A model of reforming Institutional Structure to manage Open-Space in Hanoi City, Vietnam

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Abstract. A new Hanoi city had been expanded over 3,300km2, which merged the old Hanoi with Ha Tay province and parts of Vinh Phuc and Hoa Binh provinces from August 1, 2008. After more than 10 emerge years, the population in the new city has gone up to over 8,05 million people in 2020. Improving urban living environment is one of the important targets for the new Hanoi, and managing open-space (m-OS) is a key element in achieving this goal. M-OS is a crucial issue since the expansion and re-zoning of the city can increase the rate of urbanization, cause disappearance of open-space and lead to a serious deterioration of living conditions. Administratively, institutions need to be reformed to effectively manage open spaces in the expanded Hanoi and there is a need to implement specific strategies to manage these areas. This paper aims to provide a solution in managing open-spaces. A managerial model consists of regulatory simplification and adjustment, decentralization of decision-making and simplification of open-space management process. Lastly, proposing an active plan is necessary to implement such strategies successfully and ensure effective and efficient management of open-space and community participation for a mega- Hanoi.

1. General background
The expanded Hanoi is considerably one of megacities in the world. Periodically, Hanoi has undergone three administrative boundary adjustments with two expansions in 1961 and 1978, and a streamlining in 1991. After the implementation of this mergence in 2008, at the Governmental level, the three consultants who were selected, among 12 tenderers by a special council showed different approaches toward the city development. First, Japan's Arata Isozaki - the Netherlands' Metropolitan Architecture presented the idea of “a multi-polar city”. Second, South Korea's Posco E&C - two American firms - Jina Architect and Perkins Eastman introduced the vision of “green corridors”. Finally, US-based architecture and design firm (RTKL Associates Inc.) showed the model of five satellite cities inside Hanoi.

At the national level, the new Hanoi Municipal People's Council approved socio-economic development tasks (2008, 2011, 2018) of the city. One of the initiatives, called sub-task, focused on relevant agencies to accelerate administrative reform, especially in terms of investment and land policies for businesses. Regarding the sub-task, it may be argued that there is a very good opportunity for local authorities and research scholars to review present policies and deal with existing problems in managing open-space within the mega-Hanoi. The paper, therefore, aims to answer a question of “how do they manage and protect current open-spaces through the city’s institutional system to increase green areas
in the next periods? The following sections focus on analysing open-space conditions and the institution system of mega-Hanoi accordingly.

2. Present open-space system and relevant institutions

In urbanization, the cities in developing countries are growing fast. The majority of our population now lives in urban areas, which have destroyed the environment and impacted its open-space. Since 1976, the scholars [11] have figured out the final quality criterion of our physical environment must be related to three primary elements such as: open space for common use of the occupants (physical exercise-sports and games for children of all ages and adults), play-spaces for young children (recreational use and parks), spaces for private use (public footpaths and gardens open to general public). Moreover, G Eckbo [12] categorized those similarly into three parts such as structure (building, streets, roads, and highways parking areas, utilities, above and below ground), open-space (for pedestrians only), nature (represented by ground forms, rocks, plants, water). From these approaches, we explore open-space system in Hanoi as a typical case-study.

2.1. Present open-space system

Hanoi was many natural ponds, lakes as well as a system of rivers and canals for irrigation and drainage purpose. In urban area, a number of lakes such as Hoan Kiem and Ho Tay lakes has nice scenery and creates large greenery core for Hanoi. However, urban growth has resulted in a significant decrease of both lake and green areas. Mega-Hanoi has around 100 lakes within the inner districts (Ba Dinh, Hoan Kiem, Dong Da, Hai Ba Trung and Tay Ho) [1] as showed in the figure 1. These districts maintain 53 parks (over 320ha) while the outside area has 15 parks with 60ha [2]. From the previous record, this area has decreased to 19 lakes with over 600ha [3] under five local authorities’ management [4].

Figure 1. The water surfaces and greenery areas in the Hanoi Capital construction master plan to 2030 and vision 2050 (Source: sodohanoi.com, 2019).

Mega Hanoi statistics:
- 2016: 2.02 m2/per
- 2020: 8.0 m2/per (as being expected)
- 2030: 10.0-12.0 m2/per (in future)

Vietnam standard (QCVN 01:2019/BXD) of minimum green area:
- Special cities (like Mega-Hanoi): 7.0 m2/per
- Class I and II: 6.0 m2/per
- Class III and IV: 5.0 m2/per
- Class V: 4.0 m2/per
At the same time, landscape of the West Lake has been reduced more than 50ha by the illegal occupations, while over one-fourth of True Bach Lake’s green system was converted to other functions compared to the past. Nevertheless, in rapidly urbanizing districts, the average per capita green space is about 1.0 m$^2$ [2]. This means the city authority could not properly control urban and residential development in a way that would allow to create more parks and green spaces (7.0 m$^2$ green space/person for special city likes Hanoi City) as provided for technical regulation in Vietnam standard (QCVN 01:2019/BXD). As a matter of fact, green area of mega-Hanoi is being taken into consideration by local inhabitants for private purposes. There are a program of one million trees initiated from 2018 for new development areas [5]. Thus, mega-Hanoi’s authorities are facing more difficulties in protecting, remaining, especially increasing green spaces for the core of city center.

2.2. Institutional system in m-OS

2.2.1. Overview of the management system and actors

In 2019, mega-Hanoi organized the 20 years anniversary of “City for Peace” and after that, “Innovative City” recognized by UNESCO because of its specific characteristic of greenery space, water surface and culture. These have been associated with “city center”, which includes the 36 old street quarter, West lake and Hoan Kiem lake [6]. Unfortunately, the management system is a complex issue belonging to different players under present Hanoi People’s Committee (mega-HnPC) and Ha Tay People’s Committee (HtPC). This confused local authorities by engaging many stakeholders in managing open-space. From the decision no.41, dated 19 Sep 2016 of mega-HnPC, however department of construction started taking care of all parks in 29 districts of mega-Hanoi from 1 Jan 2017 [7] until now. Figure 2 shows the previous structure in details.

2.2.2. Organization system

In the state managed administration and construction, mega-HnPC and Ministry of Construction (MOC), and their agencies under both are responsible to control, manage and prohibit illegal construction activities in open-space areas. However, they seemed to fail in bringing out effective solutions for a better mega-Hanoi due to lack of resources (financial and human).

National level policy makers group: currently, mega-HnPC is one of the two keys for setting up open-space management policies. Next, the policies are handed in the agencies (Figure 2) such as Department of Architecture & Planning (DAP), Department of Natural Resources and Environment (DONRE), Department of Construction (DOC) and Hanoi Park Company (HPC), Department of Police (DOP) and The People’s Committees of Districts Wards (PCD/W) and Hanoi Urban Planning Institute (HPI). On the other hand, MOC is the one responsible for setting up professional regulations and guidelines to conduct technical utility plans/designs.

Functional department group at municipal level: in order to carry out these policies, there are some key players assisting mega-HnPC, and making detailed plans with purpose of developing and managing open-space to improve quality of life in urban context. From the figure, mega-Hanoi’s administrative structure shows relationships that look very simple exteriorly, but internally complicated within horizontal-vertical interactions.

The top-down hierarchy, among three actors, such as policy makers at national level, implementers at local level and functional departments at city level, shows an interaction of Organization System in Open-space Management, Monitoring, Planning and Design. It clearly defines mega-HnPC (at the national level), which seems to be so far to touch real problems on open-space at lower levels. As a result, the management system was ineffective and deficient for land-use and areas utilized for parks, recreation, green belt and green streets [8]. This is proved by over exploitation of trees and green areas that can be seen in public places of the city.

In addition, the community role is not accountable in current organization system. Consequently, relevant user-groups and the authorities are unmanageable towards local public recreational grounds, small parks, gardens and buffer zones in residential areas.
3. Research methodology

According to the general and specific purposes, this is the descriptive research to provide information about existing situation of the socio-economic activities, living environment of the city core (inner 05 districts) and different aspects relating open – space at community level. After that, the exploratory approach discovered basic facts, opinions concerning open-space management. In particular, interviews with key informants in survey sites, relevant public officials and organizations and socio-economic survey have been utilized appropriately.

4. SWOT analysis for institutional system

After having applied the research methods and collected the data, SWOT analysis is a practical tool for strategic planning and management. It provides a framework for identifying critical issues of a situation that requires development planning based on management guidelines. In this paper, SWOT determines internal - external aspects of legal provision, management and organization system to clearly identify where the problems are occurring, and then proposing suggestions to improve efficiency in m-OS after the mergence.

In principle, most related properties in mega-Hanoi such as land, houses and cultural-historic assets, and others belong to the state. Therefore, changes of m-OS should really be initiative from the administration system. Within the research scope, three major legislative documents are taken into account as first initiation to figure out findings in next parts.

They are: Decree 64/2010/ND-CP of Urban greenery management, June 11, 2010 (the central government); Decision 19/2020/QD-UBND of regulating urban greenery system, parks, flower-gardens, zoos in Hanoi, May 14, 2010 (mega-HnPC); Decision 7109/QD-UBND of announcing procedure, economic and technical norm and unit price to maintain greenery parks in Hanoi city (mega-HnPC), December 26, 2016; previously, decision 01/2006/QD-BXD of Greenery planning for public utilities in
Urban Areas Design Standards, January 5, 2006 (MOC); Circular 20/2005/TT-BXD of Guidance of managing urban trees, December 20, 2005 (MOC); and Stipulation 6032/UB-TP of management and protection towards park, greenery and zoo system in Hanoi, November 11, 1993 (mega-HnPC); recently, document 4659/SXD-HT about checking, reviewing green tree system in schools, educational and medical areas, cultural and sport centres in Hanoi to secure safety for people and properties during raining and storm season, June 12, 2020 (DOC).

4.1. Legal provision of m-OS

Strengths: most legislative documents are concentrating on landscape and open-space aspect related to implementer (local level) and functional departments (city level). It means that it is a good starting point for solving existing issues. From management’s point of view, the hierarchical system has differentiated functional and administrative departments to ensure overall responsibilities in both socio-economic growth and open space management.

Weaknesses: to confirm construction control and management, policy makers have promulgated several general provisions theoretically. Hence, main managerial issues due to provisional and responsible disorders happen. In addition, economic enforcement and measures in law are quite low with constraint levels. Consequently, the provisions have been weak in preventing violations because of the user’s misperception and misbehaviour. It may be argued that there is a lack of strict and proper enforcement for current situations. Moreover, no relevant guidance is carried out to assist the implementers to deploy these legal documents. As a result, the implementer has been facing many problems in applying and combining them synchronously to resolve “encroachment phenomenon”.

Opportunities: current provisions cause temporary difficulties in the state management works. To assist local authorities, the legislative system needs positive changes to amend articles that should be based on present situations. Thus, this is taken into account as reforming the regulations. More importantly, regulatory reform should be ground to incentive policies towards community level.

Threats: there is regulatory unrest as policy makers prepared a lot of documents without pilot studies. They followed their own ways in controlling open-spaces. As such, overlaps and shortcomings in regulatory contents were inevitable. As a consequence of open-space occupation for private purposes, the articles were designed for government purposes, which were slightly different from the need of residents. Lastly, mistakes can be seen on general-specific terminologies, causing misunderstanding with the contents on district and community levels. Thus, these laws became powerless.

4.2. Organization of m-OS

Strengths: as discussed previously, mega-HnPC and MOC are strong policy makers, who can decide and appoint staff(s) to satisfy the tasks. This strength is, therefore, a powerful tool to propose a possibility to decentralize open-space project approvals to their functional departments because they are best consultants for policy-making process.

Weaknesses: the involvement of six agencies or even more does not allow anyone to fulfil the goals due to the overlaps in permitting open-space development. As a matter of fact, the makers and local authorities have realized their weaknesses, but they are in an embarrassing situation with other alternatives. Additionally, lack of transparency and accountability has been as seen as a common phenomenon in the top-down approach. The consequence is that local people do not know exactly “where they are” and “who are in charge” for such issues. Therefore, community participation is “zero”.

Opportunities: decentralization will bring out transparency and accountability between the authority and community to deal with violations and functional open-spaces for community people in the future. Besides, it will also increase quality of management and enhance local authority - community cooperation for open-space development.

Threats: it is collaboration between two policy makers. They keep a similar ranking in the governmental system to avoid conflicts. For instance, horizontal-vertical relationships are therefore, over-complicated in getting license of open-space rebuilding. Moreover, the State’s appointments on professional departments are inconsistent like HPC case (Figure 2). Consequently, many proposals and
projects are unfeasible plans. Furthermore, the agency’s units have misused human resources (unskilled civil servants and staffs) for these specific issues. Hence, they have insufficient instruments and measures to stop the deterioration and destruction of the open-space areas.

4.3. Implementation process of m-OS

**Strengths:** Fundamentally, management process is creating particular power to force all activities following the regulations and approved plans. There are priorities concentrated on improving open-space role and value through the functional department’s proposals. In other words, they are internal potentials for developing open-space areas.

**Weaknesses:** Complex laws and the top-down model were the reason for weak decision-making power of manager for open-space issues. In parallel, granting process of open-space development for investor takes a long-time (30 days) with money wastage and malfunctioning. Furthermore, shifting responsibility among the authorities happened occasionally. Rampant corruption in each function has made every process disorganized. Thus, most district/commune level-based authorities control greenery sites inappropriately.

**Opportunities:** To improve managerial effectiveness, the decision-making process must be centralized and should be replaced by the decentralization form. It means that some offices need to be re-established to set up transparent/clear mandate. These actions require multi-skilled leaders who can involve the community into plans more effectively and efficiently.

**Threats:** Lack of long, mid, and short-term strategy and detailed planning is another inevitable threat for open-space grounds. Authorities have insufficient information while making decisions to prevent illegal construction activities. Misuse of human resource causes investors and community unwilling to make necessary contributions to avoid the malfunctioning. Malfunction caused reduced enforcement and punishment for residential growth.

![Figure 3](image_url). The relationship analysed among three factors of the institutional system (Source: updated by researcher, 2020).

Figure 3 shows attempts to outline linkages between legal provisions - management system and the actors with directive interrelationships. These address responsibility overlaps and shifts, and other issues presented above, leading to open-space uncontrollability. So, these relationships must be simplified between three factors in order to protect, develop open-spaces as well as to improve living condition better for sustainable development of mega-Hanoi City.

5. A model of reforming institutional system

By conducting the SWOT to deal with fragments of current regulation, a model of reforming the regulation, restructuring the organization and decentralizing management system and optimizing “1 gate” operation system will be proposed to keep improving institutional system in terms of managing and developing open-space to fulfil the strategy 2030 and vision 2050.
5.1. Regulation reform by clarifying regulatory contents (admin and professional aspects)
As discussed previously, the complicated legal provisions caused several problems for the authorities and the community. To implement it, regulation reform is necessary. It defines participatory possibilities for target groups that focus on administrative and functional groups.

First priority emphasizes on strategy to set up legal framework, which continues simplifying and adjusting the existing regulations to create new regulatory body. Then only policy provision will redefine the responsibilities to relevant public agencies for managing open-spaces in short term and long term. Next, the problem in current institutions is complicated relationships of functional departments. Therefore, inter-departmental coordination must be improved to avoid overlaps and duplication of their duty for improving quality of m-OS. Besides, general functions of departments under mega-HnPCC and MOC created unnecessary redundancy in m-OS. Thus, through legal framework, the redundancy of duplicated functions will be reduced to increase decision making and qualifying in open-space development.

Party: the Vietnamese Communist Party is the supreme decision-maker in mega-Hanoi City. Its component consists of leaders of public agencies (professional operational agencies) and others on political, administrative and technical systems. For the administrative system, the criteria set up is in such a way that the administrative representative will be Department of Architecture & Planning (DAP) because it is one important department of mega-HnPCC in controlling and managing all green trees and areas through approved town development plans. In this regulatory reform its duty is to permit grants of open-space issues, and monitor the compliance within identified period to meet community aspiration and demand of the issue.

For the technical field, legislative provisions regulate DOC and HPC to be leading functional departments among other offices because its work now is on construction and practical techniques for mega-Hanoi City. The DOC will be mandated to make technical guidelines (open- space ratio per urban areas, technical index and so forth), which assist renovating- rebuilding-developing open-spaces. It will supervise what is established on real functional lands and pieces, and do consultation as main advisor for relevant construction planning and techniques.

Department of Architecture & Planning (DAP) will ensure dissemination about any technical information of green trees to community and investors. It is required to maintain transparency and public relationship with community in managing open space.

5.2. Decentralization of organization
Greater efficiency and flexibility as well as better adjustments to local conditions in the provision of government services can be gained through greater decentralization of decision- making power, responsibilities and resources to public services, agencies and managers (and public institutions like legal provisions). The slogan could be: let the managers manage. However, strong decentralization and enhancing flexibility need the clarification of responsibilities and accountability. This process also needs to have (an agreed upon) legal and policy framework.

5.2.1. Policy framework
The strategic approach for the revised organizational set-up is to keep developing a policy that considers the following elements consistently: Vision/Mission/Strategic Goals/Principles/Strategic Objectives (priority target groups, measures, etc.)/ Implementation/ Performance Measure.

5.2.2. Revised tasks and responsibilities
In order to avoid too detailed legal provisions, these can be fairly general and then be complemented by a policy that defines the tasks and processes so that it also has coordinating functions. The tasks and responsibilities revised are: mega-HnPCC Party approves legal provisions, steers and controls: Approves legal provisions/ develops policy guidelines/ fixes tariffs and performance aims/ is involved in cases where public subsidies are given/ does controlling/ initiates and supervises decentralization process/
reports current situation of mega-Hanoi to the Prime Minister (6 months/time). Public agencies are responsible for operational matters based on performance-based approach and accountability.

DAP is in-charge for activities belonging to administrative aspects concerning m-OS as its duty: Grant permits for open-space renovation, rebuilding, conservation and development/ does monitoring for target group’s compliance/ report activities related his duty and m-OS to mega-HnPC (3 months/time)/does leading consultation process. Its composition consists of certain stakeholders: leaders of technical departments under mega-HnPC/representative of inhabitants/ private and public business/ neighbouring communities/ professional associations.

Construction Department (DOC) of Hanoi is responsible for making technical guidelines with indicators related OSM/supervising construction activities following the technical guidelines/ implements technical consultation for DAP, community and mega-HnPC.

Hanoi Park Company (HPC): HPC prepares greenery standards with criteria for open-space areas and gives advice on planning aspects to community, DOC and DAP. Both DOC and HPC will report every week to present their duty, occurring problems and activities in relevant areas, which effect open-spaces to DAP and mega-HnPC as well. This work will make them more responsible through their accountability to higher levels (Figure 4).

Urban inhabitants of each area: participate/establishment of development plans/decision making through participation in DAP/elected representation of community units (leader of community).

5.2.3. Formal structure
According to the factors of decentralization of organization presented with policy framework, new tasks and responsibilities to public agencies, a formal structure is established as follows:

![Figure 4. Innovative structure under decentralization.](source)

![Figure 5. The strategic management process (Source: updated by researcher, 2020).](source)

5.3. Strategic Management Process
To avoid difficulties and problems of previous management system that caused many stops and stages for residents in open-space (re)development, the number of these stops must be reduced and simplified from the stops down to “one” only to ensure good governance for the community (Figure 5). This will encourage people to advance their aspiration and needs easily as well as to save time and money for the investors and the community.

5.3.1. Model of operational management process
DAP is a legal public administration that conducts and supervises spatial development plans. It is a part of daily construction activities which concerns local open-spaces in regard to the regulation reform of central government and the delegation of mega-HnPC. This process is the main approach to deal with local administrative work. It will be implemented by DAP from receiving to granting permits of open-space development to people under only one stop at the office of DAP. All necessary procedures dealing with the design, plans and papers will be implemented in a closed process by operational unit within DAP.

DOC and HPC are parts of the administrative structure, which will assist DAP in dealing with technical works. It implements its functions delegated by mega-HnPC (as mentioned above), having no
legal status of a public administration. The divisions will not directly contact people and other organization with identified responsibilities, authorities and functions as indicated in the closed loop (Figure 5).

**Table 1.** Timeline for granting permission for open-space issues (working day)

| No | Operational unit of DAP | Receive application form (design, plans, documents) | 1<sup>st</sup> |
|----|-------------------------|-----------------------------------------------------|---------------|
| 1  | DOC and HPC             | Applications processed and examined, recommendation given | 2<sup>nd</sup>-8<sup>th</sup> |
| 2  | DAP                     | Comments, approval and decision making               | 9<sup>th</sup>-10<sup>th</sup> |
| 3  | Operational unit of DAP | Receive approved plans and designs                   | 11<sup>th</sup> |
| 4  | DAP                     | Grants permits to people                             | 12<sup>th</sup> |

The estimated time duration for this oriented management process is 12 days (working time, Table 2) which will happen in the closed circle with clear responsibilities and functions designated in regulation reform as well as in formal structure.

5.3.2. Basic principles for this process

For technical group including DOC and HPC: they must keep following their mission, goals, objectives, implementation and performance indicators that are based on technical aspects. If not, they will have to accept strict punishment from mega-HnPC depending on the DAP’s proposal. They must also make weekly reports of problems faced while implementing DAP or even mega-HnPC in order to get better solutions. This step will ensure accountability of DOC-HPC among DAP and community.

Decentralization in operational management process: in order to reduce work overload for DAP, it should mandate more functions and responsibilities to technical groups (DOC and HPC) that are based on some criteria.

**Table 2.** Proposing decentralization in open-space construction process

| No | Who          | Criteria of open-space area | Level of Renovation, Rebuilding, Development | Responsibility                      |
|----|--------------|-----------------------------|---------------------------------------------|------------------------------------|
| 1  | DOC          | < 10m²                      | Small                                       | Granting permits-monitoring        |
| 2  | DAP          | 11-2,000m²                  | Big                                         | Granting license-conducting supervision |
| 3  | mega-HnPC    | 2001-3,000m²                | Large                                       | Approving and controlling          |
| 4  | Govt.        | > 3,000m²                   | Largest                                     | Granting permission and controlling |

*Granting permits for the second and next open-space redevelopment after 5 years:* in reality, some investors may divide their greenery grounds into some small pieces of less than 10m² to get license (permits) from lower level quickly. To avoid the consequence from this division, DAP must stipulate clear provision in granting permits for the second and next open-space renovation, and rebuilding at the same sites after a fixed period of around 5 years for that redevelopment.

5.4. Action Plan for Implementing Institutional Reform

To effectively initiate the action plan for implementing institutional reform, some meetings and discussions must be organized among relevant stakeholders to create the best environment as important foundations for implementing. Action plan is supposed to implement as a pilot project of Public Administration Reform (PAR) during two years, which can be divided into three phases: (1) short-term
(2) mid-term and (3) long-term. After two years, PAR will be evaluated and monitored again to modify and adjust properly for sustainable development of mega-Hanoi.

5.4.1. **Short-term**: (a) review and evaluate existing regulations and technical guidelines according to the simplification of regulation reform; (b) review and evaluate current structure of organization among administrative and technical departments; and (c) train and retrain staff for regulatory and organizational reform.

5.4.2. **Mid-term**: (a) adjust and simplify regulatory body and technical guidelines; and (b) restructure organization, mandate responsibility and make draft strategic plans for the operational management process.

5.4.3. **Long-term**: (a) finalize and enact new regulation and technical guidelines to community; and (b) monitor effectiveness and efficiency of new regulation, formal structure and the operational management process.

6. **Conclusion**

In summary, this paper emphasizes on PAR Reform with positive strategies of regulation reform, decentralization of organization and strategic management process to keep improving institutional system of m-OS for sustainable urban development and good governance. Besides, a key strategic plan with mission, objectives and key focus to orient decentralization of organization through policy framework, and to define updated tasks and responsibilities for relevant agencies and community in innovative structure, is developed. Based on both regulation reform and innovative structure, the operational management process is established to create the best advantages for local communities, investors and people to easily approach their aspiration and interest in m-OS and development. Lastly, the action plan is also proposed for more involvement of actors, who have clear responsibilities in three phases, levels of the city towards sustainable urban development and good governance.

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