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Smart City Policy in Indonesia: An Overview from the Green Constitution's Perspective

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Abstract

Smart city is now become an alternative policy to address various urban ecosystem's issues. This article examines smart city policies in Indonesia, as well as the extent to which these policies can fulfill citizens' rights from the green constitution's perspective. This is a normative/doctrinal legal research with statutory and conceptual approach. Data was gathered through library research on primary legal materials in the form of related laws and regulations, as well as secondary legal materials in the form of relevant literature. The findings show that several smart city policies are still sectoral and unsustainable. A specific legal instrument is required to regulate smart city standardization to avoid misinterpretation and obstacles in its implementation. The smart city concept is consistent with the rights enshrined in Indonesia's green constitution, but policies continue to rely on local government initiative and discretion, resulting in citizens' rights not being placed proportionally.

Keywords:

Citizen Rights; Green Constitution; Smart City.

A. INTRODUCTION

In a release entitled "World Population Prospects 2019," the UN stated that the global population could grow to around 8.5 billion people in 2030, 9.7 billion in 2050, and 10.9 billion in 2100. Previously, the UN reported in 2008 that urban areas house 3 billion of the world's population, with that number expected to rise to 5 billion by 2030. Despite covering only 2% of the earth's surface

area, urban areas house approximately 50% of the world's population, consume 75% of global energy, and have an 80% impact on global warming. According to these statistics, cities have evolved into centers of civilization and social interaction.¹ However, the increasing workload in cities due to migration and population has triggered various urban problems, including the decline in the quality of public services, facilities,

¹ Mircea Eremia, Lucian Toma, and Mihai Sanduleac, "The Smart City Concept in the 21st Century," *Procedia Engineering* 181 (2017): 12-19, <https://doi.org/10.1016/j.proeng.2017.02.357>, p. 13.

and infrastructure, traffic jams, and the environment, all of which are interrelated with poverty and various other social problems.²

Various solutions to urban problems are proposed, including the smart city concept, which is designed to address urbanization and the need for sustainability, as well as an idea or concept that people hope can solve urban problems while also considering environmental factors.³ A smart city's goal is to improve citizens' quality of life through smart living, smart environment, utility, smart economy, smart mobility, and smart people. Frost and Sullivan expanded the list to include smart governance, smart technology, smart infrastructure, smart healthcare, smart buildings, smart energy, and smart citizens. This concept is widely accepted as a solution involving the use of cutting-edge technology.⁴

As one of the most densely populated countries in the world, Indonesia is not immune from issues related to urbanization. Urbanization itself is generally interpreted as a process of population concentration at certain

geographic points, especially in urban areas.⁵ In Indonesia, the Central Statistics Agency (BPS) released the results of the 2020 population survey in January 2021. The total population of Indonesia as of September 2020 was 270.20 million people, an increase of 32.56 million from the 2010 population survey. According to BPS calculations, this number will continue to increase. increase to 311.6 million in 2045. The dominance of the urban population in the overall population continues to grow from year to year. According to Worldometers, the urban population in Indonesia in 2019 was 150.9 million people, or 55.8 percent of the country's total population of 270.6 million. This dominance increased by 0.7 percent from the previous year to 147.6 million people, or 55.1 percent of Indonesia's total population of 267.7 million people. This percentage is expected to increase to 66.6 percent in 2035.

The condition of excessive urbanization described above undoubtedly has its own challenges. Over-urbanization will create problems not only in destination cities but also

² Joanne M. Leach *et al.*, "Reading Cities: Developing an Urban Diagnostics Approach for Identifying Integrated Urban Problems with Application to the City of Birmingham, UK," *Cities* 86, No. October 2018 (2019): 136-144, <https://doi.org/10.1016/j.cities.2018.09.012>, p. 136.

³ Y. Arafah and H. Winarso, "Redefining Smart City Concept with Resilience Approach," *IOP Conference Series: Earth and Environmental Science* 70, No. 1 (2017), <https://doi.org/10.1088/1755-1315/70/1/012065>, p. 2.

⁴ Renata Paola Dameri, "Searching for Smart City Definition: A Comprehensive Proposal," *International Journal of Computers & Technology* 11, No. 5 (2013): 2544-2551, <https://doi.org/10.24297/ijct.v11i5.1142>, p. 2545.

⁵ Dorota Sikora-Fernandez Danuta Stawasz, "The Concept of Smart City in the Theory and Practice of Urban Development Management," *Romanian Journal of Regional Science* 10, No. 1 (2016): 86-99, p. 88.

in abandoned villages, such as the increasing number of poor and slum areas as well as urban crime.⁶ In response, the government implemented a smart city approach as a solution to modern city problems. The smart city concept, on the other hand, is viewed as a form of state responsibility in fulfilling city residents' rights to quality services and a healthy environment.

Aside from the smart city concept, the "green constitution" concept has previously emerged as a new direction for national development policies in various countries. In the 1970s, the term "green constitution" was conceived to describe the relationship between constitutionalism and the concepts of environmental protection and sustainable development.⁷ At first glance, the smart city concept appears to be related to the green constitution concept, particularly in terms of the shared goal of achieving environmentally sound development. The green constitution concept requires that all government policies, including urban development policies, comply with constitutional provisions that guarantee human rights to a good and healthy environment.

Based on the description above, there are several problems that are the

main focus of this research. The problem formulation is determined methodically in order to obtain comprehensive and continuous analysis results. These problems include: first, what is the concept of a smart city as part of the rights of city residents? second, what is meant by the concept of a green constitution and how relevant it is to the Indonesian constitution? and third, how is the compatibility between the smart city policy in Indonesia and the 1945 Constitution of the Republic of Indonesia as a green constitution?

Previously, there have been several studies examining the concept of smart cities in Indonesia, including research from Sutriadi with the title "Defining Smart City, Smart Region, Smart Village, and Technopolis as an Innovative Concept in Indonesia's Urban and Regional Development Themes to Reach Sustainability," which concluded that Indonesia's unique conditions require a specific definition of smartness that represents Indonesian conditions, such as the will of the people, history, culture, impact technology, and so on.⁸ Another study by Anindra et al., entitled "Smart City Implementation Modeling in Indonesia with Integration Platform Approach," concluded that

⁶ Abdurrozzaq Hasibuan and Oris Krianto Sulaiman, "Smart City, Konsep Kota Cerdas Sebagai Alternatif Penyelesaian Masalah Perkotaan Kabupaten/Kota," *Buletin Utama Teknik* 14, No. 2 (2019): 127-135, <https://jurnal.uisu.ac.id/index.php/but/article/view/1097>, p. 129.

⁷ Lucas Prabowo, "Green Constitution Indonesia (Diskursus Paradigmatik Pembangunan Berkelanjutan)," *Jurnal Hukum Dan Peradilan* 3, No. 2 (2014): 127, <https://doi.org/10.25216/jhp.3.2.2014.127-136>, p. 133.

⁸ Ridwan Sutriadi Dameri, *op.cit.*

the implementation of smart cities in Indonesia still has big challenges, so new breakthroughs are needed, one of which can use “platform integration.”⁹

Unlike previous research, this study examines smart city-based policies from a legal and constitutional standpoint, employing the concept of a “green constitution” as an approach. Thus, providing new perspectives and insights into state administration law in general, as well as studies of public policy and the concept of smart cities in particular. Based on this, it is worthwhile to examine smart city policies in Indonesia, particularly if they are related to the concept of a green constitution and the constitutional rights stipulated in the Indonesian constitution.

B. RESEARCH METHODS

As legal research, the nature of this research is descriptive-analytical. It is intended that this research does not only describe the legal situation as it is but also seeks to carry out in-depth investigations and draw general conclusions. Judging from its type, this research is classified as a type of doctrinal or normative legal research, which is often referred to as theoretical legal research and analyzes primary and secondary sources of law.

This research uses several approaches: First, the statutory approach is carried out by examining the laws and regulations related to the problem. Second, a conceptual approach that departs from perspectives and concepts that emerge in the science of law. In line with the type of research used, data collection was carried out by means of library research on primary legal materials in the form of constitutions and the laws and regulations under them, as well as secondary legal materials, which include the results of previous research, journals, and books. The data is then presented and analyzed qualitatively and descriptively.

C. RESULTS AND DISCUSSION

1. “Smart City” as Citizen’s Rights

A smart city is a new concept that aims to manage cities (urban areas) in a modern way, using the most advanced technological means available, but still adhering to environmentally friendly principles and the tendency to save resources in order to achieve the desired results. This is a global trend in urban strategy that aims to improve the quality of life of city dwellers by leveraging innovation and cutting-edge technology to solve problems and difficulties caused by high population density.¹⁰ The

⁹ Firman Anindra, Harco Leslie Hendric Spits Warnars, and Daniel Moonkee Min, “Smart City Implementation Modelling in Indonesia with Integration Platform Approach,” *Proceedings of 2018 International Conference on Information Management and Technology, ICIMTech 2018*, No. September (2018): 43-48, <https://doi.org/10.1109/ICIMTech.2018.8528141>, p. 43.

¹⁰ Renata Paola Dameri, *op.cit.*

application of the smart city concept can help to solve urbanization problems such as pollution, land consumption, urban sprawl, transportation congestion, energy demand, and access to public services.¹¹

It is widely assumed that a city can be classified as a smart city if it possesses the characteristics formulated in 2007 in Vienna at a regional center meeting, which divided the concept of a smart city into six characteristics, namely: smart economy, smart environment, smart people (smart society), smart government (smart government), smart mobility (smart transportation), and smart living (smart life).

As Harold points out, creating a smart city is a complex, long-term process, and its success depends heavily on a clear vision and a one-way policy strategy.¹² As a result, rather than relying solely on the initiative and will of local governments, it is critical to have a shared understanding of smart city-based development as a citizen's right that is the responsibility of the government. The first step in realizing a clear arrangement of the smart city concept is to form

a smart city as a necessity based on citizens' constitutional rights.

Discussions about smart cities and citizen rights are not new. The concept of the right to the city has long been debated, most notably by Henry Levebvre, who coined the phrase "right to the city".¹³ This means that residents of cities should not only have the right to occupy and use space, but the existing space should also be designed to meet the needs of its inhabitants. In this context, Harvey added that a small group of political and economic elites should not have a monopoly on the city, let alone use their power and influence to direct urban development according to their wishes.¹⁴ Thus, the right to the city essentially includes the notion that all citizens of the city can fully enjoy city life with all its services and benefits (the right to habitation), as well as the right to participate in making decisions about urban development (the right to participate).¹⁵

The smart city concept has been implemented in a number of countries around the world and provides many benefits for its citizens in terms of

¹¹ Sławomira Hadjuk, "Concept of a Smart City in Urban Management," *Business, Management and Education* 14, No. 1 (2016): 34-49, <https://doi.org/10.3846/bme.2016.319>, p. 35.

¹² Chandra Eko Wahyudi Utomo and Mochamad Hariadi, "Strategi Pembangunan Smart City dan Tantangannya Bagi Masyarakat Kota," *Jurnal Strategi Dan Bisnis Vol.4*, 4, No. 2 (2016): 159-176, p. 169.

¹³ Henry Levebvre in Rob Kitchin, Paolo Cardullo, and Cesare Di Felicianantonio, "Citizenship, Justice and the Right to the Smart City," no. October (2018), <https://doi.org/10.31235/osf.io/b8aq5>, p. 17.

¹⁴ David Harvey, "The Right To City," *New Left Review*, No. 53 (2008): 23-40, http://scholar.google.co.in/scholar?start=320&q=author:arivazhagan+a&hl=en&as_sdt=0,5#13, p. 25.

¹⁵ Abigail Friendly, "The Right to the City: Theory and Practice in Brazil," *Planning Theory and Practice* 14, No. 2 (2013): 158-179, <https://doi.org/10.1080/14649357.2013.783098>, p. 162.

technology, economy, social life, and culture.¹⁶ Several initiatives and policies have been implemented in many developing countries, including PlanIT Valley (Portugal), Skolkovo Innovation Center (Russia), Cyberport Hong Kong (China), Songdo International Business District (South Korea), Cyberjaya (Malaysia), and Masdar City (Abu Dhabi, UAE). These new cities were designed and built from the ground up, utilizing cutting-edge “smart” technology and green development planning. Some of these projects are very ambitious, requiring massive investments to acquire land, build infrastructure, and establish large-scale community settlements.¹⁷

2. The Green Constitution and Its Relevance to the 1945 Constitution of the Republic of Indonesia

The concept of a “green constitution” is a thought response from the global community towards environmental issues.¹⁸ The Brundtland report, which

gave rise to the term “ecocracy,” has inspired the development of the idea of a green constitution.¹⁹ Ecocracy itself is an abbreviation of the term ecological democracy or eco-democracy. The term “green constitution” is now often used to explain the relationship between the concept of constitutionalism and environmental protection and sustainable development.²⁰ A green constitution, in addition to containing the meaning of democratic rule of law, also provides environmental or ecosystem sovereignty, in which the government bases its governance on the ecological principles of sustainable development.²¹ In other words, the concepts of sovereignty based on law (nomocracy) and sovereignty in the hands of the people (democracy) are combined to form the concept of an environment with its own autonomy and sovereignty, which is known as ecocracy or ecological sovereignty.²²

In general, the concept of a “green constitution” originates from the fact

¹⁶ Jennifer Bélissent, “Getting Clever about Smart Cities: New Opportunities Require New Business Models,” *Forrester Research, Inc.*, 2010, pp. 5-8.

¹⁷ Margarita Angelidou, “Smart City Policies: A Spatial Approach,” *Cities* 41, No. July 2014 (2014): S3-11, <https://doi.org/10.1016/j.cities.2014.06.007>, p. S4.

¹⁸ Z. Aspan and A. Yunus, “The Right to a Good and Healthy Environment: Revitalizing Green Constitution,” *IOP Conference Series: Earth and Environmental Science* 343, No. 1 (2019), <https://doi.org/10.1088/1755-1315/343/1/012067>, p. 2.

¹⁹ Brundtland in Eko Nurmardiansyah, “Konsep Hijau: Penerapan Green Constitution Dan Green Legislation Dalam Rangka Eco-Democracy,” *Veritas et Justitia* 1, No. 1 (2015): 183-219, <https://doi.org/10.25123/vej.1422>, p. 193.

²⁰ Lukas Prabowo, *op.cit.*

²¹ Sekar Anggun Gading Pinilih, “The Green Constitution Concept in the 1945 Constitution of the Republic of Indonesia,” *Mimbar Hukum - Fakultas Hukum Universitas Gadjah Mada* 30, No. 1 (2018): 200-211, <https://doi.org/10.22146/jmh.28684>, p. 204.

²² I Gede Yusa and Bagus Hermanto, “Implementasi Green Constitution Di Indonesia: Jaminan Hak Konstitusional Pembangunan Lingkungan Hidup Berkelanjutan,” *Jurnal Konstitusi* 15, No. 2 (2018): 306-326, <https://doi.org/10.31078/jk1524>, p. 311.

that conventional environmental policies are not sufficient to overcome the threat of an environmental crisis. As a result, constitutional norms are required as the highest and most fundamental policy. This idea, for example, was implemented by Turkey, which started calling for an ecological constitution, as well as by the Bolivian constitution, which recognizes the values and rights of the motherland.²³ The same concept has also been adopted in the 2008 Ecuadorian Constitution and the 2005 French Constitution.²⁴ In Ecuador, for example, the environment is granted constitutional rights as a legal subject and is considered to have its own human rights in accordance with the concept of human rights. Thus, "green constitution" is only an idea that raises the level of environmental protection to the level of the state constitution, or "environmental constitutionalization."²⁵

According to Imhoff et al., two conceptual approaches can be used to initiate the process of environmental

constitutionalization. First, does the constitution protect individual rights to a healthy environment and/or the preservation and sustainability of the environment itself? This approach, known as the "anthropocentric concept," has been used since the 1970s. The second approach, known as ecocentric, relates to the extent to which environmental aspects are protected normatively and legally. Such protection may cover the entire environment or be limited to certain environmental elements, such as mountains, bodies of water, flora, or fauna.²⁶

Environmental problems are issues that cannot be separated from the constitution because one of the objectives of the Indonesian constitution is to guarantee the right to a healthy environment.²⁷ In the context of the Indonesian constitution, Yusa and Hermanto agree with Jimly Asshiddiqie and a number of other observers that the green constitution aspect has

²³ I Gusti Ayu, Ketut Rachmi, and Handayani Corresponding, "Embodying Green Constitution by Applying Good Governance Principle for Maintaining Sustainable Environment" 11, No. 2002 (2013): 18-25, p. 21.

²⁴ Fanny Dwi Octaviany, Kokom Komalasari, and Susan Fitriyari, "Green Constitution Model in Civic Education Learning to Develop Students' Civic Engagement (Comparative Study in 12 High Schools, 5 Vocational High Schools, 7 Vocational High Schools Bandung)," *Journal of International Conference Proceedings* 3, No. 1 (2020): 96-106, <https://doi.org/10.32535/jicp.v2i4.784>, p. 98.

²⁵ Sekar Anggun Gading Pinilih, *op.cit.*

²⁶ Sina Imhof, Jerg Gutmann, and Stefan Voigt, "The Economics of Green Constitutions," *Asian Journal of Law and Economics* 7, No. 3 (2016): 305-322, <https://doi.org/10.1515/ajle-2016-0025>, p. 307.

²⁷ Suwari Akhmaddhian, Ria Virigianti, and Erga Yuhandra, "The Law Enforcement Factors in Waste Management to Achieve Environmental Sustainability and Community Welfare," *Substantive Justice International Journal of Law* 4, No. 1 (2021): 15-24, <https://doi.org/10.33096/substantivejustice.v4i1.109>, p. 15.

been adopted and reflected in two constitutional arrangements in the 1945 Constitution,²⁸ namely Article 28H paragraph (1) and Article 33 paragraph (4).

related to the concept of ecosystem protection, namely that the national economy must be managed in accordance with sustainable and environmentally sound principles. With the provisions of

Table 1
Green Constitution approach in the 1945 Constitution

Environment Constitutionalization approach (Imhof and Voigt, 2016)	Constitutional Arrangement
<i>Assigns individuals the right to a sound environment as instrumental for a healthy life</i>	Article 28H paragraph (1): "Every person has the right to live in physical and spiritual prosperity, to have a place to live, and to get a good and healthy environment and has the right to obtain health services."
<i>Concerns the extent to which the environment is legally protected</i>	Article 33 paragraph (4): "The national economy is organized based on economic democracy with the principles of togetherness, efficiency with justice, sustainability, environmental awareness, independence, and by maintaining a balance of progress and national economic unity."

Based on Imhof and Voigt's concept of environmental constitutionalization, the 1945 Constitution of the Republic of Indonesia adopted two approaches at once. The provisions of Article 28H paragraph (1) essentially provide the right to a healthy environment for every individual, which implies the use of an anthropocentric concept. Meanwhile, Article 33 paragraph (4) contains aspects

Article 28H paragraph (1) and Article 33 paragraph (4) of the 1945 Constitution mentioned above, environmental norms have been constitutionalized as the highest law. On that basis, the 1945 Constitution of the Republic of Indonesia is not only conceptually relevant to the green constitution, but can be said to be the green constitution itself.

²⁸ I. Gede Yusa and Bagus Hermanto. "Implementasi Green Constitution di Indonesia: Jaminan Hak Konstitusional Pembangunan Lingkungan Hidup Berkelanjutan." *Jurnal Konstitusi* 15, No. 2 (2018): 306-326, p. 313.

3. Analysis of the Smart City Policy and its conformity with the 1945 Constitution

In Indonesia, the smart city concept has begun to be implemented in several regions. The application of the smart city concept in Indonesia has started, among others, in the cities of Bandung, Surabaya, Yogyakarta, Makassar, and others. Two of them, namely Bandung and Surabaya, are often regarded as the pioneers of smart city development in Indonesia, as evidenced by the many awards the two cities have won.²⁹ However, most of the implementation of smart cities in big cities in Indonesia is only based on regulations at the regional level, such as regional regulations, regional head regulations (*regelend*), and a set of policy regulations (*beleidsregel*). For example, the Yogyakarta City Government issued Yogyakarta Mayor Regulation Number 15 of 2015 concerning E-Government. The policy for implementing smart cities in the city of Bandung was also prepared based solely on the Decree of the Mayor of Bandung, Number: 130/Kep.860-Bappeda/2014, concerning the Bandung Smart City Development Council (Smart City), the Bandung City Information and Communication Technology (ICT)

Master Plan 2013-2018, and through a Joint Agreement with the Company (Persero).³⁰

Most of these regulations are still limited and sectoral in substance, have not articulated the concept of a comprehensive smart city, are not yet interrelated, and do not fulfill the principles of sustainability. In Indonesia, the smart city concept has been transformed into a number of different schemes. For example, Jakarta has established the Smart City Lounge as a public service complaint center for problems in the city, including floods, garbage, crime, and social problems. The Bandung City Government has made a number of programs, such as Hay U (for online permits), SIP (for village report cards), and online citizen complaints. The Municipal Government of Makassar introduced smart cards for payment and management of government systems, while Bekasi exhibited a number of government-related applications, including the Attendance Application, the Sikarya Application, the Bekasi Iconic Application, and the RW RapoRT Application, which is integrated with a Command Center.³¹

²⁹ Dyah Ratna Pramesti, Aulia Nur Kasiwi, and Eko Priyo Purnomo, "Perbandingan Implementasi Smart City Di Indonesia: Studi Kasus: Perbandingan Smart People Di Kota Surabaya dan Kota Malang," *Ijd-Demos* 2, No. 2 (2020): 163-173, <https://doi.org/10.37950/ijd.v2i2.61>, p. 165.

³⁰ Eko Budi Santoso and Annisa Rahmadanita, "Smart Government Dalam Rangka Mewujudkan Smart City Di Kota Bandung," *Jurnal Ilmu Pemerintahan Widya* ... 46, No. 2 (2020): 317-334, <https://doi.org/10.33701/jipwp.v.>, p. 320.

³¹ Aan Widodo and Diah Ayu Permatasari, "Strategi Komunikasi Dalam Program Bekasi Smart City," *ETTISAL : Journal of Communication* 5, No. 1 (2020): 79-89, <https://doi.org/10.21111/ejoc.v5i1.3454>, p. 81.

Several studies reveal that the smart city applied in various cities in Indonesia, is still focused on limited technological development and ignores the human and environmental dimensions.³² In fact, Giffinger claims that smart city-based development must cover all six dimensions of life: *smart living, smart environment, smart transportation, smart governance, smart people, and smart economy*.³³ The only practice that is somewhat different is in the City of Yogyakarta, which bases its smart city concept on the concept of smart culture, which consists of two elements: smart education and smart tourism. This concept was chosen because Yogyakarta has a rich cultural heritage and is considered a center of education and tourism.³⁴

Some government parties also frequently claim that the success of the e-government system equates to the implementation of a real smart city. In fact, the use of technology in government

administration is only one aspect of a smart city. On a larger scale, smart city policies should prioritize public services, transportation, education, the environment, and health care, with the goal of providing convenience and quality benefits.³⁵ The government must realize that technology alone is not enough to make cities more “smart,” because technology is only one of the instruments to achieve a smart city condition.³⁶

One of the reasons why the implementation of smart cities in Indonesia is still ineffective and does not meet sustainable aspects is a lack of national and integrated policies. Until now, Indonesia has not yet had firm and definite legal instruments for regulating smart city development issues, especially in terms of standards, criteria, and direction of implementation. For example, current smart city-based development provisions are only contained in the Ministry of Communication and

³² Annisa Rahmadanita, Eko Budi Santoso, and Sadu Wasistiono, “Implementasi Kebijakan Smart Government Dalam Rangka Mewujudkan Smart City Di Kota Bandung,” *Jurnal Ilmu Pemerintahan Widya Praja* 44, No. 2 (2019): 81-106, <https://doi.org/10.33701/jipwp.v44i2.279>, p. 81.

³³ Giffinger; Pichler; Milanovi, “Smart Cities: Ranking of European Mid-Sized Cities,” *Digital Agenda for Europe*, No. October (2007): 28, <https://ec.europa.eu/digital-agenda/en/smart-cities>, p. 28.

³⁴ Nur Faidat and Muhammad Khozin, “Analisa Strategi Pengembangan *Smart City* (Smart City): Studi Kasus Kota Yogyakarta,” *JIP (Jurnal Ilmu Pemerintahan) : Kajian Ilmu Pemerintahan Dan Politik Daerah* 3, No. 2 (2018): 171-180, <https://doi.org/10.24905/jip.3.2.2018.171-180>, p. 171.

³⁵ Albert Meijer and Manuel Pedro Rodríguez Bolívar, “Governing the Smart City: A Review of the Literature on Smart Urban Governance,” *International Review of Administrative Sciences* 82, No. 2 (2016): 392-408, <https://doi.org/10.1177/0020852314564308>, p. 393.

³⁶ Hermansyah Andi Wibowo, “Model of Academic Role in Supporting Smart City Implementation in Serang City,” *Jurnal Kebijakan Pembangunan Daerah* 2, No. 1 (2018): 29-42, <https://doi.org/10.37950/jkpd.v2i1.32>, p. 40.

Informatics paper entitled “Guidelines for Developing a Smart City Master Plan Through the 100 Smart City Movement in Indonesia.” This publication also clarifies that this guide is only a tool for local governments to use in the process of planning, implementing, monitoring, and evaluating smart city-based city and district development.

Some argue that a number of e-government regulations, such as Presidential Instruction Number 3 of 2003, dated June 9, 2003, concerning national policy and strategy for e-government development, and Law Number 14 of 2008 concerning public information disclosure, provide a legal foundation for smart city-based development policy. However, it should be noted that these regulations are still very sectoral and cannot be used as a legal framework for broader implementation of smart city initiatives.

Perhaps the only rule directly related to the implementation of the smart city is Government Regulation Number 38 of 2017. All forms of reform in regional government administration are interpreted as “regional innovation.” According to Article 1 Point 1, regional innovation can be defined as “innovation in the administration of regional government,” “public service innovation,” or “other regional innovations in accordance with government affairs that are the authority of the region.” However, there are no further provisions that mention the development of smart city.

The lack of clear and firm regulations governing the smart city concept appears to indicate that the Indonesian central government is not yet committed to realizing smart cities as citizens’ rights. This is evidenced by the lack of laws and regulations, as well as a misunderstanding among local governments about the fundamental concept of a smart city. The legal basis, on the other hand, is an important consideration in the successful implementation of a policy. In this case, the government must develop new legal instruments, beginning with laws, government regulations, and presidential regulations that explicitly regulate smart cities and their implementation, so that they can serve as a guideline for the formulation of more technical policies at the regional level.

So far, smart city development policies have been viewed as experiments that rely on the discretion of local governments and initiatives in various regions. In the context of Government Administration Law Number 30 of 2014, discretion is defined as decisions and/or actions taken by government officials to address concrete problems that arise in government administration when laws and regulations do not provide a choice, do not regulate, are incomplete or unclear, and/or government stagnation (Article 1 point 9).

In theory, discretion is required to supplement the legality principle, but this has the potential to spark a number of practical debates. First, discretion must be based on good governance principles

and the public interest, not on specific regulatory requirements. However, exercising discretion in the name of the public good usually results in a violation of people's rights.³⁷ This authority allows the government to interpret existing conditions and regulations in ways that are open to abuse (*detournement de pouvoir*).³⁸ Second, because discretion is not based on concrete rules, it requires the legitimacy of the situation (government stagnation) and the courage to make legal breakthroughs. However, discretion frequently lead to maladministration and are even suspected as corruption.³⁹ As a result, only a few government officials are willing to make such decisions, including developing smart city policies with a hazy but firm legal foundation. Third, there is no legal standard that strictly prescribes the formation of a smart city, implying that the government is under no obligation to implement it. Smart city policies will be heavily reliant on the adaptability and responsiveness of each local government due to their discretionary nature. This will eventually result in a development imbalance between regions with

innovative governments and those that simply fulfill legal obligations.

D. CONCLUSION

In Indonesia, legal policies governing the implementation of smart cities are still considered premature. Several cities in Indonesia have only implemented one or a few aspects of the smart city. Due to a lack of understanding among local governments, technology-based innovations such as e-government monopolize the smart city image, causing it to be unsustainable. Smart city policies focus solely on the limited use of technology, ignoring other dimensions such as a smart environment, and a smart economy. As a result, existing policies have not been able to transform urban areas into "green cities" (eco-cities) and fulfill citizens' constitutional rights to a healthy environment, as mandated by the Republic of Indonesia's 1945 Constitution as a "green constitution." To ensure that there are no misinterpretation or technical obstacles in the implementation of smart cities, a specific regulation on smart city is required. This arrangement

³⁷ Agus Budi Susilo, "Makna Dan Kriteria Diskresi Keputusan Dan/Atau Tindakan Pejabat Publik Dalam Mewujudkan Tata Pemerintahan Yang Baik (The Meaning And Criteria Of Discretion Of Public Policy And/Or Act Of Public Officials In Good Governance Implementation)," *Jurnal Hukum Dan Peradilan* 4, No. 1 (2015): 133-152, p. 133.

³⁸ Odie Faiz Guslan, "Tinjauan Yuridis Mengenai Batasan Antara Perbuatan Maladministrasi Dengan Tindak Pidana Korupsi," *JCH (Jurnal Cendekia Hukum)* 4, No. 1 (2018): 9-25, <https://doi.org/10.33760/jch.v4i1.38>, p. 15.

³⁹ Lutfil Ansori, "Diskresi dan Pertanggungjawaban Pemerintah Dalam Penyelenggaraan Pemerintahan," *Jurnal Yuridis* 2, No. 1 (2015): 134-150, <https://ejournal.upnvj.ac.id/index.php/Yuridis/article/view/165>, p. 141.

is not intended to achieve uniformity, but rather to ensure the availability of minimum standards and legal certainty for smart city's implementation.

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