SMALL PUBLIC SPACES IN THE RESIDENTIAL QUARTERS OF HANOI'S HISTORICAL INNER CITY-TOWARD SUSTAINABLE DEVELOPMENT

Ta Quynh Hoa^{a,*}

^aFaculty of Architecture and Planning, Hanoi University of Civil Engineering, 55 Giai Phong road, Hai Ba Trung district, Hanoi, Vietnam

Article history:

Received 01/4/2022, Revised 26/4/2022, Accepted 27/4/2022

Abstract

This paper explores the existing situations of small public spaces (including parks, flower gardens, and play-grounds) in the residential quarters of Hanoi's historical inner city. The research identified issues related to physical conditions, the usage and management of these spaces, planning policies, and legal regulations, and the current roles of stakeholders in managing and developing small public spaces at the neighborhood level. This research is based on the surveys of three residential quarters in the historical inner districts of Hanoi city: Chuong Duong ward, Bach Khoa ward, and Hanoi's Old Quarter, where 24 small public spaces have been systematically surveyed. The paper proposes several recommendations for improving planning codes and standards of small public spaces, planning and landscape architecture in existing small public spaces in the inner city of Hanoi, and collaborative mechanisms among different stakeholders toward sustainable development.

Keywords: small public spaces; flower gardens; playgrounds; residential quarter; Hanoi's inner city.

https://doi.org/10.31814/stce.huce(nuce)2022-16(2)-08 © 2022 Hanoi University of Civil Engineering (HUCE)

1. Introduction

The context of small public spaces in the residential quarters of Hanoi's historical inner city

Public spaces in general and green parks, flower gardens and playgrounds in particular are one of the criteria for assessing the urban quality of life. At the same time, public spaces are also a competitive criterion that creates the difference and attractiveness of residential areas, as well as showing the humanity in planning and creating the living environment. Vietnam is in the process of rapid urbanization with a high rate of population growth and the need to improve the quality of living environment. The city of Hanoi - the capital of Vietnam, has been expanded three times larger and the population was increased from 3.4 million people in 2008 to 8.4 million people in 2021 [1]. In the inner city, the population has also increased rapidly in recent years without decreasing as the orientation of the Hanoi Capital Master Plan to 2030 and the vision to 2050 [2]. Population growth also puts pressure on improving and increasing public spaces for residents in the residential quarters of Hanoi.

^{*}Corresponding author. E-mail address: hoatq@huce.edu.vn (Hoa, T. Q.)

Flower gardens and playgrounds in residential areas are physical environments but also social spaces for people to relax, entertain and interact with each other. These small public spaces in residential areas have advantages of attracting people to come more often than large parks, due to these spaces are close to their houses [3]. The public spaces in the residential areas are very important to the lives of children and the elderly, who often have difficulty traveling long distances to access public spaces.

It can be said that currently there is a shortage of flower gardens and playgrounds in residential areas in the historical inner city of Hanoi. The historical inner city, as identified in Decision 1259 [2], limited from the south of the Red River to the 2nd ring road, is an area to preserve Thang Long - Hanoi cultural heritage and traditional values of the Hanoi people. This is a populous residential area with different types of habitat. According to the Decision No.1495/QĐ-UBND issued in 2014 "Planning the system of green trees, parks, gardens, and lakes in Hanoi city to 2030, with a vision to 2050" [4], the current area of parks and flower gardens account for only 1.92% of total land. In the inner districts with the highest population density as Dong Da, Hai Ba Trung, Hoan Kiem and Ba Dinh districts, the area of parks and flower gardens is only 1.07 m²/person [5]. According to the data from the Hanoi Capital Master Urban Development Program (HAIDEP), the average park/flower garden area in the four central districts is only 0.9 m²/person in 2007 [6] and is reducing gradually in recent time.

The policy framework for planning and managing urban parks, and flower gardens/playgrounds have been studied and proposed recently. The City People's Committee has approved the planning project on the system of greenery parks, flower gardens and lakes in Hanoi until 2030, with a vision to 2050 according to Decision No. 1495/QD-UBND [4] This plan has the purpose of developing Hanoi into a green, clean city, reducing pollution and improving the quality of life for people. For the inner city, this plan has the major goal to create urban parks with an average area of 3.92m2/person and flower gardens playgrounds at the residential quarter level to reach 1m2/person. However, to achieve this goal, it will take a lot of effort from the government, investors, experts, and the community in clarifying the current issues facing small public areas in the inner city of Hanoi and finding out suitable solutions to deal with the problems.

Research objectives

With the desire to ensure a balance in development needs for the goal of improving the quality of urban living in Hanoi, it is essential to study small public spaces including flower gardens and playgrounds in the historical inner city of Hanoi to identify the characteristics of these kind of spaces in the residential quarter. The research focus on the historical inner city area, where small public spaces for the community are in short supply and are under the pressure of urbanization and illegal occupation for private purposes Small public spaces are defined as small parks, flower gardens, playgrounds, small water bodies in a residential quarter or in a housing cluster that are commonly used by the local residents (as referred to item 1.4.9, National technical regulation on construction planning - QCVN 01:2021/BXD [7].

Under the pressure of urbanization and population growth, these public spaces are being encroached upon, destroyed, and function changed while lacking the supervision and control of management agencies.

With these in mind, the research aims to:

- Understand the current physical conditions of small public spaces in the residential quarters of the historical inner city of Hanoi in order to identify the difficulties and challenges related to planning policies, legal regulations, and management mechanisms to preserve and upgrade the quality of these small public spaces;

- Propose some recommendations in terms of planning and management to enhance the participation among different stakeholders in order to improve the role of small public spaces in the physical and social life of people in the Hanoi's historical inner city

2. Literature reviews

2.1. Perceptions of public spaces for people in the residential areas from western and non-western researches

Public spaces present an openness for the public and connote the idea that these settings are accessible to everyone regardless of age, gender, ethnicity, or other characteristics [8]. Since the 1960s, Arendt has argued that public spaces help people to meet, talk and recognize each other's presence, which is an indispensable condition for civil society [9]. Thomas (1991) emphasized the social role of public space and stated that public space is an essential field that provides opportunities for individuals and communities to develop and enrich their lives [10]. Crowhurst and Lennard [11] have studied the synthesis of social functions served in public spaces including learning, social capacity development, information exchange, facilitating social dialogue, promoting social awareness, strengthening social integration functions, and encouraging ethical behavior in society.

In his book "Life between building – Using public spaces" Jan Gehl [12] states that: "A city is a collection of architectural works, but the real-life in the city is not only in the buildings but in between them ..." His research shows that in residential areas, traffic reduction schemes, courtyard clearing, laying out of parks and comparable outdoor improvement have had a marked effect on resident's quality of life. Whyte in his book "The Social Life of Small Urban Spaces" describes the close connection between qualities of urban city spaces and urban activities and documents how often quite simple physical alterations can improve the use of the urban space notably [13].

Pham, T.L from her viewpoint argued that public spaces in Asian countries are created, used, assigned, managed, and regenerated due to the socio-political-economic needs of various social rules, in spaces and at different times, governed by different political, economic, and social systems [14]. According to Truong Ngoc Lan [15], public spaces in general and playgrounds and flower gardens, in particular, are indispensable utilities in residential areas. They not only play the role of a space for relaxation, entertainment, and landscape creation but also a place of communication and community activities for residents. Not only bringing the quality of space and comfort to the living environment, playgrounds and gardens also make an important contribution to creating, promoting, and maintaining community links between individuals and families in the living area.

2.2. The history and the formation of public spaces in the residential quarters of Hanoi city

The feudal period: Pham [14] in her research has shown that a village is a typical traditional residential model of the whole country, including Hanoi city. The village has its own powerful rules and regulations that ensure the existence and cohesion of the community. Traditional public spaces such as the wharf, the banyan tree in the front of the village's gate, the communal house yard, the village market, the village road, the assembly hall, the ancestral temple ... are used effectively and regularly. These public spaces tend to be closed within the village or hamlet, consistent with the introverted characteristics of the village community [14].

The French colonial period: the French first introduced to Hanoi the principles of Western urban planning with a network of grids, monumental roads, and squares in front of large projects such as the Governor-General's house, the Indo-China bank, the grand theater, etc. To flaunt their political and socio-economic power. In addition, there are a number of parks and flower gardens that were built to celebrate the regal life of the French but have not played the role of real public spaces for the indigenous people.

The period of socialist construction - centralized planned economy: A number of new residential areas were planned and built according to the model of "sub-housing - Microrayon" learned from the Soviet Union in the period 1960-1980 [5, 15]. In Hanoi, typical of this type, there are Trung Tu, Kim Lien, Giang Vo, Thanh Xuan collective quarters, etc. concentrated in the inner city. With a clear planning principle, public spaces and public works such as schools, kindergartens, playgrounds, and flower gardens are usually arranged in the center of residential areas or the center of groups of buildings. Although the quality of these spaces is not high enough, in terms of quantity and distribution, these flower gardens/playgrounds were originally planned quite reasonably and have been used effectively until now. In addition, the space between buildings also promotes multi-purpose public spaces and contributes significantly to the community life of the people.

In the socialist-oriented market economy: After economic transformation from the centralized subsidy mechanism to the socialist-oriented market mechanism, the forces of the new market demanded a change in the public space model. A number of new urban areas have been invested by the private sector to supply commercial housing to the market and have developed strongly since the late 1990s and early 2000s. In Hanoi, newly formed urban areas (named KDTM) have been developed over time can be mentioned such as Linh Dam's new urban area, Van Quan, Trung Hoa - Nhan Chinh KDTM.

The common characteristics of these new urban areas is that they have been planned and designed in a more methodical and synchronous manner than the "Micro-rayon" of the previous period and other self-formed residential areas in the city. The public sector has also been located and invested to a certain extent and has become part of the real estate corporations' strategy to attract the market. With new urban models such as Royal City, Time City, Ocean Park . . . when the residential function and commercial function, entertainment service of the whole city are integrated with the brandname

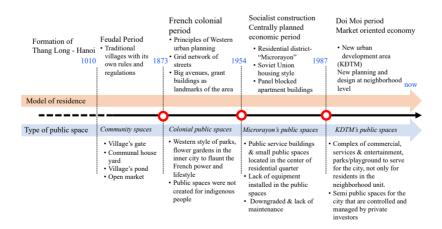


Figure 1. A timeline of the transformation of residence models and public space types under the development context of Hanoi city

KDTM of the famous real estate development corporations such as Vin Group, Sun Group, FLC, ... these public spaces not only serve local residents anymore but also become semi-public spaces for the city that managed and controlled by private investors and the role of the community is completely absent. Fig. 1 illustrates the timeline of the transformation residence model and public space types under the development context of Hanoi city.

2.3. The concept of public spaces in Vietnam legal documents

Considering from the perspective of state management, public space has not been officially defined, mentioned, or specified in the constitution, laws in general and technical regulations on architectural planning in particular. The concept of public space first appeared in Decree No. 38/2010/ND-CP of the Government on the management of urban spaces, architecture, and urban landscape [16]. Circular No.22/2019/TT-BXD promulgating the National Technical Regulation on Construction Planning, at section 1.4.15. *Urban greenery land*, mentioned "greenery land" for public use in urban areas as parks, flower gardens, and playgrounds ensuring people's access [17]. Thus, in the National Regulation on Urban Planning, public space is not defined directly but is indirectly mentioned as greenery space for public use such as parks, flower gardens, and playgrounds [16, 17]. Even though the latest legal document - National Technical Regulation on Construction Planning also has not identified the concept of public spaces and only mentioned the land for planting trees at city level and at neighborhood unit level in the item 1.4.15 and 1.4.16 [7]. Thus, the spaces of parks, gardens and playgrounds in residential areas can be considered as public spaces in urban areas and carry the physical - social characteristics of urban public spaces.

3. Research Methodology

In order to reach these objectives, the following research approaches have been used in the research project: 1) Theoretical approach with literature reviews of major concepts on public spaces, the social life aspect of public spaces, characteristics of small public spaces in Vietnam context; 2) Practical approach with legislative document analysis, data collection and analysis, case studies - site survey and observation; The secondary data from previous researches and documents were collected and analyzed.

For case studies - observational surveys: There are 03 selected wards in the historical inner city of Hanoi for studying the existing flower gardens and playgrounds, which are old dormitories in Chuong Duong ward, Bach Khoa ward, and Hanoi's Old Quarter. Table 1 demonstrates the major information

Ward	Chuong Duong	Bach Khoa	Hanoi Old Quarter	
Land area (ha)	103	54	82	
Population (people)	22,042	9,994	67,480	
Population density (residents/ha)	214	185	823	
District	Hoan Kiem	Hai Ba Trung	Hoan Kiem	
Location	Historical inner city	Historical inner city	Historical inner city	
Period of urban development	1980s	1970s	11st century	
Original status	mixed urban residential area	mixed urban residential area	National cultural heritage district	
Level of urbanization	very high	high	Very high	
Number of surveyed public spaces	8	10	6	

Table 1. Major data of three case-studies in the research [18]

of three case studies in the research. The observational surveys were conducted on all small public spaces, flower gardens and playgrounds in the three mentioned residential areas. In total, 24 small public spaces have been systematically surveyed.

Chuong Duong Ward is located in Hoan Kiem District and very close to the central area of Hanoi City. Chuong Duong Ward is entirely located outside the Red River dike. Under the impact of urbanization, the sparse area has completely changed with a very high construction density. Residential areas were built and developed during different periods since 1954. Housing is mainly low-rise, diverse forms, interspersed with several old collective low-rise apartments which were typical for the period of 1960 - 1970.

Bach Khoa ward in Hai Ba Trung district, located in the south of the historical inner city, is a densely populated area, in which 54% of the ward area (31 ha out of 54 ha of the whole ward) is used by Hanoi University of Science and Technology and related units. The Bach Khoa collective dormitory which was built in the mid-1970s is typical of the "sub-housing - Microrayon" learned from the Soviet Union with public spaces and public service facilities such as primary schools kindergartens, hospitals located in the center of housing clusters. The selection of Bach Khoa collective apartments expresses the characteristics of small public spaces in each apartment cluster that has been changed gradually under the impact of population growth and urbanization.

Hanoi's Old Quarter located in the center of the historical inner city in the Hoan Kiem district is a unique area. Even though the total area of the historical district is only 82 hectares, the population here is over 66,000 people, which made population density 826 people/ha. In the district, there are some wards that have a high density of more than 1200 people/ha. The spaces for flower gardens and playgrounds are very limited in the old quarter. The small public spaces in the old quarter can be defined as sidewalk spaces, courtyards in small alleys, or small grounds in historical and cultural works such as communal houses and pagodas. The selection of the old quarter as a case study provided people with different perceptions of the characteristics of small public spaces in the residential areas of the historical inner city of Hanoi. Fig. 2 shows the boundary of the historical inner city of Hanoi and the locations of three case studies of the research.



Figure 2. Locations of three case studies in the historical inner city of Hanoi

Hoa, T. Q. / Journal of Science and Technology in Civil Engineering

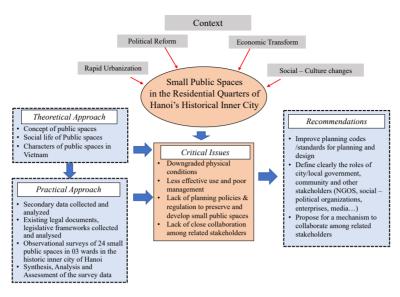


Figure 3. Research methodology - critical issues and recommendations

4. Issues of small public spaces in the residential areas of Hanoi's historical inner city

4.1. Current physical conditions of small public spaces in the residential quarters of Hanoi's historical inner city

According to the result of a research project on "Green space in the inner city of Hanoi" [5] out of a total of 66 residential areas and apartment buildings, in which 32 residential areas are state-owned with a total area of tree land and flower gardens/playground is 175 ha. With a registered population of 2,500,000 people, the total area of flower gardens and public spaces per person is only 0.7 m², which is relatively low compared to the planned target of 2 m²/person at the residential unit level. In particular, in Hanoi's Old Quarter, the area of parks and flower gardens is very low, people often use street spaces and sidewalks as entertainment and playing spaces.

Table 2. Observational survey results on physical conditions of 24 small public spaces in three locations in the historical inner city of Hanoi

No.	Small public space issues	Unit	Percentage (%)
1	Downgraded with poor maintenance	22	91.7
2	Lack of equipment for local resident entertainment		66.7
3	Spaces are encroached, functions are changed	18	75.0
4	No lightings, un-safe at night	15	62.5
5	Lack of urban furniture (benches, shading canopies, drinking fountains)	15	62.5
6	No separate place for children playing	20	83.3
7	Poor hygiene and sanitation	11	45.8
8	Difficult to access	7	29.2
9	Local residents can use only	13	54.2
10	Have strict regulations for use	6	25.0

According to survey results, 91.7% of surveyed flower gardens and playgrounds in residential quarters and old dormitories have been downgraded and have not been renovated or embellished, of which 67% of small public spaces have no lights and have not been equipped with urban amenities such as benches, shading verandas, playground equipment for children. Moreover, 29.2% of the small public spaces are difficult to access, especially for the people who live outside the area. Some small public spaces have strict regulations made by residents to restrict outsiders to use the spaces.



Figure 4. Playground in a collective block in Chuong Duong ward has been encroached of parking area and domestic activities



Figure 5. Playground between two collective blocks in Bach Khoa ward has not been installed with lighting, playing facilities, benches, drinking water posts



Figure 6. Playground between residential collective blocks in Chuong Duong ward without green trees and shading canopies



Figure 7. One part of community's playground is changed to be motorbike parking area – in residential collective block K17 – Back Khoa ward

4.2. Using and managing small public spaces at the neighborhood level

In Vietnam, due to the influence of rural/village culture, the semi-public feature of playgrounds, flower gardens or other spaces for the community can be seen. Although it is still an open space,

anyone can come in and out, but the use of these small public spaces has a unique character, governed by the implicit consensus among residents in the area.

This semi-public feature creates several opposing aspects. On the one hand, due to the ownership of the community group and the privilege of use, the people living here will have priority to use these public spaces and they will create their mechanisms to manage and maintain the spaces (Fig. 8).





Figure 8. Playground's regulation formed by local community in K17 Bach Khoa collective block: a), b) Regulation on the use of playing equipment, c) General regulations on the use of common playground

However, in another aspect, most residents consider the common area adjacent to their house as an extension of the apartment and intended to use it for family activities. A typical example can be given as the space between two buildings in old dormitories in Hanoi's inner city. The distance between two buildings is one to 1.5 times the building's height according to the design standard. This standard helped residents of the dormitory enjoy natural light and ventilation and have a spacious living space. However, up to now, these spaces have been narrowed down due to some reasons: the space encroachment by some families who live on the first floor of the apartments for private uses or construction of community's cultural houses or resident representative board office (Fig. 9).

The functional use of small public spaces is also misused by individuals or groups for the original purposes such as: 1) a part of the space is turned into a motorbike parking place for households on the first floor of the apartment building organized by the ward People committee to get more income; 2) Turning into a gathering place for toad markets, eateries, coffee shops, etc.; 3) Turning into places for waste collection; 4) Lack of playground equipment in these public spaces. In the areas where playgrounds and flower gardens are planned, initial facilities such as stone benches, simple sports equipment such as beams, and some amusement equipment such as swings, seesaws, etc. are installed. However, with poor quality, the facilities were damaged quickly without regular maintenance thus it is no longer available. The current equipment and utilities are mainly self-made and equipped by the residential community, but are very rudimentary, poor and less creative, not yet safe for users.

Utilities such as benches, sun shading canopies, handwashing places, watering plants, public drinking posts, and lighting facilities ... are almost nonexistent. Besides, the spatial landscape of these public spaces has not been studied, designed and improved after a period of use, the sanitation

Hoa, T. Q. / Journal of Science and Technology in Civil Engineering



Figure 9. The ground in front of resident's flat was encroached for private use - the collective apartment in Chuong Duong ward



Figure 10. The ground was use as semi-public ground for local community to gather and interact together - the collective apartment in Chuong Duong ward



Figure 11. Public spaces in the Old Quarter of Hanoi are occupied by private purposes with poor management:

a) Sidewalk is encroached for motorbike parking areas; b), c) the space in front of resident's house is changed into private cooking area to provide food service; d) residents often use pavement /public spaces for private uses

of the area has not been paid attention to (discharge garbage, environmental pollution ...) makes the quality of spaces even more seriously degraded. In areas with high population density and lack of internal parks and gardens such as Hanoi's Old Quarter, the space of sidewalks and alleys becomes the

main public spaces of the people, but most of them are also encroached or occupied for personal and commercial purposes such as family cooking, food stalls, food service seats, iced tea shops, parking spaces, services for residents such as car washes, repair of home appliances, grocery store ... (Fig. 8). There is a shortage of entertainment and sports spaces for people, playground spaces for children and the elderly, etc.

According to survey results, some aspects that local people considered the most when talking about the quality of their public spaces are the safety (92%), the accessibility and the frequent maintenance (85%), followed by the comfort of the spaces as lighting, shading and trees. The good facility equipment and having spaces for children to play are also mentioned by local residents.

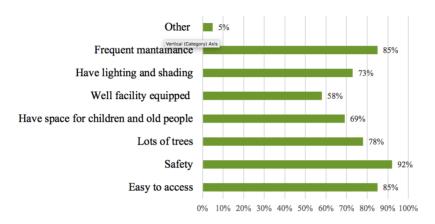


Figure 12. Local residents' expectation on the quality of small public spaces in their living quarter

4.3. Issues on planning policies and legal regulations

Currently, Hanoi city has several policies related to the development of parks, playgrounds and sports fields. However, there are loopholes and contradictions between these policies. No planning policy that clearly defines planning standards for the average area and/or minimum area of playgrounds in residential areas. In addition, the demand to optimize public land for community usage contradicts the policy of allowing the remaining public land to be auctioned to investors.

It can be said that Hanoi city has not had appropriate policies to achieve the goals set for the development of residential parks, flower gardens and playgrounds. To meet the target of land area for the new development of small public spaces at the neighborhood level, in the project of planning for green trees, parks and flower gardens in Hanoi, it was proposed: 1) relocation of old, downgraded factories in the inner city and changing the land function into public land for community uses; and 2) upgrading old state-owned housing apartments. However, the above two proposals can only increase the area of flower gardens/residential playgrounds for those living near there, while there is still no solution to increase the area of flower gardens/yards playground for other sectors of Hanoi. In addition, the implementation of the two proposals has been facing obstacles in terms of costs as well as relocation delays, while the city government has not allocated enough budget for the development of residential parks/playgrounds.

The legal framework for urban planning and management has guided the planning of urban greenery. However, the current planning guidelines for flower gardens/playgrounds development are not enough and not consistent with reality. The Law on Urban Planning [19], the Law on Housing [20] do not fully address the issues of 1) planning of social infrastructure including flower gar-

dens/playgrounds; and 2) Urban upgrading is a necessary type of planning for the inner districts of Hanoi, where residential areas are formed and exist for many generations. The planning standard sets an unrealistically high requirement for the average area of flower gardens in the old residential areas. In the National Regulation on Construction Planning QCXDVN 01:2021/BXD, in Section 2.2, the requirement of average area for residential parks and gardens is 2 m²/person, while the Hanoi greenery planning established in 2014 only needs to reach 1 m²/person; in addition, specific regulations on the minimum area and facilities for the gardens and playgrounds are not available [7]. Currently, there is a lack of consistency in the definition of public trees, flower gardens, walking spaces, playgrounds, sports fields ... in legal documents (TCXDVN 362:2005 and QCXDVN 01:2021/BXD, etc.) creates different interpretations leading to inaccurate and inconsistent information for planning and management purposes.

4.4. Issues of related stakeholders

- The role of local government: Regulations on management of urban greenery, parks, flower gardens and zoos in Hanoi according to Decision No. 19/2010 of the Hanoi People's Committee dated May 14, 2010 [21] only stipulate the tasks for the city government and the districts People's Committee to manage parks and gardens which are on the "official list", while ignoring the very important role of the ward authority as the agency that is managing most of the gardens and playgrounds of the current residential areas under the public land management mechanism and in coordination with the district government. There is an overlap of duties between several city departments responsible for planning related to land use (urban planning, construction and land management) and other governmental agencies while the coordination and cooperation among sectors are still weak.

The city government's awareness of the importance of flower gardens and residential playgrounds is still low. The green tree planning in Hanoi gives top priority to the development of large parks, not residential flower gardens. The ward-level government has not given top priority to ensuring there are flower gardens/playgrounds for the people. Some ward governments still lease public land to the private sector for commercial activities while the people's need for gardens/playgrounds remains unmet.

- The role and the awareness of the community: People understand the value of small public spaces in residential quarters and want to participate in the making and management of these spaces. They know well how public land is being used so that it can be used in the best way. However, people have few opportunities to participate, especially migrants, who temporarily reside in low-income areas with little voice in the area.

At present, regulations on the process of people's participation in urban planning are still ineffective. Although the 2009 Urban Planning Law clearly states that people are allowed to inform and give opinions on planning projects and land use planning at the local level, planning information is still not fully public [22, 23]. The limit of the population that is invited to contribute ideas, the steps to get comments opinions are inadequate, and the lack of feedback mechanisms are obstacles to citizen participation.

- The role of political organizations, social organizations, non-governmental organizations and professional associations has very limited influence on decisions and policies on park trees. This issue is not within the functions and duties of some of the above organizations. Many organizations face a lack of coordination and budget for activities. These organizations are only invited to comment on the urban park greenery development policy when the policy document has been drafted, not in the editing phase, and comments have not been received and considered by the local authority.

- The role of research institutions: Universities and research institutes play an important role in proposing new policies in planning to improve urban living quality. In Hanoi, there is no independent research institute on this issue. Training institutions provide limited knowledge on planning and management of trees at the level of cities, housing units and residential areas. Research units and non-governmental organizations (NGOs), as well as media agencies, have not actively participated in the protection of public spaces in general and residential playground gardens in particular systematic and sustainable solution for the protection and development of these essential public spaces.

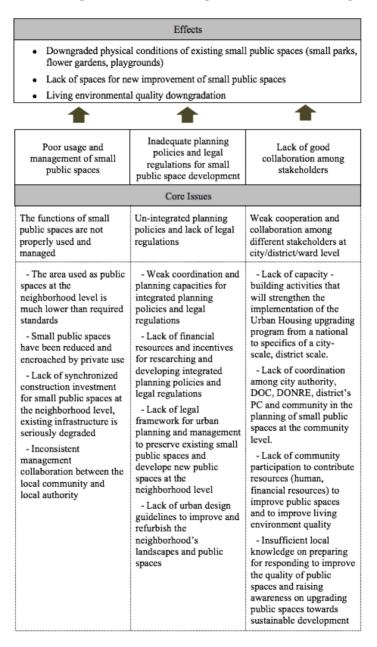


Figure 13. Identify the core issues and effects of small public spaces in the historical inner city of Hanoi

5. Recommendations

5.1. Improving planning and landscape design

The Law on Urban Planning, the Law on Housing, and the Law on Land need to mention more about social infrastructure, which includes the content of residential gardens/playgrounds. There is a need for a more effective citizen participation mechanism in urban planning and management, in which the determination of land use purpose should have the participation of the people.

It is necessary to research for propose and supplement regulations/standards of planning design for playgrounds/flower gardens at the residential level, which specify the minimum area and list of minimum utilities. In addition, there should be regulations and standards for urban upgrading, including content related to flower gardens/playgrounds in residential areas. It is necessary to have separate planning regulations and standards to apply to the historical inner city of Hanoi, due to the strategic location, residents, architectural, historical and cultural characteristics.

The terms of green areas for public use need to be unified to ensure that the collected survey information is consistent. Technical specifications should be developed to separate the area of playgrounds, parks/flower gardens, street trees, sports fields, etc., for use in cadastral maps and inventory or statistical data preparation on public land use.

5.2. Management and development mechanisms

The role of the city government: It is necessary to develop a specific plan to implement the Urban Upgrading Program for Hanoi in the National Urban Upgrading Program, the network of flower gardens, and residential playgrounds needs to be invested in supplementing, renovating, and upgrading. The project of planning public spaces and green areas for Hanoi needs to be supplemented with the content of flower gardens and playgrounds at the residential unit level.

Land use planning and management need to be improved to ensure public land for residential parks/playgrounds. The results of the public land inventory should be displayed for the public to comment on.

The Hanoi city government needs to invest in building a database management system for planning information on trees, parks, gardens, and playgrounds integrated with the city planning information system.

To be able to build a database system of planning information for parks and playgrounds, it is necessary to carry out the following activities:

- Inventory and assess the current status and use of existing flower gardens and playgrounds in residential areas, gather information on the current status and planning of playgrounds and parks based on GIS maps in the management area. ward level manager
- Evaluate and classify public land using inefficiently and propose that any remaining public land in residential areas should be used for residents' flower gardens and playgrounds.
- Classify and propose solutions to restore, embellish and upgrade existing flower gardens and playgrounds in residential areas, at the same time strengthen management, eliminate encroachment and misuse activities of public purposes on these spaces.

The role of local government (districts, wards, and communes): Local governments need to manage more closely the existing flower gardens and playgrounds in residential areas, resolutely eliminate the encroachment of these public spaces or use these spaces for purposes that create group benefits but do not bring benefits to the community, such as: using playground space as a parking space, leasing the spaces for commercial activities to take tax payment for the district.

Ward authorities need to work closely with the community and discuss with the them about the community's participation in the creation, maintenance, and management of public spaces to create better quality public spaces.

The role of the community:

Communities have an important role in "making places", helping public spaces such as flower gardens and playgrounds become "places" of the community, associated with the community's daily life over time, having important meanings for the community.

Newly created flower gardens and playground spaces need to involve the community in building visions and key functions, and the construction of these spaces also requires the participation of the community. Small public spaces created by the community to become "a place" should be under the key rationales as Community - driven, Function before form, Adaptable, Inclusive, Dynamic, Transformative, Collaborative, Sociable

The core community group - those who are always enthusiastic and attached to the place where they live - need to be the initiators to mobilize the community's participation in terms of human and material resources to create, renovate and maintain repair and maintenance of small public spaces at the housing unit level.

The community will mobilize various resources to build and improve residential gardens/play-grounds. Equipment for public spaces should be created at low cost, taking advantage of local and used materials. through the use and volunteer labor of the people.

Roles of other stakeholders

Socio-political organizations: The Fatherland Front and its member organizations need to work more with the community to understand the community's needs and lead a dialogue with the government to preserve public land and mobilize resources to build, improve and maintain flower gardens/playgrounds in urban residential areas.

Professionals and professional associations: Need to be more aware of the importance of neighborhood parks/playgrounds in urban planning. Coordination needs to be improved to contribute more effectively to policy. Urban planning training programs should address the flower garden/playground in the dwelling unit, and the training for future urban planners and architects should be user-oriented.

NGOs: It is necessary to carry out campaigns to 1) raise awareness of the government and the community about public spaces of gardens/playgrounds in residential areas; 2) conduct an assessment of the current state of these spaces, especially in-depth studies on flower gardens/playgrounds in old residential areas in inner Hanoi; 3) recommend mechanisms and policies to improve the status quo, 4) provide stakeholders with good practices that can be applied.

Mass media: Need to help raise awareness about flower gardens/playgrounds in residential areas, and have accurate evidence when directing public opinion to influence future policies.

Enterprises, private investors: Financial support, investment in public spaces to create added values for residential spaces, indirect benefits from the promotion of names and brands. However, it is necessary to develop a clear regulation on the participation of businesses so as not to affect or change the public nature of the flower garden and playground.

Fig. 14 illustrates the collaborative relationship among key stakeholders in the process of improving and developing small public spaces in the residential quarters of Hanoi's inner city.

Hoa, T. Q. / Journal of Science and Technology in Civil Engineering

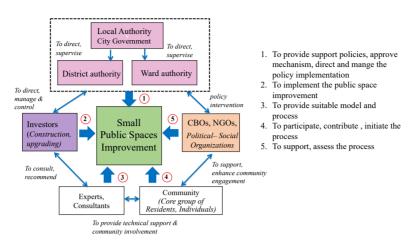


Figure 14. Proposed collaborative mechanism among stakeholders

6. Conclusions

Through research on small public spaces (including flower gardens, playgrounds) in the residential quarters in the inner city of Hanoi, it can be seen that these spaces play a very important role in people's urban lives. These spaces not only affect the physical aspect but also have impacts on strengthening social relationships such as neighborhood and community relations, creating community rules as well as increasing community commitment in the use and management of common public spaces. Through the surveys of three case studies that covered 24 small public spaces, the research has explored the current situations of small public spaces in the historical inner city of Hanoi with major issues related to the downgrading of physical conditions, the encroachment for private purposes, and the poor management and maintenance of small public spaces at residential quarter level. Besides the physical issues, there are several challenges in terms of planning policies, regulations and collaborative mechanisms among stakeholders to improve and develop the small pubic community spaces at the level of housing clusters or residential quarters. From the above research, it is necessary to clarify and supplement the concepts and the role of public spaces in the legal framework of planning so that the school of thought on making and managing public spaces at the neighborhood level can be far-reaching reflected in all kinds of planning projects. Research on urban management needs to be strengthened because, besides design work, management is decisive in maintaining the quality of public spaces in residential quarters of the historical inner city.

In addition, it is necessary to conduct training courses on public space design and management and community participation, participation of stakeholders such as city/district/ward authorities, planners, community architects, and other stakeholders to increase awareness, skills, and attitudes in preserving, improving and developing these public spaces. Community participation should be promoted in the process of making and managing small public spaces at the neighborhood level. This process should also be compiled into a manual book to introduce to the community during the implementation of urban planning and renovation projects in the locality, especially the inner-city areas of Hanoi, towards the goals of a livable city and sustainable development.

References

- [1] Worldpopulationreview, Hanoi population (2021). https://worldpopulationreview.com/world-cities/hanoi-population. Accessed on March 31, 2022.
- [2] Government of Vietnam (2011). *Hanoi Capital Master Plan to 2030 and the vision to 2050*. Decision No. 1259/QD-TTG, 26 July 2011.
- [3] Nguyen, T. H. (2015). Issues and legal recommendations for planning and managing flower gardens, playground in the residential areas of Hanoi city. In *Conference Proceeding "Flower gardens, playground in the residential areas of Hanoi city"*, The Asean Foundation.
- [4] Hanoi city's Peopple Committee (2014). Decision on approval of planning for green trees, parks, flower gardens systems and water body of Hanoi city to 2030, vision to 2050. No. 1495/QĐ-UBND, Hanoi.
- [5] Luu, D. H. (2015). Functional conflicts flower gardens, playground in the residential areas of Hanoi city. In Conference Proceeding "Flower gardens, playground in the residential areas of Hanoi city", The Asean Foundation.
- [6] HAIDEP. The Comprehensive Urban Development Programme in Hanoi Capital City of the Socialist Republic of Vietnam. Accessed on March 15, 2022.
- [7] Ministry of Construction (MOC). *National Regulation on Construction Planning*. QCXDVN 01:2021/BXD, Vietnam.
- [8] Irwin, A., Erwin, H. Z. (2012). Public Places and Spaces. Springer, Berlin, Heidelberg.
- [9] Arendt, H. (2010). The Idea of Public Sphere. Lexington Books.
- [10] Thomas, M. (1991). *The Demise of Public Space. Town Planning Responses to City Change.* Avebury: Aldershot, 209–224.
- [11] Crowhurst, S. H., Lennard, H. L. (1993). Urban space design and social life. London and New York.
- [12] Gelh, J. (2013). Life between Buildings. Island Press.
- [13] Whyte, W. H. (2005). *The Social Life of Small Urban Places*. Washington, DC: The Conservation Foundation.
- [14] Pham, T. L. (2016). Urban public spaces From theories to design. Journal of Vietnam Architecture, 18.
- [15] Truong, N. L. (2015). Organizating public spaces in residential areas of Hanoi from the view of community activities at neighborhood level. In *Conference Proceeding "Flower gardens, playground in the residential areas of Hanoi city"*, The Asean Foundation.
- [16] NASRV- National Assembly of the Socialist Republic of Vietnam (2013). *Decree of the Government on the management of urban spaces, architecture and urban landscape*. No. 38/2010/ND-CP, 07 April 2010.
- [17] DOC Department of Construction of Vietnam (2019). *Circular to promulgate the National Technical Regulation on Construction Planning*. No. 22/2019/TT-BXD, 31 December, 2019.
- [18] General Statistics Office GSO (2020). Statistical Yearbook of 2020.
- [19] NASRV National Assembly of the Socialist Republic of Vietnam (2009). *Urban Planning Law (Updated)*. No. 30/2009/QH12, 17 June, 2009.
- [20] NASRV National Assembly of the Socialist Republic of Vietnam (2014). *Law of Housing*. No. 65/2014/QH13, Vietnam, 25 November, 2014.
- [21] Hanoi People's Committee (2010). Regulations on management of urban greenery, parks, flower gardens and zoos in Hanoi. Decision No. 19/2010.
- [22] Hoa, T. Q. (2009). Urban planning with community participation Issues on appling the method in Vietnam context. *Journal of Science and Technology in Civil Engineering (STCE) HUCE*, 6:54–61.
- [23] Hoa, T. Q. (2021). Managing public spaces with community participation in Hanoi city towards urban liveability. *Journal of Science and Technology in Civil Engineering (STCE) HUCE*, 15(2V):136–154. (in Vietnamese).