The landscape concept of environment in *Taman Gajah Mada Medan*

A F Abus¹, T Lubis²*, N A A Abus³

¹Aceh Landscape Development Centre, Jalan Cut Nyak Dhien Nomor 2, Aceh, 24416, Indonesia
²,³Universitas Sumatera Utara, Jalan Dr. T. Mansur No.9, Padang Bulan, Kecamatan Medan Baru, Kota Medan, Sumatera Utara, 20222, Indonesia

*Email: tasnimlubis@usu.ac.id

**Abstract.** Taman Gajah Mada is an outdoor recreation landscape located on Jalan Gajah Mada Medan, North Sumatra. Residents around Medan use this landscape to carry out sports activities. Usually, Taman Gajah Mada is visited by visitors in the morning and evening. Visitors who come in the morning usually come to just exercise. Meanwhile, visitors who come in the afternoon typically sit around enjoying the afternoon atmosphere in this beautiful and clean garden. This study was qualitative, and the ethnography method was applied to collect and analyze the data. The analysis also deliberated the unity of multidiscipline landscape architects and landscape anthropology to explain the use of outdoor recreation in Taman Gajah Mada. This literature becomes a reference for research on the concept of public open space at Taman Gajah Mada to maintain cultural originality in the use of roars in the landscape. This study indicates three public open spaces, namely the buffer zone, transition zone, and core zone. These three public open spaces can be grouped into two based on their function and purpose: general and special public open spaces. The general public open spaces such as transition zone and core zone can be utilized and used by the entire community, while special ones such as the Buffer Zone are buffer areas.

1. **Introduction**

Taman Gajah Mada is a public space built by the Medan Government by taking the concept of the environment and culture of the local community. The park is surrounded by four different roads, namely Jalan Gajah Mada, Jalan Sei Bekala, Jalan Mayjen D.I. Panjaitan and Jalan Sei Batang Serangan are very strategic because the entrance can be reached in 4 directions. A landscape that functions as an open space in the center of Medan city. Open space is an important space to meet the community's need for outdoor recreation and to carry out active or passive activities outside of daily activities. Today's urban communities need a place for social interaction to meet their needs and satisfaction. Many Open Spaces provided now refer to the beauty and aesthetics and the functions and conditions of its users.

The concept of landscape arrangement must pay attention to all functions and uses, such as city parks, sports, recreation, flora and fauna conservation, environmental health, security, water absorption, etc. Taman Gajah Mada, as part of the city's Open Space, according to the explanation of Article 6 of Government Regulation Number 63 of 2002, functions as: (1) air filter, (2) urban oxygen
cycle circulation, (3) as water catchment area, namely infiltration area. Water that collects rainwater, as well as (4) balancing the city's ecosystem, namely by restoring the carrying capacity of nature; while the benefits are: (1) ecological, namely as a counterbalance to the city's ecosystem; (2) socio-economic, namely as a place for sports and recreation; (3) educational, namely as a place for research and study of vegetation; and (4) aesthetics, namely providing/adding to the beauty of the city environment.

This is nothing but intended so that the potential needs of existing natural resources are maintained and protected. The potential of these natural resources can be maintained and protected, so good planning for the landscape is needed through an appropriate arrangement and the preparation of proper development programs. The development and planning of tourism areas as a landscape unit must be adapted to the area's geographical conditions so that there is no degradation [1].

Taman Gajah Mada has a role to (1) city identity, (2) plasm preservation, (3) retaining and filtering solid particles from the air, (4) absorbing and absorbing lead particles, (5) absorbing and absorbing cement dust, (6) noise suppression, (7) acid rain hazard reducer, (8) carbon-monoxide absorber, (9) carbon-dioxide absorber and oxygen generator, (10) windbreak, (11) odor absorber and filter, (12) overcome inundation, (13) overcome seawater intrusion, (14) climate restoration, and (15) groundwater conservation. All these functions will create a landscape concept to support outdoor recreation at Taman Gajah Mada. This study aimed to describe the landscape zones at taman Gajah Mada Medan toward increasing open space for outdoor recreation.

2. Methods

This research was conducted at Taman Gajah Mada, Medan City, North Sumatra, Indonesia (Figure 1) from March to May 2021. The research method was carried out qualitatively with elaboration or descriptive. Descriptive-qualitative research is a study to examine social events or activities naturally with an accentuation on the way of interpretation, understanding of experience, in a systematic approach to tourism planning which consists of describing social realities so that researchers can solve their own problems [2] [3].

This method is more on the phenomenological nature that results in the researcher's appreciation. Data analysis was carried out before-during-and after in the field. Before entering the area, triangulation is needed to test the validity of the interpretation to conclude. The strength of this method is based on the flexibility of the researcher's style in describing. In contrast, the weakness of this method is how detailed the researcher is in capturing the moment and explaining it—architectural analysis method with urban landscape approach [4].

The stages of analysis include inventory, analysis-synthesis (sites and activities), concept, design, and design development. This research is qualitative, and the ethnographic method is used to collect and analyze the data. This analysis also discusses the multidisciplinary unity of landscape architects and landscape anthropologists to explain the use of outdoor recreation in Taman Gajah Mada [5].

Figure 1. Orientation location map.
3. Results and discussion

A city has visual qualities, green planning, and revitalization programs to use the concept of space utilization optimally. Visual quality (vista) is the good or bad quality of an object judged by sight. The visual quality of urban physical elements is determined by a visual experience that displays physical contrast with the surrounding environment. This contrast can be achieved by protruding objects against their environment in the background and foreground. In the context of Taman Gajah Mada, the vista is a natural view. It is an element of the city's open space that provides an overview of the boundaries of the area/region (edges). The utilization of landscapes to develop nature tourism needs to be carried out carefully and carefully and not trapped by economic interests [6].

3.1. Vista concept

To maintain the landscape concept of Taman Gajah Mada, the visual quality (vista) refers to: (1) harmony, namely the contextual harmony of objects with the surrounding environment, namely their relation to the identity of the city, community life, history, and culture; (2) expression (expressiveness), namely visual images related to social functions, status and impressions of society, including the use of colors and building materials; (3) accessibility, namely the planning element of the circulation system concerning the achievement of going to and leaving the object, so that it is related to the placement of elements in the welcome node area through lighting systems, orientations, colors, symbols, and sculptures; (4) activity support, namely demands that must be able to accommodate all existing activities through the provision of a functional activity container; (5) point of view (view), namely the demand must be easily enjoyed by the five senses from a certain distance and point of view, both from inside and outside the object so that it can be recognized and viewed comfortably at a certain distance; (6) elements of nature (nature), namely the use of natural elements as elements that are most friendly to humans - to obtain a unified and human impression through consideration of topography, vegetation, water, climatology, and sky line conditions; and (7) maintenance, namely the direction to maintain the quality of the object through adequate maintenance and care efforts. So it is so important to consider cultural diversity in human life. Different cultures may have different expectations [7].

3.2. Green plan concept

In addition to considering the Vista Concept, it is necessary to pay attention to the vegetation plan, which is the main landscape element that lives and continues to grow. The function of plants contains not only aesthetic value but also improves environmental quality related to climatic factors. In tropical climates, such as Indonesia in general and Bondowoso in particular, there are 2 (two) types of plants in terms of leaf mass, namely: (1) deciduous plants which change shape and color of leaves according to the season, and (2) evergreen connivers that have thick leaves and flower all year round. Design in 3 aspects, namely planning, architecture, and landscaping, to bring the most significant value of the project into play and arouse people's sympathy. Under the innovative design concept, we can create a series of valuable landscapes [8].

The criteria for achieving vegetation quality refer to its function in landscape planning: (1) visual control, namely the function of plants to withstand glare caused by sunlight, street lights, and vehicle lights on roads, buildings, and spaces. Outside, and less pleasant things; (2) physical barrier, namely the function of plants that are used as barriers and directing the movement (circulation) of humans and vehicles through the regulation of plant spacing and plant height; (3) climate control, namely the function of plants used as climate control against: (a) solar radiation and temperature, (b) wind control, (c) sound control, and (d) air filter; (4) erosion control, namely the function of plants as erosion prevention and soil reinforcement due to the process of soil formation, cut and fill, and soil excavation; (5) animal habitats (wildlife habitats), namely the function of plants as a source of food and a place for animal life, so that it can indirectly help their survival; and (6) aesthetic values, namely the function of plants to increase the aesthetic value of the environment obtained from a combination
of plant colors (leaves, stems, flowers), plant physical forms (heads, branches, stems), plant textures (branching characters, leaf mass), plant scale (proportion of size, height and low), and plant composition (variation, accentuation, balance, simplicity, order). Proper arrangement of green open spaces will play a role in improving the quality of the city's atmosphere, refreshing the city, lowering city temperatures, reducing air pollution levels, and reducing noise. In general, green open space is dominated by plants, where this element has a lot of influence on the city's air quality. Plants can create a microclimate, namely a decrease in ambient temperature, sufficient humidity, and increased oxygen levels [9].

3.3. Revitalization concept

The development of the concept of open space in the Taman Gajah Mada Medan landscape is carried out through efforts to revitalize (renovation) the landscape elements to achieve the intended quality. It contains 3 (three) types of activities, namely: (1) giving new vitality to the existing condition, (2) increasing the existing vitality, and (3) reviving the old vitality that has faded away.

The criteria for achieving revitalization in landscape elements are based on considerations: (1) social physical, namely the function of green open space involving user behavior, namely: a forum for socio-political, socio-cultural, socio-economic, socio-ecological activities, and socio-social of all citizens of the city; (2) spatial physical, namely the function of green open space which involves the structure of space and territory, namely: entertainment and recreation facilities and infrastructure, structuring landscape functions, as well as patterns of functional layout alignment; (3) visual physical, namely the function of green open space related to aesthetics and environmental quality, namely: preserving the natural environment, vegetation elements which are regional/city mascots, sculpture elements with identities, and the arrangement of ideal landscape elements. In planning to improve the quality of public green open space, it should create the value of security, comfort, achievement, vitality, and image [10].

3.4. Landscape concept

The central concept of planning is to create sustainable outdoor recreation by developing tourism based on regional ecology and landscape potential to protect natural resources and environmental quality, visual quality of the landscape, and improve the welfare of local communities.

Based on the analysis and synthesis, the concept of a sustainable landscape in Taman Gajah Mada was developed into three main zones, namely the buffer zone (53%), the edge zone (20%), and the Arena zone (27%) (Figure 2). 30% of the city's green open space is a minimum measure to ensure the sustainability of the balance of the city's ecosystem, which includes the balance of the hydrological system, microclimate balance, and other ecological systems that can increase the availability of clean air needed by the community, open space for public activities and at the same time increase the value of the community and city aesthetic [11].

Figure 2. Landscape land use concept.
In the development zone with less potential, the tourism zone is a zone with high ecological value, including areas that are very vulnerable and still have very natural landscape characters. This zone is planned as a buffer zone with limited uses and activities based on rules. The rules used in this zone are restrictions on access to the area. Tourism activities developed for this are education and research, observation, good view, and jogging track.

The tourism development zone is quite potential, which is a zone that has a moderate ecological value which has been developed into a border zone to accommodate certain tourist activities and facilities. This zone allows little development with high regard for construction works and assessment of environmental impact. Tourism activities developed in this zone are passive tourism activities such as bird watching and good view.

![Image of landscape land use concept]

**Figure 3.** Landscape land use concept.

The tourism development zone is very potential. It is a zone that has a low ecological value which was developed to accommodate tourism activities and facilities because the arena zone is a zone that meets the requirements as a tourist area. Its vulnerability is low and can be exploited. Sustainability depends on the relationship between tourism and the environment [12]. Although this zone has a low exposure in its development, it must still pay attention to its development to not cause negative impacts—the landscape concept of outdoor recreation in Taman Gajah Mada Medan (Figure 3).

**4. Conclusions**

The concept of open space in Taman Gajah Mada landscape is the planning of landscape elements on the site which is intended to increase open space for outdoor recreation. This is created through 3 zones: the buffer zone, the transition zone, and the core zone. The three zones have emphasized the existence and existence of the city of Medan as an environmentally friendly city. As an open space, Taman Gajah Mada has a uniqueness, identity, and good view that is easy to enjoy. This open space enhances visual quality by arranging landscape elements in harmony with the environment, expressive, memorable, accepting, able to accommodate community activities, having a good, natural, and well-maintained view. Revitalize landscape elements physically so that they fulfill social, spatial, and visual functions.
References

[1] Gunn C A 1994 *Tourism Planning: Basics, Concepts, Cases* (Washington: Taylor & Francis)
[2] Wearing S and Neil J 2009 *Ecotourism: Impacts, Potentials and Possibilities* (Oxford: Elsevier’s Science and Technology Rights Department in Oxford)
[3] Creswell J W and Poth C N 2018 *Qualitative Inquiry and Research Design Choosing Among Five Approaches* (California: Sage Publishing)
[4] Gold S M 1980 *Recreation Planning and Design* (New York: Mc Graw-Hill Book Company)
[5] Zulkarnain, Lubis T, Ramlan, Dardanila, Hasrul S, Shaumiwaty and Saputra N 2021 Nandong as a culture-based effort to overcome food security toward COVID-19 pandemic situation in Simeulue Island *IOP Conf. Ser. Earth Environ. Sci.* 807 022007
[6] Warpani S . P and Warpani I P 2007 *Pariwisata dalam Tata Ruang Wilayah* (Bandung: Penerbit ITB)
[7] Lubis T and Purba A 2020 Metaphor and parallelism in political advertisements *Cogency* 12 71
[8] Gao B 2018 Research on Thematic Landscape Design *IOP Conf. Ser. Mater. Sci. Eng.* 371
[9] Hakim R and Hardi U 2003 *Komponen Perancangan Arsitektur Lansekap* (Jakarta: PT. Bumi Aksara)
[10] Darmawan E 2009 *Ruang Publik Dalam Arsitektur Kota* (Semarang: Badan Penerbit Universitas Diponogoro)
[11] Hakim R 2004 *Arsitektur Lansekap, Manusia, Alam dan Lingkungan* (Jakarta: FALTTL Universitas Trisakti)
[12] Bunruamkaew K and Murayama Y 2011 Site suitability evaluation for ecotourism using GIS & AHP: a case study of Surat Thani Province, Thailand *Procedia Soc. Behav. Sci.* 21 269–278