

THE ROLE OF URBAN PARKS FOR THE SUSTAINABLE CITY: THE CASE OF HARGEISA CITY, SOMALILAND



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School of Civil Engineering and architecture

Presented in partial fulfillment of the requirement for the Degree of Master's
in urban planning and design

Office of Graduate Studies
Adama Science and Technology University

August, 2021

Adama, Ethiopia

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Approval page of M.Sc. Thesis

I/we, the advisors of the thesis entitled "MASTER THESIS ENTITLED THE ROLE OF URBAN PARKS FOR THE SUSTAINABLE CITY: THE CASE OF HARGEISA CITY, SOMALILAND" and developed by SAKARIE ABDIHAKIM MOHAMED, hereby certify that the recommendation and suggestion made by the board of examiners are appropriately incorporated into the final version of the thesis.

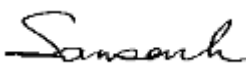
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Declaration

I hereby declare that this master's thesis intituled "MASTER THESIS ENTITLED THE ROLE OF URBAN PARKS FOR THE SUSTAINABLE CITY: THE CASE OF HARGEISA CITY, SOMALILAND" is my original work. That is, it has not been submitted for the award of any academic degree, diploma or certificate in any other university. All sources of materials that are used for this thesis have been duly acknowledged through citation.

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Recommendation

I/we, the advisor/s of this thesis, hereby certify that I/we have read the revised version of the thesis entitled "MASTER THESIS ENTITLED THE ROLE OF URBAN PARKS FOR THE SUSTAINABLE CITY:, THE CASE OF HARGEISA CITY, SOMALILAND" prepared under my/our guidance by SAKARIE ABDIHAKIM MOHAMED submitted in partial fulfillment of the requirements for the degree of Master's of science in "Urban planning and Design" therefore, I/we recommend the submission of revised version of the thesis to the department following the applicable procedures.

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LIST OF ACRONYMS

CP:		Community Parks
GI:		Green Infrastructure
GIP:		Green Infrastructure Parks
NEB:		National Election Board
PD:		Primary Data
SD:		Social Demand
SD:		Sustainable Development
SF:		Slovene's Formula
UD:		Urban Development
UGI:		Urban Green Infrastructure
UN:		United Nation
UP:		Urban Parks

Abstract

Parks contribute to urban, environmental, social, and economic sustainability. Parks are vital for the environment and the people living in the cities. So, the main objective of this research is to discuss the effect of parks on the urban environment, the social demands, their role in sustainable cities, and propose urban parks for sustainability, especially Hargeisa City, the capital of Somaliland. To achieve this main objective the researcher, collected data from both primary and secondary sources and analyzed it. The primary sources are the community and officials, whereas the secondary sources are documents such as the structural and master plan of the town and related literature. So, after analyzing the data, the result of the study reveals that the community's most pressing needs in the city is parks when they need to take their free time. Likewise, it reveals that the parks can contribute to social integration and strengthen relationships between the community. The research is also exposing how parks can contribute to public health. Also, the research's results show that people can take advantage of the parks by walking or exercising to improve their health. It similarly embraces in the research that the parks can participate in both public and private meetings. Hence, the research's results show that the parks play an essential role in the refreshment and relaxation of the community, which promotes the mental stability of the community that uses the parks. The research also concluded that the parks could contribute to environmental sustainability and promote environmental development. Similarly, the research concludes that the parks play a good role in reducing urban temperatures, increasing oxygen, and increasing shade and reforestation in the city. Furthermore, the research concludes that the parks contribute by reducing air pollution and accessing fresh air. It is concluded that the parks could make the city spaces that are environmentally friendly and creditable. Finally, the research recommends that the parks of Hargeisa city need development in many directions, such as increasing the space, lighting, greenery, and adding sports facilities, walkable places, and unique places for children. It is also proposed a park design that is suitable for Hargeisa city.

Keywords: Urban parks, sports facilities; social integration; relaxation of the community; environmental sustainability; environmental development; urban temperatures.

CHAPTER ONE: INTRODUCTION

1.1. Background of the Study

Throughout the world, urban areas have been increased in size over recent decades (Borrios, 2000). The United Nations report indicates more people of the world (54 %) are living in urban centers and by 2050 urban environment will need to accommodate an additional 2.6 billion people, pushing urbanization to 86% in the developed world and 64% in the developing countries (Nation, 2014). Overcrowding and the resulting unplanned growth are also recognized as constituting one of the most complex processes in the world, raising concerns about the sustainability of cities and inquiries about how to achieve sustainable cities (Nation, 2014).

The World's population had been rapidly congregating in urban areas. Increasing population and urbanization is recognized as one of the most complex processes on at the global scale. This massive urbanization began in the industrial revolution in the nineteenth century and the decline of nature during the twentieth century increased public awareness of the necessity of introducing natural assets and components in urban contexts, which led to the creation and development of the urban park movement with the objective of increasing life quality in the modern city (Costa, 2012). This rapid urban expansion and population growth across the globe is followed by degradation of local environments such as air pollution, intensification of the heat island, loss of urban green spaces, biodiversity, and ecosystem services. Overall, population growth and urban expansion induce high pressure on natural resources and threats to compromise the quality of life within the urban environment (Maza, 1997).

Urban parks are an important part of the complex urban ecosystem network and provide significant ecosystem services. It benefits urban communities environmentally, aesthetically, recreationally, psychologically, and economically. The urban park movement had the objective to increase the city life quality of the industrial revolution era (19th century). The planning of parks was closely related to urban and garden design (Loures, 2007).

The movement of making parks to the cities started in England, creating public city parks like the Victoria Park which is considered the first urban park of history, while according to some authors Birkenhead Park was the first urban park constructed exclusively with the public money. Public parks supported by municipal governments date from the 1840s in

Britain and the 1850s in the United States and Canada. Initially, urban parks were not public, once they were used only by a privileged part of the population. Additionally, public parks and green spaces can have a statistically significant effect on the sale price of houses in close proximity to those resources (Maza, 1997). According to Ganz and Boland, urban green space contributes to ecological sustainability. A functional network of green space is important for the maintenance of the ecological aspect of a sustainable urban landscape. Landscape connectivity should be promoted with the development of greenways and the use of autochthonous species, adapted to local conditions, with a low maintenance cost, self-sufficient, and sustainability (Loures, 2007).

The aesthetic, historical, and recreational values of urban parks and green spaces increase the attractiveness of the city and promote its tourism potential, thus generating employment and revenues. Modern cities have developed their own sustainability indicators to measure the quality-of-life issues, which are central to all the various definitions of sustainability in cities. Urban parks and green spaces can provide social services for quality of life and are considered a key component of sustainability. Public attitudes must be understood and accounted for in natural resource management and can help guide management strategies (Kim, 2015).

In sub-Saharan Africa, the provision of high-quality urban GI components in cities is rarely recognized (Girma, 2019). Moreover, the important role of urban GI elements in African urban regions is still hardly recognized in policymaking. (Irwin, 2002). There is also a lack of ~~an appropriate~~ GI approach that well integrates into the planning and governance system of the cities (Girma, 2019). Similar problems were also observed in Ethiopia, which is one of the most rapidly urbanizing countries in sub-Saharan Africa. The share of the population living in cities has increased from an estimated 7.1% in 1994 to 16% in 2016 and is expected to reach 60% by 2040 at the current annual growth rate of 3.5% (United Nations, 2014; Lamson-Hall et al., 2018). Due to rapid urbanization, the consequences on the development of urban GI components are alarming (Ministry of Urban Development and Housing, 2015, (Girma, 2019). However, there is no research or any other related study conducted in Hargeisa or other cities of Somaliland.

1.2. Statement of the Problem

Green spaces constitute a major environmental resource of the urban landscape. In Africa, statistics show that urban green spaces are depleting at an alarming rate with green spaces now occupying a small proportion of the landmass of several urban areas (Mensah, 2014). Although a variety of green spaces exist in Africa, it came to the fore that among the various forms of urban green spaces much emphasis is given to urban trees (Mensah, 2014). The governments of most African countries in collaboration with environmental agencies often embark on tree planning exercises in urban areas to enhance the greenery and air quality of those areas (Mensah, 2014). East and Central African countries have large national parks, which have been expanded in size or have increased in number as a result of the economic benefits of tourism. Kenya's parks include Tsavo, one of the largest, with an area of more than 8,000 square miles, Lake Nakuru National Park for flamingos, several montane parks, and a marine park (David, 2020). Tanzania has the famous Serengeti National Park, with its unrivaled populations of plains ungulates, and the parks of Ngorongoro, Lake Manyara, Arusha, and others. Other countries with notable national parks and game reserves are Botswana, Malawi, Namibia, Zambia, and Zimbabwe. All parks in these countries preserve representative woodland, thornbush, grassland, and succulent-desert habitats and species (David, 2020).

One of the biggest problems in Hargeisa and other Somaliland cities is the limited and not enough of parks. There are parks but lack basic infrastructure, attention, role, values and they are not developed enough to meet the needs of the people of the cities and neighborhoods close to such parks. It is also important that there is a serious problem with municipalities not being aware of the benefits of parks to the environment, people and the city and contributing to urban sustainability. This research has been done to show the role that urban park played. In addition, there is not study conducted under the issue particular in Hargeisa city. The parks of Somaliland are very small and underdeveloped and most of the cities, they didn't have parks, . The parks are not very important in the country when it comes to projects to be implemented in the cities, so the researcher chose this topic to change that opinion. That is why the researcher is talking about this important issue that has prompted him to discuss this thesis.

1.3. Objectives of the Study

General Objective of the Study

The general objective of the study was to investigate the role of urban parks for the sustainable city

Specific Objectives of the Study

The specific objectives of the study are:

- Assess the effect of urban parks on the environment in Hargeisa
- Examine the social demands of an urban park in Hargeisa,
- evaluate the role of urban parks in the sustainable of Hargeisa city.
- Propose urban park for the sustainability of Hargeisa town, Somaliland

1.4. Research Questions

The study answers the following questions

1. What is the effect of urban parks on the environment?
2. What is the social demand of urban parks?
3. What are the roles of the urban park for sustainable city?

1.5. Scope of the Study

This research was thematically presenting, how urban parks could take an apart for the sustainable city specially the side of the environment and social behaviors. Accordingly, the main focus was on the role of parks on the location(city) and its population behavior. Geographically, the scope of the study was limited to Hargeisa city.

1.6. Significance of the Study

This study was taken part in improving parks for use and changing the behavior that the people of Hargeisa and their leader have for the park. Also, it can contribute to the hard work that is going on beautification of the country as part of the development activities within the cities. Additionally, this research will be used for reference for future related studies on the issue.

1.7. Limitation of the Study

This study was interesting but there was some limitation of the study as the researcher indicated below:

- Lack of reference and papers those written this issue on the study area.

1.8. Organization of the Thesis

The thesis is organized into five chapters. Each chapter systematically and effectively examines the content and data of the study accordingly. The fundamental chapter in the thesis is further demonstrated as follows.

Chapter One: Introduction to the study introduces the thesis by highlighting the main topic of the study, research problems, objectives, questions, significance, scope, description of the study area, limitation, and organizing.

Chapter Two: Literature Review is a chapter that discusses key concepts and definition of sustainable city, parks and their role to the Environment and to the public, environmental benefits of urban parks, social behavior of urban parks, park in the city as part of the infrastructure, urban park and sustainability of the city and lastly, the economic importance of urbanParks.

Chapter Three: Research Methodology is a chapter that discusses the methodology of the research. The chapter explains the methods used for the study and the process of data collection and analysis in detail.

Chapter Four: Result and Discussion is a chapter that discusses the results of qualitative and quantitative data findings. The data are analyzed based on a questionnaire survey, field observation notes. Also, it makes the master plan oof the city analyzed and proposed a park design according to the surrounding land use of the park.

Chapter Five: Conclusion and recommendation is the concluding part of the research. The chapter made a conclusion based on the findings and design needs from the analyzed data and made conclusion and recommendations.

2. CHAPTER TWO: LITERATURE REVIEW

2.1. Concepts and definition of sustainable city

A sustainable city is hard to define. Some sources define a sustainable city as a city that has achieved social, economic and physical development which benefits also future generations. According to the global agenda following the Rio Summit! 1992, one of the principles which governments should ensure, includes fundamental rights of all people to an environment that is adequate for their health and well-being, incorporating non-economic variables as clean air and water, protection of the nature and health and education (Ranmkhah, 2009).

Sustainability is a debate of our way of life (Stevens, 2010). A discussion on the philosophy of sustainability stands on two specific questions related to its meaning. Through these questions, Steven explores an understanding of sustainability that is broad, comprehensive, interpretive, and process-oriented. Sustainability, in the ecological model, can draw from at least five intellectual traditions. They are capacity, fitness, resilience, diversity, and balance. (Stevens, 2010).

2.2. The Role of Urban Parks to Environment

A Park is an area of natural, semi-natural, or planted space set aside for human enjoyment and recreation or for the protection of wildlife or natural habitats. It may consist of grassy areas, rocks, soil, and trees, but may also contain buildings and other artifacts such as monuments, fountains, or playground structures. Parks belong to a vast category of land uses termed public open places (Mohammad Mehdi, Zhirayr Vardanyan, 2014). These places cover a broad range of purposes that are devoted to serving the needs and interests of diverse groups and many subdivisions of the population. They are geared towards fulfilling the leisure, recreational and educational needs of the young and old, male and female, rich and poor, and of people of varying abilities. Public areas and facilities can be publicly and privately owned or owned through a public-private partnership. All these types of public areas can be divided into two broad families of spaces: plazas, streets, and parks (Bryan, 1977).

Furthermore, a public park is an open space that is controlled by government. The level of government participation is related to the scale of the park and accordingly its classification. The scale of a park can range from a national park to smaller. For each classification of park there is a government agency that has authority. There are four main types of parks: national, provincial, regional, and municipal (Brown, Greg, Delene Weber, and Kelly De Bie, 2014).

Parks in a city can play a significant role to enhance the quality of life of citizens. They provide important environmental services like air purification and noise filtering. Perhaps the most cited benefit of a park for people who use it is "contact with nature. A park is often considered an oasis of greenery in a concrete desert. Many documents mention the range of ways in which contact with nature enhances the quality of Life for people. Parks provide visual relief, personal change and relaxation (Costa, 2009). Parks can also promote social interaction and human contact. Some researchers suggested that properly designed park can promote social interaction for their users. If parks in cities provide people with better services and benefits, the city becomes a better place to live and work (Ranmkhah, 2009). Parks are key to ensuring the health of our environment because they play a critical role in maintaining healthy ecosystems, providing clean water and clean air, and enabling conservation of natural resources (Campbell, 1996).

Humanity is rapidly urbanizing, and by 2030 more than 60% of the world population is expected to live in cities. (Irwin, 2002). But even if humanity is increasingly urban, we are still as dependent on Nature as before. Cities are, for example, dependent on the large hinterlands needed to provide input and take care of output from the city. In a study of the 29 largest cities in the Baltic Sea region, it was estimated that the cities claimed ecosystem support areas at least 500–1000 times larger than the area of the cities themselves (Ranmkhah, 2009). When humanity is considered a part of nature, cities themselves can be regarded as a global network of ecosystems. If compared with true, natural ecosystems, the man-made ones are however immature due to features like their rapid growth and inefficient use of resources such as energy and water (Bowrin, 2003). Even observes cities to be “only parasites in the biosphere”. But there is also a presence of natural ecosystems within the city limits. As will be discussed in this paper, the natural urban ecosystems contribute to public health and increase the quality of- life of urban citizens, e.g., improve air quality and reduce

noise. Most of the problems present in urban areas are locally generated, such as those due to traffic. Often the most effective, and in some cases the only, way to deal with these local problems is through local solutions. In this respect, the urban ecosystems are vital (Bolund, 1999).

2.2.1. Environmental benefits of Urban Parks

When it comes to the benefits of urban green and open space, one should concern on the facilities provided to promote human or societal wellbeing, either directly or indirectly. many benefits cover various areas such as natural conservation which increases biodiversity of flora and fauna, affecting urban climate by reduction of air temperature and urban heat islands, improving air quality, decreasing air pollution and carbon sequestration, noise reduction and cleaning up contaminants (Yosuf, 2018).

Creating sustainable cities is much about addressing quality of life in them. Increasing prosperity and life spans brought more free time to many people, increasing the need for leisure facilities and green spaces Parks in a city can play a significant role to enhance the quality of life of citizens. They provide important environmental services like air purification and nose filtering (Sassi, 2006).

For instance, air pollution involves many pollutants ranging from PM to SO_x and NO_x also CO_x and may be caused by urban warming, for example, by increasing surface ozone concentration with several negative impacts on human health (Feyisa et al., 2014). It is being associated with indirect health effects (Li, 2014) and abnormal levels of mortality and morbidity among urbanites (Jerrett et al. 2011). Urban open green spaces play a significant role in decreasing air pollution as they intercept atmospheric particles and absorb different gaseous pollutants, (Yin et al., 2011). They are frequently quoted as a partial solution, as leaves take in gaseous pollutants through their pores and capture particulate matter on their surfaces (Kessler, 2013). They reduce the level of NO_x and SO_x and remove large amounts of airborne pollution (Pugh, et al 2012; Yin et al., 2011) and also contribute substantially to the elimination of particles (Tallis et al 2011; Tallis et al. 2011). Pollution removal depends on the amount of tree cover, and also the duration of the in-leaf season and a host of meteorological variables that have an effect on trees (Paoletti et al 2011).

Furthermore, complex processes are involved in determining the cooling effect of vegetation on daytime air and surface temperature (Arabi et al 2015). The vegetation cools the

environment through evaporative cooling which consumes energy, shading effects which encompass intercepting solar radiation, and its thermal and optical properties (Bowler et al., 2010; Vasilakopoulou et al, 2014; Kleerekoper et al. 2012; Jim & Peng, 2012). Cities in the tropics, urban open green spaces are of particular importance as they offer shading and cooling, to mitigate the urban heat island effect and with regard to air pollution (Gago et al 2013). Trees offer shade on hot days and in sunny climates (Carmona et al 2004) and generally, parks are cooler than the urban areas that surround them (Skoulika et al., 2014). According to Bowler et al. (2010), temperature in a park reduces averagely by about 0.94°C in day time and 1.15°C at night. Park size also plays a positive role in estimating the cooling effect, helping to maximize the cooling effects of parks, tree vegetation canopy cover can be increased and the choice of species for greening should be optimized (Feyisa et al., 2014).

Cities play an important role in the global carbon cycle. They produce a large proportion of CO₂ emissions (Strohbach, Arnold, & Haase, 2012), but urban forests and open green spaces sequester and store carbon within trees and other kinds of vegetation that are very valuable (Davies, Edmondson, Heinemeyer, Leake & Davies, 2011). The sequestration of carbon by urban vegetation acts as carbon sinks and plays a significant role in the issue of climate change (Paoletti, 2011).

2.2.1 Social Benefits of Urban Parks

Urban parks provide multiple non-material benefits to human health and well-being; measuring these “intangible” benefits mainly co-produced by the spatial interactivity between dwellers and urban parks is vital for urban green space management. It is operationalized by using biophysical indicators. Urban parks, particularly for urban residents, are the most important part of urban green space, and their main benefits or values are driven by the residents’ demand for recreational services (Haase, 2012). Recreational services cover a wide variety of activities, such as walking, jogging, running, picnicking, and aesthetic experiences in nearby urban parks (Gaston, 2011). Within the range of cultural ecosystem services relevant to urban parks, recreational ecosystem services are particularly important and widely acknowledged for securing mental and physical wellbeing. Since recreational services are “user movement related” the “intangible” benefits mainly arise from the actual contact and spatial interactivity between residents and accessible nature-based areas. The natural and semi-natural landscapes are the service providing areas (SPAs) and

produce recreation potential or opportunities given by their biophysical attributes (Davies, 2009).

Parks can also promote social interaction and human contact. Some researchers suggested that properly designed park can promote social interaction for their users (Matsuoka & Kaplan, 2000). Parks can contribute to social sustainability by making citizens' lives liveable, providing social, emotional and physical well-being and "providing people with satisfactory living conditions so that they can identify positively with their values and environment (Moser, 2009).

According to Gehl (1987), social interaction in open spaces offers an opportunity to be with other people in a relaxing and undemanding way. Being among others, seeing and hearing them, implies positive experiences and offers alternatives to being alone. Green spaces provide opportunities for contact at a modest level and a possibility for maintaining already established contacts (Gehl, 1987). It is claimed that the relationships among neighbors grow primarily in the course of the repeated visual contacts and through short-duration outdoor talks and greetings (Greenbaum, 1982; Kuo et al., 1998). Therefore, public spaces, especially in high density housing, are essential places that enable residents to establish social interaction and recognition (Gärling and Golledge, 1989, cited in Huang, 2006). In other words, they can become "social arenas" (Carr et al., 1992).

People look for the natural scenery and aesthetics of the parks but they do not find it safe specially to get the sports equipment and facilities in the parks are inadequate. This shows that besides integrating public opinions in park development procedures more accurate strategies and policies must be employed in park planning, design and management to achieve higher quality of parks and therefore people's satisfaction of their living environment (Loukaitou-Sideris, 1995). Although standards are used in the designing and development parks, they don't reflect the demands parts of the population and do not take into account the individual and local differences. In order to make useable and attractive parks, which are developed to function to take full advantage of their possibilities for use, research has to be undertaken to recognize the user's needs, attitudes and preferences. The design of the parks should give priority to the most desired activities by people and should provide choice and challenge (Ranmkhah, 2009).

It cannot be denied that the city is a stressful environment for its residents (Bollund and Hunhammar, 1999). The symptoms of stress and mental fatigue include irritability, inattentiveness, and decreased control over impulses, such as outbursts of anger (Kuo and Sullivan, 2001 and references therein). These symptoms might lower the quality of social interactions (Kuo et al., 1998). The levels of stress are particularly high for people suffering from social exclusion, e.g. unemployed (Ward Thompson et al., 2004) and those living in areas characterized by high levels of crime (Wong and Auckland, 2005; Hirschfield and Bowers, 1997). Also among people from ethnic minority backgrounds instances of stress and depression are double in number compared to the population as a whole (Wong and Auckland, 2005).

Park in the City as Part of Infrastructure

Parks are a part of infrastructure. It is a fact that urban parks, open space structure and related human health issues are a critical component of any state, regional and local infrastructure plan. They promote the core values at stake in building public infrastructure: providing children the simple joys of playing; improving health and recreation; equal access to public resources; democratic participation in deciding the future of the community; economic vitality for all with increased property values, local jobs, small business contracts, and affordable housing; spiritual values in protecting people and the earth; the environmental benefits of clean air, water, and ground; and sustainable regional planning. (Luís , 2012)

It is argued, however, that urban parks and open green spaces are of a strategic importance for the quality of life of our increasingly urbanized society.¹ Increasing empirical evidence, in fact, indicates that the presence of natural assets (i.e., urban parks and forests, green belts) and components (i.e., trees, water) in urban contexts contributes to the quality of life in many ways. Besides important environmental services such as air and water purification, wind and noise filtering, or microclimate stabilization, natural areas provide social and psychological services, which are of crucial significance for the livability of modern cities and the wellbeing of urban dwellers (Elsevier, 2003)

“To listen and observe nature” (shortened as “To be in nature” for editorial convenience) constitutes another important motive to visit the park. This motive reflects a pure and disinterested need to feel nature around, to observe its elements, and experience them through

the senses (i.e., smell, hearing, and sight). The motive “To escape from the city” is mentioned in 32.2% of the answers returned. This motive indicates that the park constitutes a sort of “oasis”, a refuge far from the traffic, the noise and the pollution of the city. Many respondents also mentioned the need to see other things than cars, buildings and concrete. In these terms, urban nature offers the possibility to escape not only from the worries and the routine of everyday life, but also from the physical contours of the city. Findings also indicate that almost 20% of the respondents visit the park “To be with the children”(Elsevier, 2003)

Sustainable urbanism has recently been defined as “walkable and transit-served urbanism integrated with high performance buildings and high-performance infrastructure” (Stevens, 2010). Compactness (density) and biophilia (human access to nature) are considered as the core values of sustainable urbanism. These associated values of sustainable urbanism focus on the form-based bias of the current architectural theories and practices for understanding sustainability. This paper, on the contrary, posits that conceiving the city in terms of form is neither necessary nor sufficient to achieve the goals ascribed to sustainable development. Instead, conceiving sustainability and the city in terms of process holds more promise in attaining the elusive goal of a sustainable urbanism (Bagheri , 2007).

The area from which a city attracts visitors for community parks is generally considered to be within an approximate 2.4-kilometer radius of the park. Community Parks serve a much larger area and suggestion more facilities than neighborhood parks. They serve as a focal point for community-wide activities and, as such are proposed to provide either the facilities or intensity of activities that are suitable in the community where noise, lighting vehicular traffic are appropriate for the neighborhood (Bedimo. 2005). They generally provide parking and restroom facilities. Where there are no neighborhood parks, community parks can also provide that function. A Community Park, depending on size, visual character, natural determinant factors, or location can address one or more of the following recreational needs of the community: Ecologically sensitive and unique natural areas where, through public protecting, the character of the area is preserved for future generations. Uses will be primarily passive in nature and may include trails, picnicking, viewing, and environmental education. Explanatory sites of historic land use such as agriculture or mining may also be included in these parks. Areas intended to provide diversity of either structured or non-structured outdoor recreation activities. It May include facilities such as athletic fields, play areas, waterfront,

swimming pools, community gardens, skating area, or outdoor amphitheaters (Bedimo, 2005). In some community parks, active recreation facilities can be the focal point of the park. In these instances, parking facilities can become quite large. Areas proposed to address the needs for indoor recreation activities. These may include gyms, daycare, fitness facilities, meeting space, classrooms, game rooms, swimming pools, theaters, recreation centers (Bolund, P, 1999). Community Parks may contain certain park constituents benefiting adjacent vicinities. The intent is to make accessible to the community extensive diversity of recreational opportunities through an appropriate distribution of activities and facilities. Community Parks should be served by major or collector streets and be available (Martin, 2003).

2.2. Urban Park and Sustainability of City

Sustainable Parks would have to have to its generally thought to increase the ecological performance of parks. To warrant being recognized as a distinctive model, we expected that at least some of these traits would not be found in any of the other four prior park types. These new characteristics included the ties of native plants, restoration of streams or other natural systems, wildlife habitat, integration of appropriate technologies or infrastructure, recycling, and sustainable construction and maintenance practices. This working definition started out emphasizing the ecological Valtice of parks, but we knew it would also include social values. After all, sustainability is ultimately a social concept rather than a technical or biological one because humans are responsible for the ecological crisis today (Cranz, 2004). Creating sustainable cities is much about addressing quality of life in them. Increasing prosperity and life spans brought more free time to many people, increasing the need for leisure facilities and green spaces. (Roshanak Razmkhah, 2009).

Increasing empirical evidence, however, indicates that the presence of natural areas contributes to the quality of life in many ways. Besides many environmental and ecological services, urban nature provides important social and psychological benefits to human societies, which enrich human life with meanings and emotions (Luies, 2009).

2.1. Theoretical frame work

2.1.1. Parks and their role

Parks in a city can play a significant role to enhance the quality of life of citizens. They provide important environmental services like air purification and noise filtering. Perhaps the most cited

benefit of a park for people who use it is "contact with nature. A park is often considered an oasis of greenery in a concrete desert. Many documents mention the range of ways in which contact with nature enhances the quality of Life for people. Parks provide visual relief, personal change (Francis, 1998); and relaxation. Parks can also promote social interaction and human contact. Some researchers suggested that properly designed park can promote social interaction for their users. If parks in cities provide people with better services and benefits, the city becomes a better place to live and work. (Roshanak Razmkhah, Noor Rosly Hanif, Melasutra Md Dali, 2009)

2.1.2. *Sustainability city through park*

Sustainable Parks would have to have to its generally thought to increase the ecological performance of parks. To warrant being recognized as a distinctive model, we expected that at least some of these traits would not be found in any of the other four prior park types. These new characteristics included the ties of native plants, restoration of streams or other natural systems, wildlife habitat, integration of appropriate technologies or infrastructure, recycling, and sustainable construction and maintenance practices. This working definition started out emphasizing the ecological Valtice of parks, but we knew it would also include social values. After all, sustainability is ultimately a social concept rather than a technical or biological one because humans are responsible for the ecological crisis today (Cranz, G and M Boland, 2004).

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2.1.3. *The parks make naturalistic place*

Humanity is rapidly urbanizing, and by 2030 more than 60% of the world population is expected to live in cities. (Irwin, 2002). But even if humanity is increasingly urban, we are still as dependent on Nature as before. Cities are, for example, dependent on the large hinterlands needed to provide input and take care of output from the city. In a study of the 29 largest cities in the Baltic Sea region, it was estimated that the cities claimed ecosystem support areas at least 500–1000 times larger than the area of the cities themselves (Roshanak Razmkhah, Noor Rosly Hanif, Melasutra Md Dali, 2009). When humanity is considered a part of nature, cities themselves can be regarded as a global network of ecosystems. If compared with true, natural ecosystems, the man-made ones are however immature due to features like their rapid growth and inefficient use of resources such as energy and water. (B.V., 2003) even observes cities to be “only parasites in the biosphere”. But there is also a

presence of natural ecosystems within the city limits. As will be discussed in this paper, the natural urban ecosystems contribute to public health and increase the quality of- life of urban citizens, e.g. improve air quality and reduce noise. Most of the problems present in urban areas are locally generated, such as those due to traffic. Often the most effective, and in some cases the only, way to deal with these local problems is through local solutions. In this respect, the urban ecosystems are vital. (Bolund, P, and S Hunhammar, 1999)

2.2. Empirical frame work

2.2.1. *Public satisfaction with parks*

The findings also indicate that while people finding the natural scenery and aesthetics of the parks in Tehran attractive, they don't approve of the safety and especially find the sports equipment and facilities of the parks inadequate. This shows that besides integrating public opinions in park development procedures more accurate strategies and policies must be employed in park planning, design and management to achieve higher quality of parks and therefore people's satisfaction of their living environment (Loukaitou-Sideris, 1995). Although standards are used in the designing and development of parks, they don't reflect the demands of parts of the population and don't take into account the individual and local differences. In order to make useable and attractive parks, which are developed to function to take full advantage of their possibilities for use, research has to be undertaken to recognize the user's needs, attitudes and preferences. The design of the parks should give priority to the most desired activities by people and should provide choice and challenge. (Roshanak Razmkhah, Noor Rosly Hanif, Melasutra Md Dali, 2009).

The respondents were asked about the type of plants to be planted in parks for betterment of parks. 56% of respondents marked both medicinal and ornamental plants to be planted in parks. 24% respondents marked only medicinal plants to be planted in garden while rest of respondents preferred ornamental plants. This reveals that people visit the parks for health benefits as well as to satisfy their aesthetic needs. (University of Jammu, 2014).

2.2.2. *Park in the City is Part of Infrastructure*

It is a fact that urban parks, open space structure and related human health issues are a critical component of any state, regional and local infrastructure plan. They promote the core values at stake in building public infrastructure: providing children the simple joys of playing; improving health and recreation; equal access to public resources; democratic participation in deciding the future of the community; economic vitality for all with increased property values, local jobs, small business contracts, and affordable housing; spiritual values in protecting people and the earth; the

environmental benefits of clean air, water, and ground; and sustainable regional planning. (Luís Loures and Laura Costa, 2012)

It is argued, however, that urban parks and open green spaces are of a strategic importance for the quality of life of our increasingly urbanized society.¹ Increasing empirical evidence, in fact, indicates that the presence of natural assets (i.e. urban parks and forests, green belts) and components (i.e. trees, water) in urban contexts contributes to the quality of life in many ways. Besides important environmental services such as air and water purification, wind and noise filtering, or microclimate stabilization, natural areas provide social and psychological services, which are of crucial significance for the livability of modern cities and the wellbeing of urban dwellers. (B.V., 2003)

“To listen and observe nature” (shortened as “To be in nature” in [Fig. 2](#) for editorial convenience) constitutes another important motive to visit the park (54.4%). This motive reflects a pure and disinterested need to feel nature around, to observe its elements, and experience them through the senses (i.e. smell, hearing, and sight). The motive “To escape from the city” is mentioned in 32.2% of the answers returned. This motive indicates that the park constitutes a sort of “oasis”, a refuge far from the traffic, the noise and the pollution of the city. Many respondents also mentioned the need to see other things than cars, buildings and concrete. In these terms, urban nature offers the possibility to escape not only from the worries and the routine of everyday life, but also from the physical contours of the city. Findings also indicate that almost 20% of the respondents visit the park “To be with the children”. (B.V., 2003)

Sustainable urbanism has recently been defined as “walkable and transit-served urbanism integrated with high performance buildings and high-performance infrastructure” (Farr 2007). Compactness (density) and biophilia (human access to nature) are considered as the core values of sustainable urbanism. These associated values of sustainable urbanism focuses on the form-based bias of the current architectural theories and practices for understanding sustainability. This paper, on the contrary, posits that conceiving the city in terms of form is neither necessary nor sufficient to achieve the goals ascribed to sustainable development. Instead, conceiving sustainability and the city in terms of process holds more promise in attaining the elusive goal of a sustainable urbanism (Bagheri A, and P Hjorth, 2007).

2.2.3. Community Parks

The area from which a city attracts visitors for community parks is generally considered to be within an approximate 2.4-kilometer radius of the park. Community Parks serve a much larger area and suggestion more facilities than neighborhood parks. They serve as a focal point for community-wide activities and, as such are proposed to provide either the facilities or intensity of activities that are suitable in the community where noise, lighting vehicular traffic are appropriate for the neighborhood. (Bedimo-Rung, A, A Mowen, and D Cohen, 2005). They generally provide parking and restroom facilities. Where there are no neighborhood parks, community parks can also provide that function. A Community Park, depending on size, visual character, natural determinant factors, or location can address one or more of the following recreational needs of the community: Ecologically sensitive and unique natural areas where, through public protecting, the character of the area is preserved for future generations. Uses will be primarily passive in nature and may include trails, picnicking, viewing, and environmental education. Explanatory sites of historic land use such as agriculture or mining may also be included in these parks. Areas intended to provide diversity of either structured or non-structured outdoor recreation activities. It May include facilities such as athletic fields, play areas, waterfront, swimming pools, community gardens, skating area, or outdoor amphitheaters. In some community parks, active recreation facilities can be the focal point of the park. In these instances, parking facilities can become quite large. Areas proposed to address the needs for indoor recreation activities. These may include gyms, daycare, fitness facilities, meeting space, classrooms, game rooms, swimming pools, theaters, recreation centers. Community Parks may contain certain park constituents benefiting adjacent vicinities. The intent is to make accessible to the community extensive diversity of recreational opportunities through an appropriate distribution of activities and facilities. Community Parks should be served by major or collector streets and be available. (Martin C, P Warren, and A Kinzig., 2003).

3. CHAPTER THREE: MATERIALS AND METHODS

3.1. Description of Study Area

Hargeisa is a city in the Maroodi Jeex region of Somaliland in the Horn of Africa. It is the capital and largest city of Somaliland. Hargeisa was founded as a watering and trading stop between the coast and the interior and later became an Islamic Tariqa settlement under the leadership of Sheikh Madar and his mullahs. Hargeisa is situated in a valley in the Galgodon (Ogo) highlands, and sits at an elevation of 1,334 m (4,377 ft). Home to rock art from the Neolithic period, the city is also a commercial hub for precious stone-cutting, construction, retail services and trading, among other activities. Hargeisa is situated near the town of Gabiley, which serves as an agricultural centre in Somaliland. That town's Allay-Baday area produces tons of tomatoes and onions each month during the rainy season. Due to its relative fertility and greenery, wild animals come to the Hargeisa area to either breed or graze on the grassland savannah. Fauna that can be found in rural sections of the city include the kudu, wild boars, Somali wild ass, warthogs, antelopes, Somali sheep, goats, camels, and many different types of birds. There are also a number of both public and private menageries. South of Hargeisa is a grassland savannah, which attracts many types of wildlife to the area, including lions and leopards.

Hargeisa has a semi-arid climate (Köppen: *BSh*). The city generally features warm winters and hot summers. However, despite its location in the tropics, due to the high-altitude Hargeisa seldom experiences either very hot or very cold weather. This is a trait rarely seen in regions with a semi-arid climate. The city receives the bulk of its precipitation between the months of April and September, averaging just under 400 millimeters (16 in) of rainfall annually. Average monthly temperatures in Hargeisa range from 18 °C (64 °F) in the months of December and January to 24 °C (75 °F) in the month of June.

In 2005 according to the UNDP the city had a population of 560,028, while according to CIA factbook, Hargeisa has estimated population of around 760,000 as of 2015. As of 2019, it is estimated that Hargeisa has a population of 1.2 million. The urban area occupies 75 square kilometres (29 sq mi), with a population density of 12,600 inhabitants per square kilometre (33,000/sq mi).

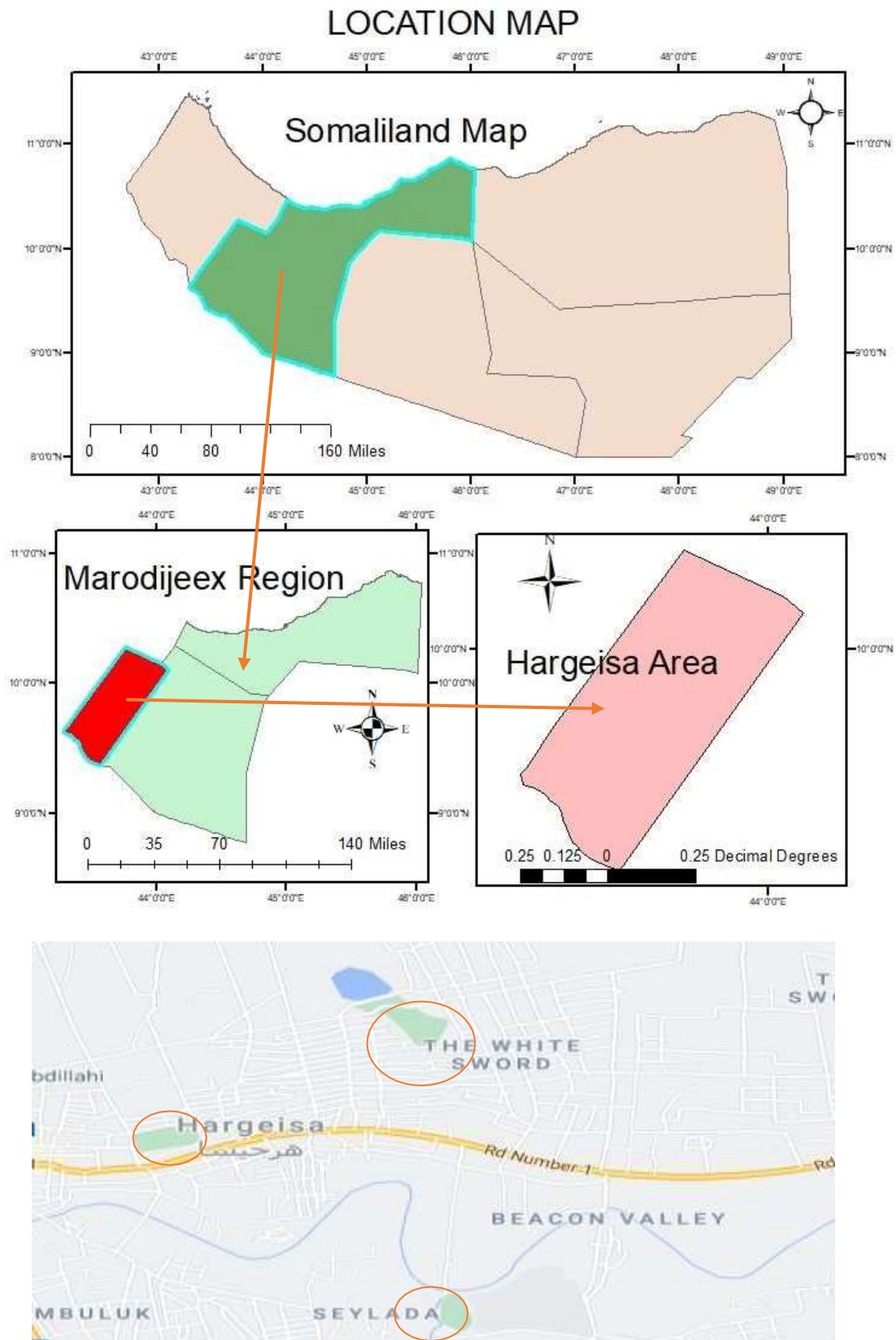


Figure 1 Location Map: from the google

3.2. Research Type

The primary data was gathered through interviews and questionnaires administered by the researcher. As a result, the researcher's approach to the study was both quantitative and qualitative by respecting in that manner. In addition, the study used a probability approach to select the population equally.

3.3. Sample Design

The study was carrying out in three parks of Hargiesa city in two Districts (Siinay Park in Ahmed Dhagah District, Beerta Xoriyadda Park in Ahmed Dhagah District and Lixle Park in 26 June District). According to the officer from the municipality, averagely the population who visit Siinay Park, Beerta Xoriyadda Park and Lixle Park each day is 160, 90 and 170 respectively. Using Convenient sampling, the sample size was determined (Equation 1). Convenient sampling has been chosen because the parks have been visited by different people. To determine the sample size, the average population of the study were used. That is e 420.

3.3.1 Sample Size

As (Samawi, 1999), states that the Sample size measures the number of individual samples measured or observations used in a survey or experiment. So, using the following Sloven's formula, the total sample population is determined (Equation 1)

$$n = N / (1 + N(e^2)), \dots \text{Equation 1}$$

$$420 / 1 + 420 (0.05^2), =$$

$$420 / 1 + 420 (0.0025), =$$

$$420 / 1 + 1.05 =$$

$$420 / 3 \quad \text{then the sample size is} = \mathbf{140} \text{ questionnaire}$$

Note that small n is represent the sample size and capital N is represent the total population.

3.4. Methods of Data Collection

For the study, both primary and secondary data sources have been used.

Primary Data

The primary data were collected from the office of the district through individual (face to face) interviews of the experts whereas a questionnaire was used to collect data from the visitors of the parks.

Secondary Data

The secondary data that the researcher used is from the internet, municipality of Hargeisa and their offices of the districts and also some any other previous researches written by this issue accordingly in the world, continent, region and even the country.

3.5. Methods of Data Analyzes

The data that was collected through a questionnaire was analyzed using SPSS. Percentage, bar chart and bi charts, and tables were used to present the data. Then a triangulation was made with the data collected via interview.

3.6. Ethical Consideration

The researcher was getting permission to conduct the study from the Office of Municipal especially each Office of the Districts those stands the municipality authority. After having the permission, the researcher was using an informed consent form forgetting the acceptance of therespondents.

4. CHAPTER FOUR: RESULTS AND DISCUSSION

4.1. Introduction

This chapter presents the finding of the study and discussions were made with other related work. Hence, the respondents' demographic information, such as age, gender, education, and marital status; the role of the urban park; social demands, and their role in the sustainability of the city were presented underneath

4.2. Demographic Characteristics and Further Information of The Respondents

The purpose of this background information was to find out the characteristics of the respondents. As Table 1 shows the age, gender, education level, marital status and period of residence for their percentages and frequency.

Table 1 Profile of the Respondent

Age of Residents	Frequency	Percent
20-30	48	34.3
31-40	50	35.7
41-50	29	20.7
51-above	13	9.3
Total	140	100.0
Gender	Frequency	Percent
Male	83	59.3
Female	57	40.7
Total	140	100.0
Education Level	Frequency	Percent
Secondary and below	59	42.1
Bachelor	65	46.4
Postgraduate	16	11.4
Total	140	100.0
Marital Status	Frequency	Percent
Single	51	36.4
Married	70	50.0
Divorced	19	13.6
Total	140	100.0
Period of Residence	Frequency	Percent
1-3	31	22.1
3-6	50	35.7

6-10	35	25.0
10-20	14	10.0
20-Above	10	7.1
Total	140	100.0

Source: (Field Survey of 2021)

As shown in table 1, respondents indicates that 34.29% of the respondents were in the age 20-30, 35.71% of the respondents were in the 31-40 age group and (20.71%) of the respondents were 41-50 age, finally, 9.29% of the age group were 50 and above. Young people tend to socialize or relax with their own group, which makes park visits mostly an in-group activity (van Aalst & Brands2021). This shows most of respondents who participated in this research were young and between 31 – 40 years old. In Somaliland country 70% of the people is younger then 40yrs as the ministry of planning mentioned its report in 2019 and that is why high percent of the respondents become young. Secondly, as shown in table 1, explains the gender of respondents. Around 60% of respondents were male, while 40% of respondents were female. This table 1 shows there is no big difference in percentage number in both male and female. This table 1 shown that the visitors of the parks were mostly male. Age and gender have a great significance on the reason of visiting park as evident from the result that most of the park visitors were males as also described by many authors in their research. As Ayesha tells in his paper “While in terms of spending maximum time in the park were male respondents for walk, jogging and self-satisfaction” (Ayesha, 2013). So, thismeans the visitors of the parks are male in mostly.

The people who visit the parks were mostly educated. As we see the table 1, 11.4% of the respondents have postgraduate, 46.4% of the respondents have bachelor and 42.1% of the respondents have secondary and below. Also, this shows that the most visitors are educated and that is strongly agreed that educated people knows the importance of the parks. As the other writes such as Yonis resulted that “the visitors have bachelors and that reveals the role of education for visiting the parks” (Yonis, 2013).

The martial status of the respondents is different. Most visitors are married and the second status is single while the respondents who are divorced are the least ones as shown the table 1. This shows that the community are strong according to the bond between family structure saving and mutual respect of the members family. Lastly, most of the respondents were

residence in the village of the park around the last 3-6 years, the second are the people who were residence in 6-10 and 1-3 while the visitors who were residence in 20-above are the least ones as shown in table 1.

4.3. The effect of urban parks to the environment

According to the figure 2, more than 65% of the respondents agreed and totally agreed that the parks can reduce the temperature of the city by seeing its nature and how it promotes to the shading and oxygen, while less than 35% of the respondents disagreed and totally disagreed that the statement of “parks can reduce the temperature”. This result from the participants shows that the parks can take part the lowering the temperature of cities as the visitors mentioned.

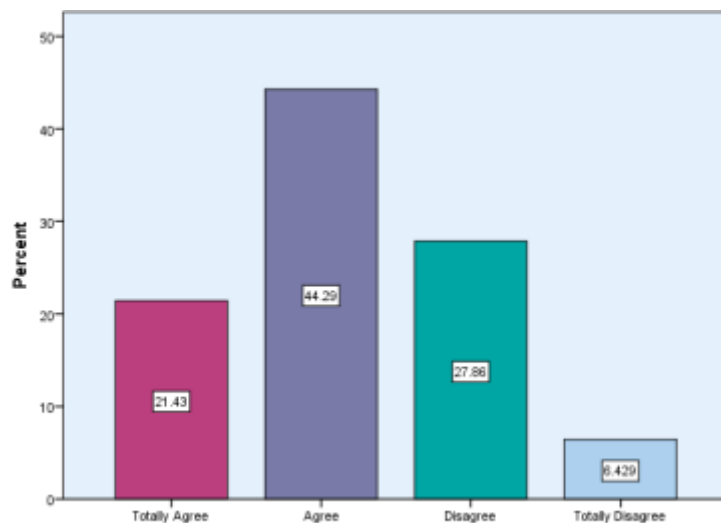


Figure 2: The Park takes part the lowering the temperature of the city

Source: (Field Survey 2021)

According to the figure 3, 43.57% and 27.14% of the respondents agreed and totally agreed respectively, that the parks can increase and take part of getting fresh air of the city while the 24.29% disagreed and 6.429% totally disagreed that the statements “the parks can take part getting fresh air”. Accordingly, this result shows that the parks can increase and take part of getting fresh air of the cities as the most visitors said. Likewise, as Chen’s result for his

research reveals that “visiting open spaces with lots of greenery, like parks and gardens, reduces toxic air” (Chen, 2018)

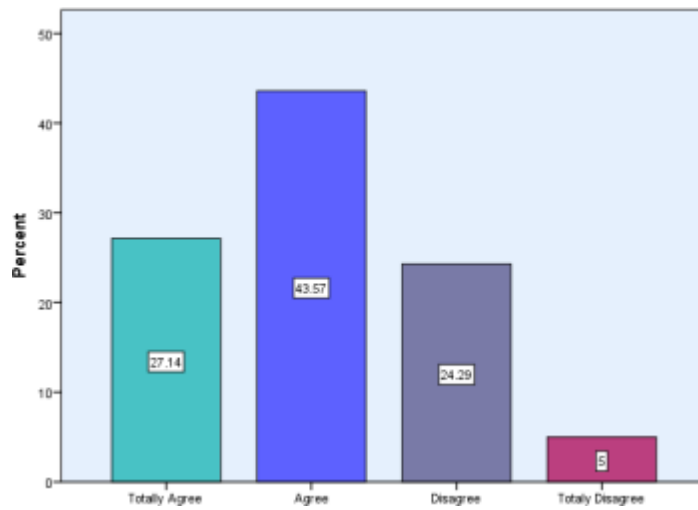


Figure 3: The Park takes part for getting fresh air

Source: (Field Survey 2021)

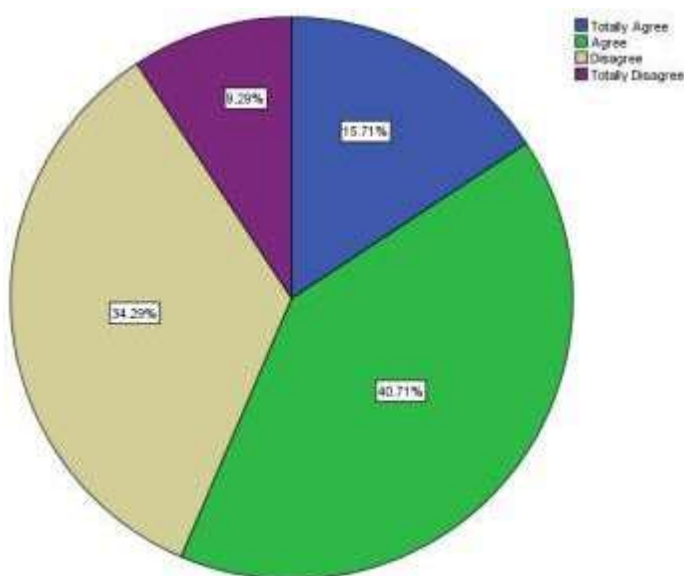


Figure 4: The Park encourages for saving the forest and trees

Source: (Field Survey 2021)

According figure 4, 40.71% and 15.71% of the respondents agreed and totally agreed respectively, that “the parks can encourage for saving the forest and trees”, while the 34.29% disagreed and 9.29% totally disagreed that “the parks can encourage for saving the forest and trees”. This result shows that the parks can boosts for saving the forest and trees of the cities

as the most visitors stated.

According to figure 5, above 73 % of the respondents agreed and totally agreed that “the parks can reduce water pollution and filter rains”. On the other hand, below 30% of the respondents disagreed and totally disagreed the statement “the parks can reduce water pollution and filter rains”. Likely, this result parades that the parks can reduce water pollution and filter rains and this means parks can take a good role for reducing acid rain and also pollutions from different places of the cities as the visitors stated. Similarly, on the other writers as they said, the parks can improve water as Chow statedthat “Parks and protected public lands are proven to improve water quality, protect groundwater, prevent flooding, improve the quality of the air we breathe,” (Chow, 2013).

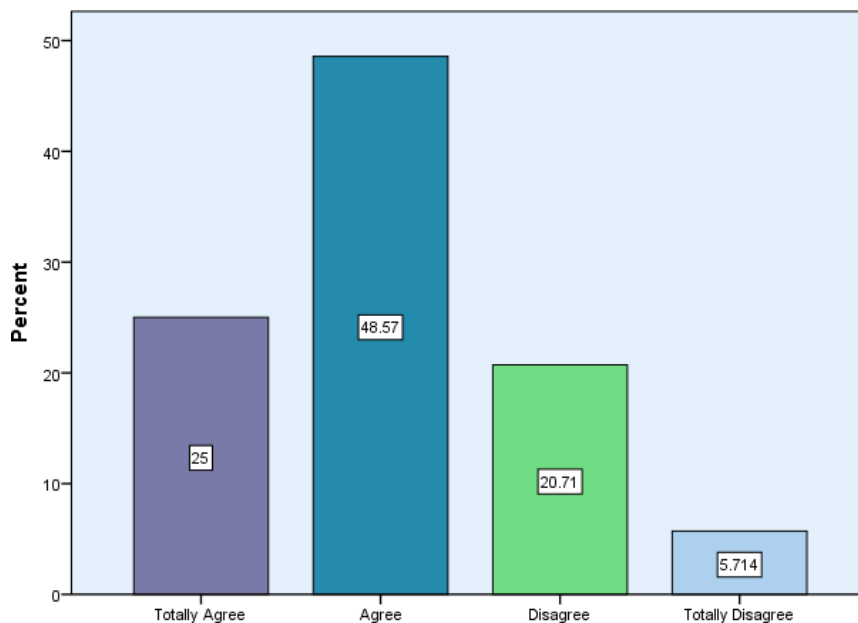


Figure 5: The parks can reduce water pollution and filter rains

Source: (Field Survey 2021)

4.4 Social Benefits of urban park

Respondents were asked about the types of parks they need. According to table 2, 32.1% of the respondents were remarked that they wish “the parks had sport facility park”. On the other hand, 24.3 % of the respondents said “we need urban plaza park” while, 19.3% of the respondents also said “we wish to have agricultural experience park”. Unlikely, 17.1% of the respondents said “we like to have wetland ecological park” while the least percent (7.1 %) of the respondents said that “riverside recreation park is the best we wish”. This table shows us that, the most visitors of the parks wish that the parks have sport facilities. Likewise, as the Juutinen said 2011 “Walk and recreation are two major reasons behind visiting the park”.

Table 2 The Types of Parks That People Need

The types of parks that people need.	Frequency	Percent
Agricultural experience park	27	19.3
Urban plaza park	34	24.3
Sports facility Park	45	32.1
Wetland ecological park	24	17.1
Riverside recreational park	10	7.1
Total	140	100.0

Source: (Field Survey 2021)

According to figure 6, 34.3% of the respondents were said that “most important facility in the park is children’s playing facility” while 27.9% of the respondents said “we wish that the parks have lighting and gardening”. On the other hand, 22.9% of the respondents said “natural experience facility is the thing that we wish the parks have” while the least respondents were 15% and said “sales facility is good to get the parks in the parks”. This shows us that the most important one that the visitors of the parks need is to get some place that their children take time and play it.

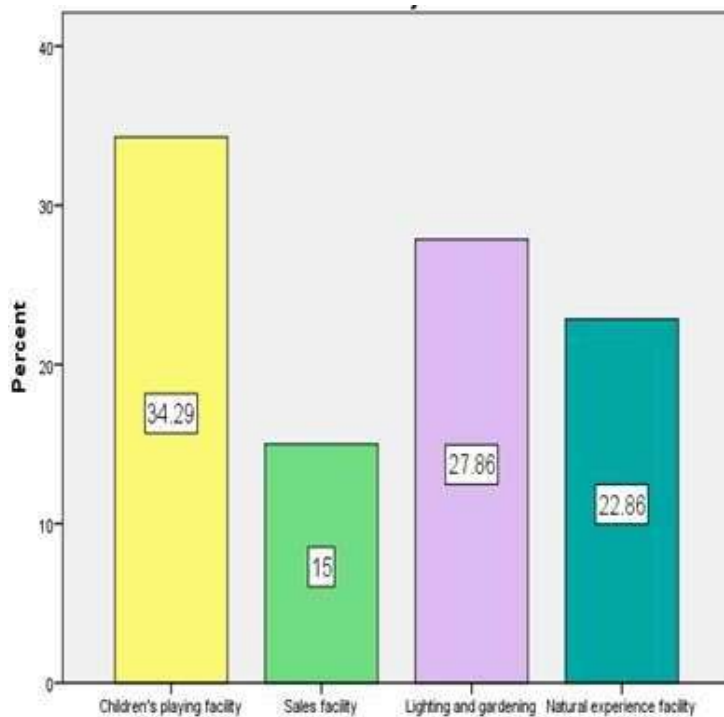


Figure 6 The Most Needed Facility in The Parks

Source: (Field Survey 2021)

According to Table 3, 34.3% of the respondents were said that “we visit the park a couple of times a week” while 27.1% of the respondents said “we visit the park 3 or 4 times a week”. On the other hand, 24.3% of the respondents said that “we visit the park Almost every day” while the least respondents were 14.3% and said “we hardly use the park”. As the table states, the visitors of the parks are in interesting and using mostly accouple of a day in every week, so that the parks are very important for them. Accordingly, as the Lee stated 2013, “urban parks provide multiple non-material benefits to human health and well-being; measuring these “intangible” benefits mainly co-produced by the spatial interactivity between dwellers and urban parks is vital for urban green space management”.

Table 3 Frequency of visitors visit to the parks

<i>frequency of visitors visits to the parks</i>	Frequency	Percent
Almost every day	34	24.3
3 or 4 times a week	38	27.1
A couple of times a week	48	34.3
Hardly Use	20	14.3
Total	140	100.0

Source: Primary Data 2021

According to figure 7, 28.57% of the respondents were said that “the main purpose of using parks is meeting with friends”, while 23.57% of the respondents said that “the main purpose of using parks is enjoying the nature”. Also, 20.71% of the respondents said that “the main purpose of using parks is relaxation and walking” and, 17.14% of the respondents said that “the main purpose of using parks is spending time with family” while the minimum respondents were 10% and said that “the main purpose of using parks is playing sports and using exercise facilities”. As the figure shows, the visitors of the parks are mostly using the parks by meeting with their friends. So, this can improve for social interaction.

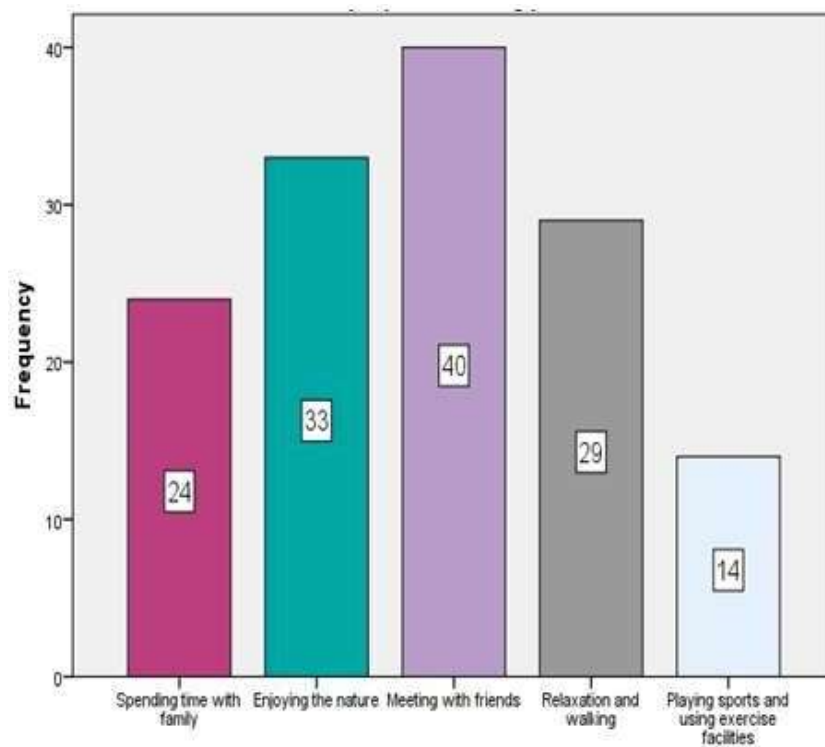


Figure 7 The main purpose of using parks

Source: (Field Survey 2021)

According to figure 8, 47.14% and 22.86% of the respondents agreed and totally agreed respectively, that “the parks can take part for increasing the health of the community”, while the 26.43% disagreed that “the parks can take part the health of the community”. Unlikely, 3.57% totallydisagreed the statement “the parks can take part the health of the community”. This result

shows that the parks can take part the health of the community and this means parks can take a good role for promoting health intensification of the cities as the visitors stated.

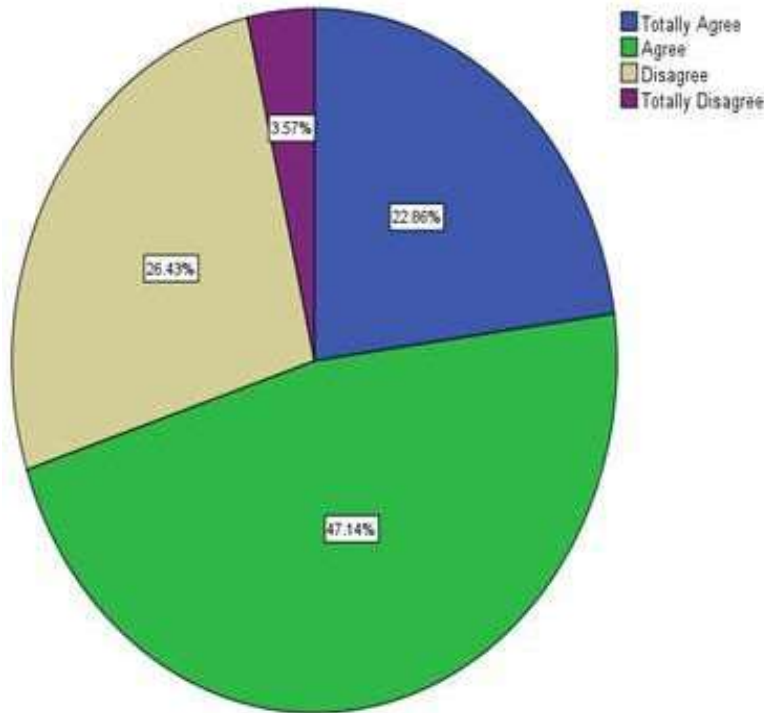


Figure 8 The parks can take part the health of the community

Source: (Field Survey 2021)

According to figure 9, more than 67% of the respondents agreed and totally agreed, that “the parks can contribute the social interaction and strengthen the relationship”, while less than 33% disagreed and totally disagreed that “the parks can contribute the social interaction and strengthen the relationship”. This result shows that the parks can contribute the social interaction and strengthen the relationship and this means parks can take a good role for promoting the social interaction and strengthen the relationship of the cities as the respondents said.

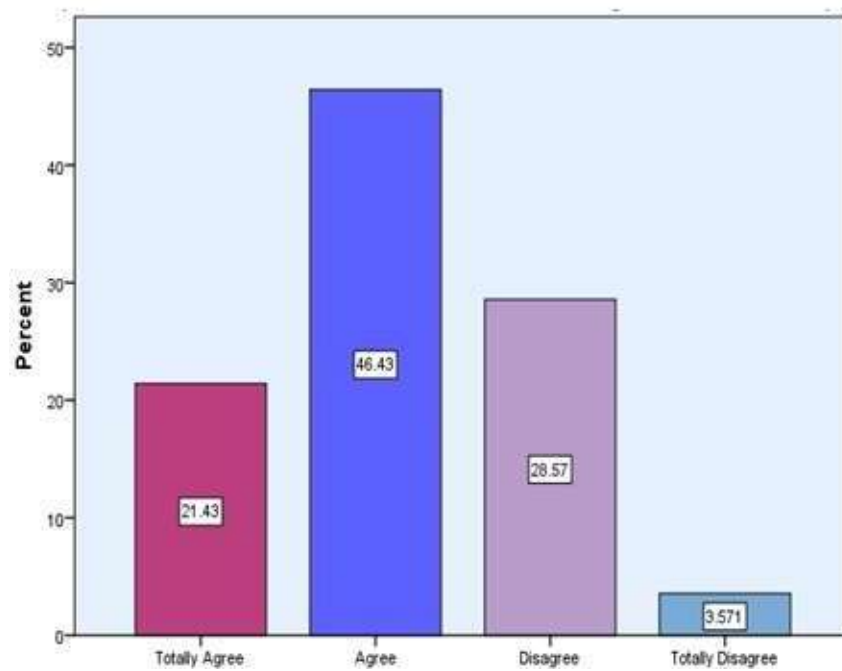


Figure 9 The parks can contribute the social interaction and strengthen the relationship

Source: (Field Survey 2021)

According to figure 10, 40.71% and 17.86% of the respondents agreed and totally agreed respectively, that “the parks can increase the social equity, while the 34.29% disagreed and 7.143% totally disagreed that “the parks can increase the social equity”. This outcome from the visitors shows that the parks almost can increase the social equity. Similarly, as the Feng said that “Providing access to parks and recreational opportunities to all members of a community is a critical opportunity for enhancing social sustainability within a community” (Feng, 2019) this show that the parks can take part for the social interaction and that increases social equity.

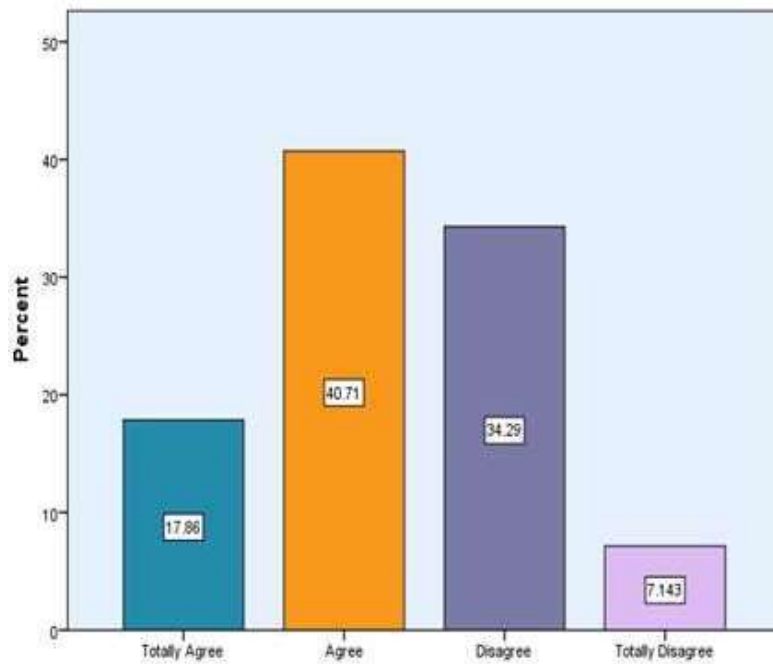


Figure 10 The parks can increase the social equity

Source: (Field Survey 2021)

According to figure 11, 45.71% and 12.14% of the respondents agreed and totally agreed respectively and said that “the parks can protect the culture and norms of the community”, while 29.29% disagreed and 12.86% totally disagreed and chose the statement that said, “the parks protect the culture and norms of the community”. This result shows that more than sixty percent of the visitors are accepted that the parks protect the culture and norms of the community while forty percent of visitors denied that idea. This means parks can take a good role by protecting the culture and norms of the community of the cities, when we consider the idea of the majority.

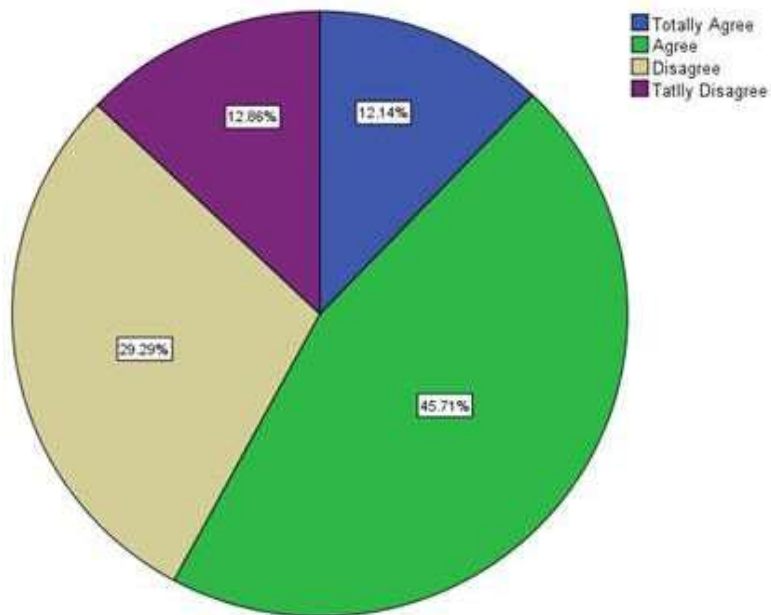


Figure 11 The parks can protect the culture and norms of the community

Source: (Field Survey 2021)

4.5 The effect of urban parks to the sustainable city

According to Table 4, 14.3% of the respondents were said that “the role of green spaces in city is making scenery beautiful”, 17.9% of the respondents said that “the role of green spaces in city is o maintaining healthy natural ecological state”, 35.0% of the respondents said that “the role of green spaces in city is preventing indiscriminate urban development”, 21.4% of the respondents said that “the role of green spaces in the city is preventing natural disasters” while the least respondents were 11.4% and said that “the role of green spaces in the city is providing leisure space”. As table 4 states, the visitors of the parks are strongly accepting that the green places or park has a role in preventing indiscriminate urban development. This result shows us that the parks can take a good role in the city’s sustainability because it contributes to the wellbeing of the city like the idea of the majority of visitors stated.

Table 4 Roles of the green spaces in downtown

Roles of the green spaces in downtown	Frequency	Percent
Making scenery beautiful	20	14.3
Maintaining a healthy natural ecological state	25	17.9
Preventing indiscriminate urban development	49	35.0
Preventing natural disasters	30	21.4
Providing leisure space	16	11.4
Total	140	100.0

Source: (Field Survey 2021)

According to Table 5, 34.3% of the respondents were said that “the way they can participate if there are some expansion projects of the parks is participating in volunteer works of cleaning and management”, 28.6% of the respondents said that the way they can participate if there is some expansion projects of the parks is joining or assisting non-profit civic organizations”, 27.1% of the respondents said that “the way they can participate if there is agreement with paying more tax” while the least respondents were 10% and said that “the way they can participate if there is donation in cash or real estate”. As the table 5 states, the visitors of the parks are mostly chosen that the best way they can participate the projects of expansion on parks is “Participating in volunteer works of cleaning and management” while the smallest part of the respondents mentions that they can participate the projects of expansion on parks is “donation in cash or real estate”. This proper result states that the visitors of the park are ready to do volunteerism by getting a good park.

Table 5 Participating the expansion project of parks and green spaces

<i>Participating the expansion project of parks and green spaces</i>	Frequency	Percent
Donation in cash or real estate	14	10.0
Joining or assisting non-profit civic organizations	40	28.6
Agreement with paying more tax	38	27.1
Participating in volunteer works of cleaning and management	48	34.3
Total	140	100.0

Source: (Field Survey 2021)

According to figure 12, 42.14% and 15.71% of the respondents agreed and totally agreed respectively, that “the parks can contribute to the safety of the city environmentally”, while the 28.57% disagreed and 13.57% totally disagreed that “the parks can contribute the safety of the city environmentally”. This result shows that the more than fifty seven percent of the visitors are accepted the statement that said “the parks can contribute the safety of the city environmentally” while forty one percent of that visitors denied that idea. This means parks can take a good role for contributive the environmental saving of the cities.

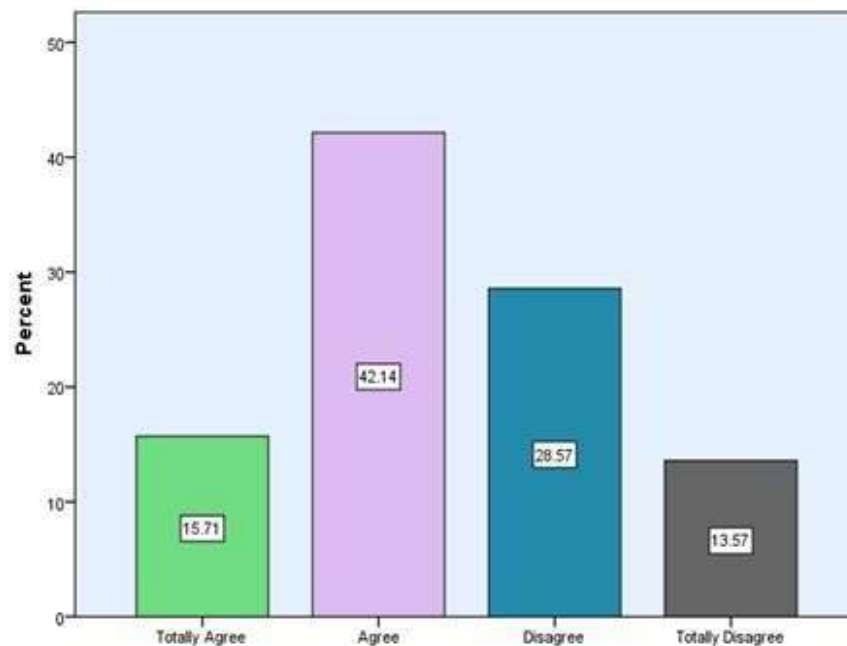


Figure 12 The parks can contribute the safety of city environmentally

Source: (Field Survey 2021)

According to figure 13, more than 56 % of the respondents agreed and totally agreed, that the statement “the parks can reduce the pollution and noise disturbance”, while the 20.71% disagreed and 22.14% totally disagreed that the idea stated “parks can reduce the pollution and noise disturbance”. This upright result shows that the more than fifty six percent of the visitors are accepted that the idea “parks can reduce the pollution and noise disturbance” while less then forty three percent of that visitors denied of that idea. This means parks can take a little bit role to reduce the pollution and noise disturbance of the cities according to the visitor’s idea. Correspondingly, as Norton said in 2020 “In 2017, the National Park Service found that human-caused sounds at least doubled natural noise levels in 63% of protected lands in the United States, such as parks and forests. The agency's Natural Sounds and Night Skies Division is behind one of the few federal efforts to deal with the noise issue”.

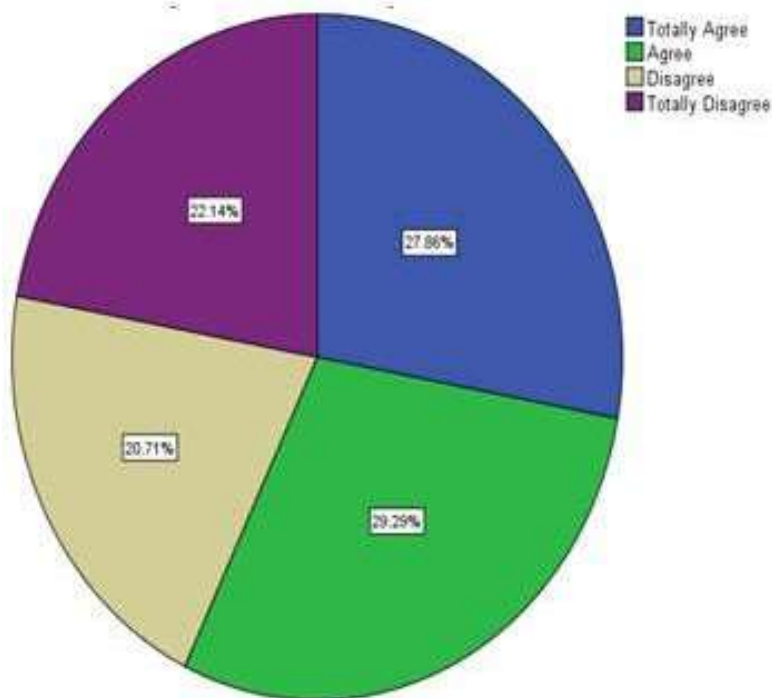


Figure 13 The parks can reduce the pollution and noise disturbance

Source: (Field Survey 2021)

According to figure 14, more than 55% of the respondents agreed and totally agreed, that “the parks can contribute the economic growth in cities”, while the 32.86% disagreed that and 12.14% totally disagree the idea “the parks can contribute the economic growth of cities”. According to the replies of the visitors, parks can take a decent part for economic growth of the cities.

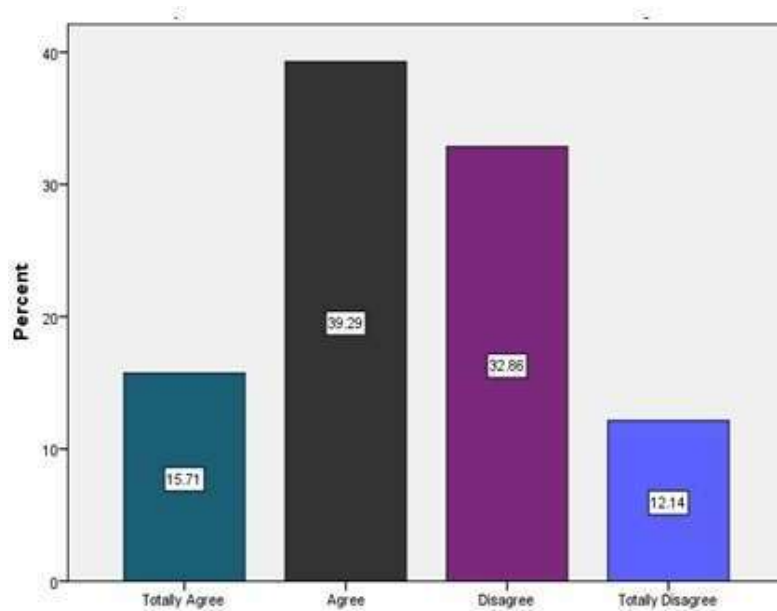


Figure 14 The parks can contribute the increase of the economy

Source: (Field Survey 2021)

Then again, officials of the municipal offices in charge of parks said “most visitors come for rest and exercise and some of them to take a walk on the pedestrian and see the good environment”. They also stated that “the main purpose of the parks was to allow the surrounding community to spend their free time”. Also, according to officials, the park also had a number of other purposes, including conserving the environment, beautifying the city, and contributing to the city's cleanliness and fresh air. They also noted that “the parks have brought many benefits to the environment such as contributing noise reduction and city relief”. Likewise, they also noted that “the air had been cleared, people had been reassured, and that it had become a drought-free area because of the parks”. Furthermore, they added that “the businesses in the area are public businesses and the purpose of that business is to get money to renovate and renew the parks”. Finally, the official from the local government who is responsible for guiding the parks stated that “the parks increase the tourists from the other cities and countries”; so according to that information, the parks in the city can encourage economic growth of the city and perpendicularly to the country. Similar to the information of the officials, (Norton, 2020) “to the efforts of park and recreation professionals through the United States, local park and recreation agencies generated \$166 billion

in economic activity and supported more than 1.1 million jobs in 2017 (Norton, 2020). This proves that the parks can take part for economic development.

4.6. Propose urban park for the sustainability of Hargeisa town, Somaliland

The existing situation of Beerta Xoriyadda Park in Hargeisa City

Freedom Park is located in the center of the city. More than a hundred people visit every day, according to local authorities on 26 June District. The officials noted that the park was too small for the people but that this did not stop them from missing out on its visit. They come every day to spend their time as shown in the pictures taken by the researcher. This Park is very small as seen by the researcher and shows pictures of plants and places for children and also has little light to use at night. All of this is similar to other parks in the city. It is one of the largest parks in Hargeisa.



Figure 18 People Taking Time in Beerta Xoriyadda Park
Source: Field Survey 2021



Figure 17 People Taking Time in Beerta Xoriyadda Park
Source: Field Survey 2021



Figure 16 People Taking Time in Beerta Xoriyadda Park
Source: Field Survey 2021



Figure 15 People Taking Time in Beerta Xoriyadda Park
Source: Field Survey 2021

Proposed Design of Beerta Xoriyadda Park

As the figure 24 states that, the proposed design for the Beerta Xoriyadda Park. This design is in line with international standards, and it is all based on the desires of the users of the park. It also considered all the needs requested by the park's users. Also as the figure 25 shown, the proposed park design is suitable for the users and their needs.



Figure 24: Proposed Site Plan of the Park

Source: Author, 2021

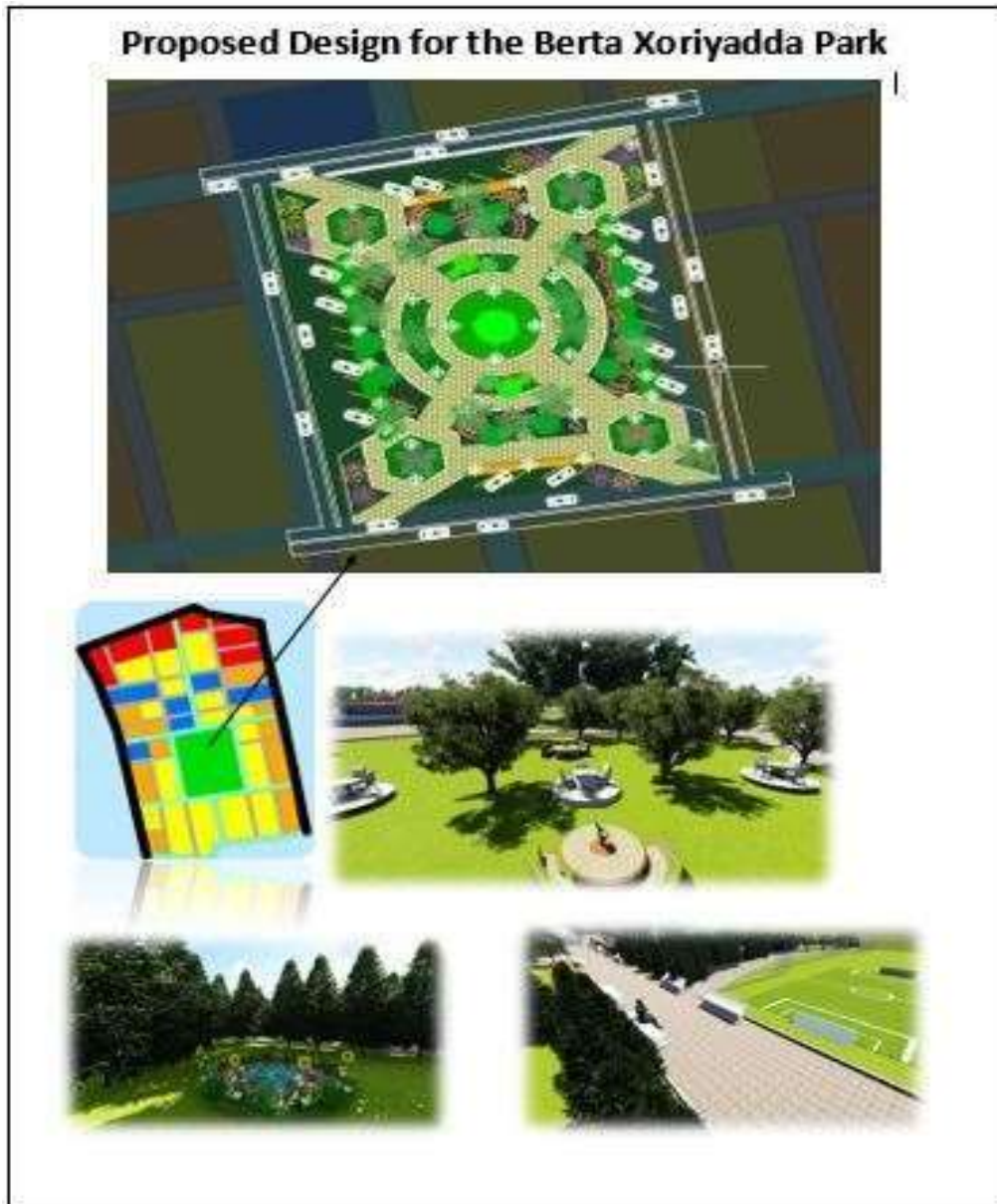


Figure 25 Proposed design for Beerta Xoriyadda Park

As the figure 24 stated, when the researcher doing this proposed design for the park, he considered these below functions that is must to get the urban parks and is still upsent for Hargeisa parks specially Beerta Xoriyadda Parks:

- Children's **play** is a time of aggregation for different age groups, to encourage physical activity and social inclusion. It is fundamental to properly equip a playground and recreational-sports facilities also for disabled children and recreational-sports facilities for adults and the elderly;

- The **didactics and civic training** nature of urban parks is considered a primary element from a cultural perspective that also plays a fundamental learning tool, for example, when learning signs regarding the different types of trees and the information tables on the naturalistic characteristics of the area (vegetation, fauna, history and culture) or in case of community gardens;
- **Sport** is an activity which must be encouraged at every level, taking in mind space and planning possibilities, it is fundamental for physical and mental health and for recreation and aggregation;
- **benches and seating areas** are an important part of an urban park as essential for social interactions and for reading, resting, or simply to make conversation. It is important to identify shaded and quiet areas, as far as possible from roads or high traffic volume;
- **Pedestrian paths** in green areas must be easily accessible by persons with different abilities, and which are at least 2 meters wide and well illuminated. They must connect different parts of the area and foresee adequate access from the surrounding roads and contain resting areas with benches, areas shaded by trees, arbours, gazebos and drinking fountains;
- **Paved surfaces** provided for the public in urban areas, generally need to be used safely by people across all age groups, some of whom may have various mobility or sensory impairments or need to be accessible for prams and wheelchairs.

5. 5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

Urban parks are essential to cities, according to the findings of this research. The research explores that the parks in cities are taking a good role for the environment saving and social interaction and even can participate increasing economic movement of the cities. Likewise, there are some social needs for the parks that the research explores according to the study area (Hargeisa city). The respondents of this research were volunteers and varied in age, education, gender, residency, and marital status, but their needs and recommendations were almost the same. According to the study, many findings need to be mentioned.

Firstly, parks are actively involved in reducing the city's temperature and hotness, as the findings of this study stated and agreed to another study. Also, parks can take a good role in getting fresh air and reducing pollution of the city's atmosphere. Similarly, the parks can contribute to increasing trees in cities, making it possible to produce more oxygen, promoting air quality, and subsidizing the well-being of the city's atmosphere. In the same way, the parks are very resistant to urban environment destruction and soil erosion. They contribute generously to land nutrition and the prevention of deforestation.

Likewise, as the research findings explore, the parks in cities can take a good role in ground water filtration and reducing underground water pollution. Similarly, parks can contribute by increasing ground water level, because, when there is a lot of greenery and trees in some place in the city, it can catch much water and this drives to the water into the ground.

On the other hand, as the finding of the research state, the parks can contribute to the community's health, social integration, strengthening the relationships between the people, social equality, and the preservation of the culture and heritage of the community. As the research illustrated, the main reason people visit the parks is to spend time with friends and take time with them, but also there is another view that the research explores, such as the health of the community. The study's findings exhibited that the visitors visit the parks to walk or take fresh air and refreshment.

Also, the findings detailed that the visitors wish or need is to add the parks, some sports facilities, and children's recreation places. Likewise, the research concludes that parks can play a good role in the community's interaction and social cohesion. Also, according to the

conclusion of the findings, parks strengthen the culture and heritage of the community and even some religion aspects, because when all the people meet there, they pray and celebrate their culture together. Lastly, the researcher also concludes that the parks in Hargeisa needed to be added to children's spaces, and also there was not enough lighting in the parks.

Finally, the research concludes that the parks can also contribute to the city's economic growth, as they increase tourism and people's movement. According to that, parks increase the attraction of many people and small businesses and services such as buses, taxis and snacks sellers. Lastly, as the research conclusion states that, the main reason that visitors visit the parks is to take a time and relax, but in the parks of Hargeisa needs some extension and development to cover what the community needs such as sport facilities, special place for children, lighting at night, increasing the trees and greenery and making new parks to cover the high demand of the community for the parks.

5.2. Recommendations

When the researcher looked at the data that came out, the articles on this topic that he read, and the comparisons he made with the data he had, it turned out that parks contribute to the sustainability of cities. The researcher also found that the parks increase social interaction, contribute to health, and enhance the natural environment. So, when the researcher looked at the findings and conclusions of the research, the researcher recommended:

- Increase the lighting of parks to use at night and to attract kindness. Lighting increases the use of parks at night and strengthens the connection between people and the environment or parks they use. It also encourages the community to spend more time in parks without worrying about the darkness and insecurity at night.
- Increase greenery in parks because: it can contribute to lowering city Temperatures that can lead to a drop in the city's temperature. Likewise, increasing greenery can reduce air pollution because green plants can effectively reduce city pollution and produce too much oxygen, leading to air balance and retrieving fresh air. Similarly, it is taking part in clearing groundwater because it promotes water filtration in the soil as the plants and the compaction of the roots remove most of the impurities that come with the water.

- Enhance the parks' natural environment because it is the main reason visitors visit the parks as they remark. Increasing the naturalism of the parks leads to more guests joining the parks. It also increases the culture of going to parks and closure on regular use of parks.
- Adding sports facilities to the parks. Sports is one of the essential needs of society as the research findings concluded. So, it is essential to include the parks where the visitors can exercise and play sports because most of the people who visit the parks are young, according to the research findings. Similarly, a walkable place is a necessity for aged visitors. Accordingly, the researcher is strongly recommended that the parks have these services.
- Adding the parks for some special places for the children. These places promote the stability of the parks. As children want places to play, shout, chase and jump, this can disturb the people who visit the parks to get a quiet place to take rest and refreshment. So, then children must have particular areas in the parks to take their time, and likely the aged people get some quiet place in the parks.
- Promoting and developing parks because they contribute to economic growth and environmental protection. As the research findings concluded, when more people come to the city and visit the parks, the city's economic growth will increase. It will also strengthen the use of various services in the city such as busses, taxis, and snacks. Similarly, parks also play a crucial role in making the city more environmentally friendly, lush and making the environment safer. So, the researcher strongly recommended promoting the parks in Hargeisa city.

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Appendix A: Questionnaire

Dear Respondents,

I am carrying out this study for graduation purpose. The study that I am going to investigate is **“The Role of Urban Parks for the Sustainable City: The Case Of Hargeisa City, Somaliland”**, as your opinion in this study, may I request to answer this questionnaire. I will be grateful for you if you give more consideration to the questions and return as soon as possible.

Please be note the data you provide to me; it is only academic purpose and I will promise you that I will not use another purpose. Furthermore, the information you provide to me was treated in confidentiality.

I am extremely appreciating you the time you provide to me to fill this questionnaire.

Thank you very much indeed

Yours truly,

Sakarie Abdihakim Mohamed

MSc Candidate in Urban Planning and Design

Adama Science and Technology University, Adama, Ethiopia

Section A: Profile of the Respondent

Direction: Kindly Tick the Appropriate Space or Provide the Data Requested Where Appropriate.

1. Age of Respondents 20-30 ☐ 31-40 ☐ 41-50 ☐ 51-Above ☐
2. **Gender:** Male ☐ Female ☐
3. **Educational level:** Secondary ☐ Bachelor ☐ Post graduate ☐
4. **Marital Status** Single ☐ Married ☐ Divorced ☐
5. **Period of Residence** 1-3 ☐ 3-6 ☐ 6-10 ☐ 10-20 ☐ 20-Above ☐

Section B: To assess the effect of urban parks to the environment **(Part One)**

Kindly Choose the Correct Answer and Circle the Letter of the Answer That You Think It Is Right for You and Write If You Have Another Option

1. What are the problems of parks in downtown?

A) Lack of green spaces in parks B) Far from home C) Lack of interesting facilities and programs to use within the parks D) Improper park management

.....

2. If various parks are created for citizens, what kind of park would it be?

A) Agricultural experience park B) Urban Plaza park C) Sports facility park D) Wetland ecological park E) Riverside recreational park

.....

3. What is the most needed facility in urban parks?

A) Children's playing facility B) Sales facility C) Lighting and gardening D) Natural experience facility

.....

(Part Two)

Please select the number one to four and tick your selection under the number in the below keywords to mention your selection.

1. Totally Agree 2. Agree 3. Disagree 4. Totally disagree

Scale	1	2	3	4
1. The park takes part the lowering the temperature of the city				
2. The park takes part for getting fresh air				
3. The park encourages for saving the forest and trees				
4. The parks can reduce water pollution and filter rains				

Section C: To assess the social demands of urban park

(Part One)

Kindly Choose the Correct Answer and Circle the Letter of the Answer That You Think It Is Right for You and Write If You Have Another Option

1. How frequently do you visit parks?

A) Almost every day **B)** 3 or 4 times a week **C)** A couple of times a week **D)** Hardly use

.....

2. What is the main purpose of using parks?

A) Spending time with family **B)** Enjoying the nature **C)** Meeting with friends **D)**

Relaxation and walking **E)** Playing sports and using exercise facilities

.....

.....

3. Why do you visit parks often?

A) Clean facilities and environment B) Close to home C) Good natural environment D)
No other parks to go E) Various facilities and programs

.....

(Part Two)

Please select the number one to four and tick your selection under the number in the below keywords to mention your selection.

1. Totally Agree 2. Agree 3. Disagree 4. Totally disagree

Objective One: <i>To assess the social demands of urban park</i>				
Scale	1	2	3	4
1. The parks can take part the health of the community				
2. The parks can contribute the social interaction and strengthen the relationship				
3. The parks can increase the social equity				
4. The parks can protect the culture and norms of the community				

Section D: To indicate the effect of urban parks to the sustainable city

(Part One)

Kindly Choose the Correct Answer and Circle the Letter of the Answer That You Think It Is Right for You and Write If You Have Another Option

1. What are the roles of the green spaces in downtown?

A) Making scenery beautiful B) Maintaining healthy natural ecological state C)
Preventing indiscriminate urban development D) Preventing natural disasters E)
Providing leisure space

.....

2. What is the best way to expand parks and green spaces?

A) Expanding pedestrian paths **B)** Expanding natural parks in forest areas **C)** Making parks with public buildings and schools **D)** Making parks with relocated site of factory

.....

3. If you participate in the expansion project of parks and green spaces, in what way would you join?

A) Donation in cash or real estate **B)** Joining or assisting non-profit civic organizations **C)** Agreement with paying more tax **D)** Participating in volunteer works of cleaning and management

.....

(Part Two)

Please select the number one to four and tick your selection under the number in the below keywords to mention your selection.

1. Totally Agree 2. Agree 3. Disagree 4. Totally disagree

Objective One: <i>To indicate the effect of urban parks to the sustainable city</i>				
Scale	1	2	3	4
1. The parks can take to fulfil part the social function and psychological needs of the community				
2. The parks can contribute the safety of city environmentally				
3. The parks can reduce the pollution and noise disturbance				
4. The parks can contribute the increase of the economy				

Appendix B: Key Informant Interview

Interview questions for the district administration

1. Are there any special reasons that the people or the community of the city visits this park?

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2. What are the main reasons that you build for this park?

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3. Are any changes you see the visit of the community in the park from time to time (since the establishment)?

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4. What are the environmental benefits of the park?

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5. The business places in the park are public or private? How much money do you make from the park?

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