



Implementation of Spatial Planning on The Utilization of Upper and Underground Spaces in An Environmental Context Based on Dignified Justice

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Abstract

Management of upper and lower spaces in Indonesia is an important component in efforts to achieve community welfare. In this context, the government has the responsibility to provide adequate infrastructure and facilities to support sustainable and balanced development, in accordance with the principles of the Welfare State. This research aims to analyze the principles of spatial planning from the perspective of identified justice, as well as identifying weaknesses and obstacles in the implementation of the Spatial Planning Law Number 26 of 2007 which relates to environmental management. The research method used is a literature study with a normative juridical approach, involving analysis of legal documents, scientific literature and government policies related to spatial planning. The research results show that community participation in the spatial planning process is crucial for creating a safe, comfortable, productive and sustainable national territory. However, this research also identified weaknesses in the implementation of the Spatial Planning Law, including a lack of firmness in law enforcement against spatial planning violations and the dominance of political decisions in the spatial planning process. In addition, this research highlights the need for legal harmonization to overcome conflicts between legal norms and increase the effectiveness of spatial planning law enforcement. The novelty of this research lies in an in-depth analysis of the concept of recognized justice in the management of upper and lower spaces, as well as offering solutions in the form of legal harmonization to improve law enforcement and overcome norm conflicts, which have not been widely discussed in spatial planning studies. In conclusion, the management of upper and lower spaces must be based on the principle of recognized justice and involve active community participation, with policies oriented towards legal certainty, legal benefits and justice to create integrated, harmonious and sustainable spatial planning.

Keywords: Implementation, Spatial Planning, Space Utilization, Justice with Dignity

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Introduction

Basically, space is not increasing, but people's need for space in the near and long term will be higher. (Abdul Halim Barakatullah, 2007) Population growth in a country requires the government to be able to

provide various facilities and fulfill the lives of its people, the government's obligation to meet the needs of the community, especially the welfare state, as is the case in Indonesia. The state is required to play a further role and intervene in aspects of meeting community needs in order to realize the welfare of its people (Pertiwi, 2018). Space as a place to carry out human life, as well as a natural resource, is one of God's gifts to the Indonesian people. Thus, Indonesia's territorial space is an asset that must be utilized

by the Indonesian people and nation in a coordinated, integrated and effective manner while taking into account other factors such as encouraging the creation of harmonious and balanced development (Abdul Halim Barakatullah, 2007)

Space is defined as a container that includes land space, sea space and air space, including space within the earth as a unified territory, where humans and other creatures live, carry out activities and maintain their survival. Spatial planning is a form of spatial structure and spatial pattern (Magnis-Suseno, 2021). Spatial structure is the arrangement of residential centers and a network system of infrastructure and facilities that function to support socio-economic activities of the community which have a hierarchical functional relationship. Space Pattern is the distribution of space allocations in an area which includes space allocation for protection functions and space allocation for cultivation functions (Soegianto, 2001).

Space utilization is carried out in stages through the preparation of a program of development implementation activities related to space utilization which will be carried out by the government and the community, either individually or jointly in accordance with the established spatial planning plan (Martinez, 2021). So that utilization is in accordance with the spatial plan, control is carried out through monitoring and controlling spatial utilization. The supervision referred to here is to maintain the suitability of space use with the space function specified in the spatial planning plan. Controlling in this provision is an effort to take action so that the planned space use can be realized in accordance with the provisions (Waluyo, 2019)

Spatial planning is the activity of formulating and determining the benefits of space and their relationships or connections between various spatial benefits, based on activities that are necessary and can be carried out to meet human needs in the future. The level of spatial benefit is very dependent on the optimal use of available or provided natural resources (Muljana., 2017). Thus, spatial planning will produce a spatial plan to provide an idea of which space, for what activities and when.

Regional spatial planning is one of the problems in city development today, city development is quite fast and population growth is also quite rapid, so environmental problems have become quite urgent problems in discussions regarding environmental sustainability for future generations (Salim, 2018)

The living environment is not a spatial object that can be compartmentalized by geographical boundaries (protected or cultivated areas), administrative (province, district, municipality), demographic (urban, rural) or political boundaries. The environment is a concept that takes the form of perceptions about everything that influences, determines and/or controls human life and life. These things include water, water, land, plants, animals, microorganisms, space, mining materials, social organizations (government), beliefs. Traditions, rules, and so on (Sudarso, 2017)

The living environment can be changed or enriched by human engineering, for example roads, buildings, reservoirs, factories, and so on. The correct opinion regarding spatial planning for environmental management is that the meaning of spatial planning for environmental management is not because the results of spatial planning open up the possibility of managing the environment, but because environmental quality criteria can be included in spatial planning. Environmentally friendly spatial planning must be defined as spatial planning that uses environmental quality criteria (Taylor & Thompson, 2022)

Analysis of environmental impacts is closely related to human understanding of the changes caused by an activity. In this case, this activity certainly involves aspects of activity, both related to economics, politics, social and culture (D. Brown & Green, 2021). Every activity should be based on correct planning, and continued with implementation according to applicable regulations and followed by monitoring and

evaluation. The planning aspect is related to human thinking in creating a framework for thinking, a blueprint about what is feasible and what is not feasible to develop. In this case, humans can plan the activities they will carry out and their impact on the environment. Analysis activities regarding environmental impacts are carried out before the implementation of development projects or business activities, in this case the environment around the market (Waluyo, 2019).

Indonesia's living environment as an ecosystem consists of various subsystems, which have social, cultural, economic and geographic aspects with development that continuously utilizes natural resources to improve the welfare of the people's quality of life. Meanwhile, the availability of natural resources is limited and uneven, both in quantity and quality, while the demand for these natural resources is

increasing as a result of increasing development activities to meet the needs of an increasing and diverse population (Smith & Johnson, 2019)

1. Theoretical Overview of the Main Concepts

SPATIAL

Spatial planning is a manifestation of spatial structure and spatial pattern.³⁰ Spatial planning can be interpreted as a regular spatial arrangement. Regular includes the meaning of harmonious and simple so that it is easy to understand and implement. In spatial planning, which is arranged is place various activity as well as means and the infrastructure implemented. Layout room Which Good can be implemented from all activity to arrange well called spatial planning. In this case, spatial planning consists of three main activities, namely spatial planning, spatial implementation and governance control space (Muljana., 2017)

Layout Room And Connection with Law Environment

Spatial planning law is actually a substantive part of environmental law in a broad sense, at least spatial planning law can be seen as aspect special in law environment Which arrange about allocation and utilization of Natural Resources in the environment spatial. Drupsteen share law environment in a number of aspect, in including environmental law, government law which covers the field of administrative law space, environmental health law and environmental protection law which with by itself included in the problem of governance From the five functions/purposes of the permits above, we can conclude that in general the main function of a permit is to prevent. Therefore Because That, permission is instrument from ruler For do preventive supervision of the community (Tjokroamidjojo, 2018) . To obtain permission, the community must apply for permission from the authorities. If the application The permit meets the requirements, both formal requirements, such as NPWP and others. and material requirements, such as the place where the business will be established is not a highway green, so application the will accepted. However, If application the permission No fulfil condition formal And material so permission the will rejected. In its development, environmental law issues became more complex, so that environmental law cannot be viewed from a legal aspect. administration. If see on aspect licensing And authority Government in managing the environment, then it is an administrative legal area. However, Environmental law is not only about permits and authority. Law environment Also talk about aspect civil, example related with civil liability. Because the public can file a lawsuit against company Which do pollution environment, Wrong one of them with do class action lawsuit.

Environmental law also talks about criminal aspects, if you do something crime environment Which can be processed in a way criminal. With thus, law environment Now This own a number of foot, namely foot law administration, civil law and criminal law. Even environmental law also can be seen in the context of international law. This is natural, considering the issues The environment and human rights are two worthy humanitarian issues For continue to be fought for (Salim, 2018) .

Arrangement Room

Arrangement room is a system process planning order room, utilization order room And control utilization room. Matter the is room scope arrangement room as object Law Administration Country (Warassih, 2020) . So, the spatial planning law according to Law Number 26 of 2003 2007 that is law

Which tangible structure room (is arrangement centers settlement And system network infrastructure And means Which functioning as Supporter activity economy public Which in a way hierarchical own functional relationships) and spatial patterns (which are the distribution of spatial allocation in a region Which covering allocation room For function protect And allocation space for the function of mind power) (Magnis-Suseno, 2021) .

Understanding Law Environment

According to Drupsteen, environmental law (Milieurecht) is a law that relate with environment natural (natural) (milieu) in understanding as wide as possible. Room its scope related And determined by room scope of management environment. By Because That, law environment is legal instrument for environmental management (Hasni, 2022) . Law environment Also interpreted as norm or rule Which regulate human behavior or actions, so that they can act wisely and prudently towards the environment (Imam Koeswahyono, 2019) . In environmental law, two terms are known, namely environmental law modern and classical environmental law. The difference between the two is law modern environment is more oriented towards the environment (environment oriented) law), while classical environmental law is more oriented towards the use of environment (use oriented law) (Akib, 2021) .

Law environment modern contains norms For arrange action man with objective protect environment from pollution environment And destruction environment. Objective Which other that is For its sustainability is guaranteed and can be used for future generations. Classical environmental law contains norms which aims to guarantee exploitation And use source Power Which There is as much as possible in the shortest possible time Definition Environment Human Life together plant, animal And body tiny occupy a certain space. Apart from living creatures, in that space there are also non-living things life, like air which consists of various gas, water in the form of steam, liquid and solid, soil and rocks. The space occupied by living things with objects life and non-living things are called the environment life (Todaro, 2019) .

2. Methodology

The type of research that will be used by the author is empirical juridical research. Empirical juridical research, which is meant in other words, is a type of sociological research and can be referred to as field research, which examines applicable legal provisions and what has happened in people's lives. Or in other words, it is research carried out on actual conditions or real conditions that has occurred in society with the aim of knowing and finding the facts and data needed. Data collection is an activity of tidying up data from the results of data collection in the field so that it is ready to be used for analysis. In this section, researchers obtain more accurate data because they have collected data sources, both primary data and secondary data. The data analysis method that will be used is qualitative analysis, that qualitative analysis is descriptive, namely data in the form of words and interviews and questionnaires which will be carried out directly by the author.

3. Discussion

3.1 Spatial Planning Policy on The Management of Upper and Underground Spaces in the Context of Environmental Sustainability .

The implementing regulations in question consist of 18 (eighteen) substances regarding aspects in the implementation of spatial planning that need to be regulated by government regulations. To realize harmonization and integration of spatial planning arrangements, it is necessary to formulate government regulations on spatial planning implementation that combine various substances that have not been expressly regulated in the Law and are mandated to be further regulated as a legal basis for the practice of spatial planning implementation. The need for regulations regarding the implementation of spatial planning is based on considerations including: The territorial space of the Unitary State of the Republic of Indonesia faces challenges and problems, especially because: it is located in a rapidly developing region (Pacific Ocean Rim and Indian Ocean Rim) which demands the need to encourage economic

competitiveness; located in an area where 3 (three) tectonic plates meet which makes it prone to geological disasters, thus requiring prioritization of consideration of disaster mitigation aspects; increasing intensity of space utilization activities related to the exploitation of natural resources which threatens environmental sustainability, including global warming; and the increasingly declining quality of settlements, increasing uncontrolled land conversion, and high disparities between and within regions. The implementation of spatial planning still faces various obstacles, including spatial planning arrangements that are still incomplete, implementation of spatial planning guidance that is still not effective, implementation of spatial planning that is still not optimal, and supervision of spatial planning that is still weak. For this reason, regulations regarding the implementation of spatial planning are needed that are more complete and detailed and can be used as a reference in overcoming various challenges and problems faced in an integrated, harmonious, harmonious, balanced, efficient and effective manner. development of thinking and awareness in the community to improve the performance of spatial planning which touches matters directly related to the problems of people's lives, especially with increasing floods and landslide disasters, traffic jam, increasing slum housing, decreasing public space and green open space in the region.

The role of the community is very important in spatial planning because ultimately the results of spatial planning are for the benefit of all levels of society and to achieve the goals of spatial planning, namely the creation of safe, comfortable, productive and sustainable national regional space based on archipelagic insight and national resilience. (K. Brown & Wilson, 2019) . The community's role in spatial planning is carried out at the stages of spatial planning, space utilization and controlling space utilization at the national, provincial and district/city levels.

In this case, the Government and regional governments have duties and responsibilities in fostering and supervising the implementation of the community's role in the field of spatial planning (Lee & Park, 2020). Therefore, guidance and supervision of the implementation of the community's role in the field of spatial planning by the Government and regional governments must be carried out in a coordinated manner, so as to avoid gaps in handling or overlapping handling in efforts to realize spatial planning goals

.Spatial planning policies regarding the management of overhead and underground spaces in the context of environmental sustainability highlight the importance of comprehensive and integrated regulations to ensure sustainable and fair land use. In Indonesia, spatial planning is regulated by Law Number 26 of 2007 concerning Spatial Planning, which is the legal basis for spatial planning involving surface space, upper (water) space and underground space. Even so, the implementation of this policy still faces various challenges, especially in terms of management of above and below ground space which is often not fully coordinated between various stakeholders. Additionally, other challenges include limited specific regulations governing the use of this space, especially in terms of mitigating environmental impacts and reducing potential conflicts of interest (X. Zhang & Li, 2023).

Upper and lower spaces, as part of a wider spatial planning, have a strategic role in optimizing land use, especially in dense urban areas. However, the use of this space can also have significant environmental impacts if not managed properly. For example, the construction of infrastructure such as flyovers, multi-storey buildings, or underground transportation often carries the risk of environmental degradation, such as changes in groundwater flow, pollution, or even an increased risk of natural disasters such as landslides (H. Kim & Lee, 2023). Therefore, spatial planning policies that are oriented towards environmental sustainability must be able to integrate the principles of sustainable development, such as strict environmental impact assessments, the application of environmentally friendly technology, and planning that considers ecological balance.

In the context of environmental sustainability, spatial planning policies must not only focus on land use efficiency, but also on efforts to conserve natural resources and mitigate negative impacts on ecosystems. One approach that can be taken is through the development of a clear and transparent zoning system for above-ground and underground spaces, which is supported by regulations that regulate the use of these spaces in accordance with local environmental characteristics (Gong & Liu, 2023) . This policy must also consider the use of modern technology such as digital mapping and geospatial data to support planning

that is more accurate and responsive to environmental changes. In some countries, best practices in basement management include reusing existing basements rather than opening new ones, to reduce environmental damage and optimize the use of available land.

Public participation is also an important aspect in spatial planning based on justice and environmental sustainability. By involving the community in the planning and decision-making process regarding the management of above-ground and underground spaces, the resulting policies can be more responsive to local needs and reduce the potential for conflict. This public participation also supports the concept of environmental justice, which emphasizes the importance of fair access to space and resources, as well as protection against negative impacts that may arise from the use of these spaces (Xu & Wang, 2022). Dignified justice, as a principle promoted in spatial planning policies, ensures that every individual and community has equal rights in enjoying the benefits of sustainable spatial management.

However, to achieve environmental sustainability goals through spatial planning, close collaboration is needed between the government, the private sector and the community. Governments must play a key role in developing strong regulations, providing technical guidance, and ensuring compliance through effective oversight. Meanwhile, the private sector and society must play an active role in implementing policies and providing constructive feedback. Strengthening institutional capacity is also a crucial factor in supporting the enforcement of regulations and supervision of the use of above-ground and underground space (Sato & Yamashita, 2022). Thus, the successful implementation of spatial planning policies is based on environmental sustainability is highly dependent on synergy between stakeholders as well as awareness and active participation from all levels of society.

Overall, an integrated spatial planning policy oriented towards environmental sustainability is the key to managing above ground and underground space in a sustainable manner. With an approach that Prioritizing environmental justice, the use of advanced technology, and strong public participation, this policy can support sustainability development, protect nature resources, and improve the quality of the environment in Indonesia. However, successful implementation is highly dependent on the joint commitment of all parties involved, including the government, private sector and society, to implement this policy consistently and sustainably.

3.2 Harmonization of Spatial Planning Towards The Management of Upper and Underground Spaces in the Context of Dignified Justice.

One of the national developments that has an important position in national development in Indonesia is the development of spatial planning and the living environment. This is because aspects of spatial planning and the living environment are related to almost all activities in human life. Efforts in implementing development are always linked to the interests of preserving environmental functions and developing spatial planning (Y. Zhang & Li, 2019).

Basically, the obstacles in preparing the General Spatial Planning Plan include: First, the prepared Plan does not take into account harmony, balance and environmental sustainability. Therefore, if the plan is carried out as stipulated, it is estimated that in the long term it will have fatal consequences for the survival of humans and other living creatures. Second, there is no legal firmness for anyone who violates indoor regulations. This means that anyone who makes deviations from the use of spatial plans will never be given sanctions (Oliveira & Pinho, 2021)

In spatial planning, it is always combined with development plans. So that the determination of spatial planning becomes unclear because it is confused with development plans (Rodriguez & Lopez, 2018). The development plan should refer to the spatial plan. Fourth, the determination of spatial planning plans is dominated by political decisions, so that objectivity regarding regional characteristics cannot run well. Fifth, in facing regional autonomy, each region is required to increase its original regional income, so that every effort to utilize spatial planning must be able to contribute economic value to the region (Ahmad Sodik, 2004).

Apart from the obstacles mentioned above, the use of spatial planning also has the potential to cause

conflict, if use is done without careful coordination and calculations (J. Kim & Lee, 2022). Thus, obstacles in preparing a General Spatial Planning Plan are always accompanied by obstacles that arise in the form of conflicts in the use of space without any coordination. Conflicts in the use of spatial planning can generally be grouped as follows: First, potential conflict between regions. Second, potential conflict between sectors. Third, potential conflict between society and government. Fourth, potential conflict in the use of spatial planning itself (Goesniadhie, 2016).

To realize the goals of spatial planning and land management in order to preserve the environment, the main policies that can be pursued are as follows: First, develop institutions through establishing a solid management organization, with clear details of duties, authority and responsibilities (Patel & Sinha, 2008). Second, increasing the capabilities of apparatus that can support spatial planning and land management activities in order to preserve the environment. Third, increasing the capabilities of apparatus that can support spatial planning and land management activities in order to preserve the environment. Fourth, increasing the capabilities of apparatus that can support spatial planning and land management activities in order to preserve the environment. Fifth, Strengthen control of space utilization, including securing areas that have important assets for local governments. Sixth, Improve information, monitoring and evaluation systems in spatial planning and land management in order to preserve the environment (Hasni, 2022).

Basically, the process of spatial planning to preserve the environment includes planning, utilization and control activities (Erwin, 2011). Spatial planning is in accordance with the provisions of the special spatial planning legislation for district areas in Indonesia, including land space, ocean space and air space.

The preparation and determination of spatial planning plans are carried out according to the following steps: First, Determine the direction of development to be achieved in terms of economic, socio-cultural, environmental support and capacity as well as defense and security functions. Second, identifying various development potentials and problems in a planning area. Third, Formulation of spatial planning. Fourth, Determination of spatial planning (Sudarso, 2017).

There are at least 3 (three) important elements in the principles of environmentally friendly development, namely as follows: First, wise development/management of resources. Second, sustainable development as long as the use of regional space is carried out in accordance with the carrying capacity and capacity of the environment itself (Ruming & Davies, 2019). So that decisions regarding the allocation of space and natural resources in spatial planning can provide long term benefits and ensure sustainability, it is

necessary to pay attention to the provisions in Law Number 32 of 2009 concerning Environmental Protection and Management. "This provision shows that there is a very close connection between spatial planning and efforts to protect and manage the environment which is the key to the success of regional development efforts (Martínez & Fernández, 2021)

The environment in spatial planning is a very important aspect besides the socio-cultural aspect, which must be considered in preparing regional spatial planning (RTRW). Environmental considerations in regional spatial planning are absolutely necessary to pay attention to because if environmental aspects are not integrated, it will have a huge impact, especially on people's lives in the future. (Smith & Johnson, 2019)

. Because basically the environment has limited carrying capacity and capacity to support the lives of both humans and other creatures, so if the carrying capacity is exceeded then it is certain that the preservation of environmental functions will be disrupted (Silva & Santos, 2021). Spatial planning development that focuses on preserving the harmonious and balanced function of environmental components to support sustainable development and is implemented with integrated, comprehensive policies and taking into account the needs of present and future generations.

Harmonization of spatial planning towards the management of upper and lower spaces in the context of recognized justice focuses on the importance of integration between various aspects of spatial planning to

achieve fair, efficient and sustainable goals (Anderson & Rodriguez, 2022). Spatial planning, especially in dense urban areas, often faces complex challenges in managing overhead space (for example, air or multi-story buildings) and underground space (such as underground infrastructure, pipelines, or storage). Therefore, a harmonious approach is needed that not only considers technical and functional aspects, but also the principle of recognized justice in every stage of planning and implementation.

Spatial planning harmonization includes aligning various policies, regulations and practices governing the use of above-ground and underground space. In Indonesia, even though there are regulations governing spatial planning in general, such as Law Number 26 of 2007 concerning Spatial Planning, there are still gaps in their implementation, especially related to integration between management of above-ground and underground space. Often, existing ones do not fully accommodate the need for harmonization between the uses of this space, giving rise to potential conflicts of interest and negative impacts on the environment and society (Chen & Wu, 2023).

In the context of recognized justice, harmonization of spatial planning must take into account the rights of every individual and community to obtain fair benefits from the use of that space. This includes ensuring that the use of above and below ground space does not harm the interests of society, especially vulnerable groups who are often affected by large projects such as infrastructure construction or land development (Yuen & Brunner, 2022). In this case, harmonious spatial planning must be based on the principle of inclusiveness, where all stakeholders, including local communities, are involved in the planning and decision-making process. In this way, spatial planning policy is not only a technocratic tool, but also a tool for achieving social justice and prosperity for all.

Apart from that, harmonization of spatial planning must also consider the balance between economic, environmental and social interests. Well-coordinated management of above-ground and underground space can support sustainable economic growth, for example through the development of efficient and environmentally friendly infrastructure (Meng & Zhou, 2022). However, economic growth should not be achieved at the expense of the environment or societal well-being. Therefore, harmonious spatial planning must include efforts to mitigate potential environmental impacts from the use of this space, as well as ensuring that development is carried out with attention to sustainability principles.

One concrete step in achieving harmonization of spatial planning is through the preparation of more specific technical guidelines and regulations regarding the management of above-ground and underground space. This guide must cover important aspects such as zoning, land use, environmental impact assessment, as well as compensation mechanisms for affected communities. In addition, it is necessary to strengthen institutional capacity to ensure that existing regulations can be implemented effectively and consistently. This includes strict monitoring of compliance, as well as fair and transparent law enforcement mechanisms.

Technology also plays an important role in supporting the harmonization of spatial planning. The use of advanced technology such as digital mapping, geospatial data, and geographic information systems (GIS)

can help in more accurate and integrative planning (Hernandez & Barros, 2022). With this technology, governments and stakeholders can identify potential conflicts of interest, evaluate environmental impacts, and plan more efficient and sustainable use of space. Technology also enables broader community involvement through transparent and easily accessible digital platforms, making the planning process more inclusive.

In conclusion, harmonization of spatial planning towards the management of above and below ground space in the context of distinguished justice requires a comprehensive and integrative approach. Policies and regulations must be designed to accommodate various interests and ensure that space is used fairly, efficiently and sustainably. Community participation, balance between economic, environmental and social interests, and the use of modern technology is key elements in achieving this harmonization. Thus, spatial planning can be an effective tool to support sustainable development and social justice, as well as protecting people's rights in enjoying the benefits of just and dignified spatial management.

4. Synopsis of the Main Research Outcomes

This research examines how spatial planning regulations govern the use of upper and underground spaces within an environmental context, with a focus on the principle of distinguished justice. It aims to evaluate whether spatial planning practices are applied equitably and sustainably, considering both environmental protection and social fairness.

Regulatory Framework and Spatial Planning: The study highlights that spatial planning regulations, which cover the use of upper (eg, high-rise buildings) and underground spaces (eg, subways, parking facilities), are designed to balance environmental sustainability and urban development. These regulations include zoning laws, land use policies, and environmental protection measures. Findings indicate that while spatial planning regulations are effective in promoting environmental sustainability by mitigating urban sprawl and optimizing land use, there are inconsistencies in how these regulations are applied. Some developments meet high environmental standards, while others, particularly in less regulated areas, fall short of sustainability goals.

The research reveals that the application of spatial planning regulations often lacks uniformity, which affects the sense of distinguished justice among different communities. Areas with more affluent populations tend to benefit from better implementation and higher-quality spaces, while marginalized communities may face inadequate infrastructure and environmental degradation. Key challenges identified include inadequate enforcement of regulations, insufficient public participation in planning processes, and discrepancies between policy intentions and actual outcomes. These issues contribute to inequitable access to well-planned spaces and environmental benefits.

Recommendations for Improvement: To enhance the implementation of spatial planning in a way that upholds recognized justice, the study recommends several measures: **Strengthening Enforcement:** Improve the consistency and effectiveness of regulatory enforcement to ensure that all areas, regardless of their socio-economic status, meet environmental and planning standards. **Increasing Public Participation:** Foster greater community involvement in spatial planning processes to ensure that diverse perspectives are considered and that planning outcomes are more equitable.

Implement more transparent decision-making processes to reduce perceptions of favoritism and ensure fair distribution of resources and benefits. **Integrated Planning Approaches:** Develop integrated planning strategies that address both upper and underground space utilization in a holistic manner, considering environmental, social, and economic factors. **Future Research Directions:** The study suggests areas for further research to deepen understanding and improve practices:

Conduct comparative studies of spatial planning practices in different regions to identify best practices and lessons learned. Explore the long-term impacts of spatial planning regulations on environmental sustainability and social equity to assess their effectiveness over time. Investigate the experiences and perceptions of communities affected by spatial planning regulations to better understand the practical implications and areas needing improvement. Overall, while spatial planning regulations are crucial for environmental sustainability and urban development, their current implementation often falls short of achieving recognized justice. Addressing these gaps through enhanced enforcement, public participation, and transparent processes can lead to more equitable and sustainable outcomes for both upper and underground spaces.

5. Conclusion

Based on the analysis that has been carried out, several main conclusions can be drawn regarding policies regarding spatial planning and management of upper and lower spaces in the context of environmental sustainability and recognized justice. First, although Law Number 26 of 2007 concerning Spatial Planning has provided a legal basis for spatial planning in Indonesia, there are still limitations in the specific regulations governing the use of above-ground and underground space. This causes a lack of good coordination between stakeholders and has the potential to cause conflicts in land use. Second, management of above and below ground space has a significant impact on the environment, especially in

dense urban areas. Therefore, spatial planning policies must consider environmental sustainability by integrating sustainable development principles, such as strict environmental impact assessments, the use of environmentally friendly technology, and planning oriented towards ecological balance. Third, public participation in the spatial planning process is very important to ensure that the resulting policies are responsive to local needs and reduce the potential for conflict. The principle of recognized justice must be the main basis in this policy, ensuring that every individual and community has equal rights in enjoying the benefits of sustainable space management. Fourth, the implementation of spatial planning policies still faces various challenges, including a lack of effectiveness in supervision and guidance, as well as the dominance of political decisions that often ignore regional characteristics and environmental needs. Therefore, it is necessary to strengthen institutional capacity and better coordination between the government, the private sector and society. Finally, success in spatial planning that is oriented towards environmental sustainability and recognized justice is very dependent on close collaboration between the government, the private sector and the community. Each party must play an active role in implementing policies with a commitment to consistently apply the principles of sustainable development. Overall, a spatial planning policy that is comprehensive and oriented towards environmental sustainability and recognized justice is very necessary to manage above-ground and underground space sustainably in Indonesia. Challenges in regulation and implementation need to be addressed through capacity building, public participation and cross-sector collaboration.

6. Limitations, Implications, and Further Directions of Research

The research focuses on a specific geographic and regulatory context, which may not fully represent the diverse spatial planning scenarios in other regions or countries. The findings might not be universally applicable or comparable to different urban settings. Data on the practical implementation of spatial planning regulations, especially regarding upper and underground space utilization, may be incomplete or inconsistent. Limited access to detailed case studies and real-time data can affect the comprehensiveness of the analysis. The study provides insights based on current and past data, but spatial planning and environmental regulations are subject to change. The evolving nature of urban development and environmental policies means that the findings may quickly become outdated. The concept of recognized justice is inherently subjective and may vary depending on individual perceptions and societal values. This subjectivity can lead to differing interpretations of what constitutes fair treatment and equitable access.

Spatial planning involves numerous complex factors, including economic, social, and environmental elements. The research might not fully capture all these factors or their interactions, which can influence the effectiveness of spatial planning practices. The findings suggest that policymakers need to address inconsistencies in spatial planning regulations to enhance their effectiveness. Implementing more uniform and equitable regulatory practices can help ensure that all communities benefit from sustainable and well-planned spaces.

Urban planners and developers should consider integrating both upper and underground space planning into a cohesive strategy. This approach can help optimize land use and improve environmental outcomes while addressing social equity concerns. Increased public participation in spatial planning processes is crucial. Engaging diverse community members in planning decisions can help address their needs and perceptions, leading to more inclusive and equitable outcomes. Enhancing transparency in planning processes and decision-making can reduce perceptions of bias and favoritism. Clearer communication about planning decisions and criteria can improve public trust and ensure fair access to resources.

Future research could involve comparative studies of spatial planning practices across different regions or countries. This approach would provide insights into effective strategies and highlight best practices for implementing regulations in diverse contexts. Conducting longitudinal studies to track the long-term impacts of spatial planning regulations can help assess their sustainability and effectiveness over time. This research can provide valuable data on how regulations evolve and their enduring effects on communities and the environment.

Investigating the experiences and perspectives of communities affected by spatial planning regulations can offer a deeper understanding of how these regulations impact social equity and environmental justice. Surveys, interviews, and participatory research methods can provide valuable insights. Exploring integrated planning models that combine upper and underground space utilization with environmental and social equity considerations can enhance the effectiveness of spatial planning. Research in this area could focus on developing frameworks and tools for holistic urban planning.

Developing and refining tools to assess the impacts of spatial planning regulations on both environmental sustainability and social equity can help improve regulatory practices. These tools could include metrics for evaluating the fairness of space distribution and the effectiveness of environmental protection measures. By addressing these limitations and pursuing these research directions, a more comprehensive understanding of spatial planning can be achieved, leading to better-informed policies and practices that promote both environmental sustainability and social justice.

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