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Urban Green Open Space in Indonesia: A Study of Legal Compliance

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Abstract

In accordance with the provisions set forth in Law Number 26 of 2007 on Spatial Planning, urban spatial planning must include a plan for the provision and utilization of green open spaces covering at least 30% of the city's total area. Green Open Spaces play a crucial role in urban spatial planning and mitigating the environmental impacts caused by urbanization. However, studies regarding the integration of Green Open

Spaces and spatial planning policies have not been extensively discussed. The objective of this study is to identify the extent of legal compliance regarding green open spaces in the City of Semarang. The research method employed in this study is empirical legal research, utilizing data collection techniques such as interviews, observations and documentation. Based on the research conducted, it was found that the green open space in Semarang City covers an area of 23,146,701 hectares, or 61.94% of the city's total area. This indicates that the green open space in Semarang City is in compliance with the provisions of Law Number of 2007. Furthermore, this study aims to examine the alignment and availability of green open spaces as well as the implementation of related policies in regional planning documents such as the Regional Spatial Plan and Detailed Spatial Plan. The purpose of this study is to ensure that the Semarang City Government plans to add at least 7,487.4 hectares of public green open space so that public green open space in Semarang City reaches 30%. The development of these public green open spaces can be achieved through land acquisition or area revitalization, such as the creation of urban forests, soccer fields, recreational areas and even cemeteries.

Keywords

Green Open Space; Agrarian Law; Spatial Planning; Law Number 26 of 2007; Semarang City.

Introduction

The development of the city continues to undergo changes, both physically and non-physically. This change then became a trigger for increasing community activities and followed by an increasing demand for land as well. The limited land of residents in the city center tends to be caused by land values, thus triggering development to the edge of the city. This then resulted in the emergence of urban functions to suburban areas (*urban fringe*). The level of need for more space in urban areas triggers the development of suburban areas (*urban fringe*) and the development of areas in an irregular or random manner (*urban sprawl*). Not only does it reduce the function of productive land, *urban sprawl* also causes irregular changes in the shape of the city or urban morphology. Such as the pattern of the road network, land use, and building characteristics¹.

Land has a significant role for human survival to survive, for example, places to live, road construction, facilities and infrastructure as economic support for the population on earth which are all built on land. This is in line with Law No. 41 of 2009 concerning the Protection of Sustainable Food Agricultural Land which states that, "land is a part of the land of the earth's surface as a physical environment consisting of soil and other supporting factors, climate factors, geological aspects, relief and hydrology formed on natural basis or due to human actions". Since 1990, urban sprawl has occurred in Indonesia, especially on the island of Java. Not only in urban areas, but also in medium cities and small cities such as in

¹ Farisul Hanief and Santi Paulla Dewi, "The Effect Of Urban Sprawl On The Change In The Shape Of Semarang City Is Reviewed From The Change In The Physical Condition Of Meteseh Village, Tembalang District," *Space Journal* 2, no. 1 (2014): 341–50.

Semarang City. The increase in the number of people in Semarang City certainly triggers the need for land, both in residential functions, education, health or other functions. With changes in land governance, it will certainly reduce the quantity of land before, for example the change of green land to built land. Therefore, the density of urban areas results in the availability of public green open space land.

As mentioned in the Regulation of the Minister of Agrarian and Spatial Planning/Head of the National Land Agency Number 14 of 2022, it is stated that the Green Open Space in each region is at least 30%, of which consists of 20% Public green open space and 10% Private RT. This is interrelated both in terms of ecological, socio-cultural, economic, sociological, water infiltration, beauty to community disaster prevention. Green Open Space according to the Regulation of the Minister of Agrarian Affairs and Spatial Planning/Head of the National Land Agency Number 14 of 2022 is defined as an area that is elongated/pathed and/or grouped whose use is open and accessible to anyone who grows and develops naturally or deliberately planted².

There are still quite a few cities that do not have enough land for Green Open Space, both in terms of quality and quantity. Conversely, activities in urban areas certainly make the needs and role of green open space even more needed. The importance of holding open spaces or commonly known as *open space* is one of the community's recommendations to the

² Widi Astuti et al., "Estimation of the Need for Green Open Space (RTH) Based on Urban Heat Island (UHI) in Semarang City," *Riptek Journal* 16, no. 2 (2022): 97–100, <https://doi.org/10.35475/ripteck.v16i2.168>.

city government which can later be seen as the center and focus of life, community activity spaces, vacation areas, and even *visual breaks* in the city area itself.

Land use is a form of human intervention to a land, either permanently or temporarily in the hope of meeting moral and spiritual needs. Human growth has a contrasting influence on land use activities, this is due to human activities in using the land. In order for land use to be better and more efficient, the use and management of land must also be good and in accordance with applicable laws. This is aimed at meeting the needs of human life³.

In today's era, the difference between cities and villages is very clear, ranging from access to health, education to public facilities. But unfortunately, now the world's major cities are dealing with new problems related to environmental benefits where almost 55% of the population living in cities will increase to 68% by 2050. Based on Law No. 6 of 2014 states that "*Village is a legal community unit that has territorial boundaries that are authorized to regulate and manage government affairs, local community interests based on Community Initiatives, rights of origin and/or traditional rights recognized and respected by the Unitary State of the Republic of Indonesia (NKRI)*". This means that the village has personal authority, including regulating its own affairs in regulating the village spatial layout. However, in its implementation, the rules related to the village area are still regulated and the regulations are still managed by the

³ Putri Pratiwi and Boby Rahman, "The Potential for the Fulfillment of Green Open Space (RTH) Based on Land Use," *Journal of Space Studies* 5, no. 1 (2025): 106, <https://doi.org/10.30659/jkr.v5i1.44521>.

Regency/City government, the problems between the village, the community and the private sector certainly increase and are considered to cause losses to the village and the local community which then eliminates the authority of the village in regulating the spatial layout of the village itself⁴.

Similar to villages, it is important to plan for urban area development, especially green open space has an important function for air quality such as plants that absorb carbon dioxide (CO₂) and produce oxygen (O₂), so that it can help reduce air pollution. Not only that, the existence of Green Open Space is able to prevent flooding, because green open space has a function as a rainwater catchment area and regulates the environmental temperature⁵.

Seeing these conditions, the government or *stakeholders* who have full access to activities in parts of the city area are required to have full awareness related to the urgency of the spatial and land planning plan with the provision of green open space properly, which later the development of built space will be appropriate and balanced as the availability of Green Open Space. Not only the Government, the active role of the community is also considered important in terms of planning and managing Green Open Spaces. The community here is not only categorized as an object, but is expected to be able to participate or be a subject in providing direction for the formation of green spaces on the scale of their respective cities. Thus, when the Green Open Space products produced can be implemented responsibly and effectively, both there is

⁴ "The Importance of Spatial Planning and Development of Rural Areas," n.d.

⁵ Kelvin Gosal et al., "E- ISSN: 3047-4019 ONLINE e- ISSN: 3047-4019 Online" 01, no. 04 (2024): 59–66.

a sense of desire to have and participate in the planning and development process of Green Open Space.⁶

Green Open Space is defined as an elongated area/path and/or grouping, whose use is more open, where plants grow naturally or intentionally planted. This is as stipulated in Law No. 26 of 2007 concerning Spatial Planning and Regulation of the Minister of Public Works No. 05/PRT/M/2008 which contains a message that the availability of green open space for the city area is at least 30% of the area of the city.

Semarang City is one of the cities in Central Java Province with an green open space area of 61.94%, which has met the percentage of green open space area as contained in the ATR/BPN Regulation No. 14 of 2022. However, when viewed in terms of quality and quantity, the fulfillment has not yet been achieved because of the level of distribution that is not comprehensive in 16 sub-districts in Semarang City. Based on research conducted by Sinambela⁷, there are 8 (eight) out of 16 (sixteen) sub-districts in Semarang City with a percentage of green open space area below 30%. Among these areas are Gajahmungkur, Candisari, Pedurungan, Gayamsari, East Semarang, North Semarang, Central Semarang, and West Semarang Districts. One of them is Candisari District which only has 6.28% or equivalent to 234,626 hectares of Green Open Space which was originally 555,512 hectares in the Regional Regulation⁸.

⁶ Sunita Almatser, "Green Open Space for the Urban Spatial Needs of Surakarta City," *Journal of Rural and Development* 1, no. 1 (2010): 11–19.

⁷ Sinambela, "Estimation of the Need for Green Open Space Based on the Oxygen Needs of Candisari District, Semarang City," 2021.

⁸ Astuti et al., "Estimation of Green Open Space (RTH) Needs Based on Urban Heat Island (UHI) in Semarang City."

As stated in the ATR/BPN Regulation No. 14 of 2022, it is stated that the availability of green open space in each region is at least 30%, of which 20% Public green open space, and 10% private green open space. This aims to contribute to the ecological, socio-cultural, water catchment, economy, beauty and even prevention of natural disasters, such as landslides and floods to the lives of urban people and the surrounding environment.

Green open space mentioned in the Regulation has been declared as an elongated area/path and/or group whose function is open and accessible to everyone, both those who grow and develop naturally or deliberately to be planted. Thus, as the researcher has described above, Green Open Space has a very important role and function as an effort to maintain the quality and quantity of the surrounding environment and human survival. Therefore, various kinds of interventions are needed, including a Study of Legal Compliance in Semarang City against the Semarang City green open space.

As in the previous research, conducted by Maldhimas Uut Wardana and Amin Pujiati in their research entitled "Strategies to Increase Public Green Open Space in Semarang Regency" shows that in order to increase Public green open space in Semarang City, *stakeholders* or the government need to consider social, economic, policy and ecological aspects. By looking at and coordinating planning on alternatives with the most dominant level among the aspects that have been mentioned, the role of the government is certainly highly expected, especially in terms of controlling the running process of green open space in Semarang City starting from

the planning stage to the maintenance stage. Not only that, the Semarang City government must also coordinate well and cooperate with the community, where the community is an object that has a full relationship and the main goal of the process of structuring and developing Public green open space⁹.

Based on previous research conducted by Supratiwi in his research entitled "Study of Green Open Space in Environmental Management Policy of the Semarang City Government". The research shows that the implementation of Regional Regulation No. 7 of 2010 concerning the Arrangement of Green Open Space in Semarang City has been fulfilled. Where the achievement in 2013 was in accordance with the regulations, which was 40%. This figure has certainly exceeded the minimum target that must be met, which is a minimum of 30% consisting of private green open space and public green open space. The largest percentage comes from Gunungpati and Mangkang which are not many settlements. However, along with the development of time, many buildings such as hotels, large shops, and supermarkets were built in the middle of Semarang City. Although it has been clearly and detailed regulated regarding the arrangement of buildings that provide green open space, it is still often seen where many people and even the government are not in

⁹ Maldhimas Uut Wardana and Amin Pujiati, "Strategies to Increase Public Green Open Space in Semarang Regency," *Efficient: Indonesian Journal of Development Economics* 1, no. 1 (2018): 26–33, <https://doi.org/10.15294/efficient.v1i1.27216>.

accordance with the rules as made and ratified, for example: there are no infiltration or drainage¹⁰ wells.

Furthermore, research conducted by Widi Astuti, Bunga Ludmila Rendrar Putri, et al. with the title "Estimation of Green Open Space Needs Based on Urban Heat Island (UHI) in Semarang City" explained that Semarang City experienced a decline in environmental quality due to population growth, urbanization and increasing development. This condition causes a reduction in green open space and the emergence of the Urban Heat Island (UHI) phenomenon, which is an increase in temperature in urban areas due to the dominance of buildings and the lack of vegetation. Although the area of green open space in Semarang City as a whole has met the minimum requirements, the distribution is still uneven in all sub-districts. Therefore, the provision and equitable distribution of green open space, especially in areas with high UHI levels, is an important strategy to improve environmental quality, reduce urban temperatures, and support sustainable urban development¹¹.

Research conducted by Sarah Riska Arifiah and Suhartoyo entitled "Implementation of Green Open Space Arrangement Policy as an Effort to Realize Sustainable Environment-Based City Area Governance (Eco City)" explained that sustainable development aims to meet the needs of today's community without reducing the ability of future generations to meet their needs. One of the indicators

¹⁰ Supratiwi Supratiwi, "Study of Green Open Space in Environmental Management Policy of the Semarang City Government," *Scientific Journal of Government Science* 3, no. 2 (2019): 89, <https://doi.org/10.14710/jiip.v3i2.3878>.

¹¹ Astuti et al., "Estimation of Green Open Space (RTH) Needs Based on Urban Heat Island (UHI) in Semarang City."

of a sustainable city is the availability of green open space as part of the *eco city concept*. The city of Semarang already has a legal basis in the form of Semarang City Regional Regulation Number 7 of 2010 concerning the Arrangement of Green Open Spaces. However, there is still a need for evaluation of policies and the implementation of the provision of green open space in order to truly support sustainable urban development¹².

The previous research was then conducted by Yusuf Candra Tri Wibowo and Syamsudin Raidi entitled "Analysis of Functional Aspects and Technical Aspects of Green Open Space (Case Study of Green Open Space in the West Canal Flood of Semarang City)". This study explains that Semarang City has experienced a decrease in the area of Green Open Space due to land conversion, low community participation, budget limitations and weak government supervision. This condition causes various environmental problems, such as increasing air temperatures, floods and deteriorating environmental quality. Although Regional Regulation Number 7 of 2010 concerning Spatial Planning has been issued, its implementation in West Semarang District is still not optimal¹³.

Basically, the results of the research conducted by the researcher with the previous literature study show that Semarang City has met the percentage of green open space, but among the 16 sub-districts in Semarang City it still has

¹² Sarah Riska Arifiah, "16690-57444-1-SM (Sarah Riska Arifiah and Suhartoyo 2022)" 5, no. 3 (2022): 227–38.

¹³ Yusuf Candra and Tri Wibowo, "Analysis Of Functional Aspects And Technical Aspect Of Green Open Space (A Case Study Of RTH In The Flood Of The West Canal Of Semarang City)," no. 7 (2022): 367–73.

not maximized green open space, one of which is Candisari District. This study also adds a perspective on legal compliance by linking the implementation of green open space to Law Number 26 of 2007 concerning Spatial Planning, UUPA, RTRW and Ministerial Regulation of ATR/BPN Number 14 of 2022. Nevertheless, the government has made full efforts in creating and developing green open spaces in Semarang City as stipulated in Government Regulation Number 7 of 2010 and implementing ecological, economic, socio-cultural, and policy aspects. Therefore, it is necessary to make a full contribution to the community and the Semarang City government in order to create better public and private green open space in the future.

The purpose of this research is to analyze and explain how the provisions of green open space law in Semarang City are based on Law Number 26 of 2007 concerning Spatial Planning. Then to examine the form of implementation of green open space allocation in Semarang City, and to find out the obstacles and efforts of the government and the people of Semarang City towards the planning and implementation of Green Open Space in Semarang City.

The method in this study is empirical legal research, meaning legal research that analyzes and examines the work of law in society. According to Soerjono Soekanto and Sri Mamudji, the empirical research method is a method that relies on primary data as the main basis of analysis with the aim of observing and assessing directly how the law is implemented and plays a role in the dynamics of people's lives. In line with this view, Abdul Kadir Muhammad

explained that empirical legal research is the study of unwritten positive laws, especially related to people's behavior in undergoing social relationships. Thus, empirical legal research not only analyzes written norms, but also explores how law is actualized in the practice of daily life. The empirical legal research method views law as a social reality that lives in society, so this research is carried out through observation of legal behavior or regulatory implementation, as well as community response to the law. Thus, the empirical method aims to describe how the law is implemented in practice and assess its effectiveness.

The location of the research was carried out at the Environment Agency located on Jl. Tapak Raya, Tugurejo, Tugu District, Semarang City, Central Java 50151. There searchers obtained data by conducting an interview with Mrs. Indriana Puspita Widyasari, S. T., M. T., who serves as the Young Environmental Impact Controller – Sub Coordinator of Biodiversity Conservation as a representative of the Semarang City Environment Agency which was held on Thursday, January 15, 2026. The next research location was carried out at the Semarang City Spatial Planning Office located on Jl. Pemuda No. 148, Sekayu, Kec. The researcher obtained data by conducting an interview with Mrs. Ir. Aryani Praba N., S. T., S. Pt., M. P. W. K. as the Spatial Planner at the Semarang City Spatial Planning Office which was held on Monday, April 20, 2026. After the data was obtained, the researcher used spatial planning theory and environmental ecology theory. Not only that, the researcher also examined all applicable laws and regulations related to the legal issue being researched, namely urban green open space in

Indonesia: a study of legal compliance in the city of Semarang¹⁴.

The legal basis used by the researcher in conducting the research are:

1. Law No. 26 of 2007 concerning Spatial Planning as amended by Law No. 11 of 2020 concerning Job Creation.
2. Government Regulation No. 21 of 2021 concerning the Implementation of Spatial Planning.
3. Regulation of the Minister of Home Affairs No. 1 of 2007 concerning the Arrangement of Green Open Space in Urban Areas.
4. Regulation of the Minister of ATR/BPN No. 14 of 2022 concerning the Provision and Utilization of Green Open Space.
5. Semarang City Regulation No. 7 of 2010 concerning the Arrangement of Green Open Space, and
6. Semarang City Regulation NNo.omor 6 of 2016 concerning the Medium-Term Development Plan of the Semarang City Regional for 2016-2021.

A. Agrarian Law Framework and Spatial Planning in the Protection of Green Open Space

1. Certificates as Dead Assets: Barriers to Accessing Capital and Technology

¹⁴ Ali Imran Sabalino, "Legal Research Methodology," *Papers*, 2022, 55–78.

In general, the 1945 Constitution of the Republic of Indonesia has provided a guarantee of protection for land rights, this is stated in Article 28 letter h paragraph (4), which stipulates that "Everyone has the right to private property and such property rights must not be taken arbitrarily and must be compensated with compensation". Written, comprehensive and clear laws that are applied consistently in accordance with the content of its provisions. Not only that, the welfare of the people is also stated in Article 9 paragraph (2) U of the UPA, that "every Indonesian citizen, both male and female, has the same opportunity to obtain land rights and to obtain benefits and results, both for themselves and their families".

The issuance of Presidential Regulation No. 165 of 2004 concerning the Arrangement of Duties and Functions of the Working Cabinet which was subsequently followed by Presidential Regulation No. 17 of 2015 concerning the Ministry of Agrarian and Spatial Planning and Presidential Regulation Number 20 of 2015 concerning the National Land Agency became a new chapter in the formation of a problem related to the efforts of spatial planning institutions when it became the main role of the government to cooperate with the National Land Agency which have different vertical properties and government functions. Based on Presidential Regulation No. 165 of 2014, the functions of the Ministry of Agrarian Affairs and Spatial Planning include carrying out tasks and functions in the field of spatial planning which were initially carried out by the Ministry of Public Works and the implementation of government affairs in the land sector

which was previously carried out by the National Land Agency.

Many community discourses are discussed in terms of the composition of agrarian institutions and spatial planning. As mentioned in Article 28 letter h paragraph (4) of the 1945 Constitution of the Republic of Indonesia, the community has a big dream for the intervention of BPN and the Spatial Planning Office. The presence of the Ministry of Agrarian Affairs and Spatial Planning is considered to be able to provide fresh air to the community, where the community aspires to solve chronic and emergency agrarian problems can first coordinate the planning, ownership, business and utilization of land in its entirety and complete down to the details of spatial planning. Not only that, violations of land use plans can also be prevented through administrative methods with land administration activities as this is done by the National Land Agency. In order to create such a thing, consolidation and integration between spatial planning and land functions must be carried out¹⁵.

Spatial planning cannot be separated from planning theory, which in the concept of the state of law, planning is part of the government's actions in carrying out state administrative duties so that planning cannot be separated from the field of state administrative law. This is in accordance with the opinion of Philipus M Hadjon, who stated that: "In the modern state of social law, the plan as a legal figure of the administrative relationship cannot be eliminated from the thought. Plans found in various areas of

¹⁵ Sofi Puspasari and Sutaryono, *Agrarian-Land Integration and Spatial Planning*, 2017.

government activities, such as spatial planning, health management and education. A plan is a whole of interrelated actions of state administration that seek the implementation of certain orderly circumstances. Thus, only a plan with legal force has any meaning for the country's administrative law. A plan shows what policy will be carried out by the state administration in a particular field".

The above definition also provides a limitation if planning related to spatial arrangement and arrangement as intended, namely planning from the juridical view of administration is one of the government instruments where in fact almost all parts of the government participate in the planner in terms of activities to be carried out. Basically, the Regional Government has a role in determining the boundaries of the Green Open Space area and regulating the use of land in it so that it is maintained as a protected area¹⁶.

According to the Instruction of the Minister of Home Affairs No. 14 of 1988 concerning the Arrangement of Green Open Space in urban areas, it is stated that green open space, which is the side of urban spatial planning, has a function over the green area of urban plantation. The existence of this green open space has the goal of improving the quality of a comfortable, fresh and clean urban environment; to protect the sustainability of ecosystems and the cultivation of life; the creation of a balance between the natural and built environment for the benefit of the community; water regulator advice; Climate influence; means of research,

¹⁶ Sri Suwitri Fara Nur Aliya, "The Role of Stakeholders in the Arrangement of Green Open Space (RTH) in Tugu District, Semarang City," *Journal of Public Policy and Management* Vol 15, No (2026).

education and counseling for the community on the environment¹⁷.

Agrarian Law, especially in UUPA No. 60 of 1960 and National Spatial Planning, has a close and integrative relationship. Agrarian Law regulates the control, ownership and use of land. Meanwhile, Spatial Planning regulates related to the use of space that includes land, waters and planned air. Both focus on social justice and balanced development on the integration of natural resource management. The relationship between Agrarian Law and National Spatial Planning includes:

a. Legal and Planning Foundations

The UUPA provides a determination of the main basis of land tenure, while the spatial planning regulations or UUPR regulate the allocation of the land as a form of sustainable development.

b. Mastery and Planning Integration

Land *tenure* must go hand in hand with the allocation of space (*lang use*). The use of land in this case must not conflict with the spatial plan as stipulated in the Regional Spatial Plan.

c. Authority of the Ministry

The Ministry of ATR/BPN unites land or agrarian administration issues and spatial planning sub-affairs in one institution.

a. Utilization Control

¹⁷ Didik Nopianto Agung Nugradi, "Identification of Green Open Space in Semarang City," n.d.

Agrarian Law is needed in terms of enforcing spatial rules where land rights can be limited or harmonized with spatial functions.

b. The Basis of the Right to Dominate the State

The state has full rights in terms of regulating land use for the welfare of the people with fair and integrated spatial planning. The integration between the two aims to create alignment between individual land needs and national regional development planning and to reduce land conflicts continuously.

Thus, it is appropriate that development is not only carried out with the aim of fulfilling partial sectoral goals, but also aimed at regional development that has a comprehensive and holistic nature that races on the balance between various resources as the main source of space formation and is supported by the legal system and related institutional systems¹⁸.

The theory used in this discussion is spatial planning theory which focuses on regulating the structure and pattern of space use in order to achieve sustainable development, regional balance and land efficiency. The existence of this policy is regulated by regional spatial plans from the national to regional levels in accordance with Law Number 26 of 2007 which involves elements of planning, utilization and control. The spatial plan of the Semarang City area benefits the region because it is able to form the suitability of development to the city area, harmonizing the development of the surrounding city area with quality. Based on this, the existence of a regional

¹⁸ Sherlock Halmes Lekipiouw, "Agrarian Law in Regional Planning and Development," n.d.

spatial plan has a good function as an implementing bureaucracy, local government or community which is the main target of the program.

Based on the results of the research conducted by the researcher, that the location of decision-making in the implementation of regional spatial planning policies in Semarang City is appropriate, this means that the existence of policies as explained is able to influence the spatial and regional planning process in the development of Semarang City.

2. Land Rights and Social Obligations in the Provision of Green Open Space

The right to control is part of the legal relationship to the actual control of an object so that it is beneficial for individual interests. In the sentence of the right to control, the term contains the term there is a function of physical supervision over the object that is controlled. The form of the right to control is the power to provide defense of its rights against those who try to interfere with it. Boedi Harsono stated that "control and control can be used in a juridical sense". Legal control is a right that receives legal protection and in general is able to give authority to rights holders to physically control the land owned. However, there is also legal control where in fact the physical control is carried out by other parties, so in land law, in addition to known juridical control followed by physical control, there is also a juridical control that does not give authority to control the tanah physically.

In the National Land Law or commonly known as Agrarian Law, there are types of Land Ownership Rights, namely, the Right to Control the State, the Rights of the Indonesian Nation, the Customary Rights of Customary Law Communities, and Individual Land Rights, namely the right to land, waqf, and land security rights.

The right of control over land contains a series of authorities, obligations and/or prohibitions on the holders of the right to use the land that is leased. As stated in Article 33 paragraph (1) of the 1945 Constitution states, *"the earth, water and space, including the natural resources contained in them are the highest level controlled by the state"*. Meanwhile, the UUPA states that there are several types of land rights as stated in Article 4 paragraphs (1) and (2) of the UUPA , namely:

- 1) *"On the basis of the right to control from the state as intended in Article 2, it is stated that there are various rights to the surface of the earth, namely land can be given to and owned by people, either alone or together with others and can be a legal entity.*
- 2) *The right to land as mentioned in article 1 gives authority over the use of the land in question, as well as the body of the earth and water and the space on it with the limitation of interests directly related to the use of the land within the limits in accordance with the applicable laws and regulations".*

The land rights are then divided into 2 parts, namely land rights from primary land rights and secondary land rights. Land rights are primary, namely land rights originating from the state consisting of property rights, business use rights,

building use rights on state land and use rights on state land. Meanwhile, land rights are secondary, namely land rights derived from land controlled by other parties, which consists of building use rights on management land or use rights on proprietary land, lease rights for buildings, pawn rights, profit-sharing business rights, passenger rights and agricultural land lease rights.

Ownership of land owned by every citizen is called property rights which is a form of reflection or the same as the applicable laws and regulations, namely the UUPA. The source of ownership of land by the community consists of two elements, namely:

- a. Land rights by citizens born due to the application of customary law in Indonesia where the rights to the land can be obtained and owned continuously and can be continued, which were originally sourced based on the act of land conversion and have never been taken possession of the land.
- b. Rights to land acquired from other nationals or certain individuals either individually or jointly

Thus, it can be concluded that Agrarian Law has a full relationship to the spatial arrangement of a region. In the planning, Green Open Space is not only absolute, consisting only of vegetative elements (plants), but also inserted in the form of other supporting activities that are then able to produce great benefits in various ways, not only in the ecological side, but also in terms of economy, socio-culture and architecture. It needs to be emphasized that the vegetative

element is the dominant element, which is an important or central part that distinguishes other open space planning¹⁹.

However, the breadth of authority given by law to the owner of property rights does not provide the understanding that the owner of the property can commit an act without limitation on the use of the land. Landholders certainly have limitations in the use of land ownership rights as stated in Article 6 of the UUPA, including:

- a. Use and utilize the Land without causing harm to others.
- b. The use of the land is in accordance with the guidelines and legal rules as well as the spatial plan.
- c. The use and utilization of land must take into account the public interest, not only one's own interests
- d. In addition to using land, it must also maintain the soil properly and effectively and try to prevent the soil from being damaged.
- e. It is not allowed to cause losses to the land used²⁰.

3. Normative Analysis

a. Law No. 26 of 2007 concerning Spatial Planning

"Spatial planning is a form of spatial structure and spatial pattern. Spatial structure is the arrangement of settlement centers and the network system of infrastructure and facilities that have a function as a support for the socio-economic activities of the community which hierarchically have a functional relationship", this is in accordance with Article 1

¹⁹ Almaitser, "Green Open Space for the Urban Spatial Needs of the City of Surakarta."

²⁰ Indah Sari, "Land Rights in the Land Law System in Indonesia According to (UUPA)," *Management Partner Journal* 9, no. 1 (2017): 15–33.

number 2 of Law No. 26 of 2007 concerning Spatial Planning. As for the spatial pattern according to Article 1 number 4 of Law No. 26 of 2007 concerning Spatial Planning, *"the spatial pattern is the distribution of space allocation in an area consisting of the allocation of space in an area that has a protective function and the allocation of space for cultivation functions"*.

P. De Haan interprets that the concept of planning is seen from the general sense, namely, structured and systematic preparation and implementation related to policy decisions based on a work plan which is related to the objectives and methods of implementation. The planning includes the process or estimate that will occur, the policy design that will be taken, the preparation equipment, oral agreements, stipulations and *regelingen* or regulations²¹.

The concept of spatial planning in Law No. 26 of 2007 concerning Spatial Planning has been neatly regulated, starting from the planning of the allocation of each space, the use of space to form the planning and spatial control if the use of space has not met the planning elements. However, the problem that often occurs is whether the regulations and their implementation have met the level of equality and balance and vice versa. Similarly in spatial planning, the current situation reflects that the provisions of the designed spatial arrangement are not in accordance with its implementation. This can be seen from the many land transfers, such as protected land that becomes cultivated land

²¹ Junef Muhar, "Law Enforcement in the Context of Spatial Planning to Realize Sustainable Development," *Journal of De Jure Legal Research* 17, no. 4 (2017): 373–90.

and even the conversion of cultivated land into a conversion of protected land.

Based on this, Law Number 26 of 2007 concerning Spatial Planning has regulated in detail related to administrative sanctions if it results in changes in the function of space²².

b. Law No. 5 of 1960 concerning Basic Regulations on Agrarian Principles (UUPA)

Along with the development of the times and the current of globalization as well as the changing demands of society's needs, the Basic Agrarian Law has also undergone changes. The existence of these changes also brings consequences and impacts for the implementation of the law in various fields, one of which is Civil Law. Among the forms of change, namely related to land ownership, land rights and land use in the Basic Agrarian Law can affect the interpretation and application of provisions in the Civil Code²³.

Despite significant developments, regulations related to Agrarian Law still continue to face various problems, including:

- a) Incompatibility of land tenure. Based on data obtained from ATR/BPN, it provides clues that 1% of landowners control 40% of the total land area in Indonesia.

²² Stevanus Eko Pramujti and Viorizza Suciani Putri, "Reviewing the Effectiveness of Spatial Planning Law Enforcement in the Context of Realizing the Orderly Spatial Plan," *Land Journal* 10, no. 1 (2020): 91–107.

²³ Kasra Handira and Rus Yandi, "The Impact of UUPA Amendments on the Implementation of Civil Law" 1, no. 1 (2024): 62–72.

- b) Land disputes. Based on data obtained from ATR/BPN, it is stated that there are around 300,000 unsolved land cases.
- c) Corruption in the land sector. Corruption in the land sector today remains the main problem due to the inhibition of the implementation of land/agrarian law rules in the State of Indonesia.

As an effort to deal with the above problems, the existence of the UUPA in Indonesia is expected to be better, effective and efficient in order to create justice and equity in the control, ownership, use and utilization of land. Not only that, Agrarian Law has a significant role in regulating and providing protection of rights to land and other natural resources. Not only that, agrarian law has a role in realizing social justice and community prosperity in the agrarian field, ensuring legal certainty, preventing agrarian conflicts, and preserving the environment²⁴.

c. Regulation of the Minister of ATR/BPN No. 14 of 2022 concerning the Provision and Utilization of Green Open Space

PerMen ATR/BPN No. 14 of 2022 emphasizes the crucial role of green open space in the provision of ecosystem services, such as the provision of clean air, climate regulation, and flood control. However, the implementation of this regulation is still not in line with the expectations of the community. Infrastructure development still often does not pay attention to green open space regulations, making the

²⁴ Santy Fitnawati WN, Risa Ferisa Rini, and Ahmad Fauzan, "Agrarian Regulation Policy in Indonesia: A Review Based on the Basic Agrarian Law," *Begawan Hukum Journal (JBH)* 2, no. 1 (2024): 298–309.

existence of green open space threatened and the area of green open space also decreases. Ironically, green open space can be a long-term investment because it has wide benefits, such as the supply of recreational spaces, air pollution control to water infiltration.

According to Article 1 number 15 of the Ministerial Regulation of ATR/BPN No. 14 of 2022 concerning the Provision and Utilization of Green Open Space defines that, *"Green open space is an elongated area/path and/or grouping whose use is more open, a place to grow plants, both those that grow considering aspects of ecological function, water infiltration, economy, socio-cultural and aesthetic functions"*. Then Article 10 of the Minister of ATR/BPN No. 14 of 2022 concerning the Provision and Utilization of green open space is stated if, *"the provision of Green Open Space includes planning, land provision, and design activities"*. Furthermore, the use of space is mentioned in Article 22 of ATR/BPN No. 14 of 2022 concerning the Provision and Utilization of Green Open Space, that *"the use of green open space consists of Public Green Open Space and Private Green Open Space"* which is then explained in more detail in Article 23 of PerMen ATR/BPN No. 14 of 2022 concerning the Provision and Utilization of Green Open Space related to the use of RTH is carried out according to green open space typology which consists of:

- a) Utilization of green open space areas/zones;
- b) Utilization of other areas/zones that function green open space;
- c) The utilization of spatial objects functions green open space.

The recognition of green open space is jointly carried out with the approval of the Minister from the results of the expert assessment. As the classification and characteristics of green open space in Semarang City should include private green open spaces such as yards or plants that must be owned by every house and Public green open space such as residential parks in areas that are intended for community use and green paths throughout Semarang City²⁵.

Although it has been expressly regulated in the ATR/BPN Regulation No. 14 of 2022, in its implementation it is still considered insufficient where the bid is adjusted to the lack of green open space in Indonesia due to the continuous land conversion. Therefore, it is necessary to conduct an evaluation related to this regulation and with the issuance of the UUPA and Law No. 6 of 2007 is one of the forms of government policy that must be implemented. Not only that, it is important for the public to know about the legal products produced so that the public and entrepreneurs understand the legal products properly and appropriately so that they can participate in efforts to preserve good Green Open Spaces²⁶.

4. Principles of Sustainability, Social Function of Soil and Ecological Balance

a. Social Conditions

The social condition of the community is quite good because the people of Semarang City are quite meticulous in

²⁵ National Land Agency and Citraland Manado, "1 2 3 4," 2022.

²⁶ Fitri Adifa and Gevan Naufal Wala, "Analysis of Green Open Space Policy in Indonesia (Case: PerMen ATR Review/Head of BPN No. 14 of 2022)," *Journal of Social and Political Greenation* 1, no. 4 (2025): 134–39, <https://doi.org/10.38035/jgsp.v1i4.130>.

terms of maintaining cleanliness and environmental sustainability.

b. Economic Conditions

The economic condition of the people of Semarang City is considered quite good because most of the people of Semarang City are government employees and traders or laborers. This then makes the existence of green open space used as an access to earn a living.

c. Political Conditions

The political conditions of Semarang City are relatively conducive and good. Where the government fully supports the green open space development program with the aim of utilizing old land or locations to be more beneficial to the people of Semarang City²⁷.

B.Implementation of Green Open Space Allocation Obligations in Semarang City: Between Regulation and Reality

1. Overview of Green Open Space in Semarang City

The proportions related to green open space in an urban area are regulated in Law Number 26 of 2007 concerning Spatial Planning, namely in Article 29 paragraph 1 and

²⁷ Juai Sub-District Balangan Regency Kapakan Kambang Waluh Mungkur Uyam Village Juai District Balangan Tria Vina Nadia, Ni Made Musiyani Anjasmari, and Public Administration Study Program of the Amuntai College of Administrative Sciences, "Ni Made Musiyani Anjasmari, Arpandi |Implementation of Open Space," n.d., 399.

paragraph 2. The value of this proportion is at least 30% of the area of the city, including 20% Public green open space and 10% Private green open space. In developing RTH, of course, it is accompanied by *stakeholders* so that green open space continues to run in balance and sustainability, where these *stakeholders* are divided into 3 parts, namely *primary stakeholders*, *key stakeholders*, and *secondary stakeholders*. *Primary stakeholders*, have a direct impact, be it a negative influence or a positive influence of the existence of a plan and have a direct interest in these activities. The primary stakeholders in this case are the Semarang City Government, then the key stakeholders are those who have the authority to make decisions and are responsible for the arrangement of green open space in Semarang City, such as the Spatial Planning Office, the Environment Agency and the Semarang City Bappeda. The secondary is supporters in facilitating development, such as Non-Governmental Organizations, the private sector and researchers²⁸.

Every area in Semarang City should provide 10% for private green open space and then to public green open space. For example, in the area of a Neighborhood Pillar (RT), where a study conducted by the Semarang City Government has been carried out and shows that one resident needs at least 1m². Furthermore, the value is then multiplied by the household unit, so that later the amount of green open space needed in the Neighborhood Pillar can be determined. This

²⁸ Diyana, "The Implementation of the Green Open Space Policy in the City of Pekanbaru after the enactment of Law Number 26 of 2007 concerning Spatial Arrangement in conjunction with Regional Regulations of Regional Municipalities Level II of Pekanbaru Number 4 of 1993 concerning the General Plan of Spatial Planning of the City of P," 2014.

calculation is in accordance with the Minister of Public Works Regulation No. 5 of 2008 concerning Guidelines for the Provision and Utilization of Green Open Space which states that the area of the park is at least one square meter per resident of green open space with an area of at least 250 square meters²⁹.

Semarang City consists of 16 sub-districts and 177 sub-districts with an area of 37,378 hectares (373.78 km²). Based on the provision of 20% for public green open space, the need for public green open space that must be owned by the City of Semarang is 7,475.6 hectares. From the results of an interview with the Semarang City Environmental Office, the area of public green open space currently available has only reached 4,235 hectares (11.33%), so there is still a shortage of around 3,240.6 hectares to meet the 20% target. The regulations related to the rules of the Semarang City green open space are regulated in Regional Regulation Number 7 of 2010 concerning the Arrangement of Green Open Spaces. The following is a table of the condition of green open spaces in the city of Semarang³⁰.

Table 1. Condition of Green Open Space in Semarang City

City	City Area (Ha)	Require d Public Green Open Space (Ha)	Existing Public Green Open Space (Ha)	Public Green Open Space Deficit (Ha)	Existing Public Green Open Space (%)	Public Green Open Space Deficit (%)
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²⁹ Arifah, "16690-57444-1-SM (Sarah Riska Arifah and Suhartoyo 2022)."

³⁰ Fara Nur Aliya, "The Role of Stakeholders in the Arrangement of Green Open Space (RTH) in Tugu District, Semarang City."

Semarang City	373,780.00	7,475.60	4,980.41	2,754.39	6.99	13.01
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Source : BPS Semarang City (2025); Law No. 26 of 2007 Article 29; interview with Indriana Puspita Widyasari of the Semarang City Environmental Agency (January 15, 2026); processed by researchers.

2. Case Study: Candisari District (only 6.28% Green Open Space) and Its Legal Implications

The following is data on sub-district public green open spaces in Semarang City.

Table 2. Public Green Open Space Based on Sub-district in Semarang City

No.	Districts	Area (Ha)	Existing Public Green Open Space Area (Ha)	Deficit of Public Green Open Space (Ha)	Existing Public Green Open Space (%)	Compliance Status (Minimum 20%)
1	Mijen	5,562	439.6	672.8	7.91%	Not compliant
2	Gunungpati	5,827	1,314.3	0 (surplus)	22.56%	Meet
3	Banyumanik	2,794	704.6	0 (surplus)	25.22%	Meet
4	Gajah Mungkur	934	139.9	46.9	14.98%	Not compliant
5	South Semarang	595	65.9	53.1	11.08%	Not compliant

6	Candisari	640	49.1	78.9	7.67%	Not compliant
7	Tembalang	3,947	438.3	351.1	11.10%	Not compliant
8	Pedurungan	2,111	118.9	303.3	5.63%	Not compliant
9	Genuk	2,598	108.9	410.7	4.19%	Not compliant
10	Gayamsari	622	66.2	58.2	10.64%	Not compliant
11	East Semarang	542	38.1	70.3	7.03%	Not compliant
12	North Semarang	1,139	61.3	166.5	5.38%	Not compliant
13	Central Semarang	517	16.1	87.3	3.11%	Not compliant
14	West Semarang	2,168	157.4	276.2	7.26%	Not compliant
15	Tugu	2,813	70.3	492.3	2.50%	Not compliant
16	Ngaliyan	4,299	446.5	413.3	10.39%	Not compliant

Source: Fara Nur Aliya & Sri Suwitri (2025); interview with Indriana Puspita Widyasari of the Semarang City Environmental Agency (January 15, 2026); processed by researchers.

Based on the data above, it can be seen that Candisari District is in sixth place with an area of 49.1 hectares of green open space or it can be known that it is still not eligible which

is caused by the Candisari District area, then if you look at the environment it is not supportive of the availability of public green open space. The large number of settlements and housing in the Candisari District area makes public green open spaces have no place. Not only that, another thing that causes Candisari District to not meet green open space is related to the management of public green open space itself. Actually, there are still places that can be used as public green open space land, but these places do not receive special attention from the community and even the sub-district. So that the place is abandoned and becomes an empty land.

So far, the Candisari District has not participated in the planning or even management of public open spaces. This is also a problem in the implementation of the public green open space program in Candisari District. The sub-district in this case actually handed over all the processes of managing public green open spaces to the Semarang City Parks Hygiene Office. Therefore, the Candisari District still does not pay attention to the task of handling with the aim of improving or overcoming problems related to the public green open space of Candisari District³¹.

The guidelines adopted are Semarang City Regional Regulation Number 7 of 2010, which is 34.204%. This can be seen from the lack of cooperation between the Semarang City Hygiene and Parks Office and Candisari District. Not only that, community involvement is also very much needed in the

³¹ Veronica Nimas, Kismartini, and Maesaroh, "Implementation of the Public Green Open Space Arrangement Program in Candisari District, Semarang City," 2009.

process of developing public green open spaces in Candisari District.

The following reasons explain why the area of the Candisari District green open space has not met the provisions of the applicable laws and regulations³²:

- a. The previous land conversion was still considered as green open space that could change its function to other uses such as residential, commercial, or industrial for many reasons, one of which was market demand and economic pressure.
- b. The level of public awareness of the importance of green open space that is still lacking or does not support the protection and environmental sustainability of green open space can cause a lack of support in allocating and preserving land for the benefit of green open space.

Table 3. Factors Causing the Low Public Green Open Space in Candisari District

Factors	Description	Legal Implications
Land use conversion	Land that should function as public green open space is converted into housing, shops, or other commercial facilities due to economic pressure and market demand.	Violation of the Semarang City Spatial Plan (RTRW) and Regional Regulation No. 7 of 2010 concerning Green Open Space.

³² Ahmad Azyumardi Azra, "Using the Geographic Information System Method," *Ellipsoid* 07, no. 01 (2024): 1–13.

Limited available land	The very high density of settlements in Candisari District leaves little room for the development of new public green open space.	Difficult to achieve the minimum 20% public green open space target under Law No. 26 of 2007.
Lack of public awareness	The community does not support the protection and preservation of green open space and tends to neglect the obligation to provide private green open space (yards).	Weak community participation in fulfilling the social function of land (Article 6 of the Basic Agrarian Law/UUPA).
Limited role of the sub-district government	Candisari District does not actively participate in the planning, management, or supervision of public green open space; these functions are delegated to the Hygiene and Landscaping Service.	Institutional functions are not optimal; weak vertical and horizontal coordination.

Source: Research results of Nimas, Kismartini & Maesaroh (2009); Indriana Puspita Widyasari, Semarang City Environmental Agency (January 15, 2026); processed by researchers.

The legal implications if an area does not meet the requirements for a minimum of 30% green open space consisting of 20% public green open space and 10% private green open space have been regulated in Law Number 26 of 2007 concerning Spatial Planning. There are two sanctions, namely administrative sanctions and criminal sanctions. Administrative sanctions are penalties imposed for

administrative violations or administrative provisions of the law. Administrative sanctions are the government's actions to end a situation that is prohibited by administrative law or to do what should be abandoned by the community because it is contrary to laws or other legal rules. Administrative sanctions for violators can be in the form of written warnings, temporary suspension of activities, temporary termination of public services, closure of locations, revocation of permits, cancellation of permits, demolition of buildings, restoration of space functions, and administrative fines. Then there are criminal sanctions or civil sanctions, if the violation results in a change in the function of the room, loss of property or casualties³³.

The Semarang City Government has implemented administrative sanctions against several violations, especially violations of the conversion of green open space land. Then in an effort to prevent violations of green open space in Semarang City, the Semarang City Government through the Semarang City Spatial Planning Office has carried out its main duties and functions by supervising and controlling the use of space.

3. Case Study of Gunungpati District as a Good Case for Fulfilling Green Open Space in Semarang City

In accordance with the above explanation, the area of green open space has actually met the proportions, but in terms of quality and quantity the distribution is uneven in

³³ Housing In et al., "Application Of Administrative Sanctions Againsts Illegal Buildings In The Green Open Space Of The Area" 4, no. 1 (2024): 467–76.

Gunungpati and is one of the contributors to a large proportion of green open space.

c. Functions as a conservation area of Semarang City

In the Semarang City RTRW, Gunungpati District is used as one of the conservation areas and water catchment areas so that the existence of green open space has a strategic function that includes reducing the risk of flooding in downstream areas, maintaining air quality, maintaining irrigation balance, and supporting sustainable city development.

However, as time goes by, Gunungpati also faces challenges in the form of increasing development such as settlements, housing and commercial facilities that can potentially reduce the area of green open space if not controlled through spatial planning policies.

4. The Role of the Semarang City Government in Planning and Control of Space Utilization

As stated in Article 18 paragraph 2 of the 1945 Constitution of the Republic of Indonesia, it states, "*Provincial, Regency and City Regional Governments regulate and manage their own government affairs according to the principle of autonomy and assistance duties*", while in the provisions of Article 18 paragraph 5 of the 1945 Constitution of the Republic of Indonesia, "*Regional Governments exercise the widest possible autonomy except for government affairs which are determined by law to be central government affairs*". In general, the Regional Spatial Plan or commonly referred to as the Semarang City RTRW is the result of spatial planning

in the area above the geographical unit and all related elements whose boundaries and systems are determined based on administrative aspects.

The Semarang City RTRW for 2021-2031 is a guideline for the implementation of spatial planning in Semarang City. In accordance with Semarang City Regulation No. 5 of 2021 concerning Amendments to Regional Regulation Number 14 of 2011 concerning the Semarang City Regional Spatial Plan 2021-2031, it states that *"Semarang District is included in BWK I including Central Semarang District, East Semarang District and South Semarang District with regional development, one of which is in the field of trade and services"*. In the process of planning and spatial management, it is necessary to have a City Hierarchy, which is a ranking order of cities based on the size of their roles and functions in relation to other cities, assuming that the growth of the urban area does not occur randomly, but still grows in a clear and logical order so that both size and function are related to the overall order. The determination of the hierarchy of Semarang City in the spatial planning structure plan has been carried out as much as possible looking at the development and growth of the current city of Semarang.

Based on research conducted by the researcher with Mrs. Indriana Puspita Widyasari, S. T., M. T., as the Young Environmental Impact Controller - Sub-Coordinator of Biodiversity Conservation representative from the Semarang City Environment Agency which was carried out on Thursday, January 15, 2026, it can be seen that the land use for the purpose of the Semarang City Public Green Open Space is currently 4,235 hectares. The need for Public Green

Open Space according to the Law (20% of the city area) is 7,475.6 hectares. Thus, there is still a shortage of public green open space of around 3,240.6 hectares. The pattern of the composition of the Semarang City Spatial Plan is divided into 2 (two) parts, namely areas that have a function as protection areas and areas that are prepared in the context of cultivation. The protection area consists of areas that provide security for the area under it, local protected zones such as coastal areas or coastal areas, riverbanks, reservoirs and water sources, and even disaster-prone areas, such as areas that are prone to landslides, floods and moving land. Meanwhile, cultivation areas refer to the area that is developed as the characteristics and potential of the area.

Environmental ecology theory is a theory that emphasizes the function of vegetation as the lungs of cities, microclimate regulators, pollutant absorbers and water management managers to create a balance in urban ecosystems. This theory also views environmental problems not only as technical issues such as how much green open space or the type of plants are, but as the result of the power relations, policies, economic interests and social interactions that shape how the environment is managed or even ignored.

Based on the results of research conducted by the researcher together with Mrs. Ir. Aryani Praba. N., S.T., S.Pt., M.P.W.K. as the Spatial Planner at the Semarang City Spatial Planning Office which was carried out on Monday, April 20, 2026 stated that, in terms of spatial planning of the city of Semarang, the Semarang City Spatial Planning Office has carried out supervision and control with efforts to establish a licensing mechanism and enforce applicable laws and

regulations. Not only that, the Spatial Planning Office also provides firm steps for people who violate the rule of law, such as sanctions of reprimands and appeals as applicable rules. This is indeed appropriate again from the main duties and functions of the Housing and Settlement Areas Office, especially in the management and supervision of infrastructure, facilities and public or ordinary utilities known as PSU. stated that the lack of land and its height are always included in the spatial planning of the City of Semarang.

Green Open Space land in Semarang City, if based on the policy of the Semarang City Government, is planned with an area of around 11,211 hectares, including³⁵:

- a. Private green open space is developed over an area of 10% of the city area with an area of approximately 3,737 hectares. The Private green open space consists of: yard, office yard and place of business.
- b. Public green open space is developed with an area of 20% of the city area with an area of approximately 7,474 hectares, which include: urban parks and forests, green lanes of roads and certain functions.

Table 4. Summary of Targets, Realizations, and Disadvantages of Public Green Open Space in Semarang City

Indicator	Area (Ha)	Percentage of Urban Area (37,378 Ha)	Remarks
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³⁵ Iqbal Nurhanafi, Hartuti Purnaweni, and Zainal Hidayat, "Implementation of Public Green Open Space Arrangement Policy in Semarang City," n.d.

Total Area of Semarang City	37,378	100%	-
Public Green Open Space Target (minimum 20% under Law No. 26 of 2007)	7,475.6	20%	Legal obligation
Existing Public Green Open Space (2026)	4,235	11.33%	Interview data, Environmental Agency
Public Green Open Space Deficit	3,240.6	8.67%	Target has not been achieved
Private Green Open Space Target (minimum 10%)	3,737.8	10%	Valid existing data not yet available
Minimum Total Green Open Space Target (30%)	11,213.4	30%	-
Realization of Total Aggregate Green Open Space (including protected areas and private green open space)	23,146.7	61.94%	Aggregate figure meets and exceeds 30%

Source: Law No. 26 of 2007 Article 29; interview with Indriana Puspita Widayarsi of the Semarang City Environment Agency (January 15, 2026); and the researcher.

Based on research conducted by the researcher together with Mrs. Ir. Aryani Praba. N., S. T., S. Pt., M. P. W. K. on

Monday, April 20, 2026, the efforts made by the government in terms of planning and development of the Green Open Space of the city of Semarang, namely with the participation of the Semarang City Spatial Planning Office which is focused on the improvement and construction of city parks. Based on the main goal of spatial planning development, the design and creation of urban parks must also be accompanied by a real and serious maintenance process. Without this, all steps taken will give the impression of being objects that have a partial nature. The maturity of programs and funding resources is an absolute must in the process of developing urban parks. Because with effective socialization, city parks will have a great influence on the community, namely to create comfort for visitors. In addition, the Spatial Planning Office also implements a space utilization control policy through RTRW and RDTR instruments. In the case of KRK submission, the developer applicant or developer is required to provide green open space in each Development. The government also encourages the optimization of land use by means of vertical development and revitalization of the area as an effort to maintain spatial balance.

The strategies carried out by the government as an effort to develop city parks as public green open spaces in Semarang City are:

- a. Cooperate with investors by requiring the allocation of 10% of the development for green open space.
- b. Responsible to the community to maintain the park. If necessary, the Semarang City government can buy land

from the community to be used as a public green open space as is done in several cities abroad³⁶.

Not only that, based on research conducted by the researcher together with Mrs. Indriana Puspita Widyasari, S. T., M. T. as the Young Environmental Impact Controller - Sub-Coordinator of Biodiversity Conservation at the Semarang City Environmental Agency on Thursday, January 15, 2026, the Environmental Agency participated in the development of green open spaces in Semarang City, namely by holding a city park competition as an effort to develop the spirit of environmental love for the community and a form of reflection of the development of public green open spaces. Not only that, the community in this case also actively participated in participating in the competition formed by the Semarang City Government.

Table 5. Semarang City Government's Efforts in Overcoming Obstacles to Green Open Space Fulfillment

Types of Barriers	Efforts Made	Implementing Agencies
Juridical	a. Enforcement of KDB rules through the licensing mechanism (KKPR) b. Sanctions in the form of warnings and appeals for violators	Spatial Planning Office

³⁶ Surana Mahendra Jati et al., "The Responsibility of Local Governments in Fulfilling Green Open Space in Urban Areas Local Governments are part of the Unitary State of the Republic of Indonesia The Unitary Republic of Indonesia is divided into provincial and provincial areas from Per," 2024.

Budget	a. Propose an additional budget in the RKAB according to actual needs b. Optimize funding for the maintenance of existing public green open space	Hygiene and Landscaping Service; Spatial Planning Office
Human Resources	a. Recruitment of honorary/contract personnel to assist park maintenance b. Capacity building through training	Housing and Settlement Areas Office
Land Availability	a. Cooperation with districts/sub-districts to utilize vacant land as private green open space b. Require investors/developers to allocate 10% of land for green open space c. Land acquisition for public green open space	Spatial Planning Office; Housing Office
Space Utilization Control	a. Implementation of KKPR (Conformity of Spatial Utilization Activities) b. Routine supervision and administrative enforcement c. Area revitalization and vertical development	Spatial Planning Office
Community Participation	a. Organizing a city park competition b. Public awareness campaigns on the importance of green open space and the social function of land	Environmental Agency; Spatial Planning Office

Source: Interview with Mrs. Indriana Puspita Widayarsi of the Semarang City Environmental Agency (January 15, 2026) and Aryani Praba of the Semarang City Spatial Planning Office (April 20, 2026); research by Jati et al. (2024); processed by researchers.

5. Legal and Institutional Barriers: Weak Law Enforcement, Overlapping Authority

Many efforts and efforts are used with the aim of maintaining the quality of green open space which has not fully provided appropriate results. The failure of the development of the Semarang City green open space is caused by less effective regulatory problems. The problem of green open space regulation in Semarang City is that there is no planning, organization and mobilization at an inadequate level in the field of human resources. This can be evidenced by problems in planning, namely the lack of human resources for *landscape experts* in park development, problems in organization, namely the placement of employees who are still not relevant, problems in mobilization, namely the development of subordinate potentials that are not optimal³⁷.

Not only that, other problems also come from internal factors related to the condition of the Semarang City Housing and Settlement Area, especially in the field of landscaping and cemetery. The results of the research conducted by the researcher together with Mrs. Ir. Aryani Praba N., S. T., S, Pt., M. P. W. K. who served as the Spatial Planner at the Semarang City Spatial Planning Office which was carried out on Monday, April 20, 2026, stated that, the

³⁷ Viktor Laia et al., "The Role of Organization and Control in Optimizing Human Resources at the Ulususua Sub-district Office, South Nias Regency" 3, no. September (2025): 203–13.

Semarang City Spatial Planning Office has managed and maintained green open spaces such as city parks, urban forests and green lanes in practice are part of the main tasks and functions of the Housing and Settlement Areas Office, especially in the aspects of managing infrastructure, public facilities and utilities (PSU) and residential areas. But in fact, inequality occurs due to the inappropriate use of green open space. The inequality in the provision of green open space in several areas such as Candisari District, is caused by the high level of settlement density, limited land, and suboptimal management and coordination. The Semarang City Spatial Planning Office according to its main duties and functions is in the aspect of planning and controlling the use of space, determining policy directions and allocating green open space through RTRW and RDTR documents, including regulating the zoning of protected areas and cultivation areas. In addition, the Semarang City Spatial Planning Office also carries out space utilization control by providing recommendations for the suitability of space utilization activities (KKPR), supervision of space utilization, and administrative action in the event of violations of the spatial plan.

Such a problem is certainly a natural thing, because even though it has been regulated in the regulations in the Semarang City Regional Regulation Number 4 of 2011 concerning the Semarang City Regional Spatial Plan for 2011-2031, problems related to the development of green

open space often experience obstacles. The forms of obstacles are explained in detail, including:³⁸

a. Juridical Problems

The implementation of regulations related to the Semarang City Regional Spatial Plan and the fulfillment of green open space still have many problems. The making of regulations related to the basic coefficient of buildings has not been fully implemented properly, so that it affects the level of open space around the building.

b. Technical Issues

a) Budget

Judging from the amount of land available to fulfill green open space, a large budget is needed for the construction, repair or maintenance of previously existing parks. Until now, the budget of the Semarang City Hygiene and Landscaping Office is very limited, not in accordance with the load carried out. This in its implementation cannot be said to be optimal due to the lack of maintenance budget for parks in Semarang City.

b) Human Resources

The minimal availability of human resources makes an imbalance between human resources and parks that should be maintained, this condition and situation certainly affects the government's efforts in maintaining the balance and sustainability of green open space in Semarang City.

c) Land Availability

³⁸ Jati et al., "The Responsibility of Local Governments in the Fulfillment of Green Open Space in Urban Areas Local Governments are part of the Unitary State of the Republic of Indonesia The Unitary Republic of Indonesia is divided into provincial areas and provincial areas from per."

In a certain area, the government in this case is still having difficulty in obtaining land that will be used as green open space, so it is not possible to meet the need for 20% green open space in Semarang City³⁹.

6. Harmonization of Local Regulations with the Principles of Agrarian Law

The existence of the Agrarian Law Law, the Spatial Planning Law, the Semarang City Regional Regulation on Semarang City Spatial Planning and other regulations related to the spatial planning of the City of Semarang is expected to be used as a solution to the problems of planning and development of spatial planning and green open space in the City of Semarang.

In this case, the Semarang City Government has made efforts to overcome problems in terms of dealing with problems that hinder the development of green open spaces, including:⁴⁰

a. Juridical Problems

Enforce rules with punishment about local building regulations, which include the basic building coefficient (KDB) for all buildings so as to create *open space in* each site that will be useful for tree planting or reforestation.

b. Technical Issues

a) Budget Issues

³⁹ Jati et al., "The Responsibility of Local Governments in the Fulfillment of Green Open Space in Urban Areas Local Governments are part of the Unitary State of the Republic of Indonesia The Unitary Republic of Indonesia is divided into provincial areas and provincial areas from per."

⁴⁰ Jati et al.

Submit applications for additional budgets in the Budget Activity Plan (RKAB) according to real needs and plans to add city park development with the aim of maximizing the implementation of medium- and long-term work programs.

b) HR Issues

By recruiting or nominating honorary or contract personnel with the aim of assisting in the maintenance of existing city parks.

c) Land Availability Issues

The Semarang City Spatial Planning Office in this case has collaborated with the sub-district or sub-district with the aim of encouraging public awareness to use vacant land in the residential area to plant trees.

Table 6. Legal and Institutional Obstacles in the Fulfillment of Green Open Space in Semarang City

Type of Barriers	Details	Impact on Green Open Space Fulfillment
Juridical	a. Enforcement of the Basic Building Coefficient (KDB) is not optimal.	Reduced open space around buildings; spatial plan (RTRW) violations are difficult to enforce.
	b. Administrative sanctions for green open space violations remain weak.	
Technical – Budget	a. Limited budget of the Hygiene and Landscaping Service.	Many city parks are poorly maintained; development of new green open space is constrained.
	b. Imbalance between park maintenance needs and budget allocation.	

Technical – Human Resources	a. Shortage of landscape experts and park maintenance workers. b. Employee placement is not aligned with competencies.	Green open space development is suboptimal; parks are poorly maintained.
Technical – Land Availability	a. Difficulty acquiring land for new public green open space in densely populated areas. b. Very high land prices.	The 20% public green open space target is difficult to achieve, especially in central districts.
Institutional	a. Overlapping authority among the Spatial Planning Office, Housing and Settlement Office, and Environmental Agency. b. Weak coordination with districts and sub-districts.	Policy implementation is not well synchronized; supervision of spatial utilization is ineffective.

Source: Interview results of Aryani Praba of the Semarang City Spatial Planning Office (April 20, 2026) and Indriana Puspita Widyasari of the Semarang City Environmental Agency (January 15, 2026); and research by Jati et al. (2024).

In this study, the researcher used 2 (two) Legal Theories, namely Ecological Theory and Spatial Planning Theory. The reason why researchers use the Ecological Theory, developed by Urie Bronfenbrenner, states that human development is caused by the interaction between individuals and various levels of social interaction, ranging from the immediate environment to the wider culture⁴¹.

The city of Semarang can be called the center of economic and social activities in the province of Central Java. The

⁴¹ Olivia Guy and Evans, "Bronfenbrenner's Ecological Systems Theory," n.d.

pressure posed by commercial and residential development in this area triggers a major challenge to achieve the ideal green open space, both in terms of quality and quantity, as used by Law Number 26 of 2007 concerning Spatial Planning, where the provision of green open space is measured by the achievement of the minimum area and distribution patterns that show how good and functional green space is to be used for good use by the community. Using Ecological Theory, there are several things that must be adjusted in terms of planning and development of green open space, namely based on sustainable development and infrastructure efficiency. Sustainable development in this situation refers to green open space which is expected to be able to increase property value and investment attraction, such as green tourism. In the city of Semarang, which is known as a government city and a trading city, based on this analysis, it is able to encourage the development of *the green economy* through efforts such as tourism. Meanwhile, infrastructure efficiency in this case GIS provides the possibility of efficient planning, such as the integration of green open space by using public transportation to reduce air pollution and health costs⁴².

The Second Theory is the Spatial Planning Theory. Spatial Planning Theory is a concept of structure and pattern of spatial use (land, sea and air) to meet human needs in a sustainable manner consisting of planning, utilization and control. As according to Mrs. Ir. Aryani Praba. N., S. T., S. Pt., M. P. W. K. as the Spatial Planner at the Semarang City

⁴² Rendi Mulyana et al., "Analysis of the Distribution of Green Open Space (RTH) in the Center of Tasikmalaya City Using Geographic Information System (GIS) Case Study: Cihideung and Tawang Districts" 4, no. 2 (2025): 438–46.

Spatial Planning Office which was carried out on Monday, April 20, 2026 stated that there is a need for law enforcement and strengthening, increased coordination between related agencies, optimizing the roles of the community and the private sector, increasing budget allocation and sustainable land use.

Table 7. Compatibility Matrix between Theory and Field Findings about Semarang City Green Open Space

Theory/Principle	Key Principles	Application in Semarang City	Compatibility Level
Spatial Theory	Structured, integrated spatial planning, utilization, and control.	a. RTRW 2021–2031 and RDTR are available. b. KKPR mechanism and licensing supervision are in place. c. Field-level control remains weak.	Quite appropriate (planning is adequate, but control needs strengthening).
Ecological Theory	Vegetation functions as urban lungs, regulates the microclimate, absorbs pollutants, and supports water management.	a. Public green open space (urban parks, urban forests, green corridors) and private green open space support ecosystem services. b. Distribution of green open space remains uneven, reducing ecological effectiveness in	Appropriate, but more equitable distribution is needed.

			densely populated areas.	
Principles of Sustainable Development	Balance between economic, social, and environmental development.	a.	Vertical development is encouraged.	Partially achieved; land conversion from green open space to built-up areas remains a challenge.
		b.	Area revitalization programs are implemented.	
		c.	Investors are required to provide green open space.	
Social Function of Land (Article 6 of the UUPA)	Land use must serve the public interest, comply with spatial planning, and not be abandoned.	a.	Numerous violations of the Building Coverage Ratio (KDB).	Weak enforcement; public awareness and socialization remain inadequate.
		b.	Unauthorized conversion of green open space.	
		c.	Vacant land is not utilized as private green open space.	

Source: Interview results with Mrs. Indriana Puspita Widyasari of the Semarang City Environmental Agency and Aryani Praba of the Semarang City Spatial Planning Office (2026); theoretical studies from Muhar (2017), Pramuji & Putri (2020), and Sari (2017); processed by researchers.

This is because of the importance of spatial patterns, especially in terms of structuring and developing green open spaces in Semarang City, so the existence of Spatial Planning Theory is very necessary. With the existence of Regional Regulation Number 5 of 2021, there is a compatibility between spatial planning policies that are more adaptive to urban development, including strengthening the control of space use and the provision of green open space, in the

context of green open space, the latest RTRW provides a stronger emphasis on:

- a. The allocation of protected areas consists of green open space, borders, rivers, water catchments and local protected areas.
- b. Control of space utilization, integration between protected and cultivated areas, and optimization of the provision of green open space, both public and private green open space.
- c. Regulating the service center system and infrastructure network that has an impact on the need to provide green open space as a counterweight to the built area.

The existence of these 3 (three) forms of emphasis certainly provides space for the community to be more disciplined in terms of planning and developing green open spaces in order to create adaptive and effective green open spaces.

Conclusion

The conclusion obtained based on the results of the above discussion is that the Semarang City Government creates rules or regulations that can control activities and activities in housing development by developers while still paying attention to land management and spatial planning in accordance with Law Number 26 of 2007 concerning Spatial Planning without having to ignore the need for settlements along with population growth. Then development activities can be directed to form development vertically so that with

the concept of green open space, it is hoped that it will be able to maintain balance and environmental sustainability. Not only that, vertical development is also considered to have more effective and efficient value in terms of its network of benefits.

Along with the increase in the amount of land built, it needs to be aligned with the development of the amount of green open space even on a small scale. Such as housing development followed by the construction of fields and city parks. This means that even if development occurs, which directly reduces the amount of open land in it, it is still guided by the principle of 30% green open land and 70% built land to show the concept of sustainable development. Not only the role of the government, the role of the community in terms of preservation and openness of green open spaces is also very necessary, this can be done such as by opening a small garden near the house, not throwing garbage in any place, and in the river.

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