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A Review of Urban Forestry Management Practices for Shade Access in South LA

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Issue

As climate change continues to increase the intensity and frequency of extreme heat, marginalized communities remain vulnerable due to a striking lack of shade amenities, air-conditioning, and green infrastructure. Lower-income communities of color, especially those in unincorporated South Los Angeles, are at heightened risk due to poorer infrastructure (de Guzman, 2022), impervious surfaces and the heat island effect (Schell et. al, 2020), and an overall lack of cooling services and urban tree canopy (Bedsworth et. al, 2018).

The cooling and environmental benefits of urban tree canopies are well-documented. Still, their full integration into urban infrastructure, especially for climate vulnerable communities, has not always been prioritized. This brief outlines notable challenges and preliminary recommendations associated with urban tree canopy implementation, specifically for the unincorporated communities of South Los Angeles in the county's 2nd District.

Study Approach

The research behind this project drew upon relevant literature, existing data on urban forestry practices in Los Angeles, and built environment and tree policies from 11 different U.S. cities. Together, these sources are synthesized to identify lessons learned and develop preliminary recommendations within the framework of the socio-ecological model.

It is crucial to note that this brief, while drawing from existing information about communities in South LA, lacked the capacity to conduct formal outreach or engagement. Any preliminary recommendations presented should first be consulted with and approved by community members upon proposal.

Research Findings

Distributed equitably, an urban tree canopy can alleviate the burdens faced by communities who are disproportionately burdened by extreme heat. Shade from trees can reduce the urban heat island effect through natural atmospheric and pavement cooling (McNamara et. al, 2022), prevent heat-related deaths, and reduce energy consumption (McDonald et. al, 2020). However, an urban tree canopy is not without its limitations.

In developing an urban canopy plan, "tree disservices" must also be considered, including overburdened irrigation systems, susceptibility to pests and diseases, roots that interfere with sewage systems or upend sidewalks, or ill-placed trees that block pedestrian access and driver viewpoints (Roman, 2021). Urban trees also have a large upfront cost associated with planting, and an intensive three-year establishment period that determines their long-term viability (LA County Department of Public Works, 2022).

Upon review of the 11 U.S. cities with robust urban forestry practices, some recurring practices emerged, including optimizing planting in underutilized parking spaces, developing youth workforce pipelines to diversify the upcoming urban forestry workforce and partnering with local nonprofits, and using preservation ordinances to protect shade trees against removal.

Recommendations

Preliminary recommendations were developed using the Socio-Ecological Model, a public health framework that uses various levels of intervention to allow for the development of more comprehensive solutions (de Guzman, 2022). These levels include: individual, interpersonal, community (including institutions), and societal.

- Individual-level recommendations target behavior, knowledge, and self-efficacy,. Within the context of this research, they include understanding what communities want, increasing awareness, maintaining programs that allow residents to access free trees, and providing financial support to subsidize ongoing maintenance.

- Interpersonal-level recommendations target relationship and capacity building, and include developing workforce pipelines to increase community ownership and stewardship, as well as identifying existing assets and potential local partners.

- At the institutional level, recommendations include establishing accountability and collaboration across agencies, institutionalizing annual funding, monitoring and evaluating tree stock through robust data systems, and creating preservation ordinances to protect trees during future construction and development.

- At the community level, recommendations target the built environment and include an initial assessment of existing spatial conditions, institutionalizing design standards, planting climate-appropriate and -resilient trees, as well as maintaining ecological biodiversity.

- Finally, at the structural level, recommendations target redistributing canopy coverage through a distributional justice lens, sustaining funding for climate vulnerable communities, preventing green gentrification, and integrating the urban canopy into the physical infrastructure of a space.

Conclusion

Urban tree canopies are one of many strategies that can be used to advance shade equity in Los Angeles. Urban canopies can provide a diverse array of benefits, but it will be important to balance strategies for implementation with expressed community needs, existing infrastructure capacity, and hyperlocal ecologies. Institutionalizing funds for establishment, maintenance, preservation, and workforce will also be critical to supporting both the short- and long-term goals of an urban tree canopy. Finally, framing the urban forest through the lens of distributional and procedural equity and environmental justice, and valuing these trees as an integral part of the urban ecosystem, will help ground data-driven decisions moving forward

For More Information

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