

Activity Generators near Neighbourhood Parks: An Urban Design Study of Bengaluru

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Abstract

Neighbourhood parks are essential components of urban fabric as they provide recreation, ecosystem services and social space while shaping street vitality and perceived safety. Activity generators (amenities, programs and land uses that attract people) are widely used in park planning to increase use, diversify users, and extend hours of activation. This paper examines the role of activity generators around and within neighbourhood parks in Bengaluru from an urban design perspective. Using literature synthesis, observational frameworks drawn from SOPARC and park vitality evaluation models, and available Bangalore park datasets, the study identifies key generator types, explains how they relate to urban form and social outcomes, and offers design and policy recommendations tailored to Bengaluru's neighborhood contexts. Findings show that a combination of intrinsic design features like playgrounds, sports courts, seating, pathways, food/vendor edge and extrinsic contextual generators like adjacent mixed uses, active frontages, transit and pedestrian permeability amplify park use, biodiversity co-benefits and perceived safety. Recommendations focus on programming, edge treatments, micro-biodiversity integration and governance mechanisms suitable for the Bruhat Bengaluru context.

Keywords: Activity Generators, Neighbourhood Parks, Urban Design

1. Introduction

Neighbourhood parks are often expected to deliver diverse benefits such as recreation, health, biodiversity, microclimate regulation and social cohesion but outcomes depend heavily on how parks are integrated with their urban context and what activities they support. Jane Jacobs's classical insight that urban vitality depends on a continuity and variety of uses and people which applies squarely to parks. Parks that connect to active streets and offer a variety of reasons to visit are more likely to remain lively and safe. Designing parks with deliberate activity generators (both programmed events and built amenities that attract users) is therefore a core urban design strategy for achieving these benefits. This paper examines which activity generators are most effective in Bengaluru's neighbourhood parks and how urban design can orchestrate them for better social and ecological outcomes.

2. Aim and Research Context

The aim of this study is to identify, classify, and evaluate the urban-design factors that act as activity generators in and around neighbourhood parks in Bangalore, with the objective of understanding how these generators contribute to park vitality, social interaction, public health, and perceived safety. Through a synthesis of global literature and Bengaluru-specific planning conditions, the study seeks to formulate a contextually grounded design and policy framework that can guide municipal authorities, urban designers, and local communities in enhancing the activation and usability of neighbourhood parks.

Bengaluru is one of India's fastest growing metropolitan regions which has undergone rapid spatial expansion and densification resulting in increased pressure on public open spaces. Neighbourhood parks are typically managed by the Bruhat Bengaluru Mahanagara Palike (BBMP) and it serve as some of the most accessible recreational spaces for residents. Over the last decade, the city has invested considerably in park creation and refurbishment however levels of use, social inclusivity, ecological quality, and safety vary widely across neighbourhoods.

Emerging studies indicate that the mere provision of parks does not ensure their successful use instead, the nature, distribution and intensity of activity generators such as playgrounds, sports areas, vending zones, walking loops, active commercial edges, community gardens, and transit connectivity play a decisive role in determining park vitality. At the same time, Bengaluru's socio spatial complexity which is characterized by mixed use neighbourhoods, informal vending, high commuter movement, and micro climate concerns introduces unique challenges and opportunities for designing these generators. Sustainable urban design practice in the city increasingly recognizes the need to balance activation, ecological sensitivity, community stewardship, and maintenance feasibility. Given this backdrop, the research positions neighbourhood parks as urban micro infrastructures, whose performance is deeply tied to their

surroundings. Understanding the factors that attract people to these spaces provides critical insight for improving everyday urban life and aligning local urban design with broader climate resilience, health equity, and livability goals.

3. Theoretical Background and Literature Review

The literature on neighbourhood parks demonstrates a growing consensus that the success of public open spaces depends not merely on their physical provision but on the quality, diversity and intensity of activities they support. Scholars in urban design, environmental psychology and public health increasingly argue that parks function as critical ‘urban living rooms’ where social interaction, ecological performance, and physical activity overlap. Activity generators defined as programs, land uses, or design features that stimulate human presence are identified as central to shaping park vitality.

Jane Jacob’s foundational theory on diversity of uses remains a conceptual anchor for much contemporary research, which operationalizes her ideas into measurable indicators such as active edges, permeability, mixed use adjacency, and frequency of park programming. More recent empirical frameworks such as the Neighbourhood Park Vitality Potential Model, SOPARC based observational studies and urban design evaluation tools show that both intrinsic (inside the park) and extrinsic (contextual) factors contribute significantly to user volumes, physical activity levels and perceived safety. Research from developing world contexts, including Indian cities further highlights the role of informal vending, community stewardship, and compact neighbourhoods in shaping daily park use.

Building on these insights the following subcategories house the literature into relevant themes that inform the study of activity generators in neighbourhood parks with a specific emphasis on urban design principles applicable to Bangalore.

3.1 Neighbourhood Park Vitality and Urban Context

A substantial body of literature positions neighbourhood parks within their broader urban context rather than as isolated green pockets. Banchiero et al. (2020) argue that parks are co-dependent on surrounding land use patterns, street structure and accessibility. Their Neighbourhood Park Vitality Potential model identifies vitality as a function of adjacency to mixed use edges, pedestrian friendly street layouts and visual permeability. The model quantifies Jacob’s ideas demonstrating that even a well-designed park fails to attract users if surrounded by inactive or fenced edges.

In dense urban environments such as many of Bengaluru’s older neighbourhoods parks serve as extensions of the public realm often compensating for limited footpaths and congested streets. Studies further show that walkable access, well connected entrances and transit adjacency directly influence the frequency and diversity of park users. This literature underscores that the effectiveness of activity generators is inherently tied to how parks are spatially integrated into the city fabric.

3.2 Activity Generators: Definition, Types and their role in Urban Design

Activity generators are conceptualized in the literature as any spatial or programmatic elements that encourage people to visit, linger or repeatedly use a public space. Scholars categorize them broadly into permanent physical features like playgrounds, sports courts, semi-permanent uses like community gardens, kiosks and temporal activities like events, markets etc. Project for Public Spaces (PPS) argues that the most successful public spaces rely on layered programming and multiple reasons for people to visit.

Urban design theorists note that activity generators are most effective when spatially distributed to create movement loops rather than isolated nodes. Placement, visibility, comfort amenities and microclimate factors like shade, seating, lighting significantly influence their success. Importantly activity generators serve not only recreation but also social surveillance, helping create safer environments by increasing natural presence and eyes on the street. This aligns well with Bengaluru’s urban reality where perceived safety fluctuates drastically across wards.

3.3 Empirical Links to Physical Activity, Use Patterns and Safety

Empirical research particularly observational techniques such as SOPARC provides robust evidence that specific design features impact activity levels. Cohen et al. (2019) found that innovative playground designs not only increase user counts but also elevate levels of moderate to vigorous physical activity. Similarly, McKenzie and colleagues (2006) show that the presence of sports courts, multi-use fields and walking loops correlates strongly with higher physical activity across age groups.

Safety literature also aligns with these findings that the areas with diverse activities and consistent presence of people report significantly lower perceptions of vulnerability. Activity generators such as food vendors, informal markets,

and community events extend active hours into evenings which is very critical in jurisdictions like Bengaluru, where evening use is culturally significant. These studies validate the principle that the more reasons people have to use a park, the safer and more socially cohesive that park becomes.

3.4 Biodiversity, Community partnership and Small Urban Parks

A growing strand of literature examines the ecological dimension of neighbourhood parks especially small urban parks common in Indian cities. Swamy, Nagendra and Devy (2019) demonstrate that even small parks in Bengaluru can support meaningful biodiversity, particularly when planted with native species. Their study emphasizes that biodiversity enhancement is compatible and often strengthened by community led partnership models such as community gardening and citizen led maintenance.

Community gardens, tree planting drives and interpretive trails serve as activity generators while simultaneously improving environmental literacy. Urban design research recommends careful zoning to allow both active and quiet ecological areas ensuring that human activity complements rather than disrupts habitat value. This perspective is particularly relevant for Bengaluru where green spaces must balance recreational pressure with urban ecological needs.

3.5 Bengaluru Specific Urban Form, Governance and Park Use Constraints

The urban development literature on Bengaluru highlights distinct contextual factors: fragmented open space distribution, inconsistent maintenance by BBMP, informal vending pressures, high density residential fabric and varying levels of socio economic inclusivity. Open City spatial datasets reveal an uneven distribution of parks with some localities having clusters of well-maintained parks while others face neglect or encroachment.

Governance literature stresses that successful activation relies on collaboration between municipal bodies, Resident Welfare Associations, local vendors, and NGOs. Informal vending which is often seen as a challenge can when regulated play a role as a powerful activity generator by drawing footfall and ensuring continuous informal surveillance. This contextual research helps shape realistic and implementable urban design strategies for neighbourhood parks in the city.

4. Methodology

This study uses three complementary methods:

- a) Literature synthesis: review of urban design and public space literature on park programming, SOPARC observational studies and park vitality evaluation frameworks to extract design relevant factors and generator typologies.
- b) Policy and dataset review: examination of BBMP or open city datasets for park counts, typologies and spatial distribution to contextualize Bengaluru's park network and identify common constraints.

5. Activity generator typology and urban design relationships

Below is the list of key activity generators and explain their urban-design implications, drawing on evidence from international studies and Bangalore-specific context.

5.1 Playgrounds and innovative play equipment (Intrinsic)

Play areas are among the highest leverage generators as they attract children and accompanying adults, lengthen dwell times and promote intergenerational interaction. Studies show innovative playgrounds attract more users and higher physical activity compared to basic equipment. Design implications such as locating play areas with good sightlines from entrances and nearby seating to encourage supervisory eyes on the park. Equipment should cater to varied ages and abilities.

5.2 Sports courts and multi-use fields (Intrinsic / Edge)

Sports attract repeat, scheduled use and are effective at creating regular presence. Small courts like badminton or flexible open lawns support both organized and informal sports. From an urban design lens, placing courts near durable access and away from sensitive habitat pockets preserves biodiversity while creating predictable peaks of use especially during evenings, weekends.

5.3 Walking/jogging loops and fitness nodes (Intrinsic)

Continuous paths and discrete fitness nodes encourage daily exercise routines. The continuity of paths linked to neighbourhood pedestrian networks raises usable hours and diminishes isolated pockets. Design can be to prioritize perimeter loops with natural surveillance and durable, shaded surfaces.

5.4 Food concessions, cafes and vendor edges (Edge/Extrinsic)

Food and beverage options at park edges or adjacent frontages are powerful generators serving both park users and passersby. They extend the park's catchment area by offering reasons to linger. Urban-design strategies include regulated vendor zones at park perimeters, active frontage planning and integrating vending with pedestrian flows to avoid edgeless, inactive boundaries.

5.5 Community gardens, biodiversity pockets and interpretive trails (Intrinsic / Ecological)

Community gardens create consistent weekly usage and stewardship, aligning biodiversity goals with social activation. Bangalore's small parks have demonstrated ability to support surprising biodiversity; combining micro-habitat features and community gardening can link ecological value with repeated human presence. Design considerations: allocate small, fenced plots; use raised beds; locate interpretive signage along circulation.

5.6 Cultural programming, markets and events (Programming)

Temporary or seasonal markets, performances and festivals diversify user types and can draw adjacent commercial spillover. Programming coordination between municipal authorities, resident groups and NGOs can transform underused parks into vibrant nodes. Urban design should provision flexible plaza spaces and good access for small event logistics.

5.7 Active frontages and mixed-use edges (Extrinsic)

The land use and frontage treatment facing a park critically shape its activation. Shops, eating outlets, community services and transit stops that open onto park edges deliver eyes on the park and supply casual users. Zoning and urban-design controls that encourage active frontages transparent facades, pedestrian oriented setbacks enhance park vitality.

4.8 Transit and pedestrian connectivity (Extrinsic)

Transit stops and high pedestrian permeability increase spontaneous visitation. In Bangalore, integrating bus stops, pedestrian crossings and cycle racks near park entrances can widen catchment. Design should ensure safe, shaded pedestrian paths linking to transit nodes.

6. Activity generator typology and urban design relationships

Based on the typology and indicators above, the following urban design and governance recommendations are proposed for Bangalore's neighbourhood parks.

6.1 Design interventions

- a) Edge activation zoning: Incentivize small-scale commercial/food concessions at park edges with simple built kiosks and rules for operating hours and waste management to avoid conflict with biodiversity objectives.
- b) Flexible event plaza: Reserve a small paved plaza for markets and performances with durable surfaces and concealed service access. This allows programming without damaging lawns.
- c) Perimeter loops and seating nodes: Create continuous walking loops with regular seating and lighting to increase daily use and surveillance opportunities.
- d) Play diversity: Provide multi age playgrounds (innovative equipment) with clear sightlines and nearby seating to increase adult supervision and dwell time.
- e) Community gardening pockets: Allocate small, managed beds for residents with clear stewardship agreements to generate repeat users and care for small biodiversity features.

6.2 Policy and governance

- a) Permit vending strategically: Municipal bye-laws (BBMP) should streamline permits for low-impact vendors at park edges and require waste management plans and time limits to balance activation and maintenance.
- b) Programming partnerships: Encourage NGOs, resident welfare associations and schools to run regular programming (morning yoga, weekend markets, biodiversity walks) with low administrative friction.

- c) Monitoring regime: Adopt SOPAR style periodic observations to track person-hours and activities, enabling evidence-based interventions.
- d) Biodiversity and design balance: Use landscape design to weave small habitat pockets near less intensively used zones so biodiversity and activity can coexist (dense clusters of small parks in Bangalore can support biodiversity if designed intentionally).

6. Discussions

The analysis of activity generators in neighbourhood parks highlights that no single intervention guarantees success instead, outcomes emerge from the careful calibration of spatial design, socio-cultural context, governance and ecological conditions. International literature offers a diverse set of strategies, but their effectiveness in Bengaluru depends on how well they are adapted to the city's granular spatial patterns and local community behaviour. Activity generators must be selected in relation to park size, demographic composition, and adjacent land use structure. Small neighbourhood parks (often <1–1.5 acres in Bengaluru) cannot accommodate large sports courts or heavy event programs without compromising ecological or social quality. In such cases, lighter touch generators such as walking loops, multi age play equipment, shaded seating courts and native planting pockets prove more appropriate. Larger parks, particularly those embedded within mixed use areas, benefit from event plazas, vending zones and sports facilities that can serve wider catchments.

Bengaluru's urban morphology is characterized by large numbers of small parks distributed across residential neighbourhoods. As demonstrated in recent ecological studies such parks hold surprisingly high biodiversity value when planted with native species and minimally fragmented. Their ecological importance increases when they are part of a distributed network, allowing species movement and micro climate benefits to accumulate across the city. From a social perspective the network approach ensures that residents across different wards have access to functional green spaces within walking distance. Activity generators amplify these benefits by turning each park into a micro node of daily life such as supporting routines such as morning walks, informal gatherings, peer play and community gardening. When parks are viewed as interconnected social ecological systems rather than isolated green pockets, urban design shifts from beautification to strategic urban vitality planning.

Edge design is particularly critical in Indian cities where parks interface with highly dynamic and often contested public edges. The boundaries of parks in Bengaluru frequently experience informal vending, tea stalls, cycle repair stands, waste points and parking spillover. Rather than eliminating these edge activities which often serve community needs urban design literature suggests managing and channeling them productively.

A balanced vending strategy can transform edges into vibrant, safe, and socially mixed zones. For instance, allocating designated, regulated vending bays with waste-management provisions reduces conflict while sustaining activity. Active edges also enhance natural surveillance, improving perceived safety, especially for women, children, and older adults. Alternatively, completely inactive edges such as compound walls, dead facades, and fenced off areas tend to diminish visibility, discourage use and attract nuisance activities. Thus edge management emerges as one of the most powerful urban design levers for increasing park vitality in Bengaluru.

7. Conclusions

The analysis highlights that neighbourhood parks achieve their highest potential when designed and managed as integrated social ecological systems rather than isolated green parcels. From an urban design perspective, the presence of diverse activity generators both within the park and along its edges plays a crucial role in shaping vitality, safety, inclusivity and ecological performance. Internal elements such as children's play areas, sports courts, walkable paths, shaded seating zones and biodiversity pockets help sustain continuous and varied use throughout the day. Equally important are the external interfaces such as active frontages, well connected pedestrian and transit links, neighbourhood level surveillance and sensitively managed vending edges that create transitions between public open space and the surrounding urban fabric. In the context of Bengaluru, where small and medium sized parks form a dense and distinctive open space network, strengthening these design and management synergies presents a realistic and resource efficient opportunity for enhancing neighbourhood liveability. Strategies such as empowering ward level community stewardship groups, formalising low impact vending to maintain vibrancy without compromising environmental quality and introducing evidence based monitoring systems can significantly improve everyday park performance. Tools such as SOPARC based behavioural mapping and indices inspired by net public value approaches can help municipalities track usage patterns, ecological condition and social benefits over time. Future empirical

research should apply these indicators across a representative sample of parks distributed among different socio spatial contexts in the city. Systematic observation, user surveys and spatial analysis can then be used to calibrate interventions tailored to local needs, ultimately supporting a more resilient, inclusive and well used public space network for Bengaluru's rapidly evolving urban landscape.

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