes, substance abuse facilities) require specialized plans and resources to ensure their safety during an emergency.⁸

Temperature extremes associated with climate change will increase the need for energy to heat and cool homes, exacerbating the already existing energy burden many in the Region face. According to New York State's Energy Affordability Policy,⁹ low-income households should not pay more than 6% of their income toward their energy needs. However, over one-third of households in Rochester pay more than 10%, forcing many to choose between keeping the lights on, heating their homes, or other essentials, such as food or medicine (see Figure 2, p. 2)¹⁰. Since Indigenous peoples, people of color, immigrants, refugees, migrant workers, and women are more likely to live in poverty, they are more likely to be burdened by high energy costs.

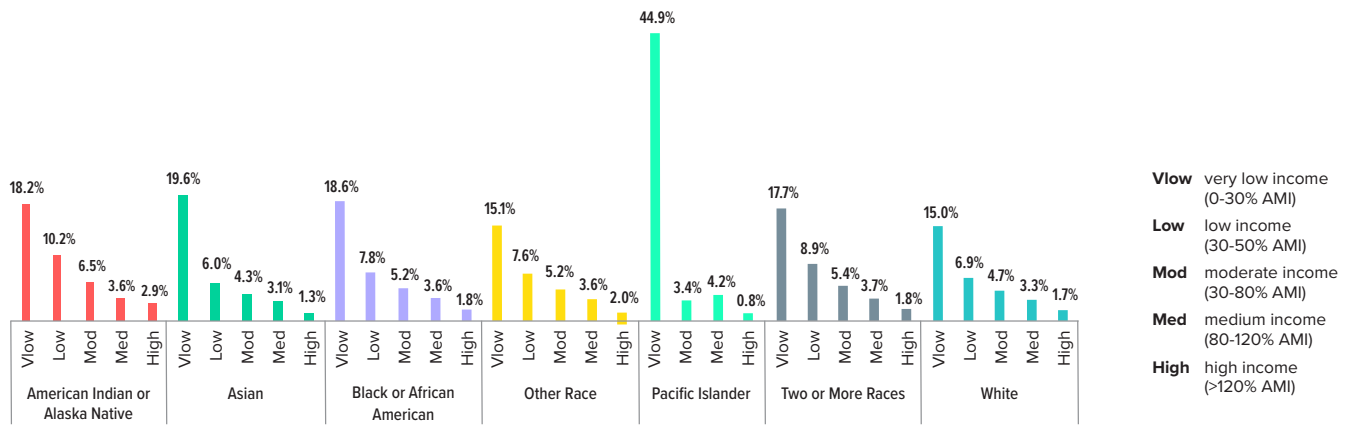


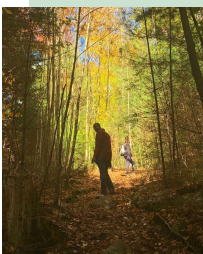
FIGURE 2. Energy Burden by Race and Income Group in Genesee-Finger Lakes (2019)

(Source: American Community Survey and Housing and Urban Development).

Climate action: reduce greenhouse gases, address inequalities

Since climate change impacts vulnerable communities “first and worst”, the climate justice movement advocates that these communities should be served “first and best” when responding to climate change. Below are a few examples of how equity-centered climate solutions can bring co-benefits that also address inequities facing the Region’s communities.

Environmental education and connecting to nature



There is a robust network of organizations providing environmental education and opportunities to connect directly with our Region’s natural landscape. The following are just a few examples of organizations working to cultivate a local stewardship ethic and ensure equitable distribution of regional environmental benefits.

Inclusive Woods & Us works with children to facilitate interactions with nature for traditionally marginalized populations including the provision of gear, transportation, snacks, mentorship, and educational resources.

540WMain is a non-profit community organization providing educational opportunities around environmental justice, anti-racism, and redlining, amongst other topics.

Photo Credit: Inclusive Woods & Us

Include diverse voices in decision-making

- **Encourage and support Black, Indigenous, and people of color (BIPOC) climate champions to assume leadership positions.** Diverse voices in decision-making processes ensures that policies and climate solutions reflect the lived experiences and needs of those most impacted by climate change.
- **Ensure equitable representation in decision-making processes.** Center equity from the beginning of a project and ensure that policy and program

Intersectionality and climate change

Legal scholar Kimberlé Crenshaw first introduced the term intersectionality in 1989 to refer to the complex ways that multiple forms of discrimination (e.g., racism, sexism, and classism) intersect¹¹. Climate impacts strike at these intersections, exacerbating the inequitable outcomes that marginalized populations regularly experience. For example, there is a significant difference in life expectancy between black and white populations in the Genesee-Finger Lakes Region¹² and also higher rates of asthma-driven emergency room visits for minorities of lower socio-economic status¹³. The burning of fossil fuels associated with climate change causes air pollution that worsens respiratory illnesses, which can impact one’s life expectancy, and disproportionately impact poor, minority communities. This is but one example of how intersecting forms of discrimination will exacerbate the consequences of climate change.

Energy efficiency improvements



Energy efficiency improvements reduce greenhouse gas emissions and help to lower utility bills, an average of 20%. Additionally, energy efficiency measures reduce exposure to air pollutants, improve temperature control and reduce dampness, leading to healthier and more comfortable living spaces.

Several local organizations, such as Action for a Better Community, PathStone, and Rochester Energy Efficiency and Weatherization (RENEW) facilitate residential participation in energy efficiency programs, including the federal New York State's EmPower program, which provide low-to-no cost energy efficiency improvements.

Connected Communities, a non-profit neighborhood organization, has partnered with the Climate Solutions Accelerator and Sustainable Homes Rochester to train resident ambassadors on accessing energy efficiency programming. Resident ambassadors then educate local homeowners, renters, and landlords about the multiple benefits of energy efficiency improvements.

Photo Credit: Sustainable Homes Rochester

Walkable, bikeable neighborhoods

Smart land-use planning that prioritizes walkable and bikeable communities reduces greenhouse gas emissions, improves public health and safety, and fosters connections between neighbors and neighborhoods.

The Thomas R. Frey Trail at El Camino is a 2.5-mile trail developed by the Genesee Land Trust, neighborhood residents, local community organizations, including Ibero-American Development Corporation, Group14621, and the City of Rochester. Neighbors use this shaded, off-road path to access neighborhood amenities, such as Avenue D R-Center, and for outdoor recreation, including biking with Conkey Cruisers.

In the Beechwood neighborhood, local residents in partnership with Reconnect Rochester, re-envisioned one of the most dangerous intersections in the City to create more space for pedestrians, incorporate public art, and reduce the amount and speed of vehicular traffic. The result was a safer, brighter, and more engaging neighborhood space for all users.



Photo Credit: The Genesee Land Trust

decisions are made in consultation with historically marginalized groups.

- **Ensure the benefits of NY State's climate laws are equitably distributed across the Region.**

NY State's Climate Leadership and Community Protection Act requires 35–40% of benefits go to “disadvantaged communities” or those who have typically been excluded from environmental benefits. Community involvement is required to ensure the full intent of the law is realized.

Ensure a just transition through workforce development

- **Ensure a just transition for individuals that may lose their jobs as a result of fossil fuel reduction initiatives.** Target skills development programs to those that may experience job losses as a result of climate policies.
- **Target clean energy workforce development programs to those traditionally underserved and discriminated against in higher education and the job market.** Clean energy jobs are one of the fastest growing employment sectors in the State, and tend to have lower educational requirements,

and higher wages and benefits. But the BIPOC community, thus far, has been underrepresented in the clean energy workforce¹⁴.

Implement energy efficiency measures

- **Implement green building codes for multi-family buildings** to increase adoption of energy efficiency measures, improve building design, and reduce utility costs.
- **Provide incentives for energy efficiency to low-income households** to reduce energy costs, improve indoor air quality, and decrease pests and mold, thereby improving overall quality of life.

Promote equitable land use and transportation policy

- **Promote climate-smart community design** that combines job opportunities, retail, housing, and outdoor space in community centers, resulting in less sprawl, reduced air pollution, and overall improvements to quality of life.
- **Increase green space in low-income neighborhoods** to reduce temperatures, improve air quality, and provide access to outdoor recreational spaces.

Community gardens



Community gardens can increase access to fresh produce and open spaces, reduce temperatures, decrease waste water run-off, enhance community cohesion, and decrease greenhouse gasses through reduced food miles traveled.

The community garden at The M.K. Gandhi Institute for Nonviolence consists of a 24 bed organic garden, greenhouse, fruit trees, and flower garden. Staff work with volunteers to maintain the garden and provide free produce to neighbors and School 19 parents. The garden also provides opportunities for residents to connect with nature in a peaceful setting.

Photo Credit: The Gandhi Institute.

- **Have more walkable communities coupled with a more robust and electrified public transit system** to reduce greenhouse gas emissions, improve public health, and reduce commute times.

Adopt equity-focused emergency preparedness plans

- **Adopt a Whole Community Approach to emergency preparedness** that incorporates residents, emergency management professionals, and community leaders to understand the needs and assets of the local community in responding to emergencies.
- **Ensure that emergency information is translated and transmitted in multiple formats and languages** (e.g., written, verbal, pictorial, ASL) to maximize community outreach. Effective communication reduces morbidity and mortality rates during emergencies.

Protect residents and workers from environmental and climate impacts

- **Remediate contaminated sites and ensure new factories are placed away from residential areas.** Historically, many environmental hazards were located near low-income neighborhoods due to lower property values. Introduce zoning laws to prevent this in the future and remediate existing contaminated sites, repurposing them to fulfill community needs (e.g., renewable energy or community green space).
- **Ensure individuals working outdoors have access to water and shade during extreme heat waves.**
- **Provide migrant workers with safe, efficient, and sanitary housing** that is well-ventilated and uncrowded.

ENDNOTES

- 1 See for example, S. Nazrul Islam and John Winkel's 2017 paper for the United Nations "Climate Change and Social Inequality." https://www.un.org/esa/desa/papers/2017/wp152_2017.pdf
- 2 See for example, "Climate Change and Inequalities in the Anthropocene" in the United Nations Human Development Report. 2019. <http://hdr.undp.org/sites/default/files/hdr2019.pdf>
- 3 See for example, the Columbia Law School's Reading List on Climate Justice at <https://climate.law.columbia.edu/content/summer-reading-list-climate-justice>, the NAACP's Environmental and Climate Justice page, <https://www.naacp.org/climate-justice-resources/> or EPA's Environmental Justice page, <https://www.epa.gov/environmentaljustice>
- 4 City of Rochester (2020). Climate Vulnerability Assessment. <https://www.cityofrochester.gov/CVA>
- 5 Islam and Winkel, ibid
- 6 United States Environmental Protection Agency. (2016). Climate Change and the Health of People with Disabilities. https://www.apha.org/-/media/files/pdf/topics/climate/epa_disabilities_health_climate_change.ashx?la=en&hash=DED67E0318FF1EF35A42570729A7BB1413253549
- 7 NY State Department of Health. Community Health Indicators Report (CHRIS). https://webbit.health.ny.gov/SASStoredProcess/guest?_program=%2FEB1%2FPHIG%2Fapps%2Fchir_dashboard%2Fchir_dashboard&p=np&ind_id=Ng133
- 8 Benevolenza, M.A., and DeRigne, L. (2019). The impact of climate change and natural disasters on vulnerable populations: a systematic review of literature. Journal of Human Behavior in the Social Environment 29 (2): 266-81. <https://doi.org/10.1080/10911359.2018.1527739>
- 9 <https://www.governor.ny.gov/news/governor-cuomo-announces-new-energy-affordability-policy-deliver-relief-nearly-2-million-low>
- 10 U.S. Department of Energy: Rochester, NY: Reducing Energy Costs for Low-Income Households. https://www.energy.gov/sites/prod/files/2018/10/f56/Cities-LEAP_Data%20to%20Decisions_Rochester%2C%20New%20York.pdf
- 11 <https://www.law.columbia.edu/news/archive/kimberle-crenshaw-intersectionality-more-two-decades-later>
- 12 Common Ground Health. Years of Potential Life Lost. <https://www.commongroundhealth.org/insights/library/years-of-potential-life-lost-rate-by-raceethnicity-gender>
- 13 Common Ground Health. <https://www.commongroundhealth.org/insights/library/asthma-driven-ed-visit-rate-by-raceethnicity-and-socioeconomic-status>
- 14 Muro, M., Tomer, A., Shivaram, R., and Kane, J. (2019). Advancing inclusion through clean energy jobs. Metropolitan Policy Program at Brookings. https://www.brookings.edu/wp-content/uploads/2019/04/2019.04_metro_Clean-Energy-Jobs_Report_Muro-Tomer-Shivaram-Kane.pdf

For more information

APR 2021

Visit us at
sei.org and climategfl.org

