Study of the Function of City Parks as Public Open Space in Meuraxa District, Banda Aceh

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Abstract

Parks are part of Green Open Space (RTH) and Public Non-Green Open Space (RTNH) which are used to carry out various activities such as recreation, education, and sports. Meuraxa sub-district has a public green space area of 11.442 Ha with types of parks, green lanes, green belts, and cemeteries under the maintenance and management of the Banda Aceh City Government [1]. Green spaces in Meuraxa Sub-district is currently utilized for recreation, education, sports, and various social interaction activities. This research was conducted to identify the function of the Meuraxa District park based on its characteristics and community perceptions related to the existing park functions. The analysis in this study used scoring method, descriptive statistical method and descriptive method. The sampling method used in this research is non-probability sampling technique with purposive sampling type with a total sample of 100 respondents. This research has assessed the overall condition of the park which shows a fairly good level of optimality. Some key indicators, such as cleanliness, availability of facilities, and visitor comfort, have met the expected standards. The results of surveys and observations show that this park has become a place of interest and is often visited by the community. However, some parks in the study locations still do not meet the appropriate standards and the utilisation is not optimal in terms of ecological, social, aesthetic, and economic aspects.

Keywords: *meuraxa, public open space, park, perception*

Abstrak

Taman merupakan bagian Ruang Terbuka Hijau (RTH) maupun Ruang Terbuka Non Hijau (RTNH) Publik yang dimanfaatkan untuk melakukan berbagai aktivitas seperti rekreasi, edukasi, dan olahraga. Kecamatan Meuraxa memiliki luas RTH Publik sebesar 11,442 Ha dengan jenis taman, jalur hijau jalan, sabuk hijau, dan pemakaman dibawah pemeliharaan dan pengelolaan Pemerintah Kota Banda Aceh (DLHK3 Kota Banda Aceh, 2022). RTH di Kecamatan Meuraxa saat ini dimanfaatkan untuk aktivitas rekreasi, edukasi, olahraga, dan berbagai kegiatan interaksi sosial. Penelitian ini dilakukan untuk mengidentifikasi fungsi taman Kecamatan Meuraxa berdasarkan karakteristiknya dan persepsi masyarakat terkait fungsi taman yang telah ada. Analisis pada penelitian ini menggunakan metode skoring, metode statistik deskriptif dan metode deskriptif. Metode sampling yang digunakan dalam penelitian ini adalah teknik non probability sampling dengan jenis purposive sampling dengan jumlah sampel yaitu 100 responden. Penelitian ini telah menilai kondisi taman secara keseluruhan yang menunjukkan tingkat optimalitas yang cukup baik. Beberapa indikator kunci, seperti kebersihan, ketersediaan fasilitas, dan kenyamanan pengunjung, telah memenuhi standar yang diharapkan. Hasil survei dan observasi menunjukkan bahwa taman ini telah menjadi tempat yang diminati dan sering dikunjungi oleh masyarakat. Namun, beberapa taman di lokasi studi masih belum memenuhi standar yang sesuai dan pemanfaatan yang belum optimal dari segi ekologis, sosial, estetika, maupun ekonomi.

Kata Kunci: *meuraxa, ruang terbuka publik, taman, persepsi*

1. Introduction

Parks are part of urban green open spaces (RTH) in the form of open spaces in urban areas where vegetation and plants grow to support ecological, socio-cultural and architectural benefits (Hilman, 2018). Green spaces can provide positive benefits for the economy and play an important role in the sustainability of the quality of an area and the aesthetics of the city and have an integral function with urban development [2]. Parks are one of the containers that provide spatial services to the community that functions as green

spaces and public open spaces integrated between the environment, society, and health through functional and environmental approaches [3].

Quality green spaces guarantee the usefulness of space for healthy, safe, comfortable, interactive, educational, recreational, and participatory social activities. To achieve quality RTH functionally and environmentally, it is necessary to optimize the function of RTH to see the extent to which the use of RTH has been functioned in accordance with the plan and purpose of its provision.

Banda Aceh City has 14.29% of the existing green space area of the urban area (SIPSN, 2023). Based on data from the Department of Environment, Cleanliness and Beauty (DLHK3) of Banda Aceh City, there are nine active parks in Meuraxa District. Based on empirical field data conducted according to community perceptions, the condition of public green spaces in Banda Aceh City is quite comfortable to use [4]. However, there are still green spaces that have not been optimized due to lack of maintenance and the lack of activities that are in accordance with the theme of green spaces.

This study observes how the utilization of parks in Meuraxa District is seen from the existing conditions, the function of the park from its characteristics, then see the function of the park based on public perception using parameters as benchmarks in assessing park conditions. The research was conducted to see the extent to which the park in Meuraxa District was utilized as an effort to make a study of the optimization of the RTH function.

2. Material and Methods

The research used a mixed methods approach with the convergent parallel designs. The quantitative approach in this study was used to determine the level of effectiveness of park utilization based on socio-cultural, aesthetic, and economic ecological functions based on public perceptions through a questionnaire distributed to 100 respondents in Banda Aceh City online via google form. The location of this research is in Meuraxa District, namely Ulee- Lheu Culinary Tourism Park, Ulee Lheue Park, and Meuraxa Tourism Park, and Mirror Beach Park. Data analysis uses scoring techniques using categorization levels to determine the classification of categories on each variable and indicator to be assessed. While a qualitative approach is used to describe the physical and non-physical characteristics of the park based on its function.

Data collection in this study was carried out in two ways, namely primary and secondary. Primary data collection is carried out by means of field observations, interviews and distributing questionnaires at the study site, while for secondary data collection methods are carried out by collecting data from literature studies and government agencies, namely DLHK3.
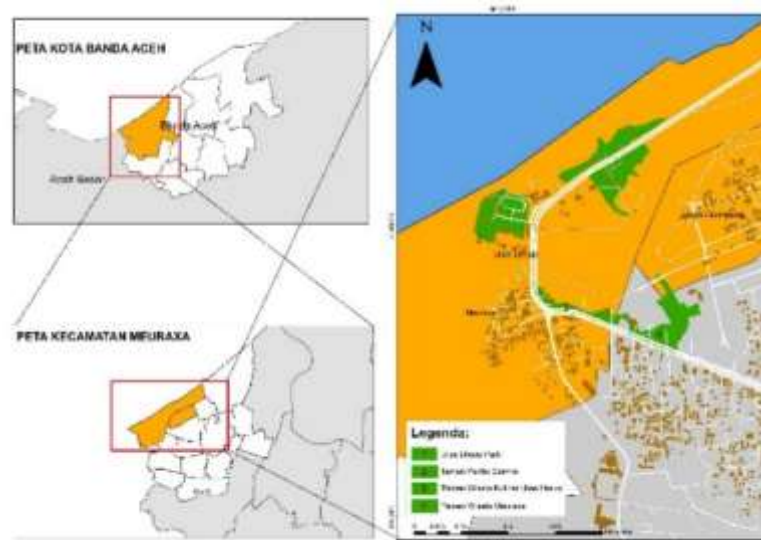

Fig. 1 : Study Locations

Table 1. Research Variables

Variable	Indicator	Code
Socio-Cultural Functions	• Social interaction activities	• J1
	• Facilities to support social interaction activities	• J2
	• Sports and non-sport active recreational activities	• J3
	• Supporting facilities for active sports and non-sport recreation	• J4
		• J5
	• Safe play activities	• J6
	• Facilities to support safe play activities	• J7
	• Research, learning and training activities	• J8
	• Facilities to support research, learning and training activities	• J9
		• J19
	• Marker in the park	• J10
	• Evacuation Route	• J11
	• Fire hydrant	
Aesthetic Function	• Conditions for design of garden elements	• K1
	• Park comfort conditions	• K2
	• Condition of the guard post	• K3
	• Environmental safety conditions	• K4
	• Environmental cleanliness conditions	• K5
	• Condition of park infrastructure	• K6
	• Park attainment or access conditions	• K7
	• Condition of parking area	• K8
Economic Functions	• Activities to search for and collect garden produce	• L1
	• Economic interaction activities of goods and services	• L2

Here is how to determine level categorization used in this study.

$$\text{Interval} = \frac{\text{Highest score in the questionnaire} - \text{Lowest score in the questionnaire}}{\text{number of categories (scores)}}$$

$$\text{I} = \frac{3-1}{3} = \frac{2}{3} = 0{,}6$$

Table 2. Category Range

Conditions	Category Range
Effective	2,5 – 3
Effective Enough	1,8 – 2,4
Ineffective	1 – 1,7

3. Results and Discussion

General description of existing conditions at study locations

Based on data obtained from DLHK3 Banda Aceh City, the four parks that are study locations are included in the city-scale park category. The following is a table of park characteristics based on the area of the park and the number of residents in each village where the park is located.

Table 3. Park Area and Population

No	Locations	Name of Park	Area (Ha)	Population
1.	Ulee Lheue	Wisata Kuliner Ulee Lheue Park	0,542	842
2.	Ulee Lheue	Pantai Cermin Park	3,89	
3.	Ulee Lheue	Ulee Lheue Park	1,170	
4.	Ulee Lheue and Deah Glumpang	Wisata Meuraxa Park	1,70	1282

Source: DLHK3 Banda Aceh (2019) and BPS Banda Aceh (2022)

Fig. 2 : Pantai Cermin Park

Fig. 3 : Tugu Pendaratan Belanda in Pantai Cermin Park

Fig. 4 : Facilities in Pantai Cermin Park

Fig. 5 : Ulee Lheue Park

Fig. 8 : Dock in Wisata Kuliner Park

Fig. 9 : Fish Selling Point in Wisata Kuliner Park

Fig. 10 : Facilities in Ulee Lheue Park

Fig. 11 : Facilities in Wisata Meuraxa Park

Fig. 12 : Jogging Track in Wisata Meuraxa Park

Fig. 13 : Activities in Wisata Meuraxa Park

Characteristics of Parks in Meuraxa District

Based on the results of observations of existing conditions at the study location as seen from research variables and secondary data obtained from related parties, the characteristics of the park at the study location are as follows.

Table 4. Park Features

Park Name	Features	Information
Pantai Cermin Park	Wide	3.86 Ha
Ulee Lheue Park	Wide	1.17 Ha
Wisata Kuliner Ulee Lheue Park	Wide	0.54 Ha
Wisata Meuraxa Park	Wide	1.70 Ha
Park Name	Features	Information
Pantai Cermin Park	Form	Active Park
Ulee Lheue Park	Form	Active Park
Wisata Kuliner Ulee Lheue Park	Form	Active Park
Wisata Meuraxa Park	Form	Active Park
Park Name	Features	Information
Pantai Cermin Park	Characteristic	Built as a beach recreation area and culinary tourism spot. This park is open from morning to evening.
Ulee Lheue Park	Characteristic	Built as a play and recreation area for children. This park can also function as a culinary tourism destination. This park is open from morning to evening.
Wisata Kuliner Ulee Lheue Park	Characteristic	This park is intended as a culinary tourism destination in the Ulee Lheue area. This park is located at Simpang Tiga Ulee Lheue which is along the side of Ulee Lheue beach with views of fishing boats anchored at the pier. This park is open from morning to evening.
Wisata Meuraxa Park	Characteristic	Built as a family recreation area, sports area, and play area and learning area for children. This park can also be used for art performances because there is a stage and arena for spectators. This park is open from morning to evening with free entry. However, for some playgrounds you have to pay to use them.
Park Name	Features	Information
Pantai Cermin Park	Facilities	• Social-recreational facilities (gazebo, food stalls, play area on the beach) • Other facilities (toilets, parking area, garden lights, guard post, prayer room and trash can)
Ulee Lheue Park	Facilities	• Social-recreational facilities (food stalls, gazebos, play areas, park benches) • Other facilities (toilets, parking area, garden lights, guard post, prayer room and trash can)
Wisata Kuliner Ulee Lheue Park	Facilities	• Social-recreational facilities (food stalls, play area) • Other facilities (park chairs, toilets, parking, park lights, guard post, prayer room and trash can)
Wisata Meuraxa Park	Facilities	• Social-recreational facilities (park benches, playground, jogging track) • Other facilities (toilets, parking area, garden lights, food stalls, guard post, prayer room and trash can)
Park Name	Features	Information
Pantai Cermin Park	Accessibility	This park is close to surrounding settlements so it can be accessed by foot and public and private transportation. The service radius that can be reached from this park is 2,500 m.

Park Name	Features	Information
Ulee Lheue Park	Accessibility	Located close to surrounding settlements and can be reached by foot, public transportation and private vehicles. The service radius that can be reached from this park is 700 m.
Wisata Kuliner Ulee Lheue Park	Accessibility	This park is near Jl. Sultan Iskandar Muda. This park can be reached by private vehicle or public transportation. The service radius that can be reached from this park is 700 m.
Wisata Meuraxa Park	Accessibility	Located on the side of the main road Ulee Lheue, namely Jl. Sultan Iskandar Muda. This park can be reached by private vehicle or public transportation. The service radius that can be reached from this park is 700 m.

Source: Analysis Results (2023)

Function of Parks in Meuraxa District

Park function analysis was carried out by comparing the characteristics of parks in Meuraxa District based on observations and secondary data with a review of literature related to parks to obtain the function of parks in Meuraxa District. The literature review used as a comparison is the theory about park use in the literature review. The following are the results of formulating the function of parks as public open spaces in Meuraxa District.

Table 5. Dominant Function of Parks in Meuraxa District

Park Name	Function Dominant	Existing Activities
Wisata Kuliner Ulee Lheue Park	Ecological & Economic Functions	Buying and selling activities for garden products such as selling fish from fishermen, food bazaars, buying and selling activities for typical Acehnese food and snacks
Pantai Cermin Park	Ecological & Social Functions	Activities include sitting, discussions, eating together, boat recreation, and playing in the water on the beach.
Ulee Lheue Park	Social and Economic	Sitting activities, discussions, eating together, food bazaars, children's play activities and activitiesactive sports and non-sport recreation, as wellbuying and selling activities of light and heavy food.
Wisata Meuraxa Park	Ecological & Social Functions	Sitting activities, discussions, eating together, food bazaars, children's play activities such as cars, slides, swings, playing ball, seesaws, iron hangers, children's outbound games, and activitiesactive sports and non-sport recreation.

Source: Analysis Results (2023)

Apart from the ecological function, there are three parks, namely Pantai Cermin Park, Ulee Lheue Park, and Wisata Meuraxa Park which have a social function as the dominant function. Social functions have a higher intensity than other functions such as social interaction activities, namely leisure activities, recreational activities, sports activities and children's play activities. The large variety of activities in a park location determines the dominant function of a park [5]. Apart from that, determining the dominant function is also influenced by the purpose of providing it and the concept of the park [5]. These three parks have the aim of providing a place for social interaction, recreation and a place to play.

However, Ulee Lheue Park and the Wisata Kuliner Ulee Lheue Park has an economic function as the dominant function because these parks have economic activities with high intensity, such as culinary tourism activities for typical Acehnese food and other snacks and there are also buying and selling activities for fish caught by fishermen in the Culinary Tourism Park. Ulee Lheue. These two parks were also built with the aim of culinary tourism activities. Apart from that, these two parks also play a role in increasing the development of the surrounding area through culinary delights.The role of the park in the function of the surrounding area is also an aspect in determining the dominant function of the park [5].

Community Perception of Park Functions in Meuraxa District

Based on a questionnaire distributed to 100 respondents in Banda Aceh City, the following are the results of the questionnaire regarding park functions based on community perceptions.

1) Pantai Cermin Park

Based on a questionnaire that was distributed to 20 respondents at Pantai Cermin Park, it was found that the condition of Pantai Cermin Park based on social function was as follows:

Table 6. Effectiveness Level of the Social Function of Pantai Cermin Park

Indicator	Ideal Value	Calculate Value	Category Level	Effectiveness Level
J1	3	2.4	1.8 – 2.4	Effective enough
J2	3	2.0	1.8 – 2.4	Effective enough
J3	3	1.6	1 – 1.7	Ineffective
J4	3	1.5	1 – 1.7	Ineffective
J5	3	1.5	1 – 1.7	Ineffective
J6	3	1.6	1 – 1.7	Ineffective
J7	3	1.4	1 – 1.7	Ineffective
J8	3	1.4	1 – 1.7	Ineffective
J9	3	2.2	1.8 – 2.4	Effective enough
J10	3	2.6	2.5 – 3	Effective
J11	3	1.7	1 – 1.7	Ineffective
Total	**3**	**2**	**1.8 – 2.4**	**Effective enough**

Based on the table above, the indicator with the highest value is the condition of the evacuation route and the lowest indicator is in research, learning, and training activities and indicators of supporting facilities. However, overall the social condition of Cermin Beach Park has a moderate condition, which means that the condition of the park is quite effective in its utilization. However, this park requires a lot of optimization because there are many conditions that are still not effective due to inadequate existing conditions.

2) Ulee Lheue Park

Based on a questionnaire that was distributed to 22 respondents at Ulee Lheue Park, conditions were obtained Ulee Lheue Park based on its function as follows.

Table 7. Effectiveness Level of the Social Function of Ulee Lheue Park

Indicator	Ideal Value	Calculate Value	Category Level	Effectiveness Level
J1	3	2.5	2.5– 3	Effective enough
J2	3	2.2	1.8 – 2.4	Effective enough
J3	3	1.8	1.8 – 2.4	Effective enough
J4	3	2.1	1.8 – 2.4	Effective enough
J5	3	2.2	1.8 – 2.4	Effective enough
J6	3	2.2	1.8 – 2.4	Effective enough
J7	3	2.0	1.8 – 2.4	Effective enough
J8	3	2.0	1.8 – 2.4	Effective enough
J9	3	2.2	1.8 – 2.4	Effective enough
J10	3	2.4	1.8 – 2.4	Effective enough
J11	3	2.0	1.8 – 2.4	Effective enough
Total	**3**	**2.4**	**1.8 – 2.4**	**Effective enough**

Based on the **Table 7**, the highest score is the indicator of social interaction activities and the indicator with the lowest score is the indicator of active sports and non-sports recreation activities. However, overall this park has functioned quite effectively. So, this park still needs optimization in several aspects to increase the utilization of this park function.

Table 8. Effectiveness Level of the Aesthetic Function of Ulee Lheue Park

Indicator	Ideal Value	Calculate Value	Category Level	Effectiveness Level
K1	3	2.4	1.8– 2.4	Effective enough
K2	3	2.5	2.5– 3	Effective enough
K3	3	2.0	1.8 – 2.4	Effective enough
K4	3	2.1	1.8 – 2.4	Effective enough
K5	3	2.2	1.8 – 2.4	Effective enough
K6	3	2.1	1.8 – 2.4	Effective enough
K7	3	2.4	1.8 – 2.4	Effective enough
K8	3	2.1	1.8 – 2.4	Effective enough
Total	**3**	**3**	**1.8 – 2.4**	**Effective**

Based on the results above, the highest aesthetic function is the indicator of park comfort conditions and the indicator with the lowest value is the indicator of guard post conditions. Overall, the aesthetic condition of Ulee Lheue Park has a good condition, which means that the condition of the park is optimal in its utilization. However, this park also still needs optimization so that it can continue to be sustainable.

3) Wisata Kuliner Ulee Lheue Park
Based on a questionnaire that was distributed to 30 respondents at the Wisata Kuliner Ulee Lheue Park, the condition of the Wisata Kuliner Ulee Lheue Park was obtained based on its function as follows.

Table 9. Effectiveness of the Economic Function of the Wisata Kuliner Ulee Lheue Park

Indicator	Ideal Value	Calculate Value	Category Level	Effectiveness Level
L1	3	2.2	1.8 – 2.4	Effective enough
L2	3	2.3	1.8 – 2.4	Effective enough
Total	**3**	**2.3**		**Effective enough**

Based on the table above, the highest condition of economic function is the indicator of economic interaction activities of goods and services and the indicator with the lowest value is the indicator of activities of searching for and collecting garden produce. The value of the effectiveness of the park's economic function is at a fairly effective level. This condition shows that there is still a need to improve the quality of parks at the study location.

4) Wisata Meuraxa Park
Based on a questionnaire that was distributed to 25 respondents at the Meuraxa Tourism Park, the condition of the Meuraxa Tourism Park was obtained based on its function as follows.

Table 10. Effectiveness of the Social Functions of Meuraxa Tourism Park

Indicator	Ideal Value	Calculate Value	Category Level	Effectiveness Level
J1	3	2.6	2.5– 3	Effective
J2	3	2.6	1.8 – 2.4	Effective
J3	3	2.3	1.8 – 2.4	Effective enough
J4	3	2.4	1.8 – 2.4	Effective enough
J5	3	2.6	1.8 – 2.4	Effective enough
J6	3	2.2	1.8 – 2.4	Effective enough
J7	3	2.0	1.8 – 2.4	Effective enough
J8	3	1.7	1 – 1.7	Ineffective
J9	3	2.2	1.8 – 2.4	Effective enough
J10	3	2.0	1.8 – 2.4	Effective enough
J11	3	1.4	1 – 1.7	Ineffective
Total	**3**	**2.3**	**1.8 – 2.4**	**Effective enough**

Based on the results of the data processing above, the highest social function is the indicator of social interaction activities, indicators of facilities supporting social interaction activities, indicators of safe play and indicators with the lowest value, namely the indicator of the condition of fire hydrants. so that optimization is still needed to improve social functions in Meuraxa Tourism Park.

Optimization Strategy Based on Factors That Influence Park Optimization

1) Land Use Aspects

The land use aspect is one aspect that influences park optimization [7]. Land use is one aspect that is taken into consideration in the direction of creating optimization strategies in parks. Based on observations and questionnaires that have been distributed, it is known that the land use in all parks that are study locations has not been utilized optimally, there are still spaces that have not been used. The spaces in all these parks can be utilized to make the parks more optimal.

One use of space that can increase the optimization of all parks in the study location is by providing a reading room in each park. The overall reading level of Indonesian society is 59.52 with a reading duration of 4-5 hours per week and 4-5 books per three months, while Aceh is the ninth province with the highest Digital Literacy Level in Indonesia with a score of 3.57 [6]. Indonesia has a low interest in reading. Therefore, providing a reading room in the park for the study location can help increase reading interest in Indonesia, especially in Banda Aceh City and also contribute to maximizing the function of the park at the study location.

Apart from that, optimization related to land use aspects that can be carried out is through reusing facilities that are not in use in the park to become needed facilities such as guard posts, facilities to support safe play activities, and facilities to support social interaction activities. Adding trees and plants to the study location is also included in optimization.

2) Recreational Aspect

The completeness of recreation facilities and infrastructure has an influence in developing optimization strategies [8]. Based on the results of observations and questionnaires that have been distributed, this is related to the diversity of types of recreation in the park. A diversity of types of recreational activities can increase the frequency of visitors to the park. Optimization strategies that can be carried out in the four parks that are the locations of this study can be in the form of collaboration with the private sector in providing types of recreation. Apart from that, maintaining facilities to support recreational activities is also one of the optimization suggestions that can be carried out.

Apart from complete facilities and infrastructure, to support the continuity of the recreation aspect so that it remains sustainable in the current digital era, it is necessary to optimize the marketing aspect of the park via social media. Marketing through social media is expected to attract more visitors and introduce the parks at the study location to the wider community. Optimization in the aspect of recreation marketing through social media also helps the government in developing the tourism potential that has been planned at the study location.

3) Social Aspect

Social aspects have an influence on park optimization [8]. Factors that influence park optimization come from community insight, community participation and community concern. Community insight, community participation and community concern are factors that influence park development.

Based on observations, questionnaires and literature studies, the social conditions in the park at the study location are quite good. However, there is still a need for optimization for park sustainability and increasing park utilization. One of them is social aspects related to learning for children and other visitors, such as providing space to be used as a reading garden, providing areas for spice plants or medicinal plants to be used as learning media for kindergarten students, increasing facilities. which supports children's physical education [9]. It is also important to improve the function of existing social interaction facilities so that they can function better [10].

The recommended direction for optimizing parks in the study location is to collaborate with environmental care communities in Banda Aceh City to socialize the importance of parks for the sustainability of the urban environment.

Then, collaborate with other agencies such as the Banda Aceh City Civil Service Police Unit to help monitor the park, involve the community in programs prepared by the government so that its existence is more valuable and has a sense of self-belonging.

4) Ecological Aspects

To optimize the function of the park, it is important to pay attention to ecological aspects based on the condition of the park. One way is to create infiltration wells/biopores to collect rainwater or to absorb rainwater in locations that can still be utilized and maintain infiltration wells [11]. Also Create infiltration wells/biopores to collect rainwater or to absorb rainwater in locations that can still be utilized. Maintenance of infiltration wells [12]. Not only that, caring for and maintaining plants in garden locations to avoid damage due to weather changes and can reduce GHG emissions is also important to pay attention to [13].

Next, making rules/warnings not to pollute the air, such as not burning rubbish in park areas, is also very important to enforce in order to continue implementing the ecological function of urban parks [14].

5) Institutional Aspects

Institutional aspects have an influence in optimizing parks to provide appropriate direction in determining decisions to optimize the function and use of parks [15]. Factors that influence park optimization from an institutional perspective come from government policies related to parks, programs and government regulations in park management.

Based on observations and literature studies that have been carried out, optimization in terms of institutional aspects that can be carried out is by realizing the existing RTH master plan, optimizing regulations to support sustainable park management, planning to develop the park into a superior area because the four parks are included in the *Ulee Lheue* Tourism Village, and gave a letter of warning and asked for compensation for the people who committed the crime.

4. Conclusion

This research has assessed the overall condition of the park, which has shown a fairly good level of optimality. Some key indicators, such as cleanliness, availability of facilities, and visitor comfort, have met the expected standards. The results of surveys and observations show that this park has become a place of interest and is often visited by the community. However, although the condition of the park is quite optimal, there are still some areas that require further optimization to improve visitor experience and park management efficiency. To ensure that the optimization of the park continues to run in accordance with the needs and expectations of the community, it is recommended that further research be carried out in more depth.

5. Acknowledgment

6. Abbreviations

DLHK3	Environmental and Cleanliness Agency of Banda Aceh
RTH	Green Open Space
RTNH	Non-Green Open Space
SIPSN	National Waste Management Information System

7. References

[1]   DLHK3 Banda Aceh, *PROFIL DLHK3*. Banda Aceh, 2016.

[2]   A. Noor, M. I.R. Winandari, and M. Ischak, "Character of Public Space Users in Ayodya Park, South Jakarta," *J. Social. Humanities.*, vol. 1, pp. 1–26, 2018.

[3]   Y. A. Hilman, "Effectiveness of Public Space Utilization through Parks in Ponorogo Regency," *J.Agora.*, vol. 16, pp. 60–68, 2018.

[4]   Gusmeri, A. Amsal, N. Herawati, Permakope, Eriawati, A. Rohendi, T. Aries, C.V. Nelson, and M. S. Saha, "Evaluation Of Green Open Space Comfort in Banda Aceh," Report, Badan Perencanaan dan Pembangunan, Banda Aceh, BA, 2019.

[5]   F. N. Rochim and J. A. Syahbana, "Determination of the Function and Suitability of Vegetation in Public Parks as Green Open Space (RTH) in Pekalongan (Case Study: Monument 45 Park Pekalongan)," *J. Urban and Regional Planning Engineering.*, vol 13, pp. 314–327, 2013.

[6]   BPS Banda Aceh, Kota Banda Aceh Dalam Angka 2021. Banda Aceh, 2022

[7]   Reza Maulana, A.F. dan Sulistyarso, H. (2020) 'Strategi Optimalisasi Ruang Terbuka Hijau Publik Berdasarkan Preferensi Masyarakat di Kecamatan Jambangan, Surabaya', *Jurnal Teknik ITS*, 8(2). Tersedia di: https://doi.org/10.12962/j23373539.v8i2.47543.

[8]   Kaepa, F.S. "Strategi Pengoptimalan Ruang Terbuka Hijau Publik Pujasera, Desa Tinakin, Kecamatan Banggai, Kabupaten Banggai Laut." (Skripsi Sarjana, Universitas Bosowa). https://repository.unibos.ac.id, 2021.

[9]   Reza Maulana, A.F. dan Sulistyarso, H. (2020) 'Strategi Optimalisasi Ruang Terbuka Hijau Publik Berdasarkan Preferensi Masyarakat di Kecamatan Jambangan, Surabaya', *Jurnal Teknik ITS*, 8(2). Tersedia di: https://doi.org/10.12962/j23373539.v8i2.47543.

[10]   Rahardja, S. (2022) 'Optimalisasi Fungsi Ruang Terbuka Hijau Sebagai Perwujudan Hak Atas Lingkungan Hidup Yang Baik dan Sehat', *Jurnal Seminar Nasional Hasil Riset (SNHR) Universitas Janabadra Yogyakarta.* Tersedia di: https://ejournal.janabadra.ac.id/index.php/snhr/article/view/2048

[11]   Kementerian ATR/ Kepala BPN (2022) *Peraturan Menteri ATR KBPN No 14 Tahun 2022 Tentang Penyediaan dan Pemanfaatan Ruang Terbuka Hijau*. Indonesia.

[12]   Forasidah (2021) 'Optimalisasi Dalam Pengelolaan Ruang Terbuka Hijau Publik Taman di Kota Banjarbaru', *Jurnal PubBis*, 5(2), pp. 124–138. Tersedia di: https://doi.org/10.35722/pubbis.v5i2.446.

[13]   Sellano, F.M., Sitanala, M.R., Santoso, P., dan Arinah, H. (2020) 'Optimization Of Green Space in Ambon City', *Jurnal Earth and Environmental Science,* 1-7. Tersedia di: https://iopscience.iop.org/article/10.1088/1755-1315/1115/1/012020

[14]   Putri, R.E., Suwondo, S. and Nofrizal, N. (2019) 'Strategi Optimalisasi Fungsi Ruang Terbuka Hijau Publik Menggunakan Analisis Swot Di Kota Pekanbaru', *Jurnal Ilmu Lingkungan*, 13(2), p. 206. Tersedia di: https://doi.org/10.31258/jil.13.2.p.206-216.

[15]   K. Wijaya, "Perubahan Fungsi Lingkungan Terbangun Di Koridor Jalan Cigondewah Kota Bandung," ARCADE, vol. 1, no. 1, pp. 8–13, 2017.