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EXAMINING THE TOURISM AND RECREATION POTENTIAL OF ISTANBUL NEŞET SUYU NATURE PARK IN TERMS OF CONSERVATION AND USAGE PRINCIPLES

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Abstract

The global increase in urban population and the growth of urban areas have led to a growing need for recreation in urban areas. However unplanned and unregulated growth of cities causes damage to both their ecological assets and natural resources in the surrounding rural areas. Global climate change has already threatened the world and our natural resources, making the support, preservation, and transmission of ecosystems in urban and rural areas increasingly important every day. In the ranking of forest assets per capita, Istanbul is 78th out of 81 provinces in our country. Therefore, it is essential that forest assets and in-forest recreation areas in Istanbul are used in a more qualified and planned manner compared to other provinces. In this study, one of Istanbul's most important in-forest recreation areas, Neşet Suyu Nature Park, was observed and evaluated through field observations and a survey, considering its existing assets. Neşet Suyu Nature Park, one of the nine nature parks in Belgrad Forest located within the borders of Sarıyer district in Istanbul, is an important recreational area with visitor potential throughout the year, frequently chosen by people. In line with the evaluation results, recommendations have been made to increase the usage potential by prioritizing the preservation of the area's natural and ecological assets to enhance the current usage towards a more qualitative state.

Keywords: *Landscape Planning, İstanbul, Neşet Suyu Nature Park, Tourism and Recreation*

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1. INTRODUCTION

Global climate change is one of the most significant environmental threats our planet is facing, and it has profound effects on urban areas. Rapid urbanization and increased industrialization have led to the destruction of natural ecosystems and a decline in the positive impact of these ecosystems on human quality of life (Bekiryazıcı, 2015). In the world, the urban population was 3.4 billion people in 2009, and it is expected to increase to around 6.3 billion by the year 2050, indicating an approximately 84% growth (United Nations, 2010). In this context, the need for green spaces in urban areas has been increased.

Green spaces are crucial in alleviating the environmental stress caused by urbanization and intense construction in cities. Trees, parks, gardens, and other green spaces provide city residents with an environment where they can breathe and relax (Steiner, 2014). Moreover, green spaces offer ecosystem services such as reducing carbon dioxide emissions, improving air quality, and regulating the water cycle. These factors are critical in combating global climate change and ensuring sustainable urban living.

Giving emphasis to green spaces in urban planning and design processes can aid cities in adapting to future climate change challenges. Additionally, it is essential for communities to develop urban policies and projects that provide increased access to green spaces. In this way, cities can not only become more sustainable but also enhance the physical and emotional well-being of the public (Lee et. Al., 2015).

In today's world, natural beauties and cultural heritage have become appealing to visitors, thus increasing the significance of sustainable preservation and effective utilization of natural and cultural resources.

Nature parks in urban areas offer city residents the opportunity to spend time in nature and relax in green spaces. These parks create a balance against the concrete and structural density of cities, providing people with refreshing and peaceful environments (Douglas and Philip, 2014). By preserving and enriching natural habitats, they contribute to the sustainability of biodiversity. Additionally, they enhance environmental awareness and sensitivity to nature by promoting educational activities, thus becoming crucial spaces where people can breathe, relax, and engage with nature within cities.

Sustainable tourism and recreation must be addressed within its environmental, economic, and societal dimensions (Harris et. al., 2012). Preservation of natural resources, maintaining biodiversity, and ensuring environmental balance should be accompanied by contributing to the local economy. This balance can be achieved through effective planning and management.

In the existing literature, a range of crucial principles and strategies for the preservation of natural areas and sustainable tourism are highlighted. Collaborating with local communities, creating education and awareness, developing sustainable infrastructure, and monitoring visitor numbers and impacts are frequent themes in the literature (Abduganiev and Makhkamov, 2022). These principles and strategies provide valuable guidance for the preservation and sustainable utilization of tourism and recreation potential (Breiby et. al., 2022).

In this study we try to find out to compile these findings from the literature and identify key principles and effective strategies for the sustainable management of tourism and recreation potential. This is a crucial step to ensure the long-term sustainability of tourism and recreation areas, focusing on both the preservation of natural and cultural resources and enabling visitors to have positive experiences. Neşet Suyu Nature Park is an area of natural and cultural significance, and the aim is to establish a sustainable ecological-based landscape planning to make optimal land use decisions while preserving the natural, cultural, and historical values of the area. Additionally, a recreation area planning is suggested to address the identified problems in the area while maintaining these values.

2. MATERIAL AND METHOD

2.1. Study Area

The study area is identified as Neşet Suyu Nature Park, one of the nine nature parks within the boundaries of the Belgrad Forest in the Sarıyer district of Istanbul. The total forest area of Istanbul is 240,000 hectares. The Belgrad Forest is one of Istanbul's significant presumed forest areas, covering a total area of 5,688.71 hectares. Neşet Suyu Nature Park, designated as a nature park in 2011, encompasses an area of 67.47 hectares (Figure 1, İstanbul Orman Bölge Müdürlüğü, 2022).

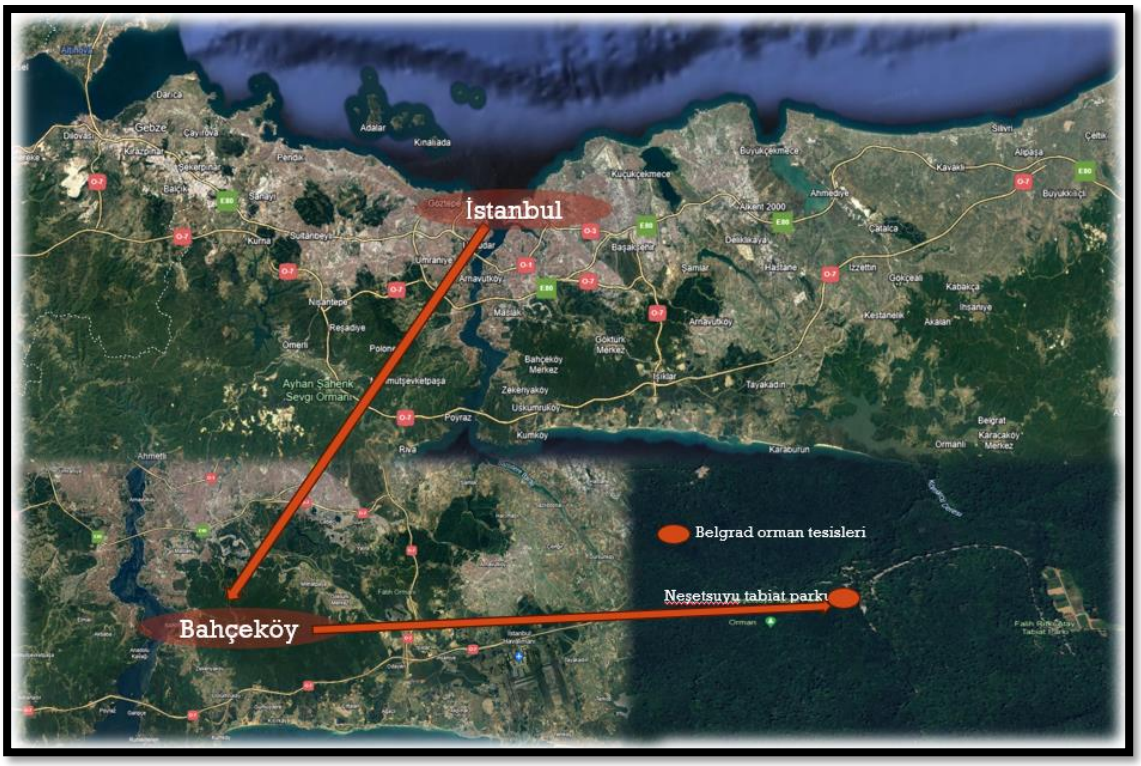


Figure 1. Location of the Study Area

Within the Neşet Suyu Nature Park , the closest transportation is available to Falih Rıfkı Atay Nature Park, Kömürcü Bent Nature Park, Bentler Nature Park, and Atatürk Arboretum. In the vicinity of these parks, there are Kirazlı Bent picnic area, Fatih Çeşmesi Nature Park, Ayvant Bendi National Park, and Mehmet Akif Ersoy Nature Park. Next to the main entrance of the Belgrad Forest, there is a family health center and a mental health center. 500 meters from the main entrance of the Belgrad Forest, there is the Istanbul Forest Nursery Directorate. Additionally, 950 meters further from the main entrance of the Belgrad Forest, you can find Istanbul University Cerrahpaşa Faculty of Forestry. Sarıyer Hamidiye Etfal Hospital is located 5.6 kilometers away from the main entrance of the Belgrad Forest.

Belgrad Forest, located 14 km away from the Sarıyer district center in Istanbul, can be reached by private vehicle from the district center in approximately 30 minutes. The location of the study area is provided in detail in Figure 1. The distance from the main entrance of Belgrad Forest to the nature park is 2.5 km, and it can be reached by private vehicle in 15 minutes or by walking in 35-40 minutes. From Neşet Suyu Nature Park, it is possible to reach Falih Rıfkı Atay Nature Park, Kömürcü Bent Nature Park, Bentler Nature Park, and Atatürk Arboretum.

In the area, there are 3 parking lots, 1 gazebo, 1 snack bar, 2 historical water cisterns, 4 children's playgrounds, 1 restroom, 2 security booths, 1 changing room, 1 prayer area, 8 shade elements, and various outdoor fitness equipment in different sections (Figure 2,3,4,5 and 6).

Figure 2. Car parking area in the study area

Figure 3. Historical water cistern in the study area

Figure 4-5. Picnic area and WC in the study area,

Figure 6-7. Snack Bar and playground in the Study Area

Neşet Suyu Nature Park's flora is predominantly characterized by oak and common hornbeam. In addition to this, the Belgrad Forest mainly consists of oak trees (*Quercus sp.*), and it also encompasses Oriental beech (*Fagus orientalis*), Chestnut (*Castanea sativa*), Lime (*Tilia tomentosa*), Field maple (*Acer campestre*), Rowan (*Sorbus aucuparia*), Aspen (*Populus tremula*), Hazel (*Corylus avellena*), and willow (*Salix sp.*) varieties (URL-1).

The main fauna species in the park area include wild boar, golden bowl, deer, roe deer, fox, wolf, badger, rabbit, squirrel, turtle, and hedgehog. Observed bird species include falcon, hawk, magpie, crow, woodpecker, sparrow, finch, and Nightingale (URL-1).

2.2. Method

In the research, initial investigations were carried out on-site at Neşet Suyu Nature Park using the observation method. During the fieldwork, access to the area, recreational activity areas, lighting and equipment elements, structural units, walking paths, picnic areas, parking lots, children's playgrounds, etc., were identified, thoroughly analyzed, and their current conditions, maintenance, and adequacy were presented. The manner and method of spatial usage by visitors were examined, and an online questionnaire conducted on Google Forms targeted approximately 50 individuals who had previously visited the area. Multiple-choice questions were used to inquire about the mode of transportation used to access the area, frequency of visits, adequacy of structural elements and facilities in the area, safety measures, and other relevant factors. Evaluations were then made based on the responses received. Visitors' opinions and preferences regarding the nature park were determined through this questionnaire. Based on observations, analyses, and questionnaire results, recommendations were made to enhance the recreational potential of the area.

3. FINDINGS

3.1. Findings obtained from the Site Analysis

Based on the examinations conducted in the study area there is only a vehicular road on the access route to the area. It has been observed that there is no pathway for pedestrians and bicycle users both within and outside the area. There are 2 parking lots in the area; however, due to limited capacity, it has been observed that vehicles parking along the roadside when the area is crowded. Insufficient security has been identified in the area. Due to the lack of security intervention, it has been observed that some visitors use the area in a disorderly and unclean manner. It has been observed that the children's playgrounds are disorganized, no safety measures are taken, and there is a lack of equipment. Due to the inadequacy of trash containers in the area, it has been observed that users are leaving their garbage in the surroundings, leading to environmental pollution and damage to nature. It has been observed that during unfavorable weather conditions, the area is not actively used due to the lack of amenities. It has been observed that there is only 1 restroom in the area for toilet facilities, and due to its central location within the picnic area, people are exposed to bad odors. It has been observed that the picnic area is disorganized, and there is no proper road for entering the picnic area. Due to insufficient lighting in the area, it has been observed that the use of the area becomes dangerous

after dark, leading to a decrease in its usage. It has been determined that despite the use of the area by many athletes, there is only one changing room available. It has been observed that there is a lack of directional and informational signs both on the way to the area and within the area. Visitors have been observed to experience food and beverage shortages in the area due to the lack of facilities. The sheet containing all analyses has given in Figure 8.

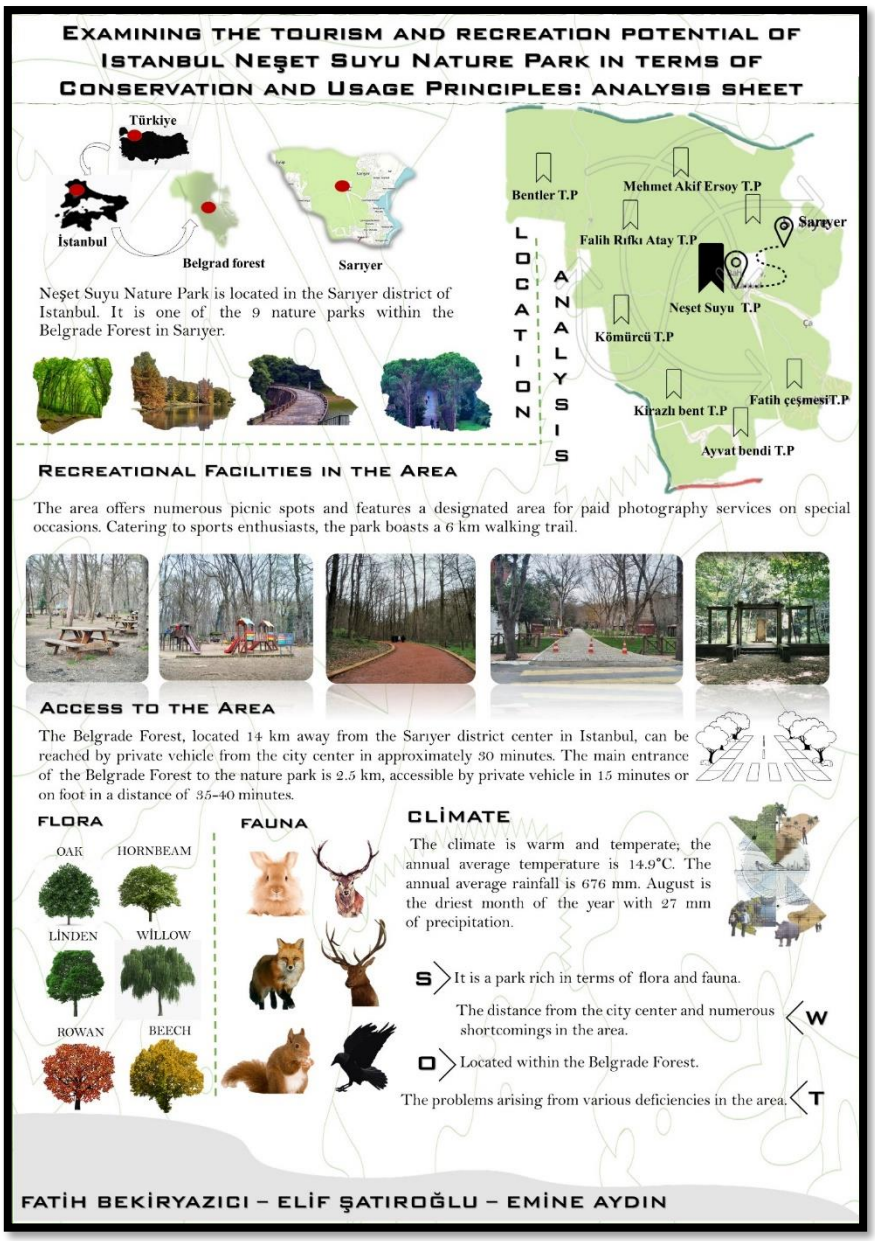


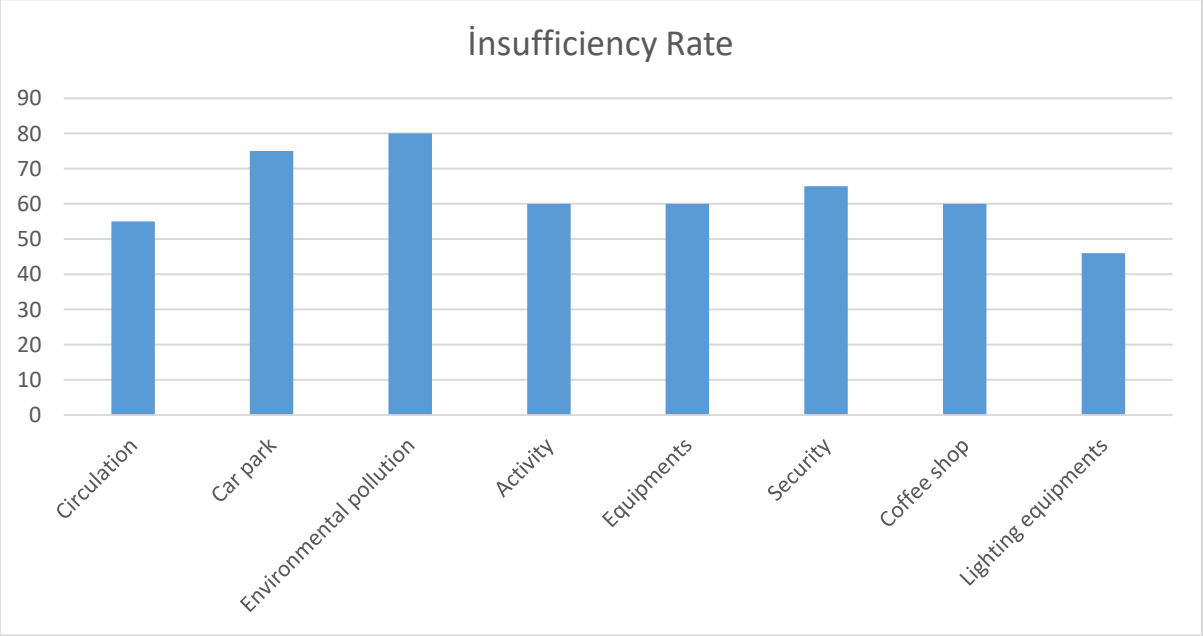
Figure 8. Analysis sheet

3.2. Findings from the questionnaire evaluation

In the survey evaluation, 55.2% of the participating visitors were female, and 44.8% were male users. The majority of users, 58.6%, are within the age range of 18-24. According to the survey, 34.5% of the visitors to this area visit it several times a year, 27.6% visit monthly, 20.7% visit once a year, and 17.2% visit every month. In terms of visiting protected areas, 41.4% of visitors do so for sightseeing, 34.5% for picnicking, 13.8% for running-walking-cycling, and 10.3% for scientific research purposes. 82.8% of users reported enjoying visiting such areas.

According to the survey, 44.8% of visitors agree with the restoration of protected areas, while 34.5% do not. As per the survey, 90% of park users expressed dissatisfaction with the area. Among the visitors to the nature park, 62.1% use the road by car, 27.6% go on foot, and 10.3% reach the area by bicycle. 70% of the participants in the survey stated that they do not consider walking and cycling transportation safe. The circulation, parking availability, presence of environmental pollution, amenities, variety of activities, security units, snack bar, and adequacy of lighting elements were individually asked to the visitors in the area, and their respective percentages are provided in the table 1. In this table, each column represents separate units that have been asked in individual questions. According to the table 75% of the visitors indicated dissatisfaction with the inadequate parking, 60% with the lack of events and activities in the area, 80% with environmental pollution, and 55% with the inadequate pedestrian and cycling circulation. In a study regarding the initiation of a fee-based entertainment sector within the forested area, 40% of the participants support this new development for entertainment purposes, while 60% believe there is no need for such development

Table 1. Insufficiency rate according to survey evaluation



4. CONCLUSIONS AND SUGGESTIONS

Neşet Suyu Nature Park is one of the significant recreational areas located within Istanbul's Belgrad Forest. In this study, analyses and survey research focused on area usage were conducted to identify deficiencies within the park, and recommendations were provided accordingly. Similar studies have been conducted in the literature for different areas. In their 2018 study, Yeşil and Beyli investigated Ordu-Boztepe's tourism and recreation potential and its contribution on the city image (Yeşil and Beyli, 2018). Cetin and Sevik examined the recreation potential of Ilgaz mountain national park (Cetin and Sevik, 2016). Bekiryazici et al. carried out a study to determine the tourism and recreational potential of Rize Şenyuva Village. They conducted an area analysis followed by the implementation of the Gülez method to identify the recreational potential of the area (Bekiryazıcı et. al., 2021). Düzgüneş and Demirel was performed to determine the tourism potential of Altındere Valley National Park with respect to its conservation and utilization (Düzgüneş and Demirel, 2013). In the study where Kurdoğlu and Düzgüneş examined the recreational potential of urban forests, they analyzed the recreational potential and user preferences of Artvin Urban Forest (Kurdoğlu and Düzgüneş, 2011). Pirselimoğlu and Demirel were investigated of an ecologically based recreation and tourism planning approach in Trabzon Çalköy (Pirselimoğlu and Demirel, 2012). Our study differs from the literature examples given above in some aspects. For example, in some of the studies mentioned above, Gülez Method was used to reveal the tourism and recreational potentials of the study areas and evaluations were made accordingly. However, we first revealed all the existing assets, usability and functionality of the area with the on-site observation method, and then we made evaluations by revealing the adequacy of structural units, equipment and activity diversity through questionnaire conducted with the users of the area. Moreover, the location and typology of

our study area differs from those mentioned above. Especially for a dense city like Istanbul with a population of over 15 million, the fact that we have chosen one of the few recreation areas as a study area for the development of the recreation potential of this area has emerged as one of the differences of our study.

According to the questionnaire evaluation, the majority of visitors who access the area by car find the existing parking insufficient. Therefore, it is recommended that an adequate parking facility be constructed in accordance with the visitor capacity of the area, and that a security personnel responsible for the organization and management of the parking area be employed. Visitors who access the area on foot and by bicycle have reported that there are no pedestrian and bicycle lanes on the access route, posing a risk to their safety. As a result, it is recommended to construct pedestrian and bicycle lanes alongside the vehicle road on the access route to the area and within the area. Additionally, it is suggested to design specific bicycle parking points within the area for bicycle users.

Due to the high level of environmental pollution in the area, it is recommended to increase the number of existing garbage containers and to install signs to raise awareness among individuals. It is suggested to place signs informing people that there are penalties for littering or dumping trash anywhere within the area.

The observation has revealed that the area is far from the town center, and there is no nearby market or similar facility near the entrance. As a result, visitors cannot shop within the area or its immediate vicinity. Visitors find the presence of only one snack bar within the area insufficient. Therefore, it is suggested that a facility be built in the area that can cater to all the needs of users and is suitable for the visitor capacity.

Due to the disorganization and lack of hygiene in the existing picnic area, it is recommended to design a separate area specifically for picnic purposes. Furthermore, as the restroom in the picnic area disturbs visitors, it is suggested to remove it from the area and design toilets at a few locations that will not inconvenience the visitors.

Visitors find the existing directional signs in the current location of the area insufficient. As a result, it is recommended to place directional signs at specific locations within the area and on the entrance road. Additionally, it has been observed that there are no informative signs about the area in its current location. It is suggested to place informative signs at the entrance of the area, providing information about the area, its flora and fauna. To inform visitors who come for scientific research, observation, or leisure, small signs indicating the names of each plant should be placed next to each plant.

According to the survey evaluation, visitors find the activity opportunities and variety of activities in the area insufficient. As a result, it is recommended to add various activities to the nature park that will not disrupt its natural balance. For example, activities like outdoor sports, camping areas, bird watching, etc., can be considered.

It is recommended to undertake conservation efforts for the flora and fauna, water reservoirs, and the mihrab of the prayer area in the park. Measures such as raising awareness among visitors, implementing restrictions to prevent any harm to the environment, and installing security cameras should be taken.

According to the survey evaluation, visitors find the existing amenities, lighting fixtures, and seating elements in the area insufficient. As a result of this evaluation and observations made, it is recommended to increase the lighting elements in the area, install seating elements at specific locations, especially along the running track and the children's playground. Additionally, it is suggested to design covered picnic areas or canopy elements that are suitable for various weather conditions (rainy, etc.) to enable continued use of the area during adverse weather conditions.

Visitors find the existing security insufficient. As a result, it is recommended to increase security services at different points within the area.

It has been observed that there is no entrance to the picnic area, and users access the area by crossing a vertically placed wooden board. As a result, it is recommended to design an entrance to the picnic area that allows users to access it comfortably.

The children's playground in the picnic area has been observed to be disorganized, lacking safety measures, and having inadequate equipment, and visitors find these areas insufficient. As a result, it is recommended to redesign the existing children's playgrounds in the area, using equipment suitable for user capacity and age groups, separating the designed children's play areas with designated boundaries and safety measures, designing seating elements for families, and preferably using a tartan surface for the safety and well-being of the children. The sheet containing all analyses has given in Figure 9.

Figure 9. Recommendations sheet

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