

The Concept of the Development of the Sultan Abdul Jalil Rahmadsyah Field Area as a Public Space and Green Open Space in Tanjung Balai City

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Abstract— This research aims to explore the development of the Sultan Abdul Jalil Rahmadsyah Field Area as a public space and green open space in Tanjungbalai City, as well as its role in providing ecological, social, and health benefits for the community. This area has great potential to improve the quality of life, but it also faces various challenges in its management and maintenance. The study identified challenges faced, including climate change, lack of public awareness, limited funding, and inadequate infrastructure. Addressing these challenges requires collaboration between governments, communities, and the private sector, as well as sustainable and adaptive planning for climate change. The results of this study are expected to contribute to the development of environmentally friendly and sustainable green open space policies in Tanjungbalai City.

Keywords—Development concept, Area, Public space, Tanjung Balai City.

I. INTRODUCTION

The city of Tanjungbalai, as one of the fastest-growing cities in North Sumatra Province, faces a major challenge in terms of providing green open space and adequate public facilities. Green open spaces (RTH) have a vital role in creating ecological balance, improving air quality, and providing space for people to interact socially and recreationally. However, along with population growth and rapid urbanization, the existence of green open spaces in Tanjungbalai City is increasingly limited. Sultan Abdul Jalil Rahmadsyah Square, located in the center of Tanjungbalai City, has great potential to be developed into a public space that not only fulfills a recreational function, but also as a green open space that can provide ecological and social benefits to the community. This area, which is currently not optimally utilized, has the potential to be used as a place that is not only an icon of the city, but also a center of social, cultural, and sports activities for city residents.

However, various factors, such as budget limitations, lack of integrated planning, and problems in the management of public spaces, make the development of this area not yet reach its maximum potential. On the other hand, the people of Tanjungbalai City urgently need a space that

can support healthy social and recreational activities and support the creation of a more friendly and sustainable environment. This research aims to explore the potential and formulate the concept of developing the Sultan Abdul Jalil Rahmadsyah Field as a public space equipped with green open space. The development of this area is expected to make a significant contribution to the quality of life of the people of Tanjungbalai, as well as improve the aesthetics and ecological function of the city.

Tanjungbalai is currently facing the phenomenon of rapid urbanization, which is characterized by an increasing population and economic activity that leads to a decline in the quality of green open spaces and public facilities. One of the real impacts of this rapid development is the reduction of green open spaces in the city, which are supposed to serve as ecological counterbalances, recreational areas, and means of social interaction for citizens. Sultan Abdul Jalil Rahmadsyah Square, which is located in the city center, is one of the open spaces that should be used more optimally as public spaces and green open spaces. However, currently the area is still not well utilized. Most of the open spaces in this area have not been functioned as a place that can support various social and cultural activities of the community. The management of green open space that is not optimal causes the area to not function optimally as a gathering place for people to gather (Muazro & Nuraini, 2020).

Another phenomenon that can be seen is the low awareness of the importance of green open space as part of sustainable development. Many residents are not fully aware of the benefits of green open space which not only has an impact on the quality of the environment, but also on social welfare and

people's mental health. In fact, green open spaces can be places for recreation, sports activities, and environmental education that are beneficial for all levels of society, especially in the midst of increasing urban density. In addition, the dependence on limited open space makes the Sultan Abdul Jalil Rahmadsyah Square area increasingly neglected in terms of maintenance and management. This area, which should be a public space that can be easily accessed by all levels of society, is constrained by the lack



of attention to long-term management, as well as the lack of investment in infrastructure and supporting facilities.

This phenomenon becomes even more complex when looking at the gap between the community's need for proper green open space and the existence of areas that have not been maximized their potential. Therefore, serious attention needs to be paid to designing and developing this area into a public space that is environmentally friendly, comfortable, and able to meet the social needs of the community, while maintaining the ecological balance of the city. This research has a very high urgency considering the important role of green open space (RTH) in creating a healthy, sustainable, and community-friendly urban environment. The city of Tanjungbalai, as one of the fastest-growing cities, faces serious challenges in terms of meeting the needs of public space and quality green open space. In this context, the development of the Sultan Abdul Jalil Rahmadsyah Field area is very relevant to be raised as a focus of research, considering that this area has great potential but has not been utilized to the maximum.

The importance of green open space in urban life is increasingly recognized along with the increasing issues related to climate change, air pollution, and social pressures felt by urban communities (Juanda et al., 2025). RTH not only functions as the lungs of the city, but also as a means of social interaction, recreation, and sports activities that can support the quality of life of city residents. Without adequate public spaces, people will be increasingly isolated in the busy city life, and their physical and mental health can be threatened. The Sultan Abdul Jalil Rahmadsyah Field Area has the strategic potential to become a center of environmentally friendly community activities. However, this potential has not been fully utilized due to various obstacles, such as lack of integrated planning, low levels of public awareness, and limited budgets for the development of green open spaces. This research is urgent to formulate the right development concept to ensure that this area can function as a public space that not only beautifies the city, but also provides ecological, social, and health benefits for the community. In addition, the urgency of this research is also driven by the need to create solutions to the limitations of green open space in Tanjungbalai City. The development of Sultan Abdul Jalil Rahmadsyah Field as a green open space integrated with public facilities can be a model for the development of open space in other areas in this city. With in-depth research, it is hoped that an approach can be found that can optimize the function of This region, as well as making a real contribution to creating a more sustainable, inclusive, and livable city for all its citizens.

PROBLEM IDENTIFICATION

The Sultan Abdul Jalil Rahmadsyah Field Area, located in the center of Tanjungbalai City, is one of the open spaces that has great potential to be developed into an environmentally friendly public space. However, until now, the area has not been optimally utilized. Some of the problems faced in the management and development of this area include:

1. Limited Facilities and Infrastructure

This area is not equipped with adequate public facilities, such as playgrounds, recreation rooms, pedestrian paths, and sports facilities that can improve the quality of life of the community. The lack of infrastructure also hinders accessibility and comfort for visitors.

2. Lack of Green Open Space (RTH)

Although the Sultan Abdul Jalil Rahmadsyah Field has a sizable area, most of the area has not been utilized as green open space that can provide ecological benefits, such as reducing air pollution and improving environmental quality.

3. Unintegrated Management

The management of this area has not been carried out in a planned and integrated manner between the government, the community, and other related parties. This lack of coordination results in the neglect of the area's potential as a public space that can accommodate various social and cultural activities.

4. Low Public Awareness

The people of Tanjungbalai City are still not aware of the importance of the existence of green open spaces as part of improving the quality of life and environmental sustainability. This is reflected in the lack of community participation in maintaining and utilizing existing public spaces.

Problem Formulation

Based on the above problem identification, the formulation of the problem in this study is as follows:

1. What is the concept of developing the Sultan Abdul Jalil Rahmadsyah Field Area as a public space that can support various social and cultural activities in Tanjungbalai City?
2. What are the elements that need to be present in the development of the area in order to function optimally as a sustainable and environmentally friendly green open space?
3. What is the role of the government and the community in the management and maintenance of the Sultan Abdul Jalil Rahmadsyah Field area as a public space and green open space in Tanjungbalai City?
4. What are the challenges and obstacles faced in the development and management of this area as a public space and green open space that can provide ecological, social, and health benefits for the community?

II. LITERATURE REVIEW

2.1. Public Spaces and Green Open Spaces

Public spaces and green open spaces (RTH) play an important role in the sustainable development of cities. As a key element in urban planning, they support various social, economic, and environmental aspects for urban communities (Nuraini & Thamrin, 2018). According to Setyaningrum (2023), public spaces are not only a place to gather, but also a space for social interaction that improves the quality of life of citizens. On the other hand, green open

spaces, such as urban parks and open fields, provide significant environmental benefits, such as rainwater absorption, reduced air temperature, and increased biodiversity (Alam et al., 2023).

A green open space area in the middle of the city can improve aesthetics and air quality. This is in line with the opinion of Sukoco and Hidayat (2023), who stated that RTH areas in big cities make an important contribution to reducing air pollution and become places for recreation, sports, and other social activities. Therefore, the importance of developing public spaces and integrated RTH in urban development plans is increasingly emphasized in the latest literature.

2.2. The Role of Public Space Areas in Urban Development

Public space areas have a vital role in the development of the social quality of the community. As explained by Rahmawati (2023), open public spaces such as city parks and sports fields have a great contribution to building a sense of community and increasing interaction between citizens (Juanda et al., 2025). In the context of Tanjungbalai City, the development of the Sultan Abdul Jalil Rahmadsyah Field can be a strategic example in strengthening the public space network, especially in areas with high population density. Furthermore, a well-organized public space can reduce social problems, such as crime and social tension, because people feel ownership and responsibility for the existence of these spaces (Wahyuni & Suryani, 2023).

2.3. Development of Green Open Space for Environmental Resilience

Green open space plays an important role in maintaining the balance of the city's ecosystem. In a study conducted by Wijaya et al. (2023), it was found that the development of RTH in the form of urban parks, urban forests, or open fields can help reduce the effects of urbanization that damage local ecosystems, such as floods and air pollution. In Tanjungbalai City, the Sultan Abdul Jalil Rahmadsyah Field area, with a design that pays attention to green elements and plant diversity, can be an area that supports the city's environmental resilience.

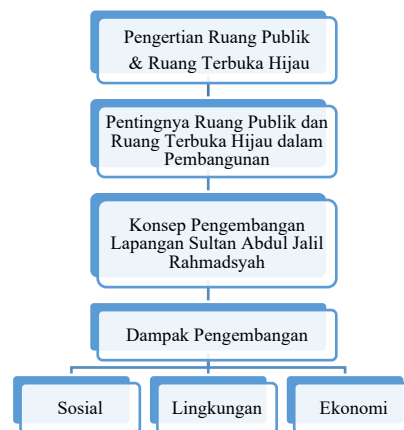
2.4. Concept of Sultan Abdul Jalil Rahmadsyah Field Area Development

The development of the Sultan Abdul Jalil Rahmadsyah Field area as a public space and green open space in Tanjungbalai City must be based on the principle

sustainability and inclusivity. In accordance with research by Setyo & Yanti (2023), in the development of the area, it is necessary to carry out planning involving various stakeholders to ensure that the needs of the community can be met, while the ecological aspect is also maintained. The arrangement of the area with facilities such as pedestrian paths, children's play areas, and spaces for community activities will support the creation of a lively and functional public space.

2.5. Challenges and Opportunities

Although the development of public spaces and RTH has many benefits, its implementation in large cities often faces various challenges. One of them is limited land and the high level of vertical development. According to Hasanah (2023), the solution offered is to design a flexible and multi-functional public space, so that it can accommodate various activities without requiring much space. On the other hand, the development of Sultan Abdul Jalil Rahmadsyah Square can be an opportunity to create a green space that can be accessed by all levels of society while still considering the local social and cultural potential.



2.6. Frame Of Mind

Figure 2.1 Frame of Mind(Source: Author's Thoughts, 2025)

This framework of thought focuses on how the concept of public space and green open space (RTH) can be applied to the Sultan Abdul Jalil Rahmadsyah Field area, as well as its impact on the social, environmental, and quality of life of the community in Tanjungbalai City.

III. METHOD

3.1 Research Approach

This study uses a qualitative approach with a case study method. This method emphasizes an in-depth understanding of social, cultural, or behavioral phenomena of human behavior by utilizing non-numerical data, such as the results of interviews, observations, and documentation (Yin, 2000 in Aris, Nuraini & Milanie, 2024; Hartini et al., 2023; Hidayat et al., 2023). The main focus is to thoroughly explore the meaning, experience, and perspective of the participants in the natural situations that are the object of the study (Yin, 2000 in Marwazi et al. 2023; Pangathousands et al., 2024; Putra and Nuraini, 2024). The qualitative approach was chosen because it can delve deeper into public perception, urban planning, and the social impact caused by the development of the Sultan Abdul Jalil Rahmadsyah Field area. This case study aims to gain a comprehensive understanding of the concept of public space and green open space in the context of Tanjungbalai City (Sugiarto, Kamakaula, et al., 2024).

3.1. Types of Research

The type of research used is descriptive research. Descriptive research is a type of research that aims to systematically and accurately describe or describe the facts, characteristics, or phenomena being studied without manipulating variables (Moleong, 2000 in Nuraini, 2023; Nuraini, 2024a; Nuraini, Azizah & Muharrani, 2024a). The main focus is to explain the "what it is" of a condition or event based on the data obtained, either through surveys, observations, interviews, or documentation (Yin, 2000 in Rahmadhani et al., 2023; Rambe & Nuraini, 2024). This approach is often used to understand situations, tendencies, or relationships between variables in an exploratory manner (Moleong, 2000 in Situmorang and Nuraini, 2024). This study aims to describe and analyze the concept of developing the Sultan Abdul Jalil Rahmadsyah Field area as a public space and green open space based on the perspective of existing theories and practices, as well as current conditions.

3.2. Research Location

This research was conducted in the Sultan Abdul Jalil Rahmadsyah Field area located in Tanjungbalai City, North Sumatra Province. The selection of this location is based on the relevance of the area as one of the potential public spaces to be developed into green open spaces that can support the quality of life of the community.

3.3. Data Source

Qualitative research data can be sourced from primary data obtained through field observation and in-depth interviews, while secondary data can be obtained through related documents (Yin, 2000 in Nuraini, 2009; Moleong 2000 in Nuraini, 2017; Nuraini, 2019). The data used in this study consisted of two types:

- Data Primer:
 1. In-depth interviews with various parties involved in the planning and management of the Sultan Abdul Jalil Rahmadsyah Field, such as the Public Works Office, the Environment Office, and residents around the area.
 2. Field observation of the existing conditions of the area, including public facilities, green open spaces, and the use of space by the community.
- Data Seconds:
 1. Urban planning and public space development documents from the Tanjungbalai City government.
 2. Literature study related to the development of public spaces and green open spaces, both from journals, books, and previous research reports.

3.4. Data Collection Techniques

Data collection techniques in qualitative research can be carried out in three ways, namely interviews, observations, and documentation (Groat & Wang, 2000 in Nuraini, 2023; Nuraini, 2024a; Nuraini et al., 2024a).

- Interview: Interviews were conducted with parties who had information related to the development of the Sultan Abdul Jalil Rahmadsyah Field and the management of public spaces in Tanjungbalai City. This interview technique will produce data on existing policies, constraints, and potentials.
- Observation: Observation is carried out to obtain direct information about the physical condition of the area, the use of public space by the community, and the social interaction that occurs in the space.
- Documentation: Collect relevant documents related to the planning and development of public spaces and green open spaces from the government or related agencies.

3.5. Data Analysis Techniques

The collected data will be analyzed using thematic analysis. The analysis process begins with the transcription of the interview results and the coding of the data to identify the main themes that emerge. (Groat & Wang, 2000 in Nuraini, 2024b; Nuraini et al., 2024b). Observational data and documentation were used to support the findings resulting from the interviews. This analysis technique aims to understand public perception, the challenges faced in the development of public spaces, and the resulting environmental impact.

3.6. Data Validity

The validity of the data in this study was maintained using the triangulation technique, which combines several different data sources, such as interviews, observations, and documentation. Triangulation in qualitative research is a technique to improve the validity of data by comparing and confirming information from various sources or methods (Yin, 2000 in Nuraini et al., 2024b; Pangathousands et al., 2024; Putra & Nuraini, 2024; Rahmadhani et al., 2023; Rambe & Nuraini, 2024; Situmorang and Nuraini, 2024). The goal is to ensure that the research findings are unbiased and reflect reality more objectively. In this way, it is hoped that the data obtained will be more valid and trustworthy.

IV. RESULT AND DISCUSSION

The concept of the development of the Sultan Abdul Jalil Rahmadsyah Field Area.

The concept of developing the Sultan Abdul Jalil Rahmadsyah Field Area as a public space that can support various social and cultural activities in Tanjungbalai City is very important to create a space that not only functions as an open area, but also as a center of inclusive and sustainable

social life. This concept must be based on the understanding that public spaces have an important role in building relationships between citizens, strengthening local cultural identities, and improving people's quality of life (Sugiarto, Yamin s, et al., 2024).



Figure 1. a) Arrangement of the Sultan Abdul Jalil Rahmadyah Field Area of Tanjungbalai City and b) Site Plan for the Development of the Sultan Abdul Jalil Rahmadyah Area of Tanjungbalai City. (Source: Tanjungbalai City PUTR Office, 2025)

Integrated and Multipurpose Spatial Planning

The development of this area should follow the principles of integrated spatial planning, which combines various elements such as green areas, social facilities, cultural spaces, and sports facilities (Marwazi et al., 2023). Regional planning can be done by dividing space into several zones according to the function and needs of the community. Some zones to consider include:

- a) **Recreational and Social Zones:** This area can function as a place to gather, socialize, and rest. It is equipped with garden chairs, walking paths, and green open spaces that can be enjoyed by visitors of all ages.
- b) **Sports and Physical Activity Zone:** This area can be equipped with sports fields, such as futsal courts, basketball, and jogging tracks, which allow people to do physical activities in a healthy and active manner.
- c) **Arts and Culture Zone:** Provides space for cultural activities, such as music performances, dance arts, art exhibitions, and other local cultural activities. This area can also include an open-air stage or amphitheater that can be used for community events or cultural festivals.

2. The Creation of Local Cultural Identity

This area must also be designed to reflect the cultural identity of Tanjungbalai City. This can be achieved by incorporating design elements that depict the local culture, such as statues or monuments related to the city's history, traditional ornaments, or even landscape designs that reflect the local flora and fauna. The use of natural and eco-friendly materials can also be part of an effort to illustrate the philosophy of balance between nature and humans.

3. Accessibility and Connectivity

One of the important concepts in the development of this area is to create good accessibility for all people, including people with disabilities. Safe and comfortable pedestrian paths, as well as easy access to public transportation or parking areas, are essential for this area to

be accessible to all groups. In addition, the connections between the zones and the surrounding areas must be well designed to create efficient connectivity, so that visitors can easily move from one area to another without barriers.

4. Maintenance and Sustainability

The concept of development of this area focuses not only on development, but also on long-term maintenance and sustainability (Alfiyyah & Nuraini, n.d.). Areas designed with sustainability principles in mind will pay attention to the use of environmentally friendly materials, energy efficiency, and regular maintenance of parks and green spaces. In addition, good water management systems, such as rainwater storage and effective waste management, can be part of efforts to create environmentally friendly areas.

5. The Role of Community in Development and Management

The development of this area must also involve the active participation of the community. Local communities should be involved in the planning and management process of the area, both in the form of public consultation and in project implementation. This will strengthen the community's sense of belonging to this public space and encourage them to maintain and maintain this area so that it continues to function properly. In addition, activities held in this area, such as cultural festivals or art markets, can strengthen social ties between residents and create an inclusive space for all groups.

6. Diversity of Social and Cultural Activities

The Sultan Abdul Jalil Rahmadsyah Field Area must be able to support various social and cultural activities that reflect the diversity of the people of Tanjungbalai City. For example, by providing facilities for traditional activities such as regional music performances, local food bazaars, or even skills training. Additionally, the area can be an ideal venue for community events, such as social gatherings, discussions, and workshops involving various elements of society.

With the right development, the Sultan Abdul Jalil Rahmadsyah Field Area will become a public space that not only meets the needs of physical recreation, but is also able to enrich the social and cultural life of the people of Tanjungbalai City. This will certainly support the creation of a more friendly, sustainable, and quality city for all its citizens.

A. Elements of regional development

The development of the Sultan Abdul Jalil Rahmadsyah Field area as a sustainable and environmentally friendly green open space requires the application of various important elements that support its function as the lungs of the city, while providing a

comfortable and safe space for the community. To achieve this goal, some elements to consider include:

1. *Provision of Green Areas and Vegetation*

One of the main elements in the development of green open spaces is the presence of abundant plants and vegetation. This area must be equipped with various types of plants that not only have aesthetic value, but also function to improve air quality, absorb pollution, and provide coolness. The selection of plants that are suitable for the local climate and environmentally friendly is very important, such as large trees that provide shade, ornamental plants that add beauty, and ground cover plants that can reduce erosion and improve soil structure. Local plants that can absorb carbon dioxide and produce oxygen should also be the top choice. In addition, planting trees that can serve as air filters and temperature stabilizers is indispensable to create a comfortable and healthy atmosphere for visitors to the area.

2. *Efficient Water Management*

The importance of good water management in green open spaces cannot be ignored. One of the elements that needs to exist is an efficient rainwater management system. For example, the application of *rainwater harvesting* systems that can capture rainwater for use in watering crops, sanitation needs, or even filling artificial ponds or lakes. In addition, it is also important to have a good drainage system to prevent waterlogging and keep the soil quality stable. The use of plants that have the ability to hold water (such as fibrous root crops) can also reduce the risk of flooding and help maintain the stability of the soil ecosystem in the region.

3. *Use of Eco-Friendly Materials*

Another important element is the selection of environmentally friendly building materials and infrastructure. Materials used for the construction of trails, play areas, and other facilities must take into account environmental impacts, such as the use of recycled materials or materials that can decompose naturally. Additionally, the use of permeable paving blocks on roads or sidewalks can help absorb rainwater, prevent inundation, and reduce the risk of flooding in the area. The lighting used in this area must also be environmentally friendly, such as using energy-efficient LED lights or solar lights to reduce the carbon footprint generated from the use of fossil energy.

4. *Pedestrian Facilities and Environmentally Friendly Accessibility*

To ensure that the Sultan Abdul Jalil Rahmadsyah Square area can function optimally as a green open space, it is important to provide comfortable and safe pedestrian facilities for visitors. Wide, barrier-free pedestrian paths, as well as accessibility for people with disabilities, are essential to encourage people to do more outdoor activities. In addition, it is recommended to develop environmentally

friendly transportation systems, such as providing safe bicycle lanes or easy access to public transportation to minimize the use of private vehicles that can increase air pollution in the region (Juanda et al., 2025).

5. *Waste Management and Recycling*

Another element that needs to be considered is an integrated waste management system. The use of separate bins for organic, inorganic, and recycled waste is essential to maintain the cleanliness of the area while supporting sustainability principles. In addition, facilities for education about the importance of recycling and waste reduction can also be part of the development of this area. The application of *composting* for organic waste can also be used to produce compost fertilizer that can be used to care for plants and enrich soil fertility in the area.

6. *Diversity of Functions and Social Space*

Areas designed as green open spaces must include a variety of facilities that encourage people to engage in social and cultural activities, without sacrificing existing natural elements. This can be realized by providing a large enough open space for social activities, such as playgrounds, sports areas, gathering places, and spaces for cultural or artistic activities. Maintaining a balance between green open space and social space is essential to create an area that is not only environmentally friendly, but also inclusive and beneficial to all levels of society. Each element of these facilities must be designed to maintain environmental sustainability and be able to adapt to climate change.

7. *Environmental Education and Community Participation*

In order for the development of this area to take place in a sustainable manner, it is very important to involve the community in the process of planning, managing, and maintaining the area. Environmental education can be done by holding educational programs for the community about the importance of maintaining green open spaces and environmentally friendly environmental management. It is also important to involve the community in routine maintenance activities of the area, such as mutual cooperation or cleaning of the park area, so that they feel owned and responsible for the preservation of the area.

By applying the above elements, the Sultan Abdul Jalil Rahmadsyah Field Area can develop into a green open space that is sustainable, environmentally friendly, and provides long-term benefits to the people of Tanjungbalai City. Proper management and active participation from the community will ensure the successful development of this area as a healthy and comfortable public space.

B. The role of the government and the community in the management and maintenance of the Sultan Abdul Jalil Rahmadsyah Field area as a public space and green open space in Tanjungbalai City

The Sultan Abdul Jalil Rahmadsyah Field Area, as a public space and green open space, has great potential to improve the quality of life of the people of Tanjungbalai City. In order for this area to function optimally, good management and maintenance are essential. In this case, the role of both the government and the community is very important to create an area that is sustainable, environmentally friendly, and can be used by all levels of society.

1. The Role of Government in Management and Maintenance

The government has a central role in the management and maintenance of the Sultan Abdul Jalil Rahmadsyah Field area (Ramadhani & Nuraini, 2024). Some of the roles that can be carried out by the government are as follows:

a) Planning and Regulations

The government is responsible for designing and formulating sustainable area management policies. This includes formulating regulations that govern the use of green open spaces, engaging urban planning experts, and accommodating a wide range of community needs. The government must also ensure that the design and development of the area is in accordance with sustainability and environmentally friendly standards.

b) Funding and Resources

The government plays a role in providing the necessary budget and resources for the development and maintenance of the area. This financing includes not only initial construction, but also routine maintenance such as watering plants, facility maintenance, and waste management. In addition, governments can look for other sources of funding, such as cooperation with the private sector or international institutions that have a focus on the management of green open spaces.

c) Cross-Sector Coordination

The management of this area requires coordination between various government agencies, such as the housing agency, the sanitation agency, and the environmental agency. Governments also need to work with other relevant parties, such as local communities, civil society organizations, and the private sector to create efficient and sustainable management.

d) Education and Counseling

One of the important roles of the government is to provide education to the public about the importance of maintaining public spaces and green open spaces. The government can hold

counseling programs related to environmental maintenance, the benefits of green open space for health, and ways to participate in maintaining the cleanliness and sustainability of the area.

2. The Role of the Community in Management and Maintenance

The community also plays an important role in maintaining and caring for the Sultan Abdul Jalil Rahmadsyah Field area so that it continues to function properly. Some of the roles of the community in the management and maintenance of the area are as follows:

a) Participation in Management

The community can be involved in the planning and management of this area from the initial stage. For example, through deliberation forums or public consultations that allow the public to provide input related to the design of the area and the type of facilities needed. Community participation in decision-making will create a sense of belonging, so they will be more concerned about protecting and caring for the area.

b) Maintenance and Mutual Cooperation

The community has a direct role in maintaining the area through mutual cooperation activities or participation in environmental cleaning activities. Through routine activities such as tree trimming, garbage cleaning, and facility maintenance, the community will be actively involved in maintaining the cleanliness and beauty of the area. By involving residents, this area will be better maintained and able to create strong social relationships among the community.

c) Environmental Counseling and Monitoring

The community also acts as an environmental watchdog who can report damage to facilities or violations of area management regulations. For example, the public can report acts of vandalism or the use of the area for activities that are not in accordance with the function of public spaces. Besides

The community can also play a role in counseling fellow residents to maintain the cleanliness and sustainability of the area.

d) Environmental Education

The community can play a role in increasing environmental awareness through informal education. For example, by educating children and families about the importance of maintaining green open spaces and their positive impact on quality of life. This can be done through community activities, such as workshops, art and culture classes, or even environmental education programs in schools (Saputra & Sugiarto, 2024).

3. *Collaboration between the Government and the Community*

The success of the management and maintenance of the Sultan Abdul Jalil Rahmadsyah Field Area is highly dependent on strong collaboration between the government and the community. The government as a facilitator must support community involvement in every stage of planning, implementation, and maintenance of the area. This collaboration also includes the development of programs that involve the community in the management of the area, such as the management of parks and green areas together. In addition, cooperation with the private sector and non-governmental institutions can also help create more effective regional management, both in terms of funding and capacity building for the community. This cooperation can be in the form of sponsorship or partnerships in the construction of facilities and the implementation of activities in the region.

By actively involving the government and the community in the management and maintenance of the area, the Sultan Abdul Jalil Rahmadsyah Field Area will develop into a public space and green open space that is not only environmentally friendly but also sustainable, beneficial for health, and strengthens social relations between residents. The government as a facilitator and the community as the main stakeholder will ensure that this area remains a comfortable and productive place for all people.

C. The challenges and obstacles faced in the development and management of this area as a public space and green open space that can provide ecological, social, and health benefits for the community

The development and management of the Sultan Abdul Jalil Rahmadsyah Field area as a public space and green open space that provides ecological, social, and health benefits for the community is not without challenges. Although this area has great potential to improve the quality of life of the people of Tanjungbalai City, there are a number of obstacles that must be faced in realizing this goal. Some of these challenges and obstacles can be divided into several categories, namely ecological and social challenges, as well as challenges related to management and funding.

1. *Ecological Challenges:*

- a) **Climate Change and Environmental Resilience**
Global climate change that impacts weather and rainfall patterns is a big challenge in the management of green open spaces. Rainfall fluctuation extreme drought or drought can affect plant growth and ecosystem sustainability in the region. Management of areas that cannot adapt to climate change risks causing damage to vegetation, soil erosion, and deterioration of environmental quality.
- b) **Limited Natural Resource Management**
Limited natural resources, such as water for watering plants or maintaining ponds and gardens, are also important obstacles in the

management of green open spaces. What's more, if the natural resources used are not managed wisely, this can lead to adverse impacts on the environment, such as over-exploitation or pollution.

c) **Environmental Pollution and Pollution**

Areas located in densely populated and industrial areas often face problems of air pollution and soil pollution. Pollution from motor vehicles, factories, or other human activities can worsen the air and soil quality in the area, thereby hindering the achievement of the ecological goals of green open space development.

2. *Social Challenges:*

a) **Lack of Public Awareness and Participation**

One of the biggest challenges in the management of public spaces is the lack of public awareness of the importance of green open spaces and the shared responsibility in caring for them. People who are less educated about the ecological, social, and health benefits of green spaces tend to care less about maintaining cleanliness or caring for facilities in the area. Without the active participation of the community, green open spaces will not be able to function optimally.

b) **Visitor Density Management**

The Sultan Abdul Jalil Rahmadsyah Field area may be one of the favorite destinations for the people of Tanjungbalai City, which can lead to a high level of visits. Managing visitor density is a challenge in itself because it can cause damage to facilities and plants, as well as reduce comfort for other visitors. In addition, high visitors can lead to garbage pollution, noise, or even safety issues.

c) **Inequality of Access**

It is possible that certain community groups, such as those living in remote areas or with limited mobility, may face difficulties in accessing these areas. This inequality of access can reduce the social and health benefits that can be obtained by all levels of society. Therefore, it is important to ensure that the area is easily accessible to all groups, including people with disabilities.

3. *Management and Funding Challenges:*

a) **Limited Funding**

One of the major obstacles in the development and management of green open space areas is limited budgets and resources. The management of this area requires considerable costs, ranging from infrastructure development, routine maintenance, to other operational costs. Without adequate funding sources, this area is at risk of experiencing a decline in quality, both in terms of facilities and natural beauty.

b) **Limited Human Resources**

Effective management of green open spaces requires a trained and competent workforce in the fields of park maintenance, environmental management, and community education. A lack of skilled labor or staff in this field can hinder the optimal management of the area. Therefore, the development of human resource capacity in this sector must be an important concern.

c) **Weak Inter-Agency Coordination**

The management of this area involves various parties, including local governments, related agencies, the community, and the private sector. The lack of effective coordination between these agencies can lead to policy inconsistencies, overlapping roles, and irregularities in regional management. Therefore, synergy between various parties is needed to ensure the smooth and sustainable management of this area.

d) **Policy Priority Changes**

Changes in political policies or development priorities that occur from time to time can interfere with the continuation of regional management. A change of government or a change in the direction of urban development can lead to a reduced focus on green open space management, thus harming the sustainability of this project.

4. Technical and Infrastructure Challenges:

a) **Limitations of Supporting Infrastructure**

The infrastructure that supports the management of the area, such as drainage systems, sanitation facilities, and environmentally friendly transportation facilities, is often inadequate. Poor drainage systems can lead to flooding, while inadequate transportation facilities can make the area difficult for visitors to reach, reducing comfort and accessibility.

b) **Facility Breakdown and Maintenance**

Facilities in green open spaces, such as playgrounds, walkways, or ponds, are vulnerable to damage from inclement weather, pollution, and intensive use. Inconsistent routine maintenance can lead to a decrease in the quality of facilities and the beauty of the area, thereby reducing its attractiveness for visitors.

The development and management of the Sultan Abdul Jalil Rahmadsyah Field area as a public space and green open space in Tanjungbalai City faces various ecological, social, and management challenges. Ecological challenges, such as climate change and environmental pollution, require special attention in the planning and maintenance of the area. On the social side,

Low public awareness and accessibility issues are obstacles that must be overcome. In addition, challenges in terms of funding, inter-agency coordination, and infrastructure management require comprehensive and collaborative solutions between the government, the community, and the private sector. Overcoming these

challenges requires strong commitment, careful planning, and active participation from all parties involved. Thus, this area can provide maximum ecological, social, and health benefits for the people of Tanjungbalai City.

V. CONCLUSION

Conclusion

The development of the Sultan Abdul Jalil Rahmadsyah Field Area as a public space and green open space in Tanjungbalai City has great potential to improve the quality of life of the community. These areas can provide significant ecological, social, and health benefits, by improving air quality, providing space for social activities, and supporting healthy lifestyles for communities.

However, in the process of development and management, there are various challenges and obstacles, both ecological, social, and related to funding and infrastructure management. Ecological challenges, such as climate change and pollution, can affect the sustainability of the region. From the social side, the lack of public awareness and accessibility issues are obstacles in optimizing the benefits of this green open space. On the other hand, limited funding and coordination between agencies are also factors that affect the effectiveness of the management of this area.

To overcome these challenges, an active role from the government, the community, and the private sector is needed in the planning, development, and maintenance of this area. Collaboration between various parties and careful planning will ensure that the Sultan Abdul Jalil Rahmadsyah Square area can develop into a sustainable public space and green open space that is beneficial to the entire community.

Suggestion

1. **Increasing Public Awareness**

Educational programs and campaigns are needed to increase public awareness about the importance of green open spaces and their impact on health and quality of life. The government and related institutions must actively involve the community in the planning and maintenance of this area.

2. **Collaboration Between Government and Community**

The management of this area requires strong cooperation between the government, the community, and the private sector. The government must provide sufficient resources and facilitate community participation in maintaining the cleanliness and sustainability of the area.

3. **Sustainable Funding and Infrastructure**

The government must find adequate funding sources to support the management and maintenance of this area, either through the regional budget

as well as cooperation with the private sector. The development of environmentally friendly and sustainable supporting infrastructure must also be a priority.

4. **Adaptive Planning for Climate Change**

Planning and management of these areas must take into account the impacts of climate change. With adaptation-based approaches, such as the use of crops that are resistant to climate change and efficient water management systems, the region can remain sustainable.

5. Improved Accessibility

This area needs to be designed to be accessible to all levels of society, including those with physical limitations. Eco-friendly transportation facilities and easy access from various points in the city should be part of the planning.

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