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Analysis of Provision of Green Open Space in Jambi City

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Abstract: Environment through the provision of parks and green open spaces (RTH), is carried out area and number of residents spread across the Jambi. urban areas are very necessary. Parks are needed to maintain land availability, as water catchment areas, which can play a role in helping water absorption, so that the supply of water in the ground (water saving) increases and reduces the potential for flooding, by reducing the amount of water runoff**.** This study used a quantitative descriptive method with research from the Jambi City Statistics Center (BPS). the research was carried out in the Administrative Region of Jambi City The results of the analysis provision of public green space based on the area need for public green open space in Jambi City is 3,617.50 ha. The available public open space area is around 779.02 ha. Based on these results, there is a difference in the area of 2,838.48 ha, and the provision of public green open space based on population according to Minister of Public Works Regulation Number. 5 of 2008 the need for a park area in Jambi City is 1,243.70 ha. The available garden area is approximately 188,388.27 m^2 or 18.84 ha. Based on these results, there is a difference in area shortage of 1,224.86 ha. Jambi City over the past 13 years (2020-2033) Some strategies Increasing the area of public open space in fulfilling intrinsic and extrinsic functions, socializing the availability of green space functions for life and the environment and Spatial planning that is equal to 20% for public open space from the total area of the city. The area of green open space in Jambi City is only 779.02 ha and is very far from the area of Jambi City which is ± 20,538 ha.

Keywords: Jambi City, Green open spaces (RTH), Jambi City Statistics Center (BPS), Spatial Planning

1. INTRODUCTION

Population will have an impact on the increasing use of land used and the reduction of green areas in urban areas. This is due to the conversion of functions from open land to being built, for various purposes such as transportation facilities, education, health, housing, business premises, shops and offices, both government and private. Besides the increasingly limited green open space, it also affects air pollution, flooding and various other negative environmental impacts [1].

The policy of allocating green open space of 30% of the total area of the city, consisting of 20% public green open space and 10% private green open space, as stipulated in the Spatial Planning Law Number 26 of 2007, is something that the City Government must strive for. Therefore, it is necessary to increase the participation of stakeholders and all elements of society, to increase participation in the management of these green open spaces [2].

Jambi City's need green open space area planned to be 5,381.79 ha (30%) consisting of of private ± 1,764.29 ha (10%)

and public of ± 3,617.50 ha (20%) and parks covering an area of ± 875.90 ha (23.69%) of the public area. public green open spaces available in Jambi City still insufficient. Only available is 779.02 ha (21.53%). Private green open space is 7,632.46 ha (43.47%) [3]. Improving the quality of the environment through the provision of garden needs, is carried out based on the area and number of residents spread across the Jambi City area. The existence of parks in urban areas is necessary. Parks are needed to maintain land availability, as water catchment areas, which can play a role in helping water absorption, so that the supply of (water saving) increases and potential reduces for flooding, by reducing the amount of water runoff [4]. Many factors cause the lack or reduction of the park area. The fact is that the domination of the economic sector is still very strong in influencing changes in the function of parks. Inconsistency and the absence of strict sanctions, regarding permits granted for urban physical development (housing, hotels, supermarkets, offices and other facilities) that are not in accordance with the arrangement and utilization of space in the city, has contributed to the decreasing number of parks in urban areas. To create comfortable and productive parks, it is time for the government to pay special attention and be committed to the existence of parks.

2. METHOD

2.1 Method

This study used a quantitative descriptive method with data taken from the Jambi City Statistics Center (BPS). the research was carried out in the Administrative Region of Jambi City, with the existing area of Jambi City covering ± 20,538 ha, consisting of 11 sub-districts and 62. Geographically, Jambi City is in the north, west, south and east bordering Muaro Jambi Regency, in other words the City area is Jambi is surrounded by Muaro Jambi Regency. Geographically, Jambi City is located at 01030'2.98"- 0107'1.07".

3. RESULT AND DISCUSSION

3.1 Analysis

The decrease in the area of green open space is expected to occur because Jambi City is a city that is still developing. This can be seen from the number of building permits (IMB), which annually range from 4,000-6,000 IMB issued by the Jambi City Government [5]. The existence of various regulations from the government regarding of green open space decreasing instead of increasing its area. Even though the benefits of green open space are clear and proven in various studies as well as the disadvantages and risks i existing green open space is reduced [6].

Public open space increases the population also increases. This happens because green open space has multidimensional benefits, including environmental benefits, social benefits and economic benefits. The ideal area of green open space tends to positively influence the population [7]. Green open space also affects the healthy lifestyle of the population, especially those around it will quality of life of urban residents. City dwellers are in fact increasingly lacking space in big cities so that green open space is a place where they can play, have recreation and enjoy fresh air [8]. The results of this study point to the importance of maintaining and expanding green open space in a city. An area of 20% green open space will also not have a significant effect if it is not followed by an increase in the quality of existing green open space and integration in calculating green open space needs in urban area spatial planning so as to obtain more ideal results [9].

Green open space in a comprehensive manner, namely urban ecological factors, physical urban spatial factors and non-physical urban spatial factors. In the case the ecological factors of have been fulfilled, especially the ecological functions of urban forests in Jambi City. Physical and non-physical urban spatial factors that must be of concern to the Jambi City Government so that public green space can be spread evenly based on population density and oxygen demand so that its function can be maximized [10]. The area of public open space in Jambi City currently reaches 779.02 ha and its area tends to decrease every year. Ideally, Jambi City currently has a public open space area of 3,617.50 ha or 20% of its area. When referring to population growth, the City of Jambi needs an urban green open space of 1,243.70 ha in 2033 and continues to increase every year.

Provision of parks for each region is different, the ideal needs depend on the number of residents. The ideal provision of a garden can be found by using the formula for the area of a garden per unit divided by the minimum area per unit. The ideal provision of parks in 2021 can be seen in Table 1

Table 1. Garden Needs

Garden Needs (2021)					
			Ward	Sub-District	City park
No.	Sub-District	Total Population	Minimum Area (m^2)	Minimum Area (m^2)	Minimum Area (m^2)
1	Kotabaru	78.844	23.653	110.381	1.324.579
2	Jambi Selatan	65.555	19.666	91.777	1.101.324
3	Jelutung	67.468	20.240	94.455	1.133.462
4	Pasar Jambi	13.468	4.040	18.855	226.462
5	Telanaipura	53.595	16.078	75.031	900.379
6	Danau Teluk	12.909	3.872	18.072	216.871
7	Pelayangan	14.446	4.333	20.224	242.629
8	Jambi Timur	71.215	21.364	99.701	1.196.412
9	Danau Sipin	51.200	15.360	71.680	860.160
10	Alam Barajo	101.645	30.493	142.303	1,707.636
11	Paal Merah	95.457	28.637	133.639	1.603.677
Jumlah		625.801	187.740	876.121	10.513.456

Source: BPS Jambi City, 2021 and Analisys Results 2022

Based on Table 1, in 2021 the projection of the most ideal provision of parks is Alam Barajo District, namely 101,645 m2 on the RT scale, 50,822 m2 on the RW scale, 30,493 m2 on the sub-district scale, and 142,303 m2 on the sub-district scale. Meanwhile, the least ideal provision is Danau Teluk District with 12,909 m2 of gardens on an RT scale, 6,454 m2 on an RW scale, 3,872 m2 on a sub-district scale, and 18,072 m2 on a sub-district scale.

Alam Barajo in 2026 District is projected to need the most parks, namely 109,016 m2 on the RT scale, 54,508 m2 on the RW scale, 32,702 m2 on the Kelurahan scale, and 152,622 m2 on the sub-district scale. The minimum ideal provision of parks is Danau Teluk District, namely 13,844 m2 on the RT scale and 6,922 m2 on the RW scale, 4,153 m2 on the sub-district scale, and 19,381 m2 on the sub-district scale.

Whereas in 2033 the ideal provision for the Alam Barajo District is 120,242 m2 on an RT scale, 60,121 m2 on an RW scale, 36,072 m2 on a Kelurahan scale and 168,338 m2 on a District scale. The minimum ideal provision for parks is Danau Teluk District, namely 15,271 m2 on the RT scale, 7,635 m2 on the RW scale, 4,581 m2 on the sub-district scale, and 21,379 m2 on the sub-district scale.

3.2 Efforts made in Provision of Green Open Space:

a. Construction and/or repair and maintenance of existing city parks so that they can function properly.

b. Planting shrubs and trees in the courtyards of residents' homes and offices or agencies, both government and private, as well as educational institutions in Jambi City.

c. Planting plants using pots as a place to plant them and using a roof garden system for dense residential areas, business facilities such as shops, markets, and hotels/guesthouses as well as multi-storey shops/shops.

3.3 Analysis of Green Open Space Park Needs

Analysis tool used is the limitation of study material in the garden needs analysis. The analysis is in the form of parks on a service scale, namely 250 people, 2500 people, 30,000 people, 120,000 people and 480,000 people or on an environmental scale, werd, District Parks and City Parks (Permen PU No.05/PRT /M/2008). In line with this in the Regional Regulation concerning the 2019 - 2033 regional spatial planning [12], the City of Jambi, which has an area of ± 20,538 ha, is expected to be able to meet the needs of a park covering an area of 875.90 ha. The existence of public open space in Jambi City is spread over 11 sub-districts. The public green open space is divided into several types, namely urban forest, city park, housing, cemete, river and lake, road and agricultural land. Jambi City along with its area and sub-districts is presented in Table 2.

Table 2. Type Of Public Green Space

No	Public Green Space	Wide (ha)	Location
1	City Park	18,78	All Sub- District
2	City Forest	72,83	Sub- District Kota Baru
3	Cemetery Garden	94,01	All Sub-District
	Sum	185,62	

Source: BPS Jambi City 2021, Analysis Results 2022

Public Cemeteries are divided into 40 locations spread across all districts in Jambi City. Table 2 shows that there are 3 main categories in Jambi City. Specifically, are city parks and urban forests, while 1 is green open space. In addition, in urban forests, each green open space is very small and rarely reaches 1 ha in size. When viewed from the total area, the figure of 185.62 ha is only 0.05% of all districts in Jambi City. The area of public open space in several sub-districts is even less than 1 ha if not counting the area of public cemeteries whose area was not specifically examined in this study. Even if the area of the public cemeteries is divided equally for all

districts, it will only get ± 8.5 ha/district. Indeed, according to M Beledan Setiawan (2015), the mandated public open space area of 20% of the city area is not ideal, especially if it does not consider the availability of supporting natural resources, but at least it is hoped that the Jambi City Government will follow the mandate of Law 26 of 2007 concerning Spatial Planning [11]. Regarding the area of public green open space that is not ideal according to government regulations suggest using the variable oxygen demand as a measure of the expected area of public green open space. Regulation of the Minister of Public Works of 2008 Number 05/PRT/M/2008 [12] concerning Guidelines for the Provision and Utilization of Urban Areas also adds a population variable as a determinant of the ideal green open space area. This is due to the combination of the role which also functions as an aesthetic apart from having an ecological function. In the case of Jambi City green open space, population size is an important factor in determining low-medium category open Space is 3,617.50 Ha.

Based on the needs analysis, there is a difference beween the availability and the need for park area. Availability and need for park area can be seen in Figure 1

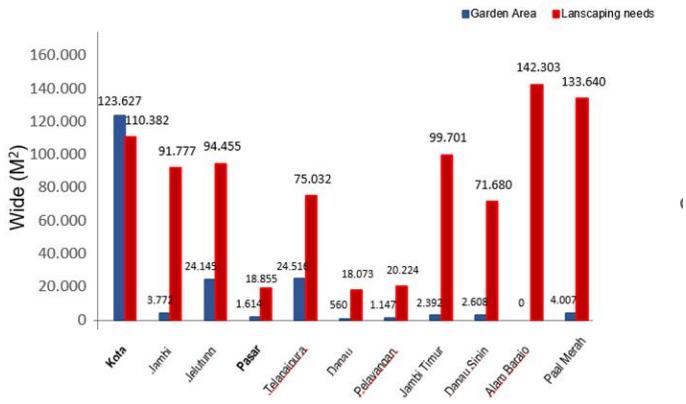

Figure 1 Graph of Availability and Need for Park Area Based on Total Population

4. CONCLUSION

Conclusion as follows:

1. Efforts are being made to fulfill Green Open Space in Jambi City, namely by providing or facilitating sub-district level.

2. The results of the analysis of public green open space based on the area the need for public is 3,617.50 ha. The available public open space area is around 779.02 ha. Based on these results, there is a difference in the area of 2,838.48 ha, and the provision of public green open space based on population according to Minister of Public Works Regulation Number. 5 of 2008 it can be seen that the need for a park area in Jambi City is 1,243.70 ha. The available garden area is approximately 188,388.27 m2 or 18.84 ha. Based on these results, there is a difference in area shortage of 1,224.86 ha. Development of green open space in Jambi City over the past 13 years (2020-2033).

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