

Growing Justice? Tree Canopy Change and Equity in Philadelphia

Urban tree canopy cover has recently been recognized as an important environmental amenity and extensive research has demonstrated the environmental and community benefits that it provides urban residents. In response, many cities have promoted tree planting as a flagship program of their sustainability and greening efforts. These efforts will not only impact the residents within urban areas but also reduce the extent of climate change impacts. However, profound disparities remain between urban tree canopy, class, and race, as decades of research have revealed differential levels of tree canopy at the neighborhood level in cities across the United States. Such differential access to an urban environmental amenity is an environmental justice issue, preventing the fair treatment of all residents. Previous research on urban tree canopy cover inequality has largely used static snapshots of canopy conditions rather than examining their change over time. The lack of longitudinal analyses has prevented an understanding of how policy initiatives have impacted urban injustices in access to tree canopy, which would allow for the development of best practices for just sustainabilities. To address this knowledge gap, we examine urban tree canopy cover change in Philadelphia between 2008 and 2018. Despite aggressive tree planting programs as part of an effort to become the greenest city in America, Philadelphia saw a 6% loss of urban tree canopy during this period. Preliminary results suggest that much of the tree canopy lost in Philadelphia was in neighborhoods primarily containing racialized minorities and/or low-income residents. To address environmental injustices, Philadelphia and other cities should work to ensure neighborhood-level access to urban tree canopy. It is important for the longevity of the cities and the equality of its residents. Understanding how tree canopy coverage has changed over time is the first step towards urban forest environmental justice.

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