

Research Article

The Role and Potential of Urban Public Park Services: A Case Study in Bangkok, Thailand

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Abstract

Urban public parks play a pivotal multi-functional role in enhancing the quality of city life, providing spaces for recreation, physical exercise, environmental preservation, and social interaction. To establish robust design guidelines for future park management, this study evaluates the service potential of urban public parks across diverse functional capacities. Focusing on seven district parks in Bangkok, the primary research instrument utilized was a Scalogram analysis based on Guttman's data arrangement concept. This method categorized park functionalities into five distinct dimensions: recreation, exercise, inclusivity ('parks for all'), learning, and social interaction. The findings reveal that high-potential parks capable of concurrently serving multiple roles are predominantly concentrated in central business districts (CBDs) specifically Benchakiti Park and Lumpini Park. Crucially, the analysis demonstrates that a park's service potential is determined by the diversity of internal activities and completeness of structural features, rather than being constrained by its spatial scale or geographic location within the CBD. Consequently, urban landuse planning in Bangkok should prioritize the programmatic richness and contextual design of park features over mere physical size. Enhancing these attributes will maximize the efficiency of urban green spaces and foster sustainable urban development.

Keywords: Field survey, Public park, Scalogram analysis, Service potential level, The role of public park

1. Introduction

A public park is a green space provided by the government for recreational and exercise purposes, resulting in a high quality of life for local citizens (Bressane et al., 2024; Hooper & Edwards, 2024; Zhang et al., 2024). Therefore, public parks serve more than just as areas with lots of trees for shade and beauty. Public parks also facilitate recreation, exercise, education, and social interaction (Kabisch et al., 2015). Consequently, public parks consist of infrastructure that is promoted in cities according to urban planning concepts (Safo et al., 2024) and global development policies (United Nations, 2024). When considering the development of public parks in Bangkok, Thailand's capital, it was found that providing areas and maintaining public parks is the responsibility of the Public Park Office, Environment Department, Bangkok Metropolitan Administration, which has historically supported the development of public parks. This is apparent in the Bangkok Metropolitan Administration's 20-year development plan phase 1 (2013-2017), which promotes Bangkok as a green metropolis where residents can access public parks within a 5-km radius (Strategy and Evaluation Department, 2013), as well as the Public Park Office plan, which aims to increase public park area by 2.16 km² per year between 2013 and 2024.

Environment Department, Bangkok Metropolitan Administration, classifies public parks into seven categories based on area size, park components, and service radius: pocket parks (green spaces less than 0.0032 km², service radius no more than 1 kilometer), neighborhood parks (green spaces between 0.0032-0.04 km², service radius between 1-3 kilometers), community parks (green spaces between 0.04-0.2 km², service radius between 4-8 kilometers), district parks (green spaces between 0.2-0.8 km², service radius of 8 kilometers or more), city parks (green spaces more than 0.8 km²), street parks (green spaces along road shoulders, median strips, intersections, sidewalks, and bicycle paths), and special purpose parks (green spaces of unlimited size with a specific purpose, such as historical parks, etc.)

In 2024, the Public Park Office managed 9,190 public parks in Bangkok, covering 43.11 km² or 2.75 % of the city's total area. Based on the previously specified count of public parks in Bangkok, a total of seven district parks—that is, public parks with an area between 0.2 and 0.8 km²—exist, each with its own unique features and amenities. All district parks are well-attended. For example, in 2022, Wachirabenchat Park had 1,431,452 people on weekdays and 1,357,240 people on holidays with a total of 2,788,692 people utilizing the public park (Environment Department, 2023).

Public park design and development must consider the site's aesthetics, shade, cleanliness, and orderliness in addition to the variety and ease of access ways (Wijaya & Christianiti, 2026). It must also consider the park's role and type (Portalés-Mañanós et al., 2026). Parks for recreation must have enough facilities, such as benches and food kiosks, etc. Parks for exercise must have well-maintained equipment and facilities, both indoors and outdoors, to promote individual and group exercise. Public parks for learning and social interaction must contain activities and spaces that foster knowledge and encourage group interaction. Furthermore, modern public parks must be designed and developed in accordance with universal design principles, which emphasize equal access and use of facilities for all.

Despite their high patronage, empirical research evaluating the infrastructural completeness and functional diversity of Bangkok's district parks remains scarce. This baseline data is vital for strategic urban green space interventions, which include accessibility, mobility, public relations, facilities, activities, security, and environmental maintenance. This is important information for urban park planning and design (Delhi Urban Art Commission, 2020; Wiranata et al., 2020), and as a result, the current public park's role is more than just recreation and exercise, as it is also a learning area, a space for social interaction, and a zone for environmental conservation (Huang et al., 2022).

This research article focuses on answering the research question of the role and service potential of district parks in Bangkok in various functions. This study examines the current state of components and activities within public parks, as well as analyzing the service potential of urban parks in their various roles. The important research instruments include Scalogram analysis, a widely used research tool in urban planning that directly analyzes data from field surveys. The research's findings subsequently lead to an appreciation of the public park's service potential, which is helpful for future administrations, and for the enhancement of public parks.

2. Methodology

Study Area

The study area includes seven district parks in Bangkok. Bangkok has served as Thailand's capital for 242 years, beginning in 1782 and continuing to today (Bangkok Metropolitan Administration [BMA], 2021). Bangkok covers 1,568.65 km² and is populated by 5,494,932 people as of 2022 (Strategy and Evaluation Department, 2022).

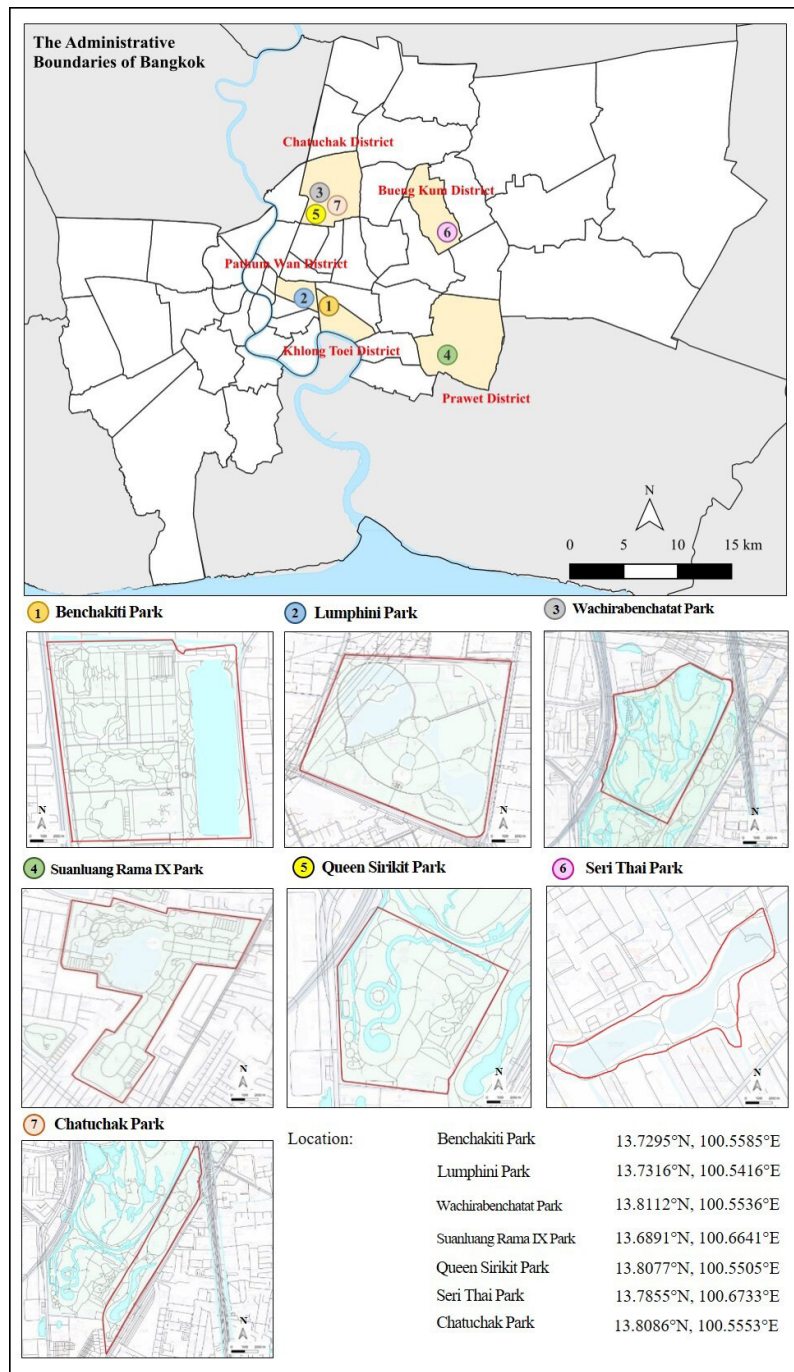


Figure 1 The study area: the seven district parks in Bangkok.

District parks are the second largest type of public park after city parks, according to the classification of the Public Park Office, Environment Department, Bangkok Metropolitan Administration, the main agency responsible for public parks in Bangkok. District parks vary in size from 0.2 to 0.80 km² and include park amenities such as parking lots and multifunctional areas. Furthermore, district parks have their own unique characteristics, such as ponds and diversified and shady plants. The district parks consist of: (1) Suanluang Rama IX Park, located in Nong Bon Subdistrict, Prawet District; (2) Benchakiti Park, located in Khlong Toei Subdistrict, Khlong Toei District; (3) Wachirabenchatat Park, located in Lat Yao Subdistrict, Chatuchak District; (4) Lumphini Park, located in Lumphini Subdistrict, Pathum Wan District; (5) Seri Thai Park, located in Khlong Kum Subdistrict, Bueng Kum District; (6) Queen Sirikit Park, located in Lat Yao Subdistrict, Chatuchak District; and (7) Chatuchak Park, located in Chatuchak Subdistrict, Chatuchak District (Figure 1).

Research Instruments

This study article's research instruments include a field survey and a scalogram analysis. The field survey is used to gather and study data on the components and activities in each park, which consist of: (Abdelhamid & Elfakharany, 2020; Fang & Tan, 2024; Luo et al., 2022; Mikuni et al., 2024; Sirina et al., 2017; Wan & Shen, 2015; Wüstemann et al., 2017; Zhang & Zhou, 2018) (1) access routes (main roads, minor roads, footpaths, bicycle paths, private vehicles, public transportation, trains, or subways); (2) accessibility within the park (walkways, cycling pathways, parking, standard parking, zebra crossings, accessible ramps or universal design features for persons with disabilities (PWDs)); (3) communication and public relations (information signs, public relations rooms, speakers or audio transmission); (4) facilities (bathrooms, individual and group benches, free drinking water stations, beverage

shops or convenience stores); (5) activities and uses (playgrounds, temporary activity areas, sculpture exhibition areas, individual exercise areas, group exercise areas, educational areas, gathering areas, shaded recreation areas, religious activity areas, pet play areas, music activity areas, gyms, exercise equipment, club establishments); (6) security (safety booths, assistance desks, lighting poles, CCTV cameras); and (7) environmental protection (trash cans, ponds or waterways, diversified and shaded plants) (Figure 2). The field survey was conducted by three researchers in March and April 2024, using a checklist and qualitative assessment methodology.

Scalogram analysis is a systematized data concept established by Louis Guttman (Peerapun, 2013) that is used to analyze the potential of district parks. Based on field surveys, every factor included in the scalogram analysis is a key component of public parks. District parks are divided into

five categories based on their functions (Schetke et al., 2016; Xiao et al., 2024): (1) public parks for recreation; (2) public parks for exercise; (3) public parks for all people; (4) public parks for learning; and (5) public parks for social interaction. The structural attributes were evaluated using Guttman’s Scalogram analysis to establish a functional hierarchy among the selected district parks. Attributes were binary-coded based on presence or absence during the field survey, and cumulative scores were normalized to categorize the parks into three distinct hierarchical potential tiers: high, moderate, and low potential. These categories are then arranged in order of score distribution (Peerapun, 2013). The research findings are then presented through descriptions and maps using data from a Geographic Information System (GIS) that reflect the location and components of the park, as well as its potential.

The public park components for Scalogram analysis			
public parks for recreation 1 2 3 4 5 6 7 8 9 10 12 14 16 17 18 20 21 22 23 24 29 31 32 35 36 37 38 39 40 41 42 public parks for exercise 1 2 3 4 5 6 7 8 9 10 12 14 16 17 18 20 21 25 26 33 34 35 36 37 38 39 40 public parks for all people 1 2 3 4 5 6 7 8 9 11 12 13 14 16 17 18 20 21 22 25 29 30 31 35 36 37 38 39 40		public parks for learning 1 2 3 4 5 6 7 8 9 10 12 14 15 16 17 18 20 21 23 24 27 35 36 37 38 39 40 public parks for social interaction 1 2 3 4 5 6 7 8 9 10 12 14 15 16 17 19 20 21 22 23 26 28 29 30 32 35 36 37 38 39 40	
Access routes 1 main roads 2 minor roads 3 foot paths 4 bicycle paths 5 private vehicles 6 public transportation 7 subways Accessibility within the park 8 walkways 9 cycling pathways 10 parking 11 standard parking 12 zebra crossings 13 ramps for the persons with disabilities	Public relations 14 information signs, 15 public relations rooms 16 audio transmission Facilities 17 bathrooms 18 individual seat 19 group benches 20 free drinking water stations 21 beverage shops	Activities and Uses 22 playgrounds 23 temporary activity areas 24 sculpture exhibition areas 25 individual exercise areas 26 group exercise areas 27 educational areas 28 gathering areas 29 shaded recreation areas 30 religious activity areas 31 pet play areas 32 music activity areas 33 gyms, 34 exercise equipment 35 club establishments	Security 36 safety booths 37 assistance desks 38 lighting poles 39 CCTV cameras Environmental protection 40 trash cans 41 ponds or waterways 42 diversified and shaded plants

Figure 2 The public park components for Scalogram analysis

3. Results

Public Park Components

There are seven district parks in Bangkok: Suanluang Rama IX Park has an area of 0.80 km²; Benchakiti Park has an area of 0.72 km²; Wachirabenchatat Park has an area of 0.60 km²; Lumpini Park has an area of 0.58 km²; Seri Thai Park has an area of 0.56 km²; Queen Sirikit Park has an area of 0.31 km²; and Chatuchak Park has an area of 0.25 km².

The findings of the study on public park components revealed that (Figure 3-4): there are two ways to enter district parks: via public transportation (buses, trains etc.) or private transportation (private vehicles, etc.). However, not all access routes to the public parks have been thoughtfully designed to include cycle tracks. In terms of traffic elements in public parks, Benchakiti Park is the only public park that has complete transportation aspects, including sidewalks, bicycle paths, parking, zebra crossings, and accessible ramps or universal design features for persons with disabilities.

Figure 3 Representative Park Features (Benchakiti Park, Lumpini Park, Wachirabenchatat Park, Suanluang Rama IX Park)



Figure 4 Representative Park Features (Queen Sirikit Park, Chatuchak park, Seri Thai Park)



In addition, sidewalks and accessible ramps or universal design features for persons with disabilities have been constructed in all parks with the exception of Chatuchak Park. On the other hand, district parks are less likely to have crosswalks and bike lanes with engineering.

Although there are information boards in each of the seven district parks, only Lumpini Park has all the components necessary for public relations and communication, including data signs, information rooms, loudspeakers, and line audio. In terms of facilities, it was discovered that the only amenities present in all district parks were group benches. Furthermore, only three of the district parks have the feature of services, particularly free drinking water service stations (Suanluang Rama IX Park, Benchakiti Park, and Chatuchak Park).

Regarding security, all parks have guards, lights, and CCTV cameras. Moreover, there are other assistance stations dispersed over Benchakiti Park, Wachirabenchatat Park, Lumpini Park, and Seri Thai Park. In terms of environmental conservation, full environmental conservation features, including garbage cans, ponds or waters, and a variety of plants that flourish in shaded areas, are present in all seven district parks.

Regarding activities and use, the seven district parks include playgrounds, individual exercise places, group exercise areas, educational areas, shaded leisure areas, and workout equipment. However, not all district parks have public park components in terms of activities and other uses. For example, temporary activity areas, religious activity areas, and club establishments are found only in Wachirabenchatat and Lumpini parks, pet play areas are found only in Benchakitti and Wachirabenchatat parks, and a gymnasium is found only in Benchakitti park, among other things.

Scalogram analysis

District parks with high potential for recreation include Benchakiti Park and Lumpini Park, with total scores of 665 and 606.67, respectively. District parks with moderate potential include Wachirabenchatat Park (a total score value: 523.33), whereas district parks with low potential include Suanluang Rama IX Park, Queen Sirikit Park, Chatuchak Park, and Seri Thai Park (total score values: 395, 328.33, 295, and 286.67, respectively) (Table 1 Figure 5-6).

District parks with high potential for exercise include Benchakiti Park with a total score of 664.05, while district parks with moderate potential include Lumpini Park and Wachirabenchatat Park (total scores values: 505.71 and 405.71, respectively) and district parks with low potential include Suanluang Rama IX Park, Queen Sirikit Park, Chatuchak Park, and Seri Thai Park (total score values: 314.05, 280.71, 263.05, and 244.05, respectively) (Table 1 Figure 5-6).

District parks with high potential for all people include Benchakiti Park with a total score of 636.43, while district parks with moderate potential include Lumpini Park and Wachirabenchatat Park (total scores values: 578.10 and 528.10, respectively) and district parks with low potential include Suanluang Rama IX Park, Queen Sirikit Park, Chatuchak Park, and Seri Thai Park (total score values: 333.10, 299.76, 274.76, and 249.76, respectively) (Table 1 Figure 5-6).

District parks with high potential for learning include Lumpini Park and Benchakiti Park, with total scores of 630.48 and 538.81, respectively. District parks with moderate potential include Wachirabenchatat Park (a total scores value: 430.48) whereas district parks with low potential include Suanluang Rama IX Park, Queen Sirikit Park, Seri Thai Park, and Chatuchak Park. (total score values: 318.81, 285.48, 252.14, and 243.81, respectively) (Table 1 Figure 5-6).

District parks with high potential for social interaction include Lumpini Park with a total score of 786.66, while district parks with moderate potential include Benchakiti Park and Wachirabenchatat Park (total scores values: 645 and 503.33, respectively) whereas district parks with low potential include Suanluang Rama IX Park, Queen Sirikit Park, Seri Thai Park, and Chatuchak Park. (total score values: 361.67, 295, 266.66, and 241.67, respectively) (Table 1 Figure 5-6).

From the aforementioned information, the majority of district parks with high potential in all roles are mostly Benchakiti Park and Lumpini Park, while district parks with moderate potential in most roles include Wachirabenchatat Park and district parks that have low potential in most roles, include Suanluang Rama IX Park, Queen Sirikit Park, Chatuchak Park, and Seri Thai Park (Table 1 Figure 5-6).

Table 1 The results of Scalogram analysis

public parks for recreation

No.	2	3	5	6	10	14	22	29	36	38	39	40	41	42	1	7	8	18	17	21	37	20	24	32	9	23	35	31	16	4	12	Total
I	14	14	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17	20	20		25	33		33	33			50		100	100	665
II	14	14	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17	20	20	25	25			33	33	50	50		100			607
III	14	14	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17	20	20	25	25				33	50	50	50				523
VI	14	14	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17		20	25		33	33	33								395
V	14	14	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17		20	25			33									328
VI	14	14	14	14	14	14	14	14	14	14	14	14	14	14			17	20			25		33									295
VII	14	14	14	14	14	14	14	14	14	14	14	14	14	14	17	17		20				33										287

public parks for exercise

No.	2	3	5	6	10	14	25	26	34	36	38	39	40	1	7	8	18	17	21	37	20	9	35	16	4	12	33	Total					
I	14	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17	17	20		25	33	33				100	100	100	664				
II	14	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17	17	20	25	25		33	50	100					506				
III	14	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17	17	20	25	25		33	50						406				
VI	14	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17		20	25		33								314				
V	14	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17		20	25										281				
VII	14	14	14	14	14	14	14	14	14	14	14	14	14	17	17		17				33								269				
VI	14	14	14	14	14	14	14	14	14	14	14	14	14			17	17			25									244				

public parks for all people

No.	2	3	5	6	14	22	25	29	36	38	39	40	1	7	11	8	13	18	17	21	37	20	9	30	35	31	16	4	12	Total				
I	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17	17	17	20	20		25	33	33			50			100	100	636			
II	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17	17	17	20	20	25	25		33	50	50		100			578				
III	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17	17	17	20	20	25	25		33	50	50	50				528				
VI	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17	17	17		20	25		33								333				
V	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17	17	17		20	25										300				
VII	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17			20				33								275				
VI	14	14	14	14	14	14	14	14	14	14	14	14				17	17	20			25									250				

public parks for learning

No.	2	3	5	6	10	14	27	36	38	39	40	1	7	8	18	17	21	37	20	24	9	23	35	15	16	4	12	Total				
II	14	14	14	14	14	14	14	14	14	14	14	17	17	17	20	20	25	25			33	50	50	100	100			630				
I	14	14	14	14	14	14	14	14	14	14	14	17	17	17	20	20		25	33		33					100	100	539				
III	14	14	14	14	14	14	14	14	14	14	14	17	17	17	20	20	25	25			33	50	50					430				
VI	14	14	14	14	14	14	14	14	14	14	14	17	17	17		20	25		33	33								319				
V	14	14	14	14	14	14	14	14	14	14	14	17	17	17		20	25			33								285				
VI	14	14	14	14	14	14	14	14	14	14	14			17	20			25		33								252				
VII	14	14	14	14	14	14	14	14	14	14	14	17	17		20				33									244				

public parks for social interaction

No.	2	3	5	6	10	14	19	22	26	29	36	38	39	40	1	7	8	17	21	37	20	32	9	28	30	23	35	15	16	4	12	Total
II	14	14	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17	20	25	25		33	33	50	50	50	50	100	100			787
I	14	14	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17	20		25	33	33	33	50						100	100	645
III	14	14	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17	20	25	25			33		50	50	50					503
VI	14	14	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17	20	25		33	33										362
V	14	14	14	14	14	14	14	14	14	14	14	14	14	14	17	17	17	20	25													295
VII	14	14	14	14	14	14	14	14	14	14	14	14	14	14	17	17					33											267
VI	14	14	14	14	14	14	14	14	14	14	14	14	14	14			17			25												242

Scalogram analysis process: 1. adding color to the row containing the public parks' components that were found in each district park, or abandoning the column empty., 2. altering each column 's colored to reflect the percentage from the 100-point score, and 3. total the component scores for each district park, and then locate on the highest row. Finally, the total scores would show the potential of each public park.

The district parks: I=Benchakiti park, II=Lumphini park, III=Wachirabenchatat park, VI=Suanluang Rama IX park, V=Queen Sirikit park, VI=Seri Thai park, VII=Chatuchak park

The public park components: 1=main roads, 2=minor roads, 3=foot paths, 4=bicycle paths, 5=private vehicles, 6=public transportation, 7=subways, 8=walkways, 9=cycling pathways, 10=parking, 11=standard parking, 12=zebra crossings, 13=accessible ramps or universal design features for persons with disabilities, 14=information signs, 15=public relations rooms, 16=audio transmission, 17=bathrooms, 18=individual seat, 19=group benches, 20=free drinking water stations, 21=beverage shops, 22=playgrounds, 23=temporary activity areas, 24= sculpture exhibition areas, 25=individual exercise areas, 26=group exercise areas, 27=educational areas, 28=gathering areas, 29=shaded recreation areas, 30=religious activity areas, 31=pets play areas, 32=music activity areas, 33=gyms, 34=exercise equipment, 35=club establishments, 36=safety booths, 37=assistance desks, 38=lighting poles, 39= CCTV cameras, 40=trash cans, 41=ponds or waterways, 42=diversified and shaded plants

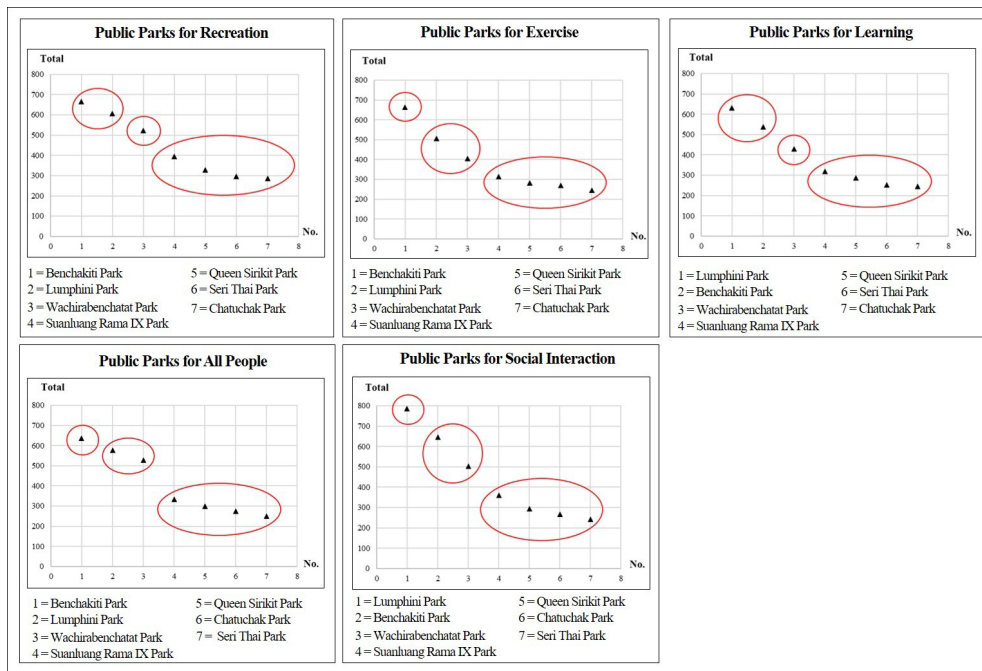


Figure 5 The district parks' potentiality hierarchy from Scalogram analysis

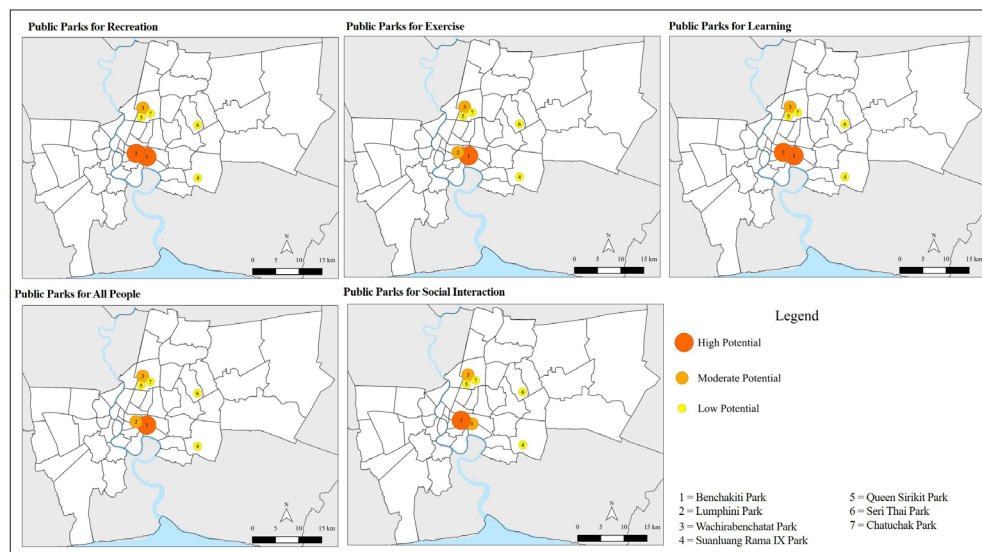


Figure 6 The district parks' potentiality hierarchy from Scalogram analysis

5. Discussion

There are numerous public park features in every public park in Bangkok. All public parks have one characteristic in common: environmental protection, such as ponds or waterways, as well as a diversity of greenery and shady plants, which are essential components of public park development, making each district park a valuable green space for the city (Kurt Konakoğlu et al., 2021). Every public park contains safety booths, lighting poles, assistance desks, and CCTV cameras, all of which demonstrate how important security is to foster trust among park users.

In addition, the elements of the public park, such as accessible ramps or universal design features for persons with disabilities, a playground, etc., highlight the importance of offering equitable services to all groups of citizens, which is currently demanded by society (Chandrasiri & Arifwido, 2017; Dennis et al., 2020). However, well-designed bike lanes, a common mode of transportation in parks, are rarely found. This is often because each park has limited space, making it challenging to designate bicycle lanes. Additionally, cycling in parks can be dangerous for the mostly pedestrian population, particularly if the pace is uncontrolled.

The findings of the analysis of the public park's potential and role indicate that the public park's size does not influence its potential level; Suanluang Rama IX Park, which has the largest area (0.80 km²), has a low level of potential in all assessments. In contrast, Benchakiti Park, which covers an area of 0.72 km², has immense potential as a public park for recreation, fitness, inclusivity, and education. Meanwhile, Lumpini Park, covering 0.58 km², has the ability to serve as a recreational, educational, and social public park. Benchakiti Park's great potential is due to its greater number of public park components than any other public park, such as bike routes, safety crossings, private and communal seats, and so on, whereas Lumpini Park's enormous potential comes from its bigger variety of activities than other public parks, including the establishment of a club, a space for religious activities, music activity areas, and temporary activity areas, among others. Furthermore, it has complete communication and public relations components, including information signs, a public relations room, and audio transmission, which are beneficial for conducting activities and attracting people to participate in activities in the area (Bressane et al., 2024). The high potential of Benchakiti Park and Lumpini Park reflects their characteristics as Active Spaces, which promote physical activity, social interaction,

and the formation of healthy communities, whereas Suanluang Rama IX Park is a Passive Space that focuses on nature preservation and promotion.

Moreover, a park's potential is not limited by its Central Business District (CBD) location. Benchakiti Park in Khlong Toei Subdistrict, Khlong Toei District, and Lumpini Park in Lumpini Subdistrict, Pathum Wan District, both exhibit this. These areas are primarily used for commercial purposes, including buildings and offices. Many people do not live in the neighborhood, but commute there to work in the morning and leave in the evening. It actually maximizes daytime and post-work user transit frequency, increasing the park's socio-economic vitality. Furthermore, the diverse features and activities in Benchakiti Park and Lumpini Park can attract people to use the park spaces. As a result, the location, elements, and activities inside a park are essential factors that contribute to each park's high potential for serving the public. (Hunter et al., 2019; Selanon et al., 2023).

6. Conclusion

Bangkok's district parks serve as hubs for social interaction and education as well as places for leisure and workout for the city's residents. Public parks' role and level of service potential will vary depending on the completeness of their components and the diversity of activities available. The park's size and position in the Central Business District do not limit its potential.

Land use planning in Bangkok should consequently encourage the design and development of urban public parks, not just large public parks. Even smaller public parks with complete and diversified park components, particularly in terms of activities and uses, would not only expand valuable green spaces in the city, but would also attract public use and enhance the parks' potential in a variety of functions.

Future research should consider and further investigate the public's behavior when utilizing public parks in order to design activities, use, and other park components that better satisfy the people's requirements and behaviors.

7. Conflict of Interest

The authors declare that there is no conflict of interest.

8. Acknowledgements

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CRedit Authorship Contribution Statement

Pananya Onpol: Conceptualization; Methodology/Study design; Software; Formal Analysis; Investigation; Resources; Data curation; Visualization; Funding acquisition. **Waralak Khongouan:** Conceptualization; Methodology/Study design; Validation; Formal analysis; Writing – original draft; Writing – review and editing; Supervision; Project administration; Funding acquisition.



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