



ROLE OF LANDSCAPE URBANISM IN PROMOTING SOCIAL EQUITY AND ACCESS TO GREEN SPACES IN URBAN AREAS

¹Mr. Vedansh rai, ²Ar. Sarang Bhide

¹Student, ²Professor

¹School of Architecture,

¹SOA, IPS Academy, Indore, India

Abstract : Landscape urbanism proposes an alternative approach to city organization, prioritizing the integration of economy, ecology, and socio-urban contexts through landscape and environmental planning. Unlike traditional urbanism, which primarily focuses on roads and buildings with green spaces as afterthoughts, landscape urbanism advocates for designing urban forms around cultural and natural processes (Sanghvi, 2020). In contrast to traditional architecture's emphasis on permanence, landscape architects and urban designers often work with living natural systems, acknowledging the temporality inherent in their designs. Temporary architectural installations, such as single-family homes or art installations, are defined by their temporary nature and adaptability to different uses and users. Ephemeral architecture finds applications in various social contexts, serving as event accommodations, lifestyle choices, responses to societal changes, or emergency solutions. Temporary landscapes are gaining traction in landscape architecture, with projects like pop-up parks and temporary art installations reshaping perceptions of open spaces. These installations are characterized by their ease of removal or their ability to evolve (Introna, 2021).

KEYWORDS: *Landscape Urbanism, Design, Architecture, Society Scenarios and Social Context, Theory.*

I. INTRODUCTION:

Urbanization has brought about significant transformations in how people interact with their surroundings, leading to pressing challenges such as social inequity and limited access to green spaces. As cities continue to expand and evolve, addressing these issues becomes increasingly urgent. In recent years, landscape urbanism has emerged as a promising approach to urban design and planning, offering a holistic perspective that integrates natural systems, social dynamics, and spatial organization.

Recognizing the vital role of green spaces extends beyond mere aesthetics, landscape urbanism emphasizes their importance as essential components for fostering social equity and enhancing urban life quality. By reconceptualizing the relationship between built and natural environments, landscape urbanism strives to create inclusive, resilient, and sustainable cities where all residents have equitable access to green spaces and their benefits.

At its core, landscape urbanism challenges conventional urban design paradigms that prioritize rigid zoning and fragmented development. Instead, it advocates for flexible, multifunctional landscapes capable of accommodating diverse activities and serving the needs of various communities. Through strategic planning and design interventions, landscape urbanism aims to mitigate social disparities by revitalizing neglected areas, enhancing connectivity, and fostering social interaction within urban environments.

One of the fundamental principles of landscape urbanism is the promotion of inclusivity. By designing spaces that are accessible and welcoming to people from all walks of life, landscape urbanism endeavors to create environments that promote social cohesion and equity. This may involve repurposing underutilized areas or integrating green spaces into urban fabric, thereby democratizing access to nature and recreational opportunities.

II. RESEARCH METHODOLOGY:

The methodology for studying the role of landscape urbanism in promoting social equity and access to green spaces in urban areas involves a systematic approach that integrates various research methods. Here's a proposed methodology:

- **Literature Review:** Conduct a comprehensive review of existing literature on landscape urbanism, social equity, green space access, and urban development. This review will provide a theoretical framework and identify key concepts, theories, and best practices related to the topic.

- Case Studies: Analyse case studies of landscape urbanism projects from diverse urban contexts. Select cases that demonstrate the successful integration of landscape urbanism principles in promoting social equity and enhancing green space access. Analyse project documentation, reports, and evaluations to identify factors contributing to their success.
- Comparative Analysis: Compare different approaches to landscape urbanism and green space provision across cities or regions. Identify lessons learned, success factors, and challenges encountered in implementing landscape urbanism interventions to promote social equity and green space access.

III. LANDSCAPE URBANISM:

Landscape urbanism, as a theoretical framework, has emerged as a response to the challenges and complexities of contemporary urban environments. Rooted in interdisciplinary approaches, landscape urbanism redefines the relationship between the built environment, nature, and society. At its core, it seeks to integrate ecological principles, social dynamics, and spatial strategies to create resilient, inclusive, and sustainable cities.

The foundational figures of landscape urbanism, including James Corner, Stan Allen, Alex Wall, and Charles Waldheim, have played pivotal roles in shaping its discourse and practice. Their contributions have propelled landscape urbanism from a nascent concept to a transformative approach to urban design and planning.

Charles Waldheim, often credited with popularizing the term "landscape urbanism," defines it as a disciplinary realignment wherein landscape supersedes architecture as the primary driver of urban form. This reorientation reflects a broader shift towards acknowledging the intrinsic interconnectedness of natural and built environments. Waldheim's emphasis on abandoned urban spaces as potential sites for revitalization underscores landscape urbanism's commitment to reimagining neglected landscapes as vibrant public realms.

Stan Allen's work further extends the discourse of landscape urbanism by exploring the interplay between architecture, landscape, and infrastructure. His theoretical writings and design projects emphasize the role of landscape as a dynamic mediator between built form and ecological systems. By integrating infrastructural interventions with landscape strategies, Allen advocates for adaptive urban landscapes capable of responding to evolving environmental challenges.

James Corner's contributions to landscape urbanism are perhaps most renowned through his influential projects and theoretical texts. Corner's seminal work, "Taking Measures Across the American Landscape," delves into the complexities of contemporary landscapes, advocating for a nuanced understanding of their cultural, ecological, and spatial dimensions. His concept of the "landscape as a medium" emphasizes the dynamic nature of landscapes as active agents in shaping human experiences and perceptions.

Corner's notion of the "eidetic range of landscape" expands the discourse beyond visual representation, highlighting the multi-sensory and cognitive aspects of landscape perception. This holistic perspective underscores the importance of considering diverse modes of engagement with the landscape, ranging from visual imagery to tactile and auditory experiences.

Furthermore, Corner's emphasis on landscape representation challenges conventional notions of aesthetics, foregrounding the strategic instrumentality of landscape design in addressing pressing urban issues. By prioritizing the performative qualities of landscapes over their formal appearances, Corner advocates for a shift towards process-oriented design approaches that prioritize functionality, adaptability, and socio-cultural relevance.

Alex Wall's contributions to landscape urbanism offer valuable insights into the role of temporality and adaptability in shaping urban landscapes. His exploration of "ephemeral landscapes" challenges traditional notions of permanence, highlighting the potential of temporary interventions to catalyze social interactions and spatial transformations. Wall's work underscores the importance of embracing change and uncertainty in the design and management of urban landscapes, advocating for flexible, responsive, and inclusive design strategies.

In practice, landscape urbanism manifests through a diverse array of projects and interventions that seek to reimagine urban spaces as dynamic, interconnected ecosystems. From green infrastructure initiatives to temporary pop-up parks, landscape urbanism offers innovative solutions to pressing urban challenges, such as climate change, social inequity, and ecological degradation.

One notable example of landscape urbanism in action is the High Line in New York City, designed by James Corner Field Operations in collaboration with Diller Scofidio + Renfro. This transformative project repurposed a disused elevated railway into a linear park, showcasing the potential of adaptive reuse in revitalizing urban landscapes. By seamlessly integrating green space, pedestrian pathways, and cultural amenities, the High Line has become a vibrant public space that celebrates the city's industrial heritage while promoting ecological stewardship and community engagement.

Another exemplary project is the Cheonggyecheon Restoration in Seoul, South Korea, which revitalized a neglected urban waterway into a linear park and public space. Designed by a multidisciplinary team led by architect Kee Yeon Hwang, the Cheonggyecheon Restoration demonstrates the transformative power of landscape interventions in reimagining urban infrastructure. By reintroducing natural elements, improving water quality, and enhancing pedestrian connectivity, the project has revitalized the surrounding urban fabric, fostering social interaction, and cultural exchange.

Landscape urbanism represents a paradigm shift in urban design and planning, challenging conventional approaches and embracing complexity, uncertainty, and change. By foregrounding the interconnectedness of ecological systems, social dynamics, and spatial strategies, landscape urbanism offers a holistic framework for creating resilient, inclusive, and sustainable cities. Through innovative projects, theoretical discourse, and interdisciplinary collaborations, landscape urbanism continues to shape the future of urban environments, fostering creativity, diversity, and resilience in the face of global urban challenges.

IV. LITRATURE CASE STUDY: ICHIKAWA, JAPAN

Our study site was Ichikawa (57.10 km² with 482,544 inhabitants), located in the Chiba Prefecture, Japan (Figure 1). This city has been formed while being strongly influenced by outer Tokyo. There have been three waves of rapid population inflows without prior establishment of urban infrastructure due to its location close to the capital of Japan. Land readjustment projects and railway construction projects have created high-density urban districts. Currently, Ichikawa consists of more than 70% urbanized areas,

including residential, commerce, and industrial districts, and about 30% (29.24%) of urbanization control areas intended to constrain periurban sprawl.

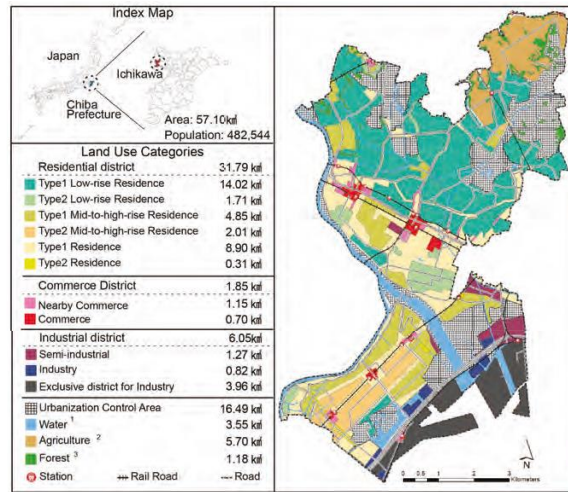
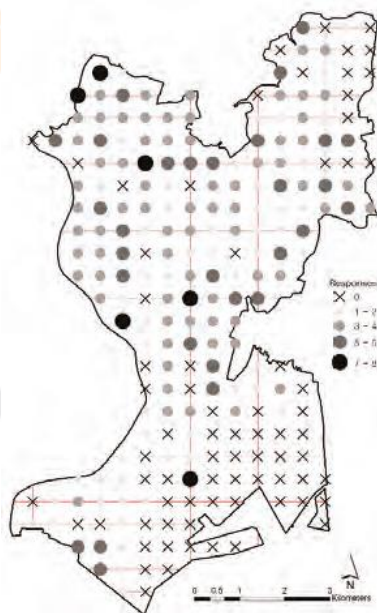


Figure 1. Location of and land use categories in Ichikawa, Japan. 1 Some of the total water areas overlap with urbanization control areas. 2 The agricultural district is included in the controlled urbanization district. 3 Forest area exists not only in agricultural districts but also in residence districts and controlled urbanization districts.

Acquisition of public land by the city is not easy because districts have formed dense urban areas of narrow roads and their land price has risen. Since most citizens migrated from outside the city, the general sense of community attachment is low. This phenomenon influenced the city government to attempt to address it through urban plans and the creation of green spaces. Ichikawa government has implemented several town plans for improving residents' quality of life since the year, 2000.

According to the Green Master Plan of Ichikawa, the government aimed to improve green space from 2003 to 2025 in three steps, using green space per capita (m²/person) as an indicator. The indicator at the time they declared the plan was 2.70 m² and the next goal was set at 3.85 m² for 2015 before the final goal of 4.73 m² per capita by 2020. However, the city only had 3.43 m² per capita as of 2016, and it seems unlikely that it is possible to provide residents with equal opportunity to use green space according to the Urban Park Act of Japan, which recommends 10.0 m² per capita.

We conducted a survey targeting residents using a mail-back questionnaire distributed around the sample sites (Figure 2a) of an existing grid that was set up for a previous field survey of IGS distribution. Sampling kits were allocated at 20 per sample site, and a total of 3700 kits were distributed, except in the non-resident areas. If there were not enough residences in the sample site, we extended the distribution scope using a buffer as 50 m or 100 m focusing on the sites. The number of replies per site was from 1 to 8, with an average of 3.29 responses.



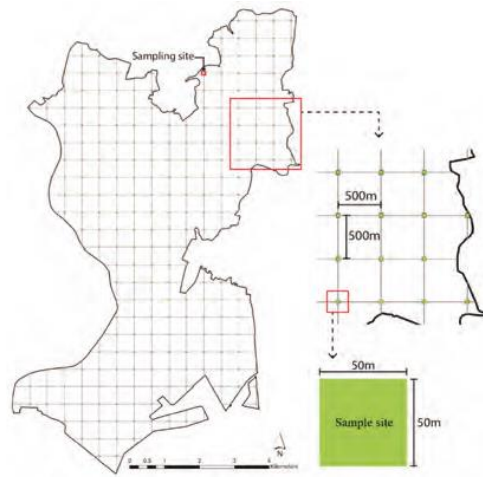


Figure 2. Sampling strategy and number of responses:
 (a) Distribution of survey sites across Ichikawa;
 (b) number of responses per sample site.

Before creating the survey instrument, we conducted a pilot workshop on IGS with 70 undergraduate students of agricultural science and landscape architecture. We discussed the merits IGS is considered to have and reasons why one may be reluctant to use it. Results were used to create the questionnaire. The questionnaire contains questions on the general characteristics of the respondents, the merit of IGS, potential reasons for their reluctance to use IGS and respondents' attitudes toward urban green space. To ensure the contents of the questionnaire were easy to understand and answered for residents without a relevant professional or academic background, grammar and wording were revised by seven native non-specialist Japanese speakers. To capture the full variety of IGS in Ichikawa, we extended the IGS typology by adding 'parking lot verges' and 'unimproved land' to the typology used in previous work (Table 1). Additionally, we provided photos of the revised IGS types in our questionnaire sheet to allow residents to visually identify what IGS looks like (Figure 3). We lowered the colour saturation of the non-IGS area in the photos to make it easier for residents to notice IGS in the images provided.

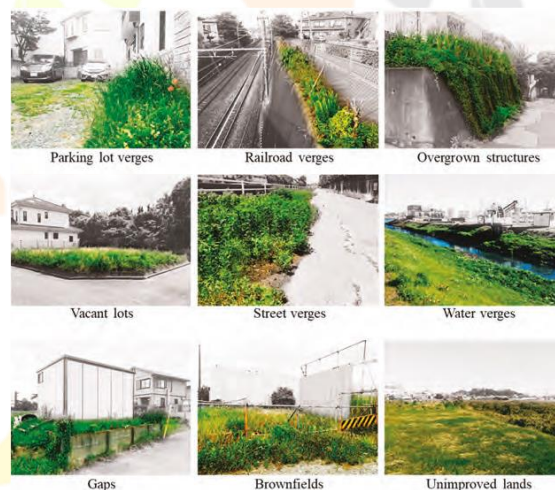


Figure 3. Nine types of IGS in Ichikawa.

4.1 Exposure to Urban Green Space:

We categorized environmental contact with green spaces into three types: First, how much green space do residents perceive in their living surroundings? Second, what kind of green space is connected to residents in their residential environment? Third, how often do residents use UGS? Asked how much green spaces residents perceive in their surrounding environment, 221 respondents (42.8%) responded that green spaces are abundant, while 160 (31.2%) answered that green spaces are lacking. Four hundred and five respondents were living in housing with green space, of which 72.07% of them could access green space by a home garden from the house, and 25.93% shared green space within an apartment housing. The proportion of people who do not use UGS at all was about 2% higher than the proportion of people visiting UGS every day. We divided the responses regarding the environment toward surrounding greenery into two groups: Low and high green space exposure. In these groups, we excluded neutral responses and compared the perception of 'ME and RE' of IGS. Table 4 shows significant values for differences in IGS perception for each independent variable. The group with high amounts of green space exposure had a more positive stance toward IGS merits. Moreover, residents who could access green space from their home garden in the residential environment showed a higher position

on 'ME.7' than people who could access green space as a shared form. The group with low green space exposure agreed more strongly with reasons for being reluctant to use IGS.

4.2 Limitations of this case study:

This study has some limitations. Older residents (over 60) accounted for almost half of all respondents (44.7%). Therefore, it is assumed that the perception of the elderly has been reflected more strongly. However, this can be interpreted to provide a glimpse into the future Ichikawa is heading towards due to the rapid aging process ongoing in Japan. In an aging society, encouraging equality of outdoor activities and green life for the elderly is thus of increasing importance. Another limitation was the number of 'undecided' responses to the perceived IGS in our survey responses. However, similar results by Rupprecht [12], despite using a different data collection method, suggest this may be typical for the study topic. While the reason could be a lack of interest in IGS, we find it more likely that the unfamiliarity of the concept makes expressing strong opinions difficult for residents. In the future, we propose testing a six-level Likert scale rather than a five-level Likert scale when surveying unfamiliar concepts, providing respondents with more nuanced ways to indicate weak agreement or disagreement while ensuring all respondents' opinions are reflected in the final results.

4.3 Conclusion of this case study:

This study examined the potential of IGS as a supplementary greenspace to meet the well-being needs of residents in the context of spatial and financial limitations in Ichikawa, Japan. Based on our findings, we conclude that IGS in Ichikawa is not disparate from green spaces that are recognized by residents, and has potential as a supplement for UGS. IGS can play a role in relieving the spatial and financial burden of governments and help them meet the needs of residents' comfortable lives. However, planners must consider ways to compensate for the fact that it may be difficult for residents with little UGS and related experience to perceive the potential of IGS. Therefore, when discussing IGS to resolve the inequality of green space provision, proposals should consider the perceptions of residents disadvantaged in terms of green space access to address this environmental justice issue. Another issue for planners to consider is the distinct spatial form of IGS. IGS is smaller than large-scale urban parks, and the continuity of space may be uncertain. IGS, however, is a result of spatially appearing by-products of human activities, scattered around the area where human activities take place. As our findings show, accessibility is one of IGS's most significant features and potential advantages—something planners can seek to leverage. This suggests that even though it may be difficult to provide users with the full functions of green space, such as an urban park, it can provide a minimum level of functions that can contribute towards meeting residents' needs in some parts of everyday life.

We conclude with some directions for future research based on our findings and limitations of our study in the hope they will contribute to furthering our understanding of IGS. Since close to half of our respondents were over 60 years old, we believe older adults' perception of IGS and its potential for them merits further investigation. Although our study was limited to Japan, represented by a shrinking and aging city, we suggest additional research in other Asian cities that share the issue of aging as an aspect affecting the quality of residents' lives, but which still experience rapid urban growth (e.g., Seoul). While a study in rapidly growing Brisbane, Australia suggested that IGS exists even when development pressure is high, IGS availability in Asian megacities is a topic that merits further study. Such a follow-up study of the availability of IGS should also consider recognition by older people in response to the increasingly aging Asian societies. Furthermore, in this context, IGS could be investigated as a relief not only for the elderly but also for people in lower socioeconomic groups who often experience unequal availability of green space; however, more data is needed on this topic. In addition, even though research on IGS has been increasing, support from the government and stakeholders is still limited because IGS's recreational use is contested by continuous development and land speculation pressure. Future work should thus investigate the direction of IGS's empirical development through perceptions towards IGS by residents and what role the government and urban planners play in how IGS are integrated into policies.

V. LANDSCAPE URBANISM IN PROMOTING SOCIAL EQUITY:

Landscape urbanism plays a crucial role in promoting social equity by addressing various dimensions of urban life, including access to green spaces, economic opportunities, and social inclusion. Here are several ways in which landscape urbanism contributes to fostering social equity:

I. **Equitable Access to Green Spaces:** Landscape urbanism emphasizes the creation of green spaces that are accessible to all residents, regardless of their socio-economic background or geographic location. By integrating parks, gardens, and green corridors into urban environments, landscape urbanism ensures that communities have equitable access to nature, recreational opportunities, and environmental amenities.

II. **Revitalization of Neglected Areas:** Landscape urbanism interventions often focus on revitalizing neglected or underserved urban areas, thereby improving living conditions and enhancing quality of life for residents. By transforming vacant lots, brownfields, or abandoned infrastructure into vibrant green spaces, landscape urbanism helps to reinvigorate communities and promote social and economic revitalization.

III. **Community Engagement and Participation:** Landscape urbanism encourages community engagement and participation in the planning, design, and management of urban landscapes. By involving residents in decision-making processes, landscape urbanism ensures that projects reflect the diverse needs, preferences, and aspirations of local communities, thereby promoting social inclusion and empowerment.

IV. **Creation of Multifunctional Spaces:** Landscape urbanism promotes the creation of multifunctional spaces that serve the needs of diverse communities and accommodate a range of activities. By designing flexible and adaptable environments, landscape urbanism fosters social interaction, cultural exchange, and recreational opportunities, thereby enhancing social cohesion and connectivity within urban areas.

V. Reduction of Environmental Inequalities: Landscape urbanism interventions often target areas with high levels of environmental degradation or pollution, where marginalized communities disproportionately bear the burden of environmental hazards. By integrating green infrastructure and ecological restoration into urban landscapes, landscape urbanism helps to mitigate environmental inequalities and improve environmental quality for all residents.

VI. Promotion of Health and Well-being: Access to green spaces has been linked to numerous health benefits, including stress reduction, physical activity promotion, and mental well-being improvement. By increasing access to green spaces in urban areas, landscape urbanism contributes to promoting public health and reducing health disparities among different socio-economic groups.

Overall, landscape urbanism plays a vital role in promoting social equity by creating inclusive, vibrant, and sustainable urban environments that prioritize the needs of all residents and foster community well-being and resilience.

CONCLUSION:

In conclusion, landscape urbanism stands as a pivotal force in reshaping urban environments to promote social equity and broaden access to green spaces. Through its comprehensive approach to urban design and planning, landscape urbanism offers innovative solutions to confront the pressing challenges of social disparity and limited green space availability in cities. By re-envisioning the interplay between built structures and natural landscapes, landscape urbanism strives to cultivate inclusive, resilient, and sustainable urban landscapes where all residents enjoy equitable access to green spaces and their associated benefits.

Central to its mission is the principle of inclusive design, ensuring that green spaces are not only accessible but also inviting to individuals from diverse backgrounds. By actively involving communities in the planning and design process, landscape urbanism ensures that green spaces are tailored to meet the unique needs and preferences of residents. Furthermore, landscape urbanism interventions often focus on revitalizing neglected urban areas, breathing new life into marginalized neighbourhoods, and fostering social and economic renewal. Through the transformation of derelict spaces into vibrant green oases, landscape urbanism contributes to the revitalization of urban communities, thereby enhancing the overall quality of life.

Additionally, landscape urbanism addresses environmental injustices by targeting areas burdened with pollution and degradation. By integrating green infrastructure and ecological restoration into urban landscapes, landscape urbanism helps alleviate environmental hazards and enhances environmental quality for all residents. Moreover, the health and well-being benefits of green spaces cannot be overstated. Access to nature has been linked to a multitude of health benefits, from stress reduction to improved mental and physical well-being. By increasing green space accessibility in urban areas, landscape urbanism contributes to promoting public health and narrowing health disparities across socio-economic groups.

Crucially, landscape urbanism places a strong emphasis on community engagement, fostering collaboration and participation in urban landscape management. By empowering residents to play an active role in decision-making processes, landscape urbanism ensures that green spaces are responsive to the needs and aspirations of local communities. In essence, landscape urbanism offers a transformative vision for urban development, one that prioritizes social equity and fosters vibrant, inclusive, and sustainable cities where all residents can thrive. However, realizing this vision demands concerted efforts from policymakers, planners, designers, and communities to prioritize social equity and green space accessibility in urban development agendas.

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