

ENVIRONMENTAL JUSTICE AND URBAN GREEN SPACES WITH SPECIAL REFERENCE TO SHIMLA

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Abstract

The health and well-being of individuals are profoundly impacted by things like urbanisation and climate change. In order to offset these negative health consequences, nature-based solutions that are implemented as natural and sustainable techniques in urban areas are a viable option. The purpose of this article is to investigate urban green spaces as an important nature-based solution that has the potential to solve difficulties connected to climate change and urbanisation by harnessing the services provided by urban ecosystems. The purpose of this article is to provide an overview of the link between urban green spaces and urban health. It illustrates how access to these areas may improve both physical and mental health; minimize health concerns associated to pollution, and increase general well-being. For the purpose of demonstrating how the uneven distribution of urban green spaces interacts with poor supply of ecosystem services and the beneficial health outcomes that are linked with them, the city of Shimla is utilized as a case study. The distribution of vulnerable population groups, such as children and old people, throughout the various city districts is the primary focus of the investigation. Both the discrepancies in access to green areas and the ways in which these disparities impact health outcomes are brought to light by the case study. This study also investigates the idea of environmental justice, focusing on the need of ensuring that everyone has equal access to green areas in order to advance the cause of health equality. The chapter emphasizes the significance of incorporating nature-based solutions into urban planning efforts in order to cultivate urban settings that are healthier and more resilient. This is accomplished by establishing a connection between the distribution of green areas and health outcomes and environmental justice.

Keywords-: Urban Green Spaces, Environmental Justice.

1. INTRODUCTION

Known as the "Queen of Hills," Shimla is a charming city in the Himachal Pradesh state of northern India. Shimla approaches urban green belts differently from other metropolitan areas, where green spaces are typically parks and gardens. Shimla's green belts are traces of the city's former forest cover, providing a unique natural legacy that adds to the allure and ecological harmony of the area. The importance of these green belts, the difficulties in preserving nature in Shimla because of its physical limitations, and the most recent advancements in growing green spaces to protect the city's ecology will all be covered in this essay.

1.1. Unique Green Belts of Shimla

In contrast to many towns, where parks and green areas are planned and maintained, Shimla's green belts are remnants of the original forest that formerly covered the area. The preservation of the ecological balance, the provision of habitat for nearby wildlife, and the provision of a natural haven for locals and tourists within the city are all made possible by these green belts. The city's dedication to protecting these natural areas in the face of mounting urbanization pressure is demonstrated by the announcement of eight new green belts in the Shimla planned area.

1.2. Ecological and Social Benefits

Shimla's green belts fulfill a variety of ecological purposes. By releasing oxygen and absorbing carbon dioxide, they function as carbon sinks, enhancing the quality of the air. Additionally, by controlling the local climate, these regions lessen the frequent urban heat island effect in densely populated cities. The green belts also help to preserve groundwater levels and reduce the risk of landslides by conserving soil and managing water. Socially speaking, these green belts improve people's quality of life by giving locals easily accessible natural areas for leisure and relaxation. They provide a calm setting for jogging, strolling, and other outdoor activities, which is especially helpful in cities with little flat space for traditional playgrounds and parks.

1.3. Geographic Constraints and Small Parks

The mountainous topography and rough terrain of Shimla present considerable obstacles to large-scale park development and urban planning. The scarcity of level terrain has led to parks that are smaller than those in other cities. Nonetheless, this limitation has prompted creative ways to preserve the environment and increase green spaces inside the city's zoning boundaries.

1.4. Expanding Green Areas

The city government has concentrated on incorporating naturally occurring wooded areas into the urban landscape in order to increase the overall green cover and get around the geographic constraints. A step in the direction of this objective is the announcement of eight new green belts. Despite the topographical difficulties presented by the city, residents will still have access to green spaces because to the thoughtful placement of these green belts, which maximize their ecological and social benefits. Reforestation and afforestation programs, which plant native tree species on degraded or barren soils, are another way to increase the amount of green space. This improves biodiversity and restores the natural habitat in addition to increasing the amount of green cover. In addition, the city is looking into rooftop and vertical gardening as substitute techniques to add more greenery in spaces with limited horizontal space.

1.5. Conservation Efforts and Challenges

There are various obstacles in the way of protecting Shimla's green belts and growing its green spaces. The city's natural resources are under strain from the quickening pace of urbanization, population expansion, and tourism development. Constant problems like deforestation, unauthorized building, and encroachments jeopardize the integrity of the green belts.

1.6. Government and Community Initiatives

The government of Himachal Pradesh has instituted many policies and regulations in conjunction with local municipal governments with the aim of safeguarding the green belts and advancing sustainable development. Strict building norms and zoning regulations are implemented to keep out intruders and guarantee that development operations do not jeopardize green spaces. Involving the community is essential to conservation initiatives. Tree plantation drives, cleanup campaigns, and awareness initiatives are actively supported by local businesses, residents, and environmental organizations. These programs motivate residents to take part in the preservation of their natural heritage by instilling in them a sense of ownership and responsibility.

Shimla has a distinct approach to urban green areas that is ingrained in the city's natural forest heritage. Shimla boasts green belts that are remains of the ancient forest cover, providing unique ecological and social benefits, unlike other towns where parks and gardens are man-made. The geographic limitations of the city call for creative conservation tactics, such as the recent growth of green belts and reforestation programs. Shimla protects the quality of life for its citizens and visitors alike, as well as the health of the environment, by maintaining and improving these green spaces. For Shimla to remain beautiful for future years, the community, government, and environmental organizations must work together to overcome the obstacles.

2. PUBLIC HEALTH BENEFITS OF URBAN GREEN SPACE

Most research on urban green space and health has focused on parks, with studies also examining green cover. Lack of park access has been linked to mortality. Green cover has also been shown to protect health. Additionally, parks often serve as sites of physical activity, which is associated with enhanced health and reduced risk for all-cause mortality and many chronic diseases. Indeed, a large number of studies demonstrate linkages between park proximity and physical activity.

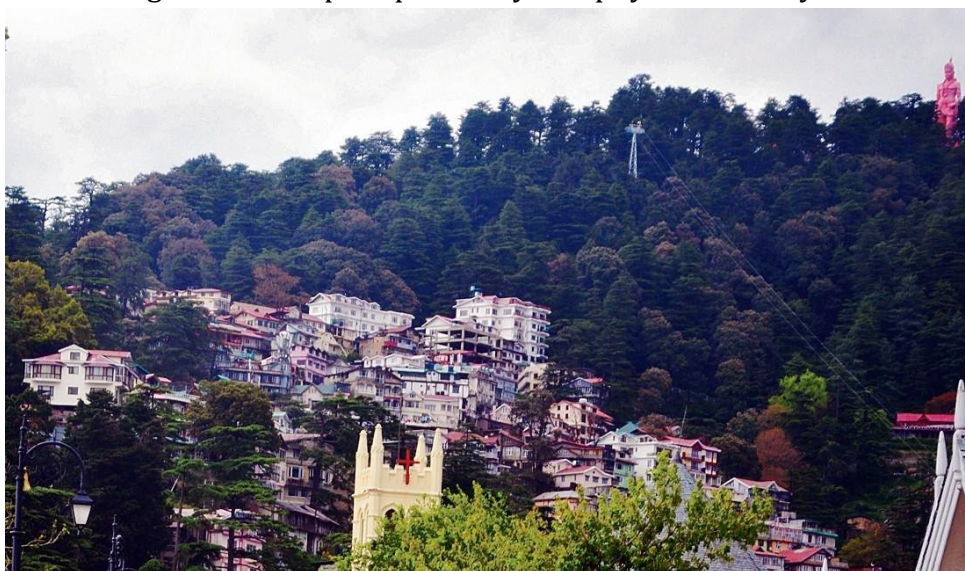


Figure 1: Shimla Urban Green Space plan

Particular attention has focused on parks and the obesity epidemic. Obesity can be detrimental to children's health and increase the probability of adult obesity. While genetic factors probably contribute rapid increases in obesity suggest that individual behavior patterns, including low levels of physical

activity, appear to powerfully influence obesity trends. Children with more access to parks and recreational facilities are more active than children with less access, and most results for adults are similar.

Curiously, public recreation has seldom been studied in regard to physical activity and obesity. However, in a cross-sectional study, audited recreation programs from southern California municipalities. Findings indicated that areas with higher population density, lower incomes, and a greater share of minority residents had inferior access to public recreational programming.

Recent studies show that both parks and recreational programs are important to the development of obesity. A wide range of built environment factors — including the foodscape pollution exposure and traffic density and social conditions, such as poverty, unemployment, and crime—to assess how proximity to parks and recreational resources affects the development of childhood obesity. Park access and especially recreational program access were significantly related to the development of obesity.

In addition, psychological well-being is empirically linked to urban parks and green space. A park experience has been shown to reduce stress, and green spaces can afford urban residents opportunities to encounter plants and animals as well as opportunities to recuperate or experience solitude. Park visits can also rejuvenate residents, enhance contemplation, and provide a sense of peace and tranquility.

Physical activity in green space—or green exercise—is also important to mental health. Barton and for example, conducted a meta-analysis of UK studies, showing that there were significant impacts of green exercise on several measures of mood and self-esteem. Another meta-analysis found linkages between various measures of psychological health and urban green space. In a major Dutch study Van den Berg, Maas, Verheij, & Groenewegen (2010) showed that respondents with more green space near their homes were less affected by a stressful life event than those with a low green space access, suggesting that green space buffers stress. Also as a locus of social interaction urban parks can increase perceptions of safety and belonging.

While research has generally focused on the health benefits of parks and other green space, there may be health risks too. These include air pollution exposure near parks and safety concerns in parks that are located in heavy traffic areas. Active transportation such as walking and bicycling, by contrast, incorporates physical activity into daily routes, reduces obesity and alleviates automobile congestion and traffic-related air and noise pollution. Low-income communities of color, however, already have relative high rates of active transport and may experience adverse health effects if strategies promoting active travel are poorly implemented. For example, if planning interventions increase walking and cycling in polluted neighborhoods, without commensurate efforts to reduce levels of air pollution, they risk also increasing low-income residents' exposure to pollution. A study found that park-adjacent neighborhoods in the Shimla region had higher pollution concentrations, especially in low income and minority communities.

3. ENVIRONMENTAL INJUSTICE IN ACCESS TO URBAN GREEN SPACE

Given the links between green space access and health, an important question is whether access to urban green space—and its health promoting and/or protective effects—is distributed in ways that disproportionately advantage or disadvantage people on the basis of race, ethnicity or class?

Despite a growing literature, there is no consensus among scholars about how to measure green space access. Most studies have used Geographic Information Systems (GIS) to measure accessibility. Metrics include presence vs. absence of a park or recreation facility near the home, density of facilities, or total park acreage within a given radius of home.

Geographic access alone may not fully capture the impact of parks on physical activity or obesity. Usage may depend on park characteristics and programs offered. Simple GIS measures can also fail to account for potential congestion of park space, which may deter use.

A challenge in access measurement is that green space is notoriously heterogeneous. Parks differ in terms of size, quality, range of facilities, availability of organized recreation, or perceptions of safety among actual or potential users. They are designed to serve diverse communities and wide-ranging recreational needs. Parks also have reputations reflecting their use, repute, upkeep, and design quality. Such heterogeneity means compliance with uniform national standards for urban park space provision in the United States is difficult. These standards may even negatively impact some urban residents, prescribing blanket solutions where locally specific interventions are needed.

Regardless of measurement strategy, there is abundant evidence of environmental injustice in the distribution of urban green space. A variety of other studies show that racial/ethnic minorities and low-income people have less access to green space, parks, or recreational programs than those who are White or more affluent. In addition, studies of public and nonprofit funding for urban parks and recreation indicate this also follows race/class contours, with low-income communities of color having far less to spend on parks and recreation and having less nonprofit resources as well.

Some studies have found more complex relationships between park access and race/ethnicity or socioeconomic status. Baltimore, found that although Blacks were more likely than Whites to live within walking distance of a park, Whites had access to more park acres. Consequently, there was more park congestion in the park service areas serving Blacks than in those serving Whites. Also, not all poor people or people of color live in inner cities; numerically, more poor people now live in suburbs. But the suburbanization of poverty is largely a result of increases in inner-ring suburban poverty due to deindustrialization, job loss, white flight, and inner-city gentrification. Such communities typically lack fiscal capacity and thus may have poorly maintained parks and minimal recreation programs. In some metropolitan regions, densification of inner suburban areas due to crowding also means that there may be pressure on park space.

4. CONCLUSION

Shimla's urban green spaces and environmental justice are related, which emphasizes the need for fair access to these important places that greatly improve the quality of life for locals. Urban green spaces offer vital advantages including better mental and physical health, leisure time, and environmental advantages like reduced urban heat island effect and better air quality. With its distinct terrain and historical importance, Shimla is a city where protecting these natural spaces is essential to sustaining the region's character and environmental integrity. But in Shimla, access to green spaces is frequently unequal, with wealthier communities having better amenities than less affluent ones. This difference is a prime example of environmental injustice, in which underprivileged groups are denied access to the advantages of natural resources. Urban planning has to place a high priority on establishing and preserving green spaces in underprivileged regions and actively include the local community in their

creation and maintenance in order to address this. Shimla can improve public health, maintain ecological balance, and advance social fairness by guaranteeing equal access to green spaces for all citizens. This could serve as a model for other towns in like circumstances.

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