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The Analysis of Public Green Open Space Management in Jambi City

Abstract
The growth of the population requires space to accommodate human activities. The development aims to provide a space for humans, but it has an impact on the decreasing green open space. The majority of previous research examines the policy, policy implementation, community support/involvement, and the need for green open space. While this study examines the management and the factors of the management of public green open space, the research uses a descriptive qualitative method by utilizing primary data through interviews and observations and is supported by secondary data, such as reports, rules, and research results. This study found that the management of green open space, and regulations were available at the regional level; however, for the fulfilment of public green open space only reached 10.76% while still lacking 9.24% because the management faces the substance and technical problems. To fix these deficiencies requires a master plan and a strong leadership commitment to realize these deficiencies.

Keywords:
factors; green open space; management; public.

Introduction

The discussions about environmental issues are always exciting topics because they are related to human life. Almost all cities in Indonesia face the issue of decreasing green open space (GOS). It is caused by the speed of horizontal and vertical development. In almost all major cities in Indonesia, the green space currently only reaches 10% of the city area (Hamrun & Prianto, 2017). Its function still has a complimentary meaning for urban areas, and the use of land is considered an enhancer of environmental aesthetics. Ironically, the perspective appears that at any time, it can be replaced with more economically beneficial uses. As a result, the economically successful development threatens the existence of the space, even its existing is functioned as built-up land.

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GOS is a vegetated open space in urban areas that functions as a recreational, social, cultural, aesthetic, physical city, ecological area and has a high economic value for humans and development. It can be in the form of urban forests, city parks, public cemetery parks, sports fields, green lanes, highways, railroad banks, and river banks. But a space with ecological functions makes green space as one of the functions of land that is often sacrificed in building and developing a city. The availability of the space plays an essential role in providing freedom of movement for users because the activities and developments of the city are increasingly developing following the demands and needs of the people who live in it (Krisnawati, 2009).

The existence of public green open space (PGOS) is essential in urban areas, especially infiltration land. Its existence has its own economic, social and environmental preservation for the urban community and a group of vegetation. However, decision-making is mainly in developing countries, rarely considering the balance of these aspects (Benchimol, Lamano-Ferreira, Ferreira, Cortese, & Ramos, 2017). In general, decision making prioritizes aspects of economic development rather than paying attention to improvements to the environment and liveable cities.

The country has responsibility for the protection and environmental management. Clearly, in Article 28, H paragraph (1) 1945, the Constitution of the Republic of Indonesia regulates that everyone deserves the right environment and healthy living. It goes the same with the 1945 Constitution of the Republic of Indonesia, the United Nations Conference on Environment and Development (UNICED) in Rio de Janeiro, Brazil in 1992 and the Johannesburg Declaration on Sustainable Development, South Africa in 2002 led to a joint agreement that a city should ideally have GOS of at least 30% of the total area of the city (Astriani, 2014).

Law No. 26, the Year of 2007 about spatial planning regulates the proportionality of GOS at least 30%, with detail 20% for PGOS and 10% for private GOS owned by a private or society of the area of the city as a whole. The development, structuring, and fulfillment of proportions to meet the needs of urban communities is the responsibility of governments at various levels, starting from the central government, provincial governments, regional governments, the private sector, and community participation.

The increase in population will have an impact on horizontal and extension for physical development and threaten the existence of GOS. The decrease of environmental quality will cause pollution and urban heat effects (Asidiqi, Utomo, & Soedwiwahjono, 2017; Shofwan, 2017; Yamagata & Seya, 2013). It also decreases the productivity of economic activities and disrupts the comfort of life in urban areas (Puspitojati

& Samsoedin, 2015). In the context of Jambi City, population growth continues to increase, so it requires proper GOS. In 2013, the number of populations was 569.331, it became 612.703 populations in 2018 or increasing around 7,6% (BPS Kota Jambi, 2019; Dukcapil Kota Jambi, 2018).

The main issue in the management of GOS in Jambi City is the absence of provision fulfillment of at least 30%. Its development plan in Jambi City based on the regional regulation of Jambi City number 9 of 2013 about the Jambi City's spatial plan in 2013-2033, covering an area of approximately 5,381.79 Ha consisting of 1,764.29 Ha of private GOS. 3,617.50 Ha of PGOS, while has been available around 1,889.50 hectares or around 10.76% of the Jambi City, reaching 17,552.83 hectares (DLH Jambi City, 2019). That number shows the availability of PGOS of less than about 9.24%.

The existence of GOS in Jambi City has not yet met the quantity while the increasing number of people continues indicates the importance of conducting a study about this. Some relevant studies emphasize aspects of development and functional policies (Syahadat & Sylviani, 2016). The implementation is more dominant in terms of communication, resources, attitudes, and bureaucratic structures, factors in implementation, challenges, and efforts to improve implementation (Setyati & Utomo, 2015; Wijayanto & Hidayati, 2017; Wulandari & Nurarpenia, 2018).

While other studies are looking at the aspect of community support and regional planning agencies for better management (Schuch, Serrao-neumann, Morgan, & Choy, 2017), the qualitative needs the GOS approach to the administrative area and population (Prakoso & Herdiansyah, 2019). The analysis to display the green index of smart city planning (Anguluri & Narayanan, 2017). Those literature show that the provision of GOS is still at the level of regulation; in the implementation, there are still various challenges. Those studies suggest the commitment of the central and local government's involvement of the community in the management.

What makes this study relevant is that it analyzes the management and factors that influence the management of GOS in Jambi City. This paper is based on the argument; urban development needs to consider the ecological system for human survival. Thus, in the ecosystem of harmony, human relations with the environment must be balanced. The citizen needs the availability of nature to breathe; the availability of GOS, both in quality and quantity, is needed. The quality of green space can be seen from the visual quality and its function on fulfilling needs, while the quantity is measured from the availability of adequate green space. This study assumes that there is a commitment to realize at least 20% of the PGOS through rules. However, the implementation of government policies to face various challenges.

Literature Review

Open space is spaces in the city or broader places both in the area/region or in a horizontal area, and it's use is more open without any building around it. GOS is a horizontal/pathway and grouping area, the use of it is more open, a place to grow plants, both naturally and intentionally planted (Cahyani, Edel, & Ngapa, 2019). According to Shofwan (2017), the existence of green space is one of the balancing factors of an area so that it can still provide stability to the life dynamics around it.

According to Astriani (2014), forms of GOS are city parks, public square, a ground of city buildings, street sides, riparian areas, particular areas, agricultural areas. Anguluri & Narayanan (2017) add that area includes not only green but also includes blue areas such as riparian zones and lakes that support the growth of green plants. Often, green ecosystem services such as this are unconsciously enjoyed by urban communities.

PGOS is a reforestation place that is managed and owned by the regional/city government. The place can be used for things that are general to the community, such as places for social activities, such as recreation or community sports activities. In contrast, private GOS is a GOS that is managed and owned by a particular institution/ institution, or individual. The function can be addressed of plantations, fields, or plants planted by private parties/communities both individually and for non-government institutions (Wulandari & Nurarpenia, 2018).

GOS in urban areas plays an essential role as an ecological function of the city to maintain biodiversity and provide ecosystem goods and services, such as air and water purification, pollination, and insect regulation. Understanding the relationship between the social and ecological role of vegetation in green spaces is essential for urban planners and planners who seek to provide spaces that meet community needs and have positive ecological results (Harris, Kendal, Hahs, & Threlfall, 2017).

Based on the Minister of Public Works regulation number: 05/PRT/M/2008 concerning guidelines for the provision and utilization of GOS in urban areas, green space has social and cultural functions, economic functions, and aesthetic (ecological) functions. While regulation of Home Affairs Minister No. 1 of 2007 concerning the arrangement of GOS in urban areas and regulation of Forestry Minister Number P.71/Menhut-II/2009 of 2009 concerning guidelines for managing urban forests, the function of GOS is only as an ecological function. According to Syahadat & Sylviani (2016), the goal of developing green space based on the three regulations is to have the same, such as to maintain the sustainability, harmony, and balance of urban ecosystems that are safe, comfortable, fresh, beautiful, clean which includes environmental, social and cultural elements.

The management of GOS considers various aspects, such as the existence of regulations and policies from various levels. This approach considers the rules of the play, actors, discourse, and interrelated resources (Fongar, Randrup, Wiström, & Solfjeld, 2019). Environmentally sound development related to the availability of GOS is not only required proper planning but also requires supervision in the implementation or implementation of the plan. Supervision is oriented towards organizational goals, planning, and implementation (Wijayanto & Hidayati, 2017).

The implementation of GOS in urban areas is generally through planning and design and subsequently maintained and further developed through landscape management, shaping the content and quality. Landscape planning, design, and management all affect children's environmental friendliness. Still, management has not yet been explored in this aspect, even though its primary purpose is to meet the needs and perspectives of users. In cities, three levels of green space management can often be distinguished: policy/strategic (politicians), tactical (civil servants), and operational (park workers, often entrepreneurs). Process management has the potential to approach the users at the local level, free, immediate, and days that can be valuable to include the views of children (Jansson, Sundevall, & Wales, 2016).

City management can be described as a set of activities that lead to social, physical, and economic development. The management of GOS will influence changes in quality and quantity. It is not easy to improve urban institutional strategies and have measurable outputs. There are several aspects of managing green space, such as planning, institutional, human resources, coordination, and funding (Hamrun & Prianto, 2017).

Management is defined as a process of activities that starts from planning, organizing, directing, and supervising, then using organizational resources to achieve predetermined organizational goals. An analytical framework to assess the management and factors that influence

the management of the Jambi City using the criteria of efforts to maintain the existing area and quality of GOS, restore the function of the area that has changed function and development of new GOS, improve the quality and rehabilitation of areas that have decreased function, development of new technologies, building new infrastructure, especially green roads, as well as land acquisition.

Methods

This research was conducted in Jambi City using exploratory qualitative methods to understand the management and issues of GOS (Soehartono, 2008). The determination of the issue of the management of PGOS based on conditions that do not meet the rules of a minimum of 20% as stipulated in Law number 26 of 2007 on spatial planning and regional regulations number 9 of 2013 concerning the spatial plan Jambi City. The research was conducted in Jambi City with an existing area covering an area of 17,553 hectares and consists of 8 sub-districts, 62 local state governments.

Data sources in the study were obtained through interviews and observations. Determination of informants was done via purposive sampling, namely the technique of taking out informants with specific considerations. In this case, the researcher chooses informants who are considered to know the problems to be studied and can provide information that can be developed to obtain data. From the main informant, then it is developed to find other informants by using snowball sampling and obtaining informants continuously so that researchers have strategic information related to the required data.

Data collection was carried out through structured and unstructured interviews. Meanwhile, observations were made directly in the ideal PGOS conditions to be identified and seen by the eye (Corbetta, 2003). This research is based on primary data from in-depth interviews and observations at the Jambi City Environment Office, Jambi City Development Planning Agency, Jambi City Public Development Office and based on secondary data in the form of reports, research results, news from the media, the results of the study are used as supporting material research analysis.

Furthermore, data analysis was carried out using coding methods from primary and secondary data. This technique is used because it is to obtain the meaning of any information from various sources. Besides, coding is useful for finding trends in the information that can be justified. The results of data coding are described through a narrative that shows the management of GOS and the factors that influence it. The research findings data are presented in a narrative manner supported by relevant numerical data. Then a data analysis was carried out with various literature findings and interpretations of the field data. In addition, the authors will confirm the specific findings in this study so that they can contribute to the study of GOS management. At the end of this study will confirm the findings and results of the discussion and then provide recommendations.

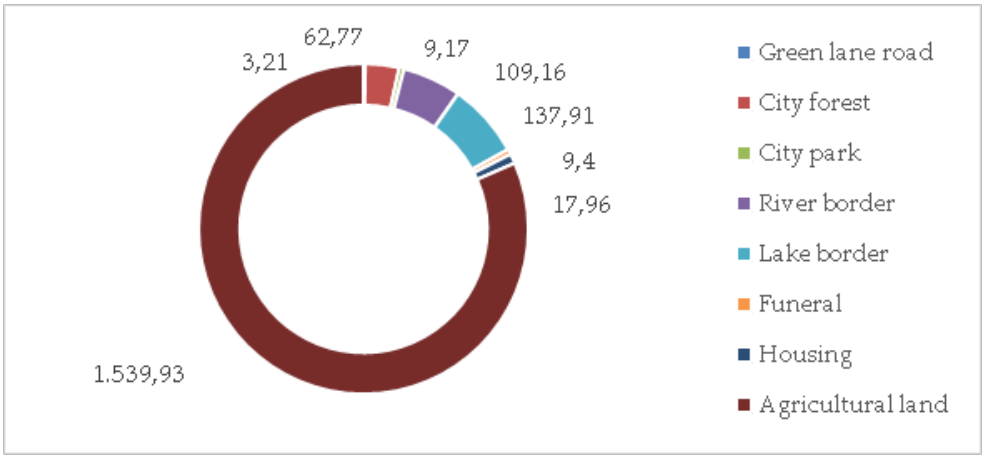
Results and Discussion

Existing Condition and Management Policy PGOS in Jambi City

Jambi City is one of 11 cities/districts in Jambi Province with an area of ± 17,552.83 Ha, located between 01 ° 30'2.98 "to 01 ° 7'1.07" the southern pathway, and between 103 ° 40'1.67 "up to 103 ° 40'0.23 " east longitude. These coordinates indicate the existence of Jambi City is located almost in the middle of the island of Sumatra. Geomorphological, the Jambi City is located in the western part of the southern Sumatra basin called the Jambi Sub-Basin, which is the lowlands of East Sumatra (Jambi, 2018).

Spatial management in urban areas requires appropriate policies to provide a suitable living environment for existing ecosystems. The

Figure 1.
Availability of Jambi City PGOS in hectares



Source: DLH Jambi City, (2019)

management of green space is conducted based on various regulations that regulate the provision of GOS management. The management of GOS in Jambi City refers to Law Number 26 of 2007 concerning spatial planning. Technically, the rule is encouraged by regulation of Home Affairs Minister Number 1 of 2007 on Spatial Planning Green Open Urban Area, Regulation of the Minister of Public Works No. 05/PRT/M/2008 on Guidelines for the Provision and Use of GOS In Urban Areas and Regulation of the Minister of Forestry of the Republic of Indonesia Number: P.71/Menhut-II/2009 Concerning Guidelines for Managing City Forests.

These rules become guidelines in managing PGOS by drafting local regulations Number 9 Jambi City in 2013 about the spatial plan Jambi City years 2013-2033 of approximately 5,381.79 hectares, which consists of 1,764.29 hectares of private GOS and 3,617.50 Ha of public GOS. In terms of medium planning, the management of GOS has been planned through the enactment of Jambi City Regulation Number 8 of 2014 concerning the Medium-Term Development Plan of the Jambi City in 2013-2018.

The regional regulation on the spatial plan of Jambi City regulates a minimum of 3,617.50 hectares of PGOS or 20% of the total area of the Jambi City. At this time, the existing of PGOS Jambi City around 1,889.50 hectares or around 10.76% of the total area of the Jambi City, 17,552.83 hectares (Figure 1). If seen from the local regulations, the Jambi City still lacks PGOS around 9.24%. The spatial plan regulation of Jambi City sets that PGOS at least 20%. It is conducted through preserves, stability, improvement, and provision that is proportional in all areas of the city (Table 1).

Table 1.
Management of GOS in the city of Jambi

Number	Information
1	Stabilizing functions and managing existing GOS
2	Returns the GOS that has shifted function
3	Enhancing availability of GOS in city centres
4	Develop innovation in providing GOS
5	Develop partnerships or cooperation with the private sector in the provision and management of GOS

Source: Jambi City Regional Regulation number 9 of 2013 concerning the Spatial Planning of Jambi City in 2013-2033

The implementation of the GOS program is implemented by the Office of Environment in Jambi City in collaboration with the private sector. The cooperation in achieving common goals is conducted using a system of work contracts or

the existence of an employment agreement. The cooperation carried out is cooperation in building PGOS.

Management of PGOS in the city of Jambi

The management of GOS considers various aspects, such as the existence of regulations and policies at various levels. This approach considers the rules of the game, actors, discourse, and interrelated resources. Environmentally sound development related to the availability of GOS not only requires careful planning but also requires supervision in the implementation or implementation of the plan. In this case, the city of Jambi has a regulation as a normative force in planning GOS in Jambi City.

The GOS planning effort is made through arrangements and efforts to give way to various development activities so that the changes that occur can develop in better conditions than they currently exist so that in the end they can give specific characteristics of the stable and dynamic nature of the region's life, but still able to maintain a balance between the built space and GOS. Thus, it is expected to be able to get a picture of the potential, then become specific in each region so that it can increase the interest of development actors to participate in the development of.

Open space not only serves to develop social interaction in an area but also plays an essential role in maintaining the ecological system as a whole as well as supporting the formation of environmental, aesthetic elements. GOS can be intended to reduce the adverse effects caused by the built environment in urban areas, such as an increase in air temperature, a decrease in the level of water absorption and humidity, pollution, and so forth. Because of its complex importance, the government regulates the use of open space. In the level of territory, an ideal quantity and quality of land are regulated, including the percentage of open space that supports the preservation and improvement of quality of the environment and inhabitants.

PGOS as part of urban spatial planning needs to be planned thoroughly and strengthened by strict local regulations to clarify its legal status, thus developing and managing it more directed and can avoid changing the function of GOS into other functions (Sudarwani & Ekaputra, 2017). Management of PGOS in Jambi City refers to several related policies. This policy is a policy that is applied at the national and local levels (Jambi City). This policy is considered to affect how the government regulates and manages urban GOS without any other interests affecting it.

One of the goals of the development of the spatial plan of Jambi City based on 2013-2033 is spatial planning to realize the Jambi City as a centre of trade in goods and services on a national scale that is religious, cultured, orderly, safe, comfortable and sustainable. The determination of the mission is an effort to realize the development of an ecological city; one of the indicators is the provision of GOS. The implementation of the mission explained in the form of policies programs in the field of GOS, development of private and public.

Planning is one aspect of environmental management, including the management of green quarter for residential environments. A stable green space planning can maintain balance and harmony between the built and open spaces in a settlement. The preparation of a management plan first makes the concept of GOS planning, whether in the form of urban parks, recreational facilities or educational facilities, and others besides, that the most important thing is the status of the land not in dispute (Syahadat & Sylviani, 2016).

The city's spatial plan is a general plan that becomes a reference for an urban city to do spatial planning in its area/city and is arranged in more detail in a strategic plan in the form of a spatial detail plan for the city and spatial plan for the strategic area of the city. The mayor, as the head of the area along with competent staff in the field of urban planning, must have a clear

vision of the progress of an urban area. Not only advances in economic aspects but must also be accompanied by proper planning in terms of the environment, in the interests of urban society, and also environmental preservation (Cahya, Widyawati, & Ayodhia, 2019).

The proportion of 20% of PGOS is a minimum measure to guarantee the balance of the city's ecosystem as well as the balance of the hydrological system and the microclimate system along with other ecological systems, which will further increase the availability of clean air needed by the community, while simultaneously increasing the aesthetic value of the city. The minimum proportion regulated by the city government is intended to guarantee to achieve the standard to enable its widespread use by the community.

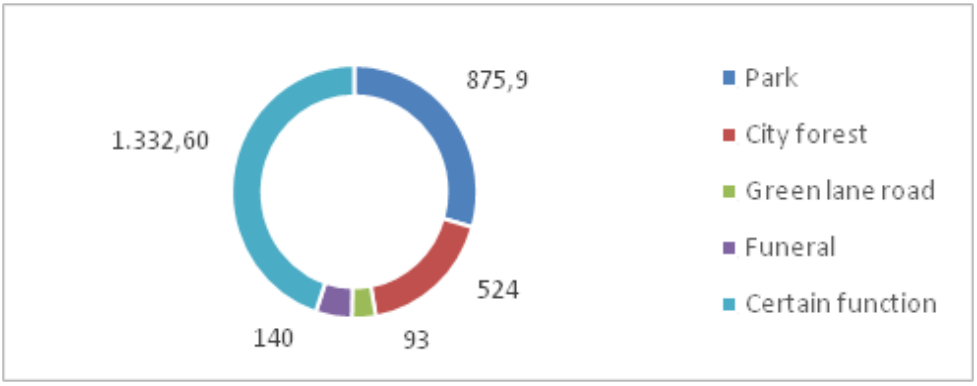
The PGOS management plan (Figure 2) consisting of:

a. Maintaining the extent and quality of GOS existing
b. Returning the function of GOS areas that have changed functions
c. Rehabilitating GOS that has decreased function
d. Improving the quality of GOS that already exist in all areas of the city
e. Developing of new GOS in the growth center
f. Developing of new technologies in the provision of GOS in the downtown area
g. Building new GOS infrastructure, especially green roads on planned arterial and collector roads
h. Developing and managing City Forest GOS, and Acquisitions of land to fulfill the needs of GOS (Jambi City Regional Regulation number 9 of 2013 concerning the Spatial Planning of Jambi City in 2013-2033)

The management of GOS in Jambi City is conducted by the Office of the Environment of Jambi City, covering regulations and policies that have been resolved. Its management in practice is more dominated by technical activities such as the installation of protective tree labels to protect various types of green trees as well as educating the public not to do illegal logging. Structuring parks, green lanes make other management efforts and greening the lake area.

The management of GOS has been reflected in the Jambi City mission, which is contained in a medium-term development planning document to develop infrastructure in an environmentally friendly city area. To realize these goals is certainly not easy because it must require significant funds for land acquisition. Prakoso & Herdiansyah (2019) suggested that in order to realize a 30% green space, it is necessary to do the planning and cooperation of various parties, namely collaboration between stakeholders, increasing

Figure 2.
Management plan of PGOS Jambi City in a hectare



Source: Jambi City Regional Regulation number 9 of 2013 concerning the Spatial Planning of Jambi City in 2013-2033

community participation, and strengthening regulations that are consistent and sustainable.

Based on the spatial plan and mid-term development plan, the Jambi City government manages GOS. The government built city parks by utilizing vacant land contained in the median of roads and utilizing public and social facilities. Urban development activities are carried out in coordination with the provincial government, and cross-departmental coordination in the Jambi City. Internal coordination between Jambi City offices runs according to the functions of each department. While coordination with the provincial government faces the challenge of disharmony in institutional relations, it often overlaps in the management of green space in the Jambi City area.

Furthermore, after the existence of regulations and policies that have been established by the government regarding the development of GOS in Jambi City, the Government has implemented a management pattern for GOS by implementing policies through organization, interpretation, and application (Fitriani, 2018). Organizing refers to implementation of policies, the determination of implementation management, and administration of work procedures by observing the authority of the implementers as well as the coordination between the Environmental Agency and the local government and the community. Then the management is carried out with an interpretation in the form of policy communication with the direction of policy objectives, namely communicating the policy of Jambi City Regional Regulation Number 9 of 2013 concerning Jambi City spatial planning through socialization and meetings regarding targets to be achieved. The interpretation looks at the critical role of leaders who have authority in managing GOS. Furthermore, management through the application becomes the implementation of the process plan into realization. And based on research programs that have been compiled to implement the implementation of the GOS policy, it can increase the quality and quantity of GOS in the medium-term plan of Jambi City.

Factors affecting the management of green open space

The management of GOS in Jambi City is influenced by various factors that can support it or be an obstacle. These factors determine the success or failure in meeting the minimum availability of 20% of PGOS (Table 2).

Table 2.
Affecting factor

Supporting factors	Obstacle factor
- The availability of a legal basis from the central and regional government level. - Local government commitment. - NGOs Support.	- Long decision-making process. - The weak policy implementation. - Weak public awareness. - Weak financing / regional budget. - The complexity of the process of land acquisition. - The pace of city development.

Source: Field data processed

Supporting factors

GOS management to achieve at least 20% in the Jambi City supported by policies at the local level through local regulations Jambi number 9 in 2013 About the Spatial Plan of the city of Jambi in 2013-2033. The regulation confirms Law Number 26 of 2007 on spatial planning that sets 20% of the land for PGOS Jambi City. This policy has a strong foundation in planning for managing GOS in Jambi City.

The existence of regulations that become prime supporting factors can make an initial planning document preparation about the manufacture of GOS land. Laws arranged within the scope of the planning period of 20 (twenty) years following the Spatial Plan period in Jambi. The compilation of local

regulations is aimed at the Jambi City Government, the private sector, and the community. The Jambi City Government can make use of the local regulation to develop a GOS plan as one of the primary references in establishing sustainable development policies. Whereas for the private sector, through the GOS master plan can gain business opportunities to support green city development policies.

Besides supporting the availability of these rules, the commitment of the city government is one of the keys to successful management. The Jambi City government is committed to meeting the minimum standard of 20% PGOS. It can be seen by the mid-term development plan that was prepared and implemented by the local government. This commitment started since 2013; the city government has consistently carried out public and private green space management.

Another supporting factor is the support of non-governmental organizations (NGO) that are concerned with environmental issues. It is one of the elements that always campaigns and advocates for the importance of the availability of GOS. The existence of NGOs such as Walhi Jambi plays a vital role in providing input to the city government to meet the needs of GOS.

Obstacle factors

In addition to the supporting factors, the management of PGOS does not always match what is expected, often influenced by challenges caused by both external and internal factors, resulting in mismatches between plans and the actual reality of conditions in the field. Proper planning will make good environmental quality and can be anticipated if there is a change in the social environment.

In various areas, the availability of GOS has decreased significantly, especially in the last 30 years. The decrease is caused by the conversion of land into built-up land to accommodate the population and its activities. This condition is worsened by weak regulation and law enforcement, followed by low public awareness of urban spatial planning. The implication is that slums appear, irregular, unhealthy urban planning, traffic jams, and other social problems (Dwiyanto, 2009).

The management of PGOS will meet challenges related to the differences in viewpoint planning and management concepts (Feltynowski et al., 2018). The political process in making long decisions, limited or inadequate financing, problems of low technical ability, and low community support (Prakoso & Herdiansyah, 2019). The management of PGOS in the Jambi City faces constraints of weak coordination between the Jambi City government and the Jambi provincial government. The provincial government manages PGOS such as Sri Soedewi Orchid Square and Tugu Juang Square, while the Jambi City government manages up to 54 city parks.

Other problems related to the fulfilment of PGOS by 20% are also related to low supervision, high land prices due to speculation by land speculators, a growth rate of job which has implications for physical development, and lack of socialization (Wijayanto & Hidayati, 2017). In the densely populated city has difficulty in providing and land acquisition, availability of human resources is not sufficient, and commitment of the low government. Such as the conditions become worse by public awareness of the importance of GOS (Wulandari & Nurarpenia, 2018).

A technical problem in the management of GOS in Jambi City is land acquisition; land prices are very expensive, so it is not surprising that the management of the space in Jambi City is more dominant in the arrangement of city parks, green lanes, lake borders (such as Sipin Lake). According to Cahya, Widyawati, & Ayodhia (2019), the real issue was determining policy and political aspects. The decision-making process is closely related to the plan made by decision-makers who have various socio-political backgrounds.

The high cost of land acquisition costs is related to the rapid growth of development in Jambi City. A total of 4,589 building permit documents were recorded during 2018 (DPMPTSP Kota Jambi, 2019). This condition is exacerbated by the low public awareness of the presence of green space. Besides, the Jambi City government has difficulty finding large areas for the construction of new green space. They were accompanied by efforts to destroy existing PGOS facilities. Dewi & Agustina (2018) argued that the problems in urban planning are budget constraints, the availability of human resources who are in the process of implementing policies.

Rapid city development without being accompanied by a good concept of sustainable development has left many problems that contribute to the destruction of urban ecology. Urban areas that become industrial areas, as well as residential areas, cause sustainable development in urban areas to develop rapidly. However, many developments in urban areas sometimes do not pay attention to urban spatial planning so that cities lose GOS and its beauty. Urban development has promoted two of the pillars of sustainable development, namely social and economic. Where in terms of urban social society has increased well-being related to public services in it, while in terms of economic rapid industrial growth impact on the opening of employment opportunities that can improve the standard of living of the people there.

From the findings of the implementation of GOS in Jambi City, it was found that the GOS that had been realized was GOS for government urban areas covering an area of 1,889.50 hectares or about 10.76% of the total area Jambi City. And this shows that the city of Jambi still has a lack in PGOS development of around 9.24% as a fulfillment of the balance needs of the city's ecosystem.

Although this study has findings that are generally the same as the results of previous studies, based on the results of the analysis, it is found that this study has a significant difference. Previous research has focused more on the aspects of community support and regional planning agencies for better management of GOS (Schuch et al., 2017), further looking at the qualitative need for a GOS approach for administrative areas and appropriate population. With the city situation (Prakoso & Herdiansyah, 2019), and analyzing the green index of smart city planning in the application of GOS (Anguluri & Narayanan, 2017). However, this research provides renewal of which can find various essential aspects in the application of GOS and provides a critical analysis of management GOS by looking at management and supporting factors as well as inhibiting factors of GOS, which will explain the increasing implementation of GOS in cities, especially Jambi city. Besides, this study looks at the normative aspect of the implementation of GOS, which is a strength in urban progress.

Various regulations have been stipulated in the implementation of GOS in the city of Jambi starting from planning and management, for the PGOS area required by the Jambi City to set a minimum size of 20% of the city area as an ideal condition for the availability of PGOS stipulated in Regional Regulation number 9 of 2013 concerning the Jambi City Spatial Plan 2013-2033. However, in its implementation, the city of Jambi still has unfinished work due to the unfulfilled ideal GOS for the city's needs with a capacity of 5,381.79 hectares. The plan for the area of GOS for Jambi City must be fulfilled stages through the allocation of land for the Jambi City until 2033.

The development of PGOS in Jambi as an arrangement for the balance of the urban ecosystem is also a mandate of Law number 26 of 2007 concerning spatial planning and a crucial part required by the government as an effort to create a healthy, clean and beautiful Jambi City for the benefit of all its citizens so that able to filter and absorb pollution, air, and binding water, as well as greening. Besides, the development of

GOS also provides benefits for environmental preservation and protects the lives of living things, including human welfare.

The development of GOS in the Jambi City is managed by the local government and the Jambi City environmental service. Its management is regulated through a planning and regulatory process as well as policies related to GOS. Planning that has been established by the government in the form of open land facilitated the community, including parks, urban forests, green lane roads, cemeteries, and land with specific functions. In its management, activities were also found to dominate the installation of protective labels for green tree species and to educate the community, which continues to be developed so as not to carry out illegal logging. In the case of Jambi City, the government manages and builds GOS by utilizing empty land and road median land, which is used as public and social facilities. This shows that the implementation of GOS Jambi City requires land development due to the lack of land to open GOS, which is also caused by the densely populated city of Jambi.

In the management of green open land management, the government applies a management pattern by implementing policies through organization, interpretation, and application. And based on research programs that have been compiled to implement the implementation of the GOS policy, it can increase the quality and quantity of GOS in the medium-term plan of Jambi City. It is not an easy matter in realizing GOS. The local government must see various supporting and inhibiting factors in its implementation; it can be seen from the finding that Jambi City has more inhibiting factors than supporting factors. This is a significant challenge for Jambi City in improving open space for applying greening in the city.

Supporting factors for the implementation of GOS, such as the availability of a legal basis from the central and local governments, can have an impact on the initial planning of GOS land creation so that the government has a basis for land quantity. Support for the commitment of local governments can bring positive things both in quality and quantity, especially with support. NGOs will be very helpful in their implementation. However, it should be noted that it is not easy to face various factors that hinder the implementation of GOS in Jambi.

In contrast, the obstacle to the implementation of GOS is a lengthy decision-making process, and weak policy implementation is governance that must be improved immediately. Then the weakness of public awareness is a challenge for city governments in shaping public perceptions, so socializing GOS in the City of Jambi is still very much needed. Weak regional funding/budgeting is a big problem in GOS development because there is not a small number of funds spent in implementing this GOS, so that the government must plan a thorough budget plan for GOS. In implementing GOS in Jambi city, one of which is land acquisition with high land prices, which costs money, so the efforts that the government can make are to determine the policy and political aspects. The decision-making process is also related to the plan of decision-makers who have various socio-political backgrounds. Then the Jambi City government must be stable in taking a policy in planning and managing GOS in urban areas, which has an essential role in flora and fauna and ecology. The government also needs to plan and collaborate with various parties, such as collaboration between stakeholders, increasing community participation, strengthening of consistent and sustainable regulations.

Conclusion

Based on the research objective is to analyze the management of PGOS in Jambi City and the factors that influence its management. This study reports that the management of GOS in the

Jambi City in terms of rules and planning shows commitment through the regional regulation on the spatial plan and mid-term regional development plan to realize a minimum limit of 20% availability. In the implementation of government regulations and the plan Jambi City will use to maintain the existing focus area, quality improvement and rehabilitation of the region, building new infrastructure such as the arrangement of the city park, the green pathway. Meanwhile, the standard fulfillment minimum through developing acquisition land for GOS is not the primary concern. So, the availability of PGOS in Jambi City is only around 10.76% and still lacks around 9.24%. The level of implementation of the law is faced with various problems related to substantial issues, the budget due to high land prices, and technical issues such as a land acquisition.

Based on the research findings, it is advisable to use the GOS management master plan as a way to meet the target of 20% of the implementation of the spatial plan Jambi City. Besides, it requires a strong commitment to realizing the target of the area. In the process of planning, the management of GOS should focus on the procurement and acquisition of land to fill up theminus.

The implication of this research is that it has an impact on academics, namely the renewal of research related to GOS in urban areas, especially in the management process which can enable local governments and the community to obtain information about management, supporting factors and obstacles for implementing GOS in Jambi City. And for future research, hopefully, it will be able to research and dig deeper into the variables related to GOS to suit the variables and spatial planning concepts. Then future research can examine various problems related to GOS, especially on substantial issues, GOS planning, land acquisition and acquisition as well as budget in making GOS in cities which have a significant impact on the community, especially in terms of fulfilling clean air circulation through green open spaces, especially in cities.

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