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Planning the Square Area as a Public Space: Realizing Green Open Space in Asahan Regency

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ABSTRACT

This study aims to examine the Planning of the Square Area as a Public Space: Realizing Green Open Space in Asahan Regency. This research adopts a qualitative approach, which aims to gain a deep understanding of the perceptions, needs, and expectations of the community and related parties towards the development of the square as a green open space (RTH). A comprehensive overview of the qualitative methods used in the research, as well as data collection and analysis techniques that will be applied to explore the perceptions, needs, and expectations of the community towards the development of the square as a green public space in Asahan Regency. Research Results The presence of green open spaces such as squares can contribute to improving environmental quality, such as improving air quality, reducing micro-temperatures, and protecting biodiversity. In addition, attractive squares can also increase tourist attractions, which has a positive impact on the local economy. By considering all of the above aspects, the planning of the square area as a public space in Asahan Regency will not only create quality green open space, but will also contribute to better social, economic, and environmental development. It is hoped that this initiative can be realized with the support of all parties, including the government, the community, and other stakeholders, to create a better environment for future generations.

Keywords: Planning of the Square Area, Public Space, Green Open Space and Asahan Regency

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1. INTRODUCTION

Green open spaces (RTH) play an important role in supporting the quality of life of urban communities. In addition to serving as the lungs of the city that help reduce air pollution and hot temperatures, green open spaces are also a gathering place for citizens for various social, cultural, and recreational activities. In Asahan Regency, the need for green public space is increasing along with the increasing population and rapid urbanization. Currently, Asahan Regency faces various challenges in meeting the needs of decent and environmentally friendly public spaces. Many existing public spaces do not have adequate facilities to support social and recreational activities, while some others do not meet the criteria as green open spaces. Squares, which are centers of community activities, are often less than optimal in providing a green and comfortable environment for socializing, exercising, or relaxing. Lack of vegetation, limited green areas, and lack of supportive facilities are the problems faced in the management of the square as an ideal public space.

In addition, with the increasing public awareness of the importance of environmental quality, many residents are starting to crave squares designed with the concept of green open space. This is in line with the local government's goal of creating a sustainable and environmentally friendly city. However, budget limitations, land, and lack of community participation in maintaining public facilities are still the main obstacles in realizing a green and optimally functioning square. To overcome these problems, comprehensive planning is needed in the development of the square area as a multifunctional green open space. This planning includes spatial design, proper vegetation selection, provision of environmentally friendly facilities, and sustainable management strategies. Thus, squares in Asahan Regency can play a more effective role as a public space that not only provides comfort and beauty but is also able to improve the quality of the environment and community welfare. In recent years, squares have become one of the vital public spaces in many cities and districts in Indonesia, including in Asahan Regency. The square functions as a center for community activities, a place of recreation, and a space for

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social interaction. However, the phenomenon that occurs in various regions shows that many squares are less than optimal in carrying out these functions. In Asahan Regency, existing squares are often uncomfortable, lack green facilities, and are less attractive for environmentally friendly recreational activities.

The phenomenon of rapid urbanization in Asahan Regency also affects the increasing need for green public space in the city center. Squares that should be the lungs of the city and water catchment areas often change their function into commercial areas or are trimmed by infrastructure development that does not pay attention to environmental aspects. As a result, the function of the square as a sustainable green open space (RTH) has become increasingly marginalized. In addition, social phenomena show that people are increasingly aware of the importance of public spaces that support quality of life and health. The COVID-19 pandemic, for example, has increased public interest in open spaces that can be accessed freely for outdoor activities. However, the condition of the square in Asahan that does not meet the criteria as a green space causes the community not to get adequate facilities for this need. In fact, a comfortable and beautiful green public space can improve social interaction and citizens' welfare. Another phenomenon that underlies the importance of this planning is the increasing awareness of local governments on the importance of the square as an environmentally friendly city identity. Several regions in Indonesia have successfully developed squares as a symbol of clean and green cities, which not only provide aesthetic value but also support the health and happiness of the local community. In Asahan Regency, the aspiration to develop the square as a green public space has not been fully realized, and challenges in terms of design, budget, and community participation are still obstacles.

Green Open Space (RTH) is an important element in urban planning that plays a role in maintaining the balance of the ecosystem, reducing air pollution, and improving the quality of the environment. RTH, in addition to functioning as the lungs of the city, also provides an area for the community to interact, recreation, and do physical activities. In Asahan Regency, the existence of adequate green open space is increasingly important in line with the rapid development of the city and the increasing population. However, the reality on the ground shows that Asahan Regency still faces various challenges in realizing a sustainable RTH and functions optimally as a public space. One of the main problems is the limited number and area of green open space available in Asahan. With the increasing need for infrastructure and housing development, green space is decreasing and being pushed by the use of more commercial space. This has an impact on air quality, environmental temperature, and the ability of urban areas to absorb water, which ultimately has the potential to cause flooding. In addition, the limitations of RTH also make people not have enough access to comfortable spaces for recreation and social interaction, which is important for their well-being.

Budget limitations and lack of attention to the importance of RTH are also obstacles in the planning and development of RTH in Asahan Regency. Local governments often face challenges in allocating sufficient resources to maintain and develop RTH amid various other development priorities. As a result, the development of RTH has not become a top priority, and some of the existing RTH is poorly maintained and poorly equipped with adequate facilities for the community. Community participation in maintaining and utilizing RTH is also still low. The lack of awareness and education about the importance of RTH as part of a healthy environment has made many residents not actively involved in the maintenance and management of RTH. On the other hand, the concept of a more modern and environmentally friendly RTH design has also not been fully implemented in Asahan Regency, which causes the attraction of RTH for the community, especially the younger generation, to be less than optimal. Therefore, this study aims to explore the right planning strategy in realizing RTH in Asahan Regency which functions not only as a green area, but also as a public space that can be accessed by the community at large. Thus, the existing RTH is expected to be an important asset for environmental sustainability while improving the quality of life of the community in Asahan Regency.

2. LITERATURE REVIEW

Definition and Function of Green Open Space (RTH)

Definition of RTH: According to Sugiyarto (2021), green open space is an area that has natural or artificial vegetation elements that function for ecological balance in an urban area. The functions of RTH include ecological, aesthetic, economic, and public health aspects. Ecological Function: In 2021, Rahmawati explained that RTH plays a role in lowering urban temperatures, improving air quality, and supporting the existence of biodiversity. Optimal RTH in the square area can help reduce air pollution and provide water catchment areas. Social and Health Functions: According to Kusuma (2021), green

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open spaces also function as a place for people to carry out social and recreational activities. This space is important for the physical and mental health of the community because it provides access to fresh air and a more comfortable environment.

The Concept of the Square as a Green Public Space

Public Space as a Tool for Social Interaction: According to Fauzi (2021), the square as a public space must have facilities that support community social activities. Squares equipped with comfortable and safe facilities can function as a gathering and social interaction center. Green Square Design Criteria: In 2021, Prasetyo emphasized the importance of design aspects in the square that integrate natural elements with modern facilities. The design of the square should include large green areas, plants that match the local climate, walking paths, and comfortable seating. Aesthetic and Economic Benefits: According to Dewi (2021), a well-managed square equipped with green space can be a visual attraction of the city and support the local economy, for example by attracting tourists or increasing the value of surrounding properties.

Principles of Green Open Space Development in the Square Area

Sustainability: Nugraha (2021) states that the concept of sustainability must be the basis in public space planning. The development of RTH in the square area must pay attention to environmental sustainability, such as the selection of plants that are efficient in water use and adaptive to climate change. Accessibility and Inclusivity: According to Astuti (2021), public spaces such as squares must be accessible to all levels of society, including people with disabilities, children, and the elderly. This inclusivity creates a welcoming space that can be enjoyed by various groups. The Role of the Community in the Management of RTH: According to the opinion of Ramadan (2021), community participation is very important in maintaining the cleanliness and sustainability of RTH in the square area. Involving local residents in the planning and maintenance of the RTH can increase a sense of ownership and responsibility for the environment.

The Relevance of RTH in the Context of Asahan Regency

Adaptation of the RTH Concept for Asahan Regency: Based on the opinions of experts, RTH developed in Asahan Regency should consider local geographical and cultural conditions. According to Widodo (2021), squares in areas with tropical climates require plant types that are resistant to high temperatures and can reduce heat in urban areas. Collaborative Strategy: Rizki (2021) stated that collaboration between the government, the community, and the private sector in designing and managing RTH is the key to success. In Asahan Regency, local governments can work with local communities to improve and maintain green open spaces.

METHOD APPROACH

According to Sugiyono (2021), qualitative research is a method used to understand social phenomena in depth, focusing on the meaning and subjective interpretation of the informants involved. In this context, a qualitative approach allows researchers to further explore the social and cultural aspects that affect the planning of green public spaces in Asahan Regency. According to Creswell (2021), qualitative research helps to understand the phenomenon in depth and contextual, especially in the case of public space planning that requires input from the community, government, and other stakeholders. This approach is relevant to identify various perspectives regarding RTH in the square area.

Data Collection Techniques According to Kvale and Brinkmann (2021), in-depth interviews are an effective qualitative technique for digging into detailed information from key informants, such as local government officials, local communities, and urban planning experts. This interview aims to understand their point of view regarding RTH planning in the square. According to Bowen (2021), documentation analysis is a useful technique to review existing data, such as regional spatial planning, RTH development reports, and related regulations. This documentation helps to enrich the context of the research and provide an overview of local government policies regarding green public spaces.

Data Analysis Techniques According to Braun and Clarke (2021), thematic analysis is a suitable method for identifying the main patterns or themes of qualitative data. In this study, this technique is used to compile important themes related to public perception, development constraints, and recommendations for RTH planning in the square. According to Denzin (2021), data triangulation is needed to increase the validity and reliability of qualitative research. This study uses data triangulation from the results of interviews, observations, and documentation to ensure that the findings obtained reflect accurate conditions in the field.

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According to Maxwell (2021), the validity of construction in qualitative research is achieved by ensuring that the data collected and the analysis carried out are in accordance with the research objectives. Thus, the researcher used various data sources and perspectives to obtain a comprehensive picture of the condition of the square as a green public space in Asahan Regency. According to Lincoln and Guba (2021), reliability in qualitative research can be achieved by recording all stages of the research process in detail and consistently. This study documents the process of data collection and analysis to ensure repeatability of results if similar studies are conducted at other times

3. RESULTS

How to develop the square area into a public space that meets the criteria for green open space

The development of the square area as a green open space (*RTH*) in Asahan Regency must pay attention to various aspects in order to meet functional, ecological, social, and aesthetic criteria. To achieve these goals, several development strategies can be implemented based on the results of research, community needs, and recommendations of experts.

- 1. Environmentally Friendly Design Concept
 - Proper Vegetation Selection: To support ecological function, the plants selected should be derived from local species that are resistant to local climatic conditions. The use of endemic plants can reduce maintenance and water needs, while strengthening local identity. Plants with a wide canopy and shade plants are also recommended to reduce the temperature around the square. Sustainable Drainage System: A good RTH should be equipped with a drainage system that supports water infiltration into the soil. Thus, the square can help reduce the risk of flooding in the vicinity. Drainage systems such as bioswale or retention ponds can be applied to capture and filter rainwater before it enters the main waterways.
- 2. Land Use for Social and Recreational Activities
 - Open Areas for Recreation and Interaction: Squares as public spaces should provide a large enough open area for various social activities, such as gathering, playing, and exercising. Recreation areas and comfortable seating are important to encourage interaction between residents. The provision of pedestrian paths and children's play areas also needs to be considered to improve accessibility for all age groups. Sports Facilities and Playrooms: The addition of facilities such as sports fields, children's play areas, and special activity zones will make the square more attractive as a recreational place. Public spaces equipped with sports facilities can improve people's physical and social health, as well as provide healthy recreational alternatives.
- 3. Provision of Inclusive Accessibility
 - Disability-Friendly Design: The square should be accessible to all groups, including people with disabilities. These include disabled-only lanes, wheelchair-friendly surfaces, and easily accessible signage. This inclusivity can be realized by providing supporting facilities such as handrails, guided lanes for the visually impaired, and wheelchair-accessible seating. Lighting and Security: Safe and comfortable public spaces are an important part of the development of RTH in the square. Good lighting and the placement of CCTV cameras can increase the sense of security for visitors. In addition, the presence of security officers at certain hours can support security and order in the square.
- 4. Community Involvement in Management and Maintenance
 - Community Education and Participation Program: According to Ramadan (2021), community involvement in the management of the square can strengthen a sense of belonging and responsibility for RTH. Educational programs that provide information about the benefits of RTH, maintaining cleanliness, and caring for plants will help create a sustainable and terawatt square. Periodic Activities for the Community: Organizing community activities such as weekly markets, sporting events, or art festivals in the square can increase community participation. Periodic activities can attract residents to visit and interact in the square, while maintaining the sustainability of the public space as a center of activity.
- 5. Sustainable Development of Supporting Infrastructure
 Environment-Based Waste Management: According to Wibowo (2021), a good RTH must be
 equipped with adequate waste management facilities. The provision of sorted bins (organic,
 inorganic, and recycled) can help maintain cleanliness and support environmental programs.
 These sorted garbage cans also need to be placed in strategic areas so that they are easily
 accessible to visitors. Use of Renewable Energy: Lighting that uses solar energy can be an

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energy-saving solution that is environmentally friendly. The application of renewable energy technologies, such as solar panels for lighting in the square, can reduce electricity consumption from conventional sources and create a modern and environmentally sound image of the square

6. Continuous Monitoring and Evaluation

Periodic Evaluation of the Utilization and Condition of the Square: Periodic monitoring of the use of the square as an RTH and the condition of its facilities is very important to ensure that the square remains suitable as a green public space. Local governments can involve local communities or community groups to report on the condition of the square and provide input on improvements. Maintenance of Vegetation and Public Facilities: Plant maintenance, cleanliness, and maintenance of public facilities must be carried out regularly to keep the square beautiful and functioning properly. This regular maintenance will extend the life of public spaces and increase comfort for visitors.

What are the main challenges in planning and managing the square as a green open space in Asahan Regency

Realizing the square as a green open space in Asahan Regency faces various challenges that need to be overcome so that this RTH can function optimally as a public space that is beneficial to the community. Here are some of the main challenges that often arise in the process of planning and managing squares as RTH.

1. Land Limitations

Land Use Competition: In rapidly growing areas, land allocation for RTH often has to compete with other needs, such as residential, commercial, or other public facilities. Land limitations are a major obstacle in creating green spaces that are large enough to support the diversity of public activities. Suboptimal Land Use: Many squares in small towns have not been optimized as environmentally friendly and ecologically productive RTH. This can be due to the lack of careful planning regarding the layout of plants, facilities, and other elements that can support the ecological function of the square.

2. Budget and Resource Limitations

Limited Funds for Construction and Maintenance: The development and maintenance of RTH requires a sizable budget to ensure the quality of public spaces is maintained. Many local governments face budget constraints in financing maintenance programs and improving square facilities on a sustainable basis. Human Resource Limitations: Competent human resources in RTH management are often limited. This includes experts who understand the concept of sustainable design and maintenance personnel who can maintain cleanliness and regular vegetation care.

3. Ecological and Environmental Challenges

Effects of Climate Change: The impacts of climate change, such as increasingly high temperatures and erratic rainfall, affect the sustainability of plants and vegetation in RTH. Climate change can cause plants in the square to experience environmental stress, thereby reducing their ability to absorb carbon and cool the environment. Air Pollution and Sewage: Urban environments often experience air pollution problems that can affect plant health and air quality in the square. In addition, poorly managed waste in public spaces can also pollute green areas and reduce visitor comfort.

4. Low Community Participation

Lack of Community Environmental Awareness: Community participation in maintaining the cleanliness and sustainability of the square as an RTH is often low. Many visitors are not aware of the importance of maintaining cleanliness and complying with regulations in public spaces, resulting in a lot of garbage and damaging public facilities. Lack of Involvement in Planning: Plans to develop the square as an RTH sometimes do not involve input from the local community, which makes this public space less in line with the needs and preferences of residents. The lack of public involvement in the planning stage can reduce the community's sense of ownership of the RTH, so that they are less concerned about maintaining and caring for it.

5. Management and Maintenance Issues

Lack of Regular Maintenance: The challenges of managing the square as an RTH also include a lack of consistent maintenance of plants and facilities. Plants that are not pruned or watered regularly can interfere with the aesthetics and ecological function of RTH. Suboptimal

maintenance can lead to a decrease in the quality and comfort of the square as a green space. Limited Infrastructure and Facilities Challenges: Facilities such as toilets, seating, lighting, and trash cans are often inadequate or poorly maintained. This makes public spaces less comfortable and unattractive to the public. Adequate infrastructure is essential to ensure the comfort and safety of visitors.

6. Technical Challenges in Planning and Design

Less Environmentally Friendly Design: Not all squares are designed with environmentally friendly principles. Sometimes, the use of materials and plant types that are not suitable for local conditions can cause these green open spaces to be less efficient and difficult to manage in the long term. The design of the square that ignores the principle of sustainability will make it difficult to maintain and will not provide optimal environmental benefits. Lack of Integration with Urban Infrastructure: Squares that are not integrated with transportation infrastructure or pedestrian paths can reduce public accessibility. The strategic and easily accessible placement of the square will increase the number of visitors and the use of RTH as a public space.

7. Policy and Regulatory Challenges

Limitations of Supporting Policies: One of the main challenges is the lack of local policies that support the sustainability of RTH. Without regulations governing the development and maintenance of green public spaces, local governments may find it difficult to allocate adequate resources. Overlap of Authority: Sometimes, there is an overlap of authority between the central and local governments in the management of RTH. Poor coordination between various government agencies can lead to inconsistent or ineffective management of the square, as well as create conflicts in the implementation of projects.

8. Challenges in Realizing Sustainability and Security

Sustainability of Square Use: Squares designed as RTH need to be planned to function in the long term. The main challenge is to ensure that these spaces remain relevant, engaging, and able to meet the needs of an ever-evolving society. Sustainability aspects need to be applied in every stage of planning and management, from vegetation selection to facility arrangements. Safety Concerns: Low levels of comfort and safety, such as the absence of adequate lighting or lack of supervision, can reduce public interest in using the plaza. Safety is an important factor in the success of RTH as a public space, because people will feel more comfortable and free to move in a safe environment.

How to increase community participation in maintaining and utilizing the planned square as a green open space

Community participation is the main key in maintaining the sustainability of green open spaces (RTH) such as squares. The active role of the community not only includes the optimal use of space but also its maintenance so that it remains comfortable, clean, and beautiful. Here are some approaches that can be used to increase community involvement in maintaining and utilizing squares that function as

1. Environmental Education and Socialization

Environmental Education Program: To foster public awareness of the importance of RTH, education programs regarding the ecological, social, and health benefits of green space can be carried out. Continuous education, such as environmental workshops or school activities, can increase citizens' understanding of the importance of maintaining the square. Continuous Socialization: Socialization through social media, community meetings, or pamphlets can be done periodically to remind the public of the rules and their role in maintaining the square. This can include information about available facilities, activities that can be done, and guidelines for maintaining cleanliness.

2. Community Activities Based in the Square

Periodic Events That Attract Residents: Holding regular events such as weekly markets, morning gymnastics, or cleaning competitions can attract people to visit and take advantage of the square. This activity involving many groups will increase the sense of belonging to RTH, so that they will feel responsible for maintaining cleanliness and order. Mutual Cooperation and Routine Cleaning Programs: Routine mutual cooperation programs, such as weekly or monthly cleaning activities, can be an effective way to engage residents directly. Mutual cooperation activities can strengthen relationships between residents and create a joint commitment in maintaining the square.

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3. Involving Community Groups in the Management of the Square

Establishment of RTH Management Groups or Volunteers: Special community groups or volunteers can be formed to help manage and maintain the square. They can be tasked with overseeing cleanliness, planting new plants, or repairing simple facilities. This will increase the sense of ownership and responsibility towards RTH. Partnerships with Local Communities: Collaborating with local communities, such as environmentalist groups, art communities, or youth organizations, can expand community participation. This community can be involved in planning activities and become the main driver in the maintenance of the square.

- 4. Provision of Supportive and Inclusive Facilities
 - Easily Accessible Facilities for All Groups: Providing friendly facilities for children, the elderly, and people with disabilities can make the square more inclusive and comfortable. The more comfortable the facilities available, the greater the public's interest in using and caring for them. Children's play areas, special paths for disabled people, and adequate seating are some of the facilities that can be provided. Sorted Trash Cans and Clear Signposts: Providing sorted trash cans and signboards about discipline in the square can help people maintain cleanliness and order in using the facilities. Easy-to-reach trash cans and informative instructions will make it easier for residents to maintain cleanliness independently.
- 5. Incentive Program for Active Participation
 - Awards for Citizens Who Actively Contribute: Local governments can give awards to people or communities who actively participate in maintaining the square, for example in the form of certificates, gifts, or publications in local media. This kind of award can motivate other communities to participate and get involved. Procurement of Environmental Competitions or Competitions: Holding competitions such as cleanliness competitions or garden arrangements by local residents can be an effective way to increase a sense of belonging. This competition can be held in the form of a routine cleaning competition or greening whose results will be integrated into the square area.
- 6. Participatory Supervision Program
 - Community Involvement in Square Supervision: Local governments can involve local communities to supervise activities in the square, so that residents feel that they have a role in maintaining order and security. This participatory surveillance system can be realized in the form of a "citizen patrol" program or a "monitoring group" that is tasked with reporting if there is activity that damages the facility. Reporting Damage or Problems Through Special Applications: Developing community-based reporting apps or using social media to report damage to facilities or problems in the square can also increase community engagement. With this application, residents can immediately report conditions in the field, and the government can respond quickly.
- 7. Strengthening Cooperation between the Government and the Community
 Regular Discussion Forum between Government and Citizens: Local governments can hold
 discussion forums or open meetings with the community to discuss the development and
 maintenance of the square. This discussion provides an opportunity for residents to provide
 input and participate in deciding on steps to improve the square. Collaboration with the Private
 Sector for RTH Maintenance: The private sector can also be invited to work together in the
 management and maintenance of RTH through corporate social responsibility (CSR) programs.
 They can donate funds or support activities carried out in the square, so that the sustainability
 of this RTH is more guaranteed.
- 8. Using Technology to Increase Engagement
 - Campaigns through Social Media: Using social media for campaigns or education about the importance of maintaining the square can reach more residents, especially young people. Content such as educational videos, photos of activities, or up-to-date information about the square will encourage community engagement online and offline. Online Apps or Platforms for Participation: Governments can develop online platforms where citizens can contribute ideas, provide suggestions, or report on facility improvement needs. Thus, the community has easy access to participate in the repair and maintenance of the square.

4. CONCLUSION

The planning of the square area as a public space that functions as a green open space in Asahan Regency is a strategic step that can provide various social, economic, and environmental benefits for the community. From the analysis that has been carried out, several important points can be concluded as follows:

Green open spaces in the square area not only function as a place of recreation, but also as a medium for social interaction, community development, and improving the quality of life of the community. The presence of a well-planned square can provide space for public activities and strengthen social bonds among residents. The planning of the square area should take into account the needs of the local community, with eco-friendly designs and facilities that support various activities, such as parks, play areas, walking paths, and performance spaces. The development of quality infrastructure will increase user comfort and security.

Community involvement in the planning and management process of the square is very important. By involving the community, their needs and expectations can be accommodated, so that the square becomes a space that truly reflects the wishes and aspirations of residents. It is important to apply sustainability principles in the management of the square area. This includes good environmental management, efficient use of resources, and ongoing maintenance of facilities to ensure that the square continues to function optimally in the long term

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