URBAN DESIGN IMPLICATIONS FOR FACILITATING EFFECTIVE USE OF URBAN NATURE FOR USER RELAXATION: CASE OF SMALL URBAN PARKS IN BATTICALOA.

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ABSTRACT

The urban nature setting is a significant contributor to the wellbeing in the urbanization places, and it ought to be combined with the public realm. The town, for an example, Batticaloa consists of a public boom on the way of concentrating on the development in the urban areas as they become high denser. The bigger density decreases in the environmental place; however, it gives a chance to design the common places and effective places that provided their people with some contacts through natural environment. That theory gives appearance to the potentials of nature in the towns, especially relaxation potentials of nature in an urbanized location. An identifying and growing the public assessment of the environment, this theory object to correcting the confirmed ways, in which nature could be depicted because that is the city to be harnessed, for the benefits of the human relaxation, wellbeing of the recommended method, in which environmental structures could be included into the urban design facilitation. The literature review behind the effects on the natural environment of human comfort and health effects of the public space, it is designed to combine the three focusing natures with sensory potentials, case study areas of the natural small public parks located in Batticaloa for the purpose of concluding recommendations of this dissertation. For example, it is expected that how these recommendations might be implemented and published in this situation existing in the Batticaloa Municipal Council area, in the neighbourhoods' character of Kallady, Mugathuvaram and Dutch Bar, that increases density. The lessons have been discussed and planned to be transferred to the other urban areas that have become known areas of density to mix environment with the civic realm as these areas remain to be improved. This dissertation aims at pertaining to the foundation for thinking more censoriously and about the relationship related to the human nature in an urban area and how the common designing space could be used in a method of improving the relaxation and wellbeing of the people of the city surroundings.

Keywords: public realm, natural spaces, relaxation benefits, social value of nature

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LIST OF ABBREVIATIONS

BMC	-	Batticaloa Municipal Council
DSD	-	Divisional Secretariat Division
KM	-	Kilometre
UN	-	United Nations
US	-	United States
WHO	-	World Health Organization

CHAPTER 1: INTRODUCTION

1.1.Background of the Study

For the first period in the antiquity of human settlement, the huge number of the whole world population still exists in an urbanized area (WHO, 2010). These types of global changes, from the rural to the urban areas, are of a new concept. In the 1950s, only 30% of the world's population lived in the urban area, and by 2018, that number rose to 55% and later, it is projected to increase 68% by 2050 (UN, 2018). According to the new projection released by the UN, there are approximately 2.5 billion urban people are expected to live from the year 2050 (Ibid). The cities have confluence of intellectual partnership and the basis of much of economic growth, wealthy generation and human's creativity (Bettencourt, 2010). So far, the urban places have also faced the sources of the social injustices, the world toxic waste and illnesses (Harvey, 2009). Fast urbanization and urban area development have displayed massive challenge in place of the town which could manage this growing problem in a way that makes sure of the well-being and health of the urban area inhabitants. Particularly the period is ready for executing our town parts wherever human could get advantages not only by increasing the social interface, but also by interacting through areas near and urban environment as well (Wiliams, 2017).

In an effort made to maintain population growth rate, several authorities have applied a plan to control urban sprawl into the rural area lands, focusing the development rate in the urban development areas. The density of the urban area has so many potential benefits including protection in effective use of infrastructure and services, critical environmental areas and better quality of lifecycle. However, an urban development area with it becomes denser with the possibility of economic value growth that frequently takes priority over the worth of concerning nature spaces in the urban areas. As an outcome, environmental spaces in the urban areas have become an extra split and very lesser. These positions are great risk to the landscape of environmental health, and subsequently to the human health and wellbeing. Urban area nature affords a

significant benefit to the people, such as air quality and water. At the same time, it plays a dynamic part in encouraging ecosystems in and around the urban areas (Kaplan,1998).

The built environment is unaccompanied by, is not sufficient to tolerate the human lifetime when we need a natural environment to prosper. We trust in an environment for the food we eat, fresh air to breathe, and the energy that is consumed to influence our civilization, and most importantly the water we drink. The investigation displays that the people rapidly become separated from the natural environment and the part of these detaches are to be blamed for increasing demand of obesity problem and unhappiness in the industrial realm. This type of anxiety is understood most highly in the most crowded urban places. The compact city form is not the space for a natural environment. The fewer possible chances are for persons to cooperate with an environment, though, if the urban growing rate is designed and planned in a considerable method with ecology facilities and community wellbeing, in a sense, certain amount of the opposing externalities of the towns like relaxation, stress could be pointed out and relieved (Heerwagen, 2009).

If this happened, there would be a healthier consideration of an interrelationship of nature and humans and an acknowledgement of this interdependence between the healthiness of the environment and human health. According to the famous preservationist Aldo Leopold Sand, propose a terrestrial principle which defines an ethical duty of persons to be human factors of protecting the natural setting to guarantee its fitness and longevity (Leopold Aldo, 1949). Even though Leopold recorded about the terrestrial in the non- urban understanding this terrestrial principle could be implemented to the public realm around environments in the urban areas through identifying the responsibility of thought of natural environments in our town environments' that supports the people and nature. Urban Designers too including Urban Planner an energetic position in helping the wisdom of duty through integrating environmental strategy addicted to green infrastructure and then the common spaces towards offers for various activities that aid together natural environments as well as people.

Today, industrial atmosphere progressively supports people's lives through knowledge and mainly it takes place inside. Whether it is employed on a processor in a weather control building structure or home-based observing TV sample of the events of individuals that are accommodated in the structures. Specific research made by means of the United States Environmentally Friendly Protection Organization demonstrations that American adult individual spends averagely 90% of their life inside. One more research made through the Nature Conservancy recognized that merely 10% of the American youth occupy life outdoors every day. Nowadays people are notably relating our life to the basis so as to realize the restorative potential power and the profits it has for us.

The previous period has shown a change for better apprehension regarding the effects of our knowledge of technology, dependence separated on nationally and globally. The concern about humans separated naturally, overlaps with community health anxieties in the West surrounding area of the improved rates of unhappiness and chronic illnesses. According to this health anxieties can, partly be credited to our progressive, setting lives inside and away from nature. Standard books such as, Your Brain on Nature (Shrub, 2012), Richard Last Child in the Woods (2008) and the Nature Fix (Wiliams, 2017) make sure of contribution in the direction of giving the conversation about social environment that is separated besides wellbeing suggestions which are keen on the changes. The rapid growth of happening about acceptance of Japanese exercise regarding "jungle showering" wherever individuals' liveliness on planned jungle way of walking by the goal of reaching better fitness also happiness remains a proof of growing interest of the community in using nature as a solution for relaxing tension.

Some lessons have attributed to the blend of better use of knowledge but seemed absence of interaction with an environment to attend to lack illnesses that become general amongst children and elders as well. Author Lou appeals this "nature discrepancy illness". Lou states that communication by environment remains serious aiming at well, fine psychological and physical advance, as it has been shown to have in general increased mental reason and attentiveness.

A growing body for investigation has given a signal designed for whatever people require instinctively recognized all alongside that natural environment stands dangerous for social fitness in addition to nature. The period in environmental arrangements partakes of having been exposed to decrease pressure, upkeep better mental healthiness with care normal situation in the increase of originality and recover understanding and attention. The result of nature on our physiques and in the minds is somewhat a new trend of learning with certain of the first learning lead in the middle of the 20th century.

These trees deliver a myriad benefit of strength to individuals, comprising the shadow of the sun, purification of contaminants aimed at clean airborne, besides even though odor healing potentials available. Plants are vital for health, relaxation, and help to decrease stress exhaustion, and calm anxieties also. A research made in London found that individuals existing nearby plants seized less nervousness medication compared with individuals who exist close to less plant, irrespective of financial position, oldness, revenue, and some additional aspects.

Scientists in Japan have been engaged in the situation intended for the productive healthiness welfares of plants, via generating additional nature paths from the jungles envisioned to develop the health of tourists. These types of nature trails encourage the exercise of Shinrin yoku, which has become a regular movement for individuals looking for respect that start the pressures of the urbanized area situation. The Shinrin yoku has revealed towards the decrease of pressure intensities in members in a research made in the Tokyo University Jungle with approximately 500 members. The results revealed significant reduction in anger so that unhappiness scores joined with augmented spirit that later became acquaintance with trees.

The public places of which concepts are open to everybody to get one's access to have countless possibilities for enabling constructive human connections with nature of urban areas. With augmented densification in urban areas, civic open space is being changed as nature developed and more incoherent. As the populated urbanized parts become denser, the variations are shaped in the water, earth, life and air around and

within them. They could initiate environmental complications that disturb the wellbeing of each tenant in the urban areas.

Though the densification and growing urbanization area population density also hold good possibilities aimed at civic places to stand by planned and deliberately for the purpose of effectiveness, they may help numerous activities, as well as providing entrance to nature. Development of natural urban places and interlacing the natural balance of the present terrestrial in the urban fabric would deliver some occasions for the urban people to have consistent connections with nature. For our own stability, others and by way of designers, planners, and urban people, to be lively alive in confirming it by environment is a fragment of the existing and future growth of together communal and private retained places in the urbanized parts.

The key theories for this study area:

➢ **Need of urbanization is affecting many cities to turn into denser.** The meaning of densification is to offer the additional demand for expansion and prizing expansion over the protection of the undeveloped spaces. Consequently, with improved expansion of our towns, it is expected that they will provide somewhere to stay less and minor nature friendly environmental places.

➢ **There is the social well-being worth of nature in urbanized areas.** Human's requirement interaction with a natural environment for physical, social, emotional, and psychological wellbeing, particularly for urban occupants who are separated from a natural environment.

➢ **The design of spaces is directly exaggerated and explains how design of spaces is perceived and in what ways spaces are experienced by the Public.** There are definite urban design approaches that might be executed to take full advantage of the welfares of social relations by means of nature friendly spaces in urbanized areas.

1.2.Research Question

How urban design measures of small urban public parks could maximize the human interactions with nature to effectively boost the potential user relaxation in the East Coastal towns?

1.3.Objectives of the Research

➢ To reveal the benefits of nature in the urban parks of the Batticaloa coastal areas, mainly the relaxation benefits nature that delivers benefits of nature to the metropolitan residents.

➢ To demonstrate the means in which nature could be refined in the urban parks to connect the benefits of human relaxation, wellbeing and to endorse means in which natural landscapes could be integrated with the urban public place designed to facilitate this.

➢ To provide the establishment for thinking more judgment all about the human connection with nature in the urban places and how the urban space design could be implemented as a way of refining the relaxation for the comfort of human in the urban areas.

1.4. Method
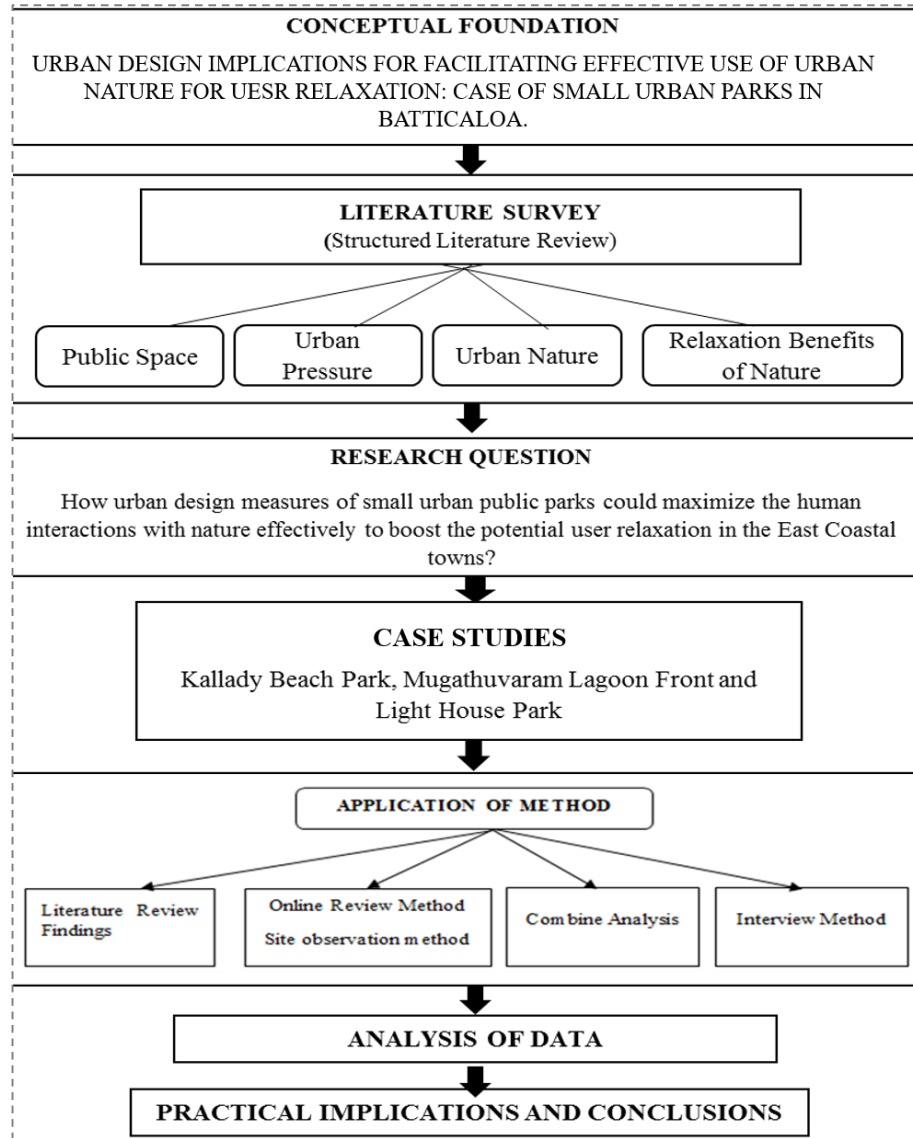
Figure 1: Flow of Study
Source: Author

1.5. Scope and Limitations

This thesis has some limitations. Considering the data, the natural elements such as maps of couture, environmental fragile area data do not mainly satisfy the specific area. Likewise, areas for the case study have been selected accordingly only by considering the aspects of 'urban', 'public', and 'small and health benefits.

It has been identified that urban design theories, principles, and concepts do not have enough detail for an urban nature and its wellbeing context. There is a need to explore rare resources to accumulate knowledge relevant to the urban nature.

2. CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

To approach the urban design of the urban spaces and to gather basic ideas of the common concept about the urban design space, along with accepting the anticipated returns and plans are to be designed. The initiative is organized by studying the positive well-being of people in connection with nature or natural environment. These types of returns could be easily understood by anybody. It has access to the natural environment and consequently, a beach increases the access to the natural environment in the urban area situations that is common to integrate with natural components of the scenario with the urban area public spaces (Bettencourt, 2010).

Common concentration on the relaxation benefits is given by nature, since there are debatably that the maximum methods to all as opposite to somewhat alike walking on a beach area that could remain a barricade to somebody who is incapable of walking. Education has revealed that the relaxation benefits in relation to nature that would come from just watching the scenery or breathing in trails discharged through water bodies and plants (Cronom, 1995). If these assistances might stand increased through just watching or else presence with nature, especially these environmental places requisites do not remain huge. Consequently, these environments friendly design components would be there that could be applied to the moderate small urban spaces like vertical gardens, green parks and pocket parks (Frumkin, 2001).

2.1.1. Public Space Theory and Urban Design Principles

The literature review concerning to public space categorizes a range of principles that have highlighted a connection among the usage of like physical assets and space of public space. Author Kevin Lynch's (1960) 'Image of the City' attempts to define the physical components of a city area and the perceptual system of the urban space. Structure on Lynch's body of work, researchers like Relph (1976) and then Canter (1977) attempt to divide the elements of place and inspected the concept of 'sense of place' from the view of social experience. Montgomery (1998) and Punter (1991) then try to comprehend the usage of space and how space appearances should be improved

by generating space making principles observing at elements of space in the system of meaning, physical setting and activity setting. Gehl's (1996) concept of human centric urbanism categorizes the link between public space and community the in terms of actions by quality of good urban design. Gehl shares spatial doings into 3 main groups: 1. essential activities, 2. voluntary activities, and 3. public activities.

The investigator has built the opinion that the formation of urban design principles by means of urban specialists and theorists similarly has been both in reaction to the absence of value of communal open spaces within urban environments, and in attempting to summarize, organize and re-form the potentials of public spaces that perform well. (Gehl, 1996).

In 1981 Kevin Lynch (1981, p.118 -19) point out five principles of urban design that could be recommend in the formation of public spaces as mentioned below:

- **Vitality:** The stage to which the system of public spaces boosts the activities, biological requirements and skills of human lives.
- **Sense:** The step to which public spaces could be visibly structured and perceived in time and public space by user groups.
- **Fit:** The step to which the system and volume of public spaces fits the form of behaviours that users involve in or want to involve in.
- **Access:** The step to reach other resources, activities, persons, services, information, or public spaces, comprising the number and variety of components that could be accessed.
- **Control:** The step to which those who access, use, work, or reside, in public spaces could accomplish and be able to contact to spaces and activities (Lynch, 1981, p.118 -19)

Moreover, Lynch's five principles are recognized, and it is well-known that these principles form the basis for some of today's urban design principles that are nowadays applied when attempting to design effective public places. Not only that but also, CABE (2004) present yet alternative opinion of the potentials required

for designed community space and consider that such public space could have the below mentioned qualities:

- **Character:** A public space with it is specific identity.
- **Continuity and enclosure:** A public place where private and common spaces are clearly prominent.
- **Quality of the public realm:** A public place with effective and attractive outside areas valued by public who use them.
- **Ease of movement:** A public place that is easy to move.
- **Legibility:** A public place that has a perfect appearance and is easy to find and memorable.
- **Adaptability:** A public place that be able to adopt with no trouble.
- **Diversity:** A public place with choice and variety.
- **Security:** A public place where the user groups sense that are safe.
- **Services:** A public place which is suitable to access basic infrastructure facilities.

2.1.2. Public Space

Commonly, the urban public spaces provided chances with links among the natural and built elements which are to be showcased and elements would be planned for maintaining ecosystem strength as well as peoples' fitness. The phrase "public space" has diverse types of meanings depending mainly on features such as guideline, tenure, and convenience included in the additional abstract significance, the elaborated urban spaces as "the life between buildings" (Gehl, 1987). Based on this research, the connection between being mental and natural renewal, the Robert Ryan and Kaplan classifies the features of healing backgrounds as follows existence left, land area, attraction and suitability (Kaplan, Kaplan and Ryan, 1998).

The Kaplan states that persons are strained towards influence in actions. It should narrate the natural ecosphere like as scenery viewing, gardening and fishing also. So, spaces that give the chances towards organizing these actions are frequently nice-looking to individuals (Kaplan et. al. 1998).

2.1.3. Urban Pressures

Even though several towns in the US depopulate numerously like the Seattle, they are facing huge growing booms partly for the reason of the area renewals as well as main trades that relocate their workplaces to these urban areas. This movement towards growth states the urban sprawl. This kind of sprawl pattern is not alone taking part in the US for the first time in history of human. Many of the world population exist in the urbanized zones. World population density is probable to develop intensely in the following century (Harvey, 2009).

Author Moore states that uncertainty of the city densification transpires deprived of correct preservation and description of natural public spaces through urban planning and design approaches; there would be negative implications on people health. As public places turn into denser the alterations, they yield into the water, airborne, soil and natural being within them the trigger ecological difficulties that interrupt the wellbeing of each occupant of the urban cities arise. Though if well scheduled and achieved, urban densification could offer possible advantages to human well-being, like dropping vehicular usage in favour of lively methods of cleaner water and air, transportation, increased communal communication, and everyday network with nature (Moore, 1981).

2.1.4. Urban Nature

Possibly conversing the worth of an urban nature, the word "nature" must be noted. This word is attached to the environment historian who places it as, "an intensely people creation" (William Cronon, 2017). This does not mean that especially 'nature' is of instant or else dreamlike, nevertheless, to point out in what way reports in addition to kindness of nature, they remain completely faultless since people gave their viewpoint. By way of creation of alive in the Anthropogenic, most people considered and established the environment that is to be lonely as of nature, maybe even the conflicting with nature (Ulrich, 1991).

Authors like Williams and Florence they state that people trust in the natural world for water in and out to drink, the food to eat and the air to breathe. Once seeing this it appears conflicting to isolation from the people and the natural world. The urban nature

is established, landscaped too planned in a way that design by individuals to appropriate in the urban system. In the built-up areas nature is receipt the "way of a diversity of open-air locations that have considerable quantities of vegetation. That comprises backyard gardens, vacant lots, parks, street trees and open spaces". Natural spaces are in the built-up areas that are regularly mentioned as "open" / "green" spaces, nevertheless urban nature would be making sure of colours, they would be surrounded, natural features, specifically in a dense urban area situation (Williams and Florence, 2017).

The urban areas that have actual complex arrangements concerning the procedures of health, socio, economic and nature concerns of the individuals should be intended by this on concentration. Author Whiston Spirn (1984) states about "The Granite Garden", all the green exposed areas in the urban with roofs, roads, parking space, malls, parks, urban wilds, and streets they are a part of a meshing, complex arrangement. Individuals continuously identified treasured belongings in natural features, recognizing nature is visual and useful values. There is a unique model on why this *Biophilia* theory elaborates a biologically identified characteristic social necessity? "It is associated with their lifecycle and realistic progress. Because of this desirability, metropolitan individuals from side to side the years have pursued to have nature inside range. This situation is tested happening inside the towns through the past in the arrangement of cascades, rooftops gardens, lawn plots, country park, and for the purpose of the city sprawls such as *New Urbanism and Garden City Movement*. Fundamentally, the antiquity describes that towns produce denser and greater, as the remoteness the rural area and wild upsurges, the wish to "recall" environment rises. Feasibly this one is longing aimed at an impression of the cleanliness of setting the fresh air, wild beauty lack of pollutants, which in eras looks like the conflicting of a natural lifespan in a metropolitan zone (Wilson, 1984).

Commencing from an ancient period of Rome to industrial period of London cities, nowadays, individuals have identified means to incorporate the encouraging landscapes of the environment being keen on the urban lifespan. In the 19th era America was an industrial and the metropolitan atmospheres turned into slowly contaminated, a metropolitan area redesigning sprawl, led by Frederick Law Olmsted, who endeavored toward the change of the metropolitan area with the civic health by taking more nature into the urban areas. The result grants for the urban parks, designed to be the so named "lungs of the city", delivered those inhabitants by way of green areas where they could inhale the fresh air. During the middle of the 20th century, it was identified that most of the urban parks owing to the park budget cuts and ever-changing significances comprising the elimination of Buffalo's Humboldt Park space to shape parkway, then widespread offense in the New York City in the 1970s appeared (Whiston Spirn, 1984).

Figure 2: Mini Park in the Lake City
Source: Whiston Spirn, 1984

Apart from being dependent on environment for our elementary requirements, suggestions have been revealed that the individuals also essential environment for spiritual reasons, expressive, besides relaxation (Wilson, 1984; Roszak et al., 1995; Frumkin, 2001; Wilson, 1984). Most of the parks in the urban areas nowadays, reduce conservation charges and remain deeply hardscape by far fewer natural environmental landscapes than that of the Olmstedian gardens of the past.

Miyazaki and Yoshifumi state that urban nature would enhance the health of individuals in the urban and some harmful ecological externalities made by the urban

areas such as heat island effect and air contamination. Plants have in the urban areas removed certain amount of the carbon monoxide gas, and particulate substance released through motor cars (Miyazaki and Yoshifumi, 2011). A research led in 1980s period of the airborne cleaning possible of various types of plants identified that the kinds of trees and the preparations of trees ought to improve their role for dropping the airborne contamination. A sample of the study shows that trees and plants with solid brushwood; rough bay and huge, bushy greeneries are the greatest activity on dropping substance in the airborne (Hartig, Mang and Evans, 1991).

The best open spaces are formed for enjoyment throughout the year by controlling temperature in the seasonal delivering accommodation as of the cold in icier periods. The natural components could help with fit places being keen on comfortable microclimate consequently creating them more friendly spaces for individuals to visit (Frumkin, 2009).

2.1.5. Relaxation Benefits of Nature

Apart from as of dependency that is going on environment for our elementary requirements, it is suggested that people also love environment for a spiritual, sensitive with recreation details (Wilson, 1984; Katcher and Beck, 1987; Roszak et al., 1995; Frumkin, 2001; Wilson, 2001). An increasing group of experientials, theoretic, then subjective proof show how natural environment has the supremacy energy to need an optimistic effect that is happening in the human form, lower cholesterol, comprising a more positive outlook on life, stress reduction and reduced blood pressure (Moore, 1981; Kaplan and Kaplan, 1989). Different types of lessons and research have showed that publicity to nature aids with cognitive function and stress drop. The urbanized surroundings with beautiful natural environment phenomena are additional possible to mark public sense relaxation healthy. In a research, significant quantities of periods of the public spend in peaceful natural space and in what way frequently they stayed are equally positively linked to the reported mental restoration. Furthermore, a separate space is stressed preceding to the green area visit to the better, the grade of pressure recovers (Wilson, 1984; Katcher and Beck, 1987; Roszak et al., 1995; Frumkin, 2001; Wilson, 2001).

Research accompanied by in internal urban areas found that individuals are alive in "greener" surrounds stated fewer incivilities, less aggressive, violent behaviour, and lower levels of fear. This type of research found the dwellers of the houses with larger levels of close plants defined less crimes that are belongings and vicious crimes. Some psychologist representatives focus on in between plants and reduced criminality towards the capability of environments to aid the emotional exhaustion. A few research made by the (Kaplan 1998) have revealed a natural environment as a device for improving emotional exhaustion. In a research accompanied in the period of 1987, Stephen Kaplan suggested three indications of emotional exhaustion. They are reduced control of impulses, irritability, and inattentiveness. If gone unconstrained, he says, there is a great tendency for emotional exhaustion and becomes the chief to "explosions of irritation then possible… viciousness" (Kaplan, 1998).

An additional possible feature might be these places boost individuals to visit outside, consequently, aggregate relaxed observation of outside green places, and lower the probabilities of crime appear. Both Jacobs and Whyte supposed that the basic thing that fascinates individuals to a space is another group of individuals. This might appear conflicting, when designing the public spaces for a makeover, of which a person may consider by means of demanding being optimistic of loneliness besides privacy, nevertheless the situation is a significant view in lieu of urban designers and town planners to save in concentration. Urban paces quiet want towards being felt greeted besides the vision of further public who appreciate that an urban place remains an important inspiration designed for public entering an urban place (Williams and Florence, 2017).

2.2.Importance of Native Landscape Principles

According to the Bell (1993), he states that altogether 6 principles of native landscape design components that have been executed by designers for eras throughout all paintings, floral design with art forms as well as native landscape design components. They are:

- **Balance**

The ''balance'' is a form of anxiety in excess of observing. Users feel relaxed and joyful in native landscapes that partake a feel of balance. Balance has 2 main categories. One is symmetrical and other one is asymmetrical.

Symmetrical balance: It is provided in recognized native landscapes while one side of the native landscape is a reflect view of the other direction. These native landscapes frequently practice linear shapes in the bicycle paths, footpaths, parks, native fixing couches and native floras are trimmed into structures. This kind of balance plays to remain rather rigid in presence and frequently is extremely upheld. Asymmetrical balance is recognized as casual balance, varies from one side to the other and acts to be calming and allowed graceful (Bell, 1993).

Applying these principles, urban designers and landscape designers use native landscapes designs those spaces are welcoming to view at and even appealing. These native landscape design principles are not designed by designers centuries ago, however more of a vital visual feel that furthermost users enjoy. Applying these as strategies aids urban designers, urban planners also architects make a native landscape that "create sense" to view at (Bell, 1993).

- **Focalization**

Somewhat urban or coastal park design has a crucial fact that the location wherever the site observer's eye is first fascinated. Focalization is occasionally stated by way of focalization of concentration or else just focal fact. The focal fact is the solidest component in the urban design into some extent specified view. A coastal park's focal fact is frequently the front space with blue. The native landscape design focal fact is frequently something nearby coastal area to improve the entry of the park.

Each and every area of the native landscape can comprise a focal fact, however it is positively not essential. Native landscape designers and urban designers would not overdo focal facts. In somewhat opinion, users are fascinated to motivating native plant

arrangements, bright colours, creative elements, architectural design and sculptures (Bell, 1993).

- **Simplicity**

Simplicity is whatever the term suggests simple. Maintaining native landscapes easy, not jumbled, or ornate is every time a moral preparation. This preparation is not the reverse of difficulty. Numerous native landscapes designs have different structures, comprising water landscapes, architectural designs, and wide illumination landscapes. Native landscapes that create users joyful and relaxed omit using a lot of colours, forms, arcs and surfaces (Bell, 1993).

- **Rhythm and line**

When somewhat in the native landscape design is continual with a typical intermission, a rhythm stands recognized. In native landscape design, the intermission is typically space. Native vegetation, groups of native floras, spotlight poles, seats or other features could be recurring within the element of design to form this particular rhythm. Appearances in a landscape design are shaped in a native landscape design through the form in addition to shape of the native fixing beds, walkways, where the meadow encounters pavement and additional hardscaping landscapes. The rhythm and landscape principle provides a landscape design a 'sense of being'. This is what creates native landscapes relaxing to users' feelings (Bell, 1993).

- **Proportion**

Proportion states to the dimension connection of components in the native landscape features. This comprises, vertical, horizontal and special contacts. User groups of short, user groups of tall and user groups of kids all recognize space in a different way. Proportion in native landscape ranges to range of lot size, building size, native bush size, parts of native plantings to parts of open space moreover the usage of the landscape structures (Bell, 1993).

- **Unity**

The principle of unity is simply distinguished if the other 5 native landscape principles have been appropriately implemented through the landscape. Unity in landscape design just means all the different parts of the landscape design work together to generate a countless complete design especially considering the local context. Textures, sizes, shapes, colours and other structures work organized to generate an integrated designed public space. Patterns and colours are frequently repeated. Local plant shapes, different features, lighting and hard landscapes such as walkways altogether essential to work organized to generate a welcoming appearance as well as an integrated landscape.

By subsequent these principles of native landscape designs, urban designers would be able to plan and generate a visually welcoming public space in somewhat urban park, small park or large park (Bell, 1993).

2.3. Conclusion

By means of recognizing and raising the well-being conveniences besides value of a natural environment, the Urban Designers together with the Town Planners could professionally promote nature in the urban and attach the aids to social wellbeing and health. The above data exist indicating the indication of the necessity in place of natural spaces in the urban areas towards making sure of individual strength, especially in the urban places that have become additional populous and denser. Densification could complex the urban area stresses such as noise and air pollution. At the same time, it has the potential for making places more diverse, workable, and lively. The urban area natural environment can improve especially urban involvement through empowering the psychological renovation, serving to release communal illnesses that happen in the industrial base society produced through strain, stress, nervousness, and weakness.

Cutting-edge of the case of manipulating places aimed at relaxation, the wellbeing and some important concepts as literature arose. They are the physical base fundamentals identified by (Ryan and Kaplan, 1998).

I include the data on lessons made by the public health specialists, sociologists, environmental psychologists and urban ecologist, our densifying urban areas could be the spaces that are not just livable but helpful to the individual relaxation and wellbeing.

3. CHAPTER 3: METHODOLOGY

3.1. Introduction

First, the theoretical basis is established, and then the organized literature review is framed. Based on the thesis, literature review is decided into four parts. They are urban pressure, public space, relaxation benefits of nature and urban nature. This thesis literature review provides the theoretic base evidence to support the part of the research question and literature review bases are referred to in the analysis, including journals, books and magazines. Based on these types of articles, they are assessed by their work site to find supplementary sources.

These types of key terms are used to search for sources. They are: "public space"- "human health", "urban nature", "nature" and "green infrastructure". Especially, the urban areas have become high denser of population. Evidence displays that the possible for natural features are also joined with the urban area public places to deliver benefits, wellbeing and good health of human.

This theoretical framework is a follow up in the case studies. There are recognized frameworks to describe the usage of environmental urban design approaches in the urban community space regarding the delivery of well-being opportunities.

3.1.1. Selection of the study area based on five parameters.

These case studies have provided with viable examples of designed base fundamentals and policies that are used to include the urban nature interested in the common places to adoptive wellbeing and better health about the people who visit these places.

Afterwards, a shortlist of the projects has been selected from three places for the case study examples. These selected study areas that are appropriate to the context and aim at the case studies. Particularly context comprises the ensuing limits: case study areas are located in the Batticaloa Municipal Council. It is a public small space, in the urban areas, and it is providing people with the perceived emotional health base assistances. Descriptions for each of these five parameters are given below.

- **Public**

These case study areas are spaces where there is widely accessibility whether they are private or publicly owned. The determination of this case study area is in the direction of notifying the open space urban design, in addition to the aforementioned this is significant that the case study samples are themselves urban public places.

- **Urban**

Case study areas are available in an urban place background. This is to display that basic of the urban design should be used in another location of an area. Since the case study areas are focused on Batticaloa, the explanation of "urban" aimed at this outline originated from, what stand Batticaloa's "urban areas". It is meant by way of standard mentioned by Urban Development Authority (Batticaloa Development Plan, 2014). All the case study areas are located within the municipality urban area borders.

- **Small**

All the case study areas be located not as much of than 2 Ha in extent. Especially this limitation is proved from theoretical background of this research, that the urban towns becoming denser parts of natural place, diminishes. The intention is in the direction of looking at the places that utilize a comparatively small zone toward attaining the anticipated potentials.

- **Relaxation Benefits**

These case study areas be situated reflected exactly and give some form of relaxation benefits. According to the investigation of research collected through the literature review, little bit of public positions is mined to specify if a space is psychologically re-established. These positions are including serene, awe-inspiring, meditative, sense of calm enclosure and calm. If some of these positions are used to elaborate the urban spaces measured for a case study, it would consider a predominant healing place.

To notice in what way of instructions is since the case studies may notify the common public place design in the Batticaloa town, an analysis of public area typologies in the case study location would be complete. The best four common space typologies

recognized are: coastal park, public park, streetscape, and pocket park. These 4 are the greatest outward public space typologies in connection with Batticaloa. Accordingly, the four case study areas have eventually been chosen for the case study because these areas are an example of each one of the public space typologies.

3.2. The Method of the Analysis
3.2.1.   Literature Review Findings

These three selected case studies areas are: The Kallady Park, Mugathuvaram Park, and Light House Park area. Those three cases are all situated within the town of Batticaloa, and they are suggested by the urban design or urban planning specialists as the public urban places that predominantly gave relaxation benefits by means of natural fundamentals. Towards the discovery of the potentials, providing through all the case study locations research for details are given by the blogs and urban designers regarding the urban spaces in the direction of observing, if there are declared somewhat relations or fundamentals of urban design which could possibly be prime to emotional refurbishment. These rapports are pinched from the results of the review of literature, and especially the book with "*Nature in Mind*", which recognizes the main fundamentals of the city area environment that could be psychologically heal.

3.2.2.   Online Reviews Method

These types of search standings and keywords include sense of insertion, meditative, overwhelming, peaceful, calm, and serene. Later they were used to measure the people who involved in the urban design project schemes and to observe if they consider the design place to be psychologically healing and where and why they are included if this is an urban design concern. The alternatives that I accessed from the online reviews about each space on Trip Advisor and Google Reviews are found.

3.2.3.   Site Observation Method

My visit to these three case study areas is considered as to how the common people are using the space and I gathered my personal impressions and observations of this site. This way of monitoring is a visit to the site at noontime on weekdays and to notice

day to day visitors to the location that are different to the users who may have one visit on Saturday and Sunday or may be visitors. Particularly I sit down at a specific location wherever I act as an observer and have a viewpoint of the whole observation area, and then perceived movement for an hour. Means of collection of facts comprised photographs, short notes recorded in the field and hand drawing sketches as well. Also, field visits are planned and even some of the data collected an online related to the case studies.

3.2.4. Combine Analysis

When considering the literature review the case study areas show that formation of a series comprising urban design references is aimed at all the small public places. These references endeavour toward response the preliminary research question: in what way could the small urban public places located in municipality towns which are economizing are designed and planned to better detention of the possible relaxation benefits of people linkage by natural environment? In conclusion, these strategies would be applied to the locations in Batticaloa to express how these interventions could be applied to a current-world situation.

3.2.5. Interview Method

Sample size of the interview method is 40. Because population of the commuters is the main target for the interviewers.

4. CHAPTER 4: CASE STUDY ANALYSIS

4.1.Introduction

This chapter explains how these literature review helps to apply the researcher's knowledge to practical explanations. Likewise, it explains the small introduction about the case study area and suitable justification for the selected case study area and this particular chapter incorporate the analysis as to how the urban design strategies have been used to feel user relaxation in the coastal small parks areas, which have been selected for the case study areas and the balance section of it will be the elaboration of framework, which is set up for the purpose of this case study regarding what types of methods and techniques have been implied in collecting the information of the data to analyse the information, collected from the research study.

Figure 3: Location Map of the Batticaloa Municipal Council Area
Source: District Statistical Handbook, Batticaloa

4.2. The Areas of the Case Study

The Batticaloa Municipal Council is situated in the District of Batticaloa, Eastern Province. This area falls under the Manmunai North DSD. Batticaloa town is located east nearly 314 km from Colombo. According to the population data, the total Population of the district is 515,857 and the population of the main city is 94,609. According to the land area, the land area of the Batticaloa district is 2,854 km^2 and the land area of the city is 75.09 km^2.

For the analysis of the case study area analysis, three case study areas have been selected. Accordingly, the Kallady Park, the Mugathuvaram Lagoon Front, and the Light House Park. These three areas come under within the Batticaloa Municipal Council Area coastal limits. When considering the case study area; the coastal park areas comprise 3501 densities of population in the Light House Park and nearly a population of 2746 in the Mugathuvaram Lagoon Front areas and also nearly 3250 amounts of population is recorded in the Kallady Beach Park area. (Source: Statistical Handbook 2018)

4.3. The Batticaloa Small Coastal Parks

Batticaloa coastal parks contribute effectively to the Batticaloa city life where parks are situated. Especially the Kallady Park, the Mugathuvaram Lagoon Front, and the Light House Park contribute a lot to the human being relaxation of mind. Additionally, parks are left looked upon by way of mere conveniences. They partake of becoming requirements and necessities obligation; they are situated closed by to each other. The availability of these parks would be felt all over the Batticaloa through travel to job places and residential area, and in the evening time, if arrangement of small coastal parks helps to prosper, which are positioned at closeness in abundance.

Usually, these Batticaloa coastal parks limit the category of activities conceivable, especially for relaxation activities of their mandate greater open spaces. Conferring to De Varies (2010), closeness of green and blue environments power is extra appropriately to the social and the mental health than when compared to physical health. In Batticaloa, several small coastal parks still stay precisely designed to the

provision of physical activity like as coastal parks and zones aimed at mind relaxation (loving the water body) though such areas might limit further activities.
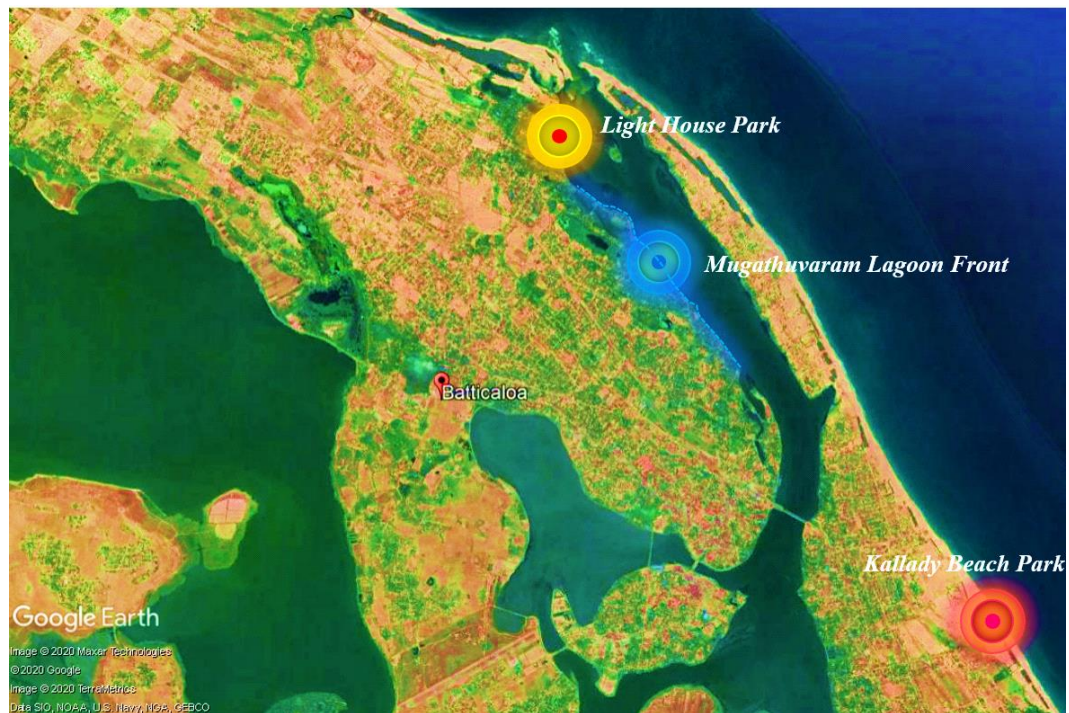

Figure 4: Location of the Batticaloa Coastal Parks
Source: Author

4.4. Identifying the Urban Design Strategies

The urban designers and the Landscape architects work by means of diverse elements when designing park developments. The arrangement of numerous components is vital to the ultimate production to experience them. The below mentioned strategies are already inspected by applying in the case study areas that have been designated.

4.4.1. Green Strategy Development

4.4.1.1. Development of Greenness

It has been observed that 'greenness' which is located in the small coastal parks contributes to the positive connections between green elements and health. Conferring to Dee (2009), he states that there are 3 proportions in a place that consist of 'walls', 'ground level plane', and 'sky level plane'. According to the analysis, as far as I am concerned, these 3 levels as 'tree canopy, 'eye-level greenery' and 'green ground cover' correspondingly. Green ground cover like grass and minor ground plants have remained positively connected to the healing experience of the city spaces. Grassers

may encourage the wish to relax and sit on. Ground level cover in relation to bushes underneath lap height could halt movement and generate designs also. Shrubs could be used toward creating places where persons could feel of privacy and sit. It could generate a visual and physical barrier that is additionally able to provide attachment, with a sense of distance near conceivable surroundings that worry. Moreover, native landscape with native plants enhances the relaxation mood and help to attract more users to these places. Some of the native plants like **coconut tree** *(Tamil name: thennai)*, **terminalia catappa** *(Tamil name: kaththaa maram), neem tree (Tamil name: vempu), casuarina (Tamil name: savukku maram), gular tree (Tamil name: athi maram) and mango tree (Tamil name: maa maram)* could be identified along the Mugathuvaram Lagoon Front area. Some of the native plants like **neem tree** *(Tamil name: vempu),* **coconut tree** *(Tamil name: thennai),* **terminalia catappa** *(Tamil name: kaththaa maram),* **palmyrah tree** *(Tamil name: panai maram) and casuarina (Tamil name: savukku maram)* could be identified along the Light House Park area and native plants like **terminalia catappa** *(Tamil name: kaththaa maram),* **coconut tree** *(Tamil name: thennai), casuarina (Tamil name: savukku maram)* **and coconut tree** *(Tamil name: thennai)* could be identified at Kallady Beach Park area. *(Refer Annexure: 1)*
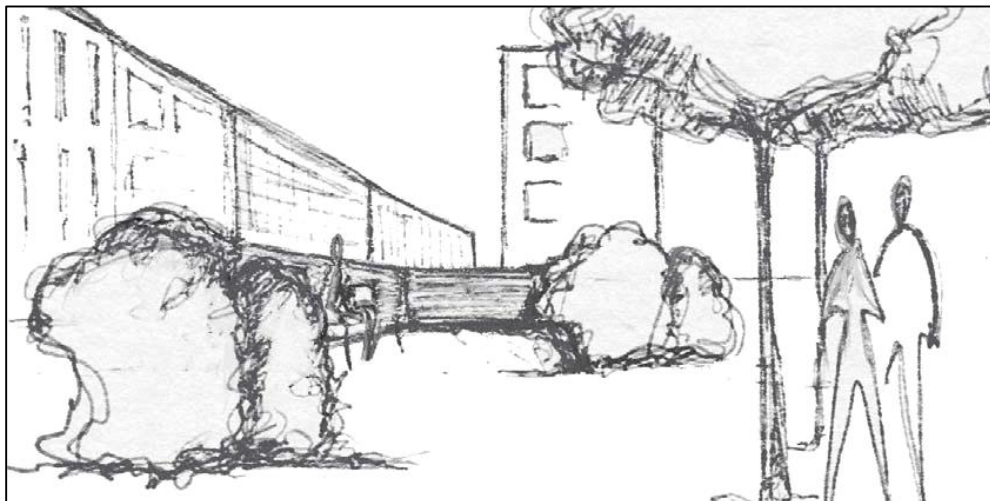

Figure 5: Visual Linkage between green cover and human
Source: Author

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Figure 6: Green cover visual linkage at the Light House Park
Source: Author

Figure 7: Green cover visual linkage at the Mugathuvaram Lagoon Front
Source: Author

Figure 8: Green cover visual linkage at the Kallady Beach Park
Source: Author

4.4.1.2. The Eye Level Greenery Development

Aiming at the 'relax and rest,' 'green area ground cover' is completely linked. Moreover, additional qualitative understandings of different opinions towards the status of 'greenery eye level', they could be seen in many coastal parks that many users like to 'rest and relax'. 'Noise', and 'play area' are adversely connected to 'relax and rest which specifies that disquieting elements must be evaded.
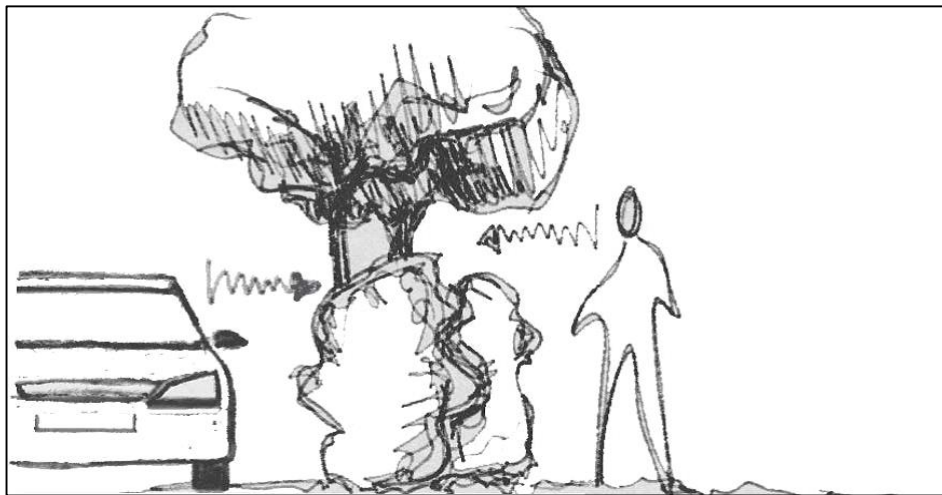

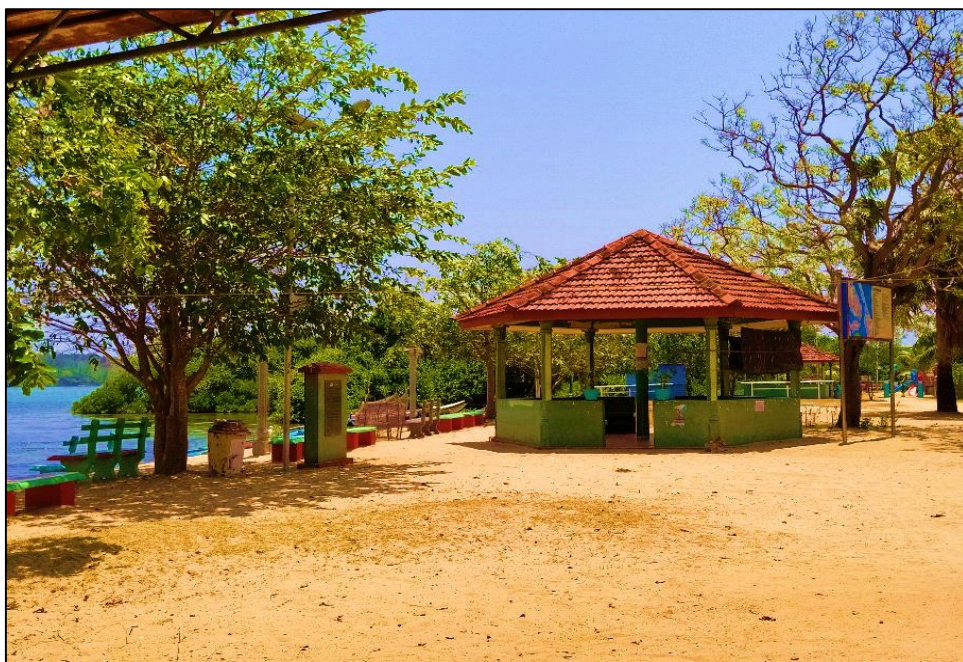**Figure 9: Sketch of the Eye Level Greenery**
Source: Author

Figure 10: Eye Level Greenery of the Light House Park
Source: Author

Figure 11: Eye Level Greenery of the Mugathuvaram Lagoon Front
Source: Author

Figure 12: Eye Level Greenery of the Kallady Beach Park
Source: Author

4.4.2. The Blue Strategy Development

4.4.2.1. The Blue Environment Enhancement

One of the scientists and aquatic environmentalist Wallace J. Nichols sates that thing concerning the "blue mind," he defines it by way of "a slightly thoughtful stage, categorized by quiet, peaceful, union and mind of the overall happiness and fulfilment by lifetime in moment."

People who live near the water body areas happen to enjoy much. The majority are more probable to be joyful, according to questionnaire survey. During open discussion

I had with people on whether the coastal parks effect wellbeing, in Batticaloa is found that compared to people who lived in the city. They are close to the coastal areas exposed advanced positive psychological benefits and less negative psychological impact.

A survey result reveals as follows. The people live close to the coast that lean towards to consume better well-being than those who live in the city. The results reveal that by going to see a coastal park area; people sense calmer, more stress-free and more energized than their organized visit to a city park.

"The blue colour has the power of creating a feeling of quietness," and performs as therapist for improvement of mental health. "The sound of roaring waves partakes of a calming result on a brain even though it reduces the blood pressure, which aids people to superficially focus people's attention and reduces rumination, decrease our anxiety, worries and depression." According to the people's response, nearly 45% of the people feel better health through water body in the Mugathuvaram Lagoon Front when compared to the Kallady Beach Park and the Light House Park area. More people feel relaxed with more decreasing worries and depression in the Kallady Beach Park when compared to the other parks. Moreover, more people say water acts as therapist mostly in the Light House Park area.

These are different from the 3 parks that are mentioned below.

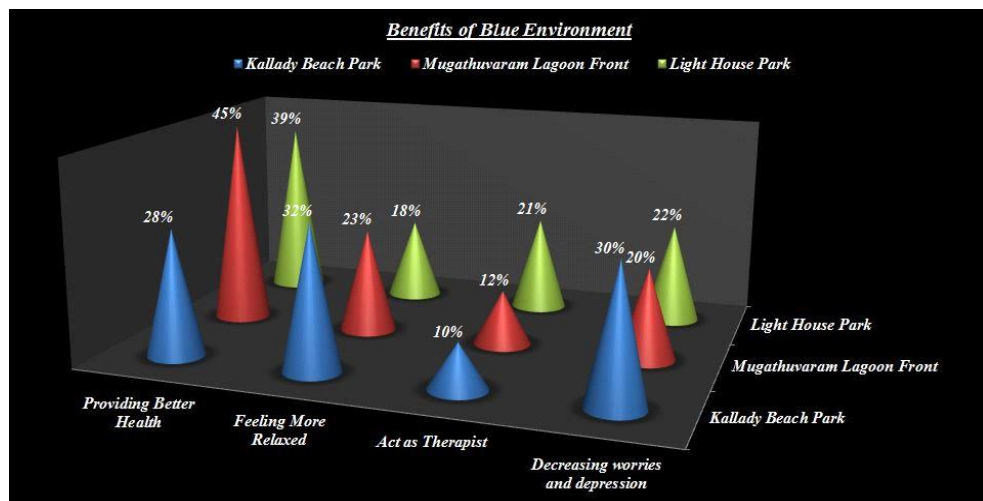**Figure 13: Percentage of People that relates to the benefits of blue environment.**
Source: Author

Figure 14: Enjoying the blue environment for their relax at the Kallady Beach Park
Source: Author

Figure 15: Enjoying the blue environment for their relax at the Light House Park
Source: Author

Figure 16: Enjoying the blue environment for relax at the Mugathuvaram Lagoon Front
Source: Author

4.4.2.2.Blue Walking and Exercise Development

Views of nature encourage a decrease level of blood pressure for reducing stress. Many people express green space which lies in the coastal parks helps a lot to get away from mental stresses. 'Blue exercise' contributes to the improvement of physical and mental health. Walking is a must for health.

Figure 17: Blue exercise at the Kallady Beach Park
Source: Author

Figure 18: Walking and Blue exercise at the Light House Park area
Source: Author

4.4.3. Social Strategy Development

4.4.3.1.Relaxation Time and Development Purpose

As shown in figure 13, these small coastal parks are mainly used aiming at 'rest and relax', 'socializing' and 'walk and bike'. The other activities are related to photography, chatting and so on. Most people prefer the Light House Park to socializing when compared to other two parks and most of them use the Kallady Beach Park for rest and relax when compared to other two parks and they like to use the lagoon front for cycling and walking when compared to other parks.

When analysing the time, most people like to spend more time at the Kallady Beach Park and the Light House Park, because more design strategies have been introduced in these two parks when compared to the Mugathuvaram Lagoon Front, because people have more opportunities and like to spend more time with the most elements.
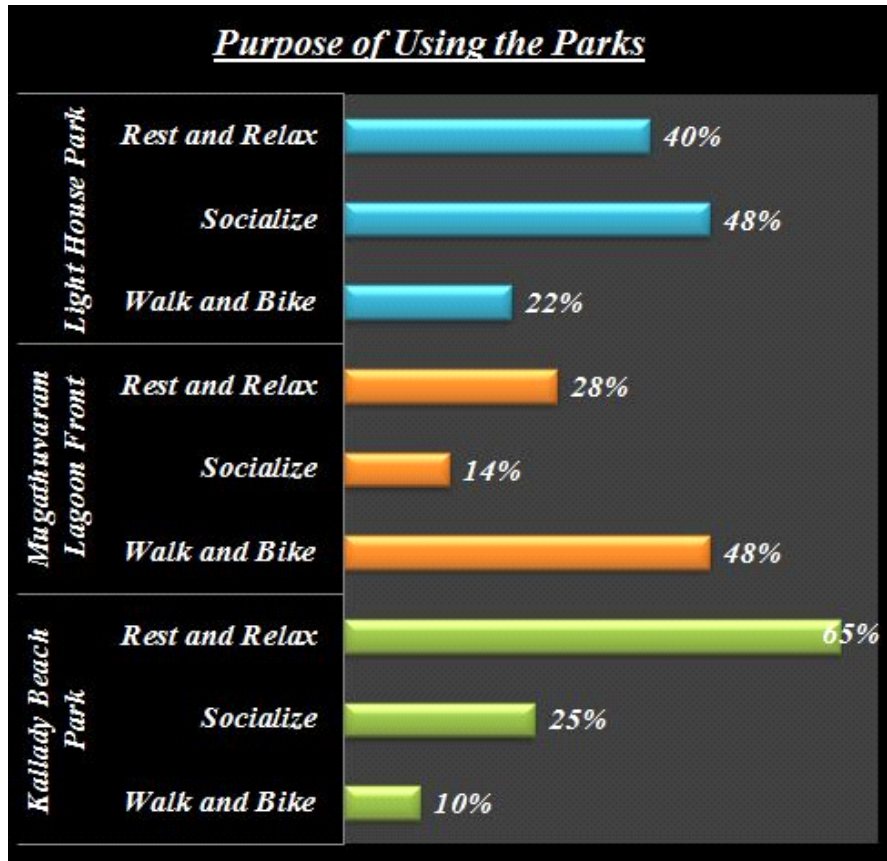
Figure 19: Percentage of people using the parks for several purposes.
Source: Author

Table 1: Average time that is spent in each park.

Spending Time Period			
Purpose	Kallady Beach Park	Mugathuvaram Lagoon Front	Light House Park
Walk and Bike	10 - 20 mins	10 - 40 mins	5 - 10 mins
Socialization	10 - 40 mins	10 - 30 mins	10 - 60 mins
Rest and Relax	10 - 60 mins	10 - 25 mins	10 - 60 mins

Figure 20: Socialization at the Kallady Beach Park
Source: Author

Figure 21: Relaxing at the Kallady Beach Park
Source: Author

Figure 22: Socialization and relax at the Light House Park
Source: Author

Figure 23: Socialization and Relax at Mugathuvaram Lagoon Front
Source: Author

4.4.3.2.Opportunities of Development by Different Aged People

Age is linked with the occurrence of activity of small coastal parks (figure 24); elder users generally visit the small coastal parks than younger ones. Also, users with less than the age of ten years are further having interest to spend time at the small coastal parks once a week than comparing with the 11- year children for playing purposes only. For the usage 'relaxation' the 45 and above 60 years' elder users are eager to approach more than twice. Furthermore, females are less eager in the direction of approaching the small coastal parks comparing with the male for the purpose of 'relaxing,' The other way around, it is observed for other activities. There is a form in that "the elder users are less eager to approach the coastal parks meant for relaxing".
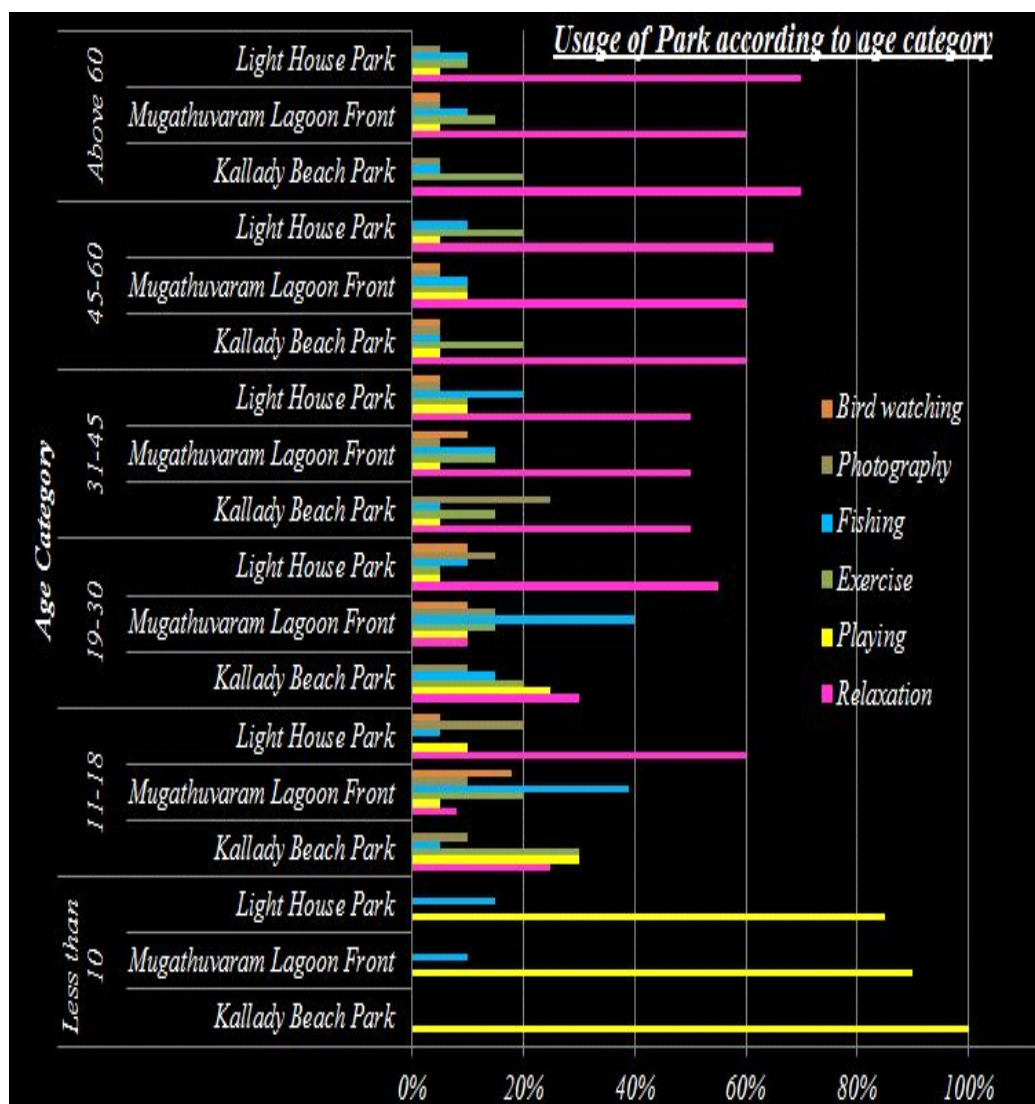

Figure 24: Percentage of the age group for using the parks for several reasons.
Source: Author

Figure 25: Taking photos and Bird Watching at the Light House Park
Source: Author

Figure 26: Playing and Fishing at the Kallady Beach Park
Source: Author

Figure 27: Fishing at the Mugathuvaram Lagoon Front
Source: Author

4.4.3.3.Serene and Social Development

When considering association among coastal parks and users, it is reported that ordinary level of mind pressure, and a significant number of coastal parks are meaningfully linked with some design elements. The outcomes of the research reveal the 'serene' and 'social' are 2 main features envisaging the perceived relax with coastal parks for all the users, particularly, it means that users are first and foremost, of anticipate catching quiet and peaceful environs ('serene') and place for social connection ('social').

As soon as tough is managed, the suggestion among coastal parks happens to the finest by the user perceived relax that varied among the 35% of users who got themselves stressed more of coastal parks in addition to the 65 % remaining category of users, the coastal parks' 'nature' remained meaningfully connected with the element 'existence away,' which specifies that the most stressed users could come to be a robust sense of actuality distant since daily burden compulsions also, if a natural relax exists in the coastal park. Furthermore, 'social', 'refuge', 'nature' and 'space' are meaningfully connected by the element favourite, which means that strained people wish to see nature through a stronger existence of those structures is certain.

Figure 28: Scenery of the Kallady Beach Park
Source: Author

Figure 29: Scenery of the Light House Park
Source: Author

Figure 30: Scenery of the Mugathuvaram Lagoon Front
Source: Author

4.4.3.4.Building the Social Capital

When considering the social capital; it is a perilous situation that is meant to aim at a congregation of the communal well-being. It is shaped since personal contacts of person's ensuing from helpful linkages. The simple existence of trees appears or landscapes to stimulate communal links. Views of the greenery from the coastal parks relate to a greater observation of happiness and of loyalty fulfilment. Inhabitants who are feeling secure if their inhabitants have been glowing maintained landscaping, including grass and trees. Moreover, they are near to the coastal parks.

When considering the Light House Park area and the Mugathuvaram Lagoon Front area; residents have direct links to view the coastal area. Anyhow, people have chances to access to landscape opening, direct scenery link and lagoon visual link. This can offer more experience when compared to the Kallady Beach Park. So, through these visual links that surrounds people, could have opportunities to build the social capital.
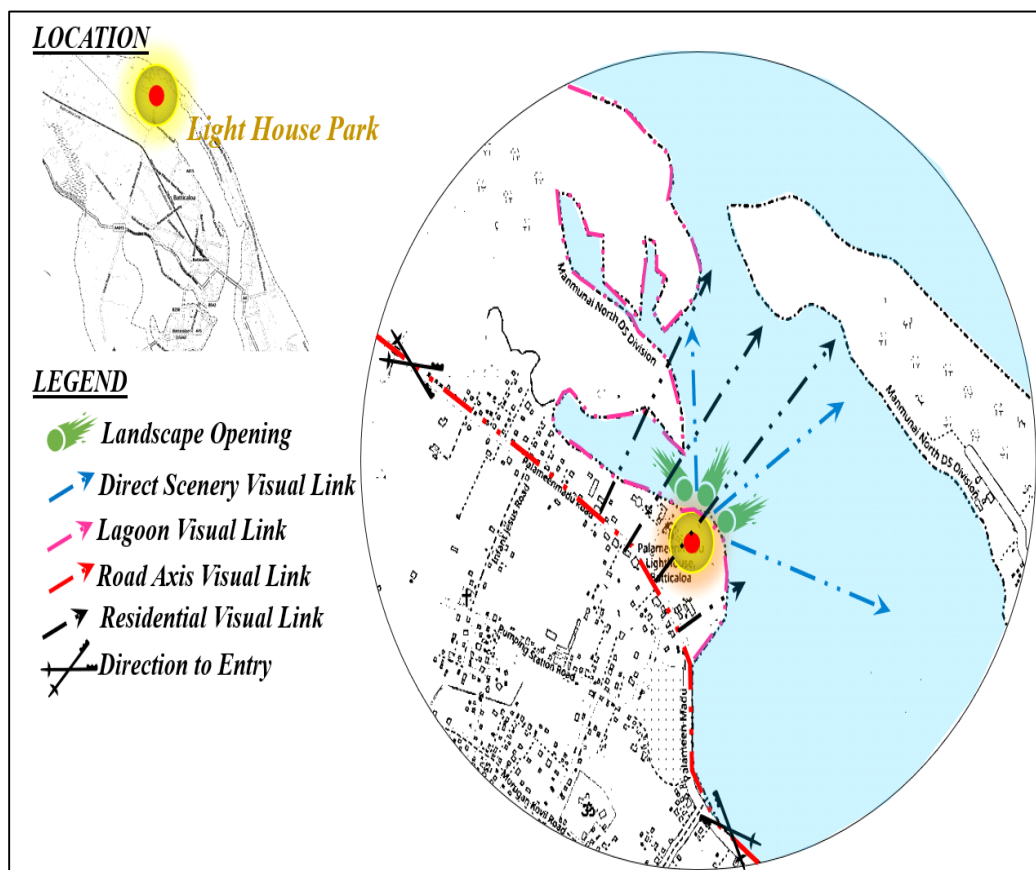

Figure 31: Visual Linkages of the Light House Park and Surrounding
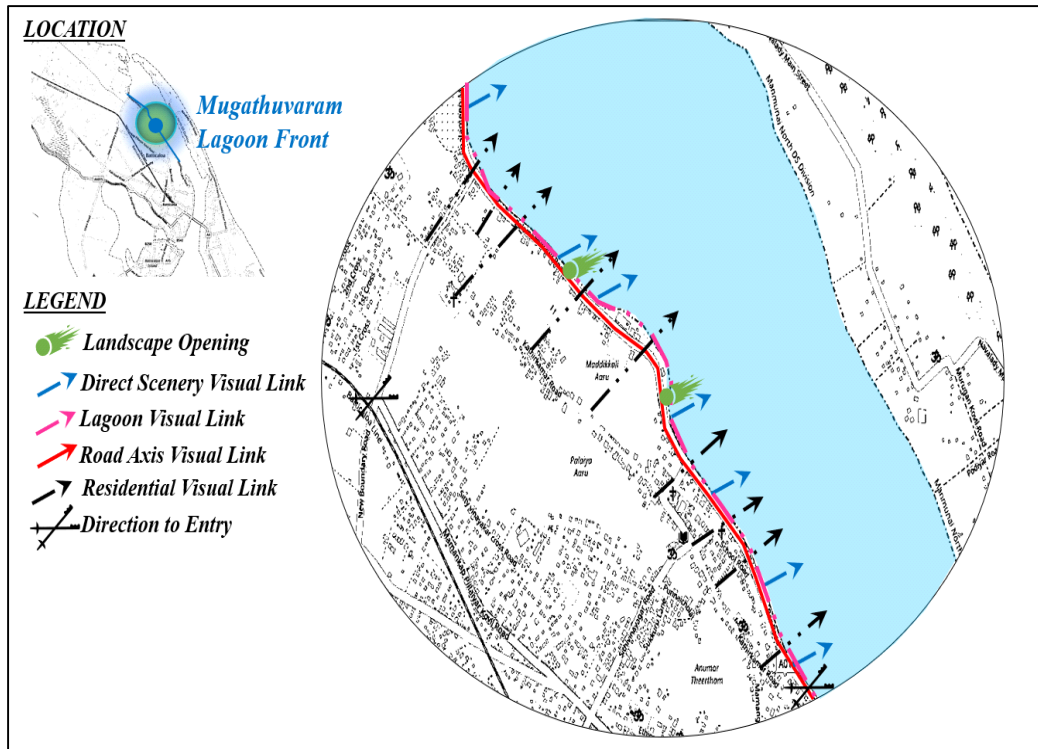Source: Author

40

Figure 32: Visual linkages of Mugathuvaram lagoon front and the surrounding
Source: Author
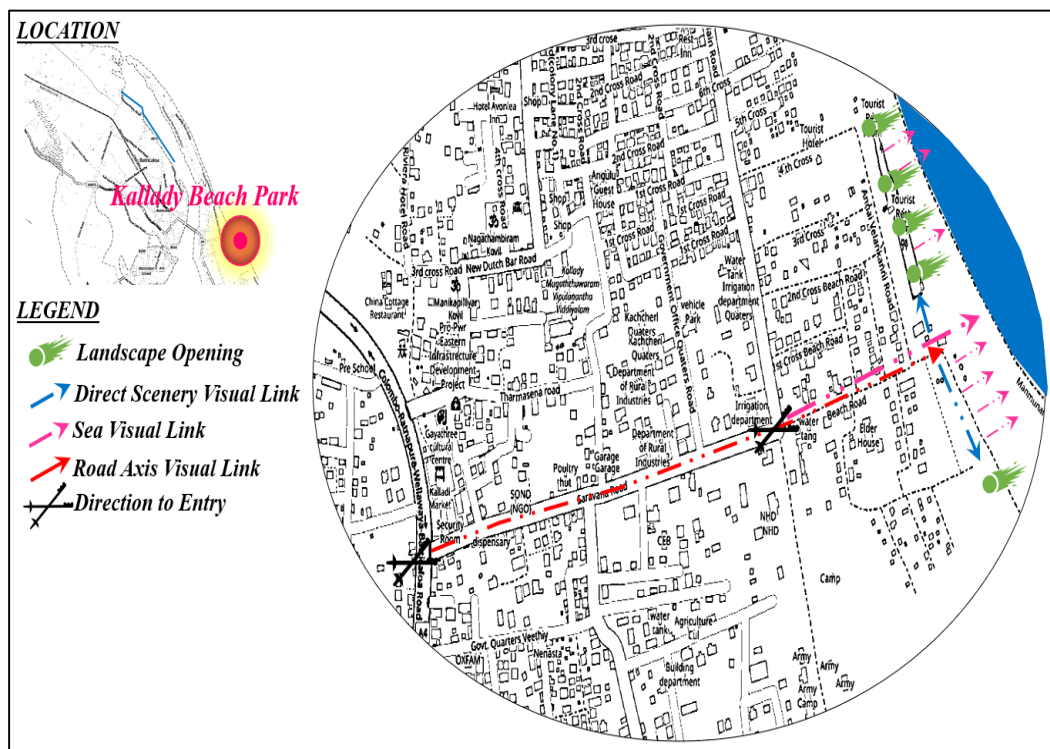
Figure 33: Visual linkages of Kallady beach park and the surrounding
Source: Author

4.4.4. Aesthetic Strategy Development

The advantages of viewing greenery or any other systems of the nature energies elsewhere, aesthetic enjoyment is important towards the nature that improved emotional mind, reduced stress, and improved health.

Figure 34: Aesthetic design elements at the Kallady Beach Park
Source: Author

Figure 35: Aesthetic elements at the Mugathuvaram Lagoon Front
Source: Author

Figure 36: Aesthetic Parks that are located along the Mugathuvaram Lagoon Front
Source: Author

Figure 37: Aesthetic design elements at the Light House Park
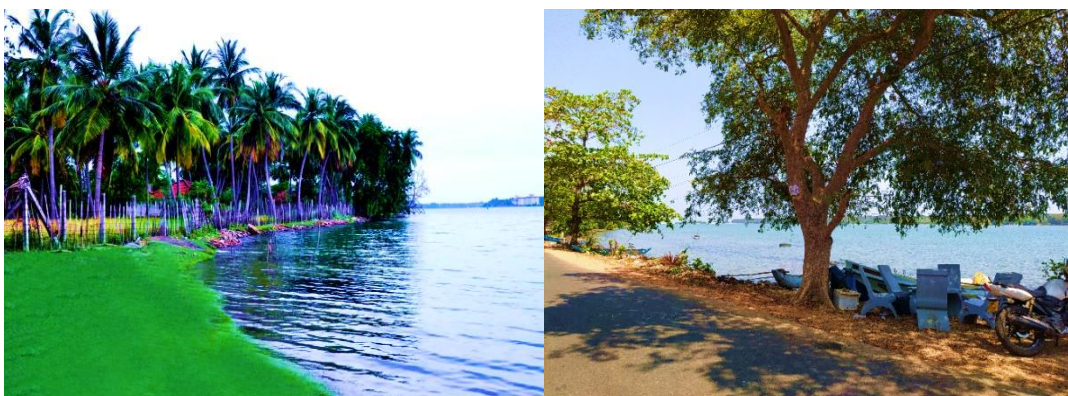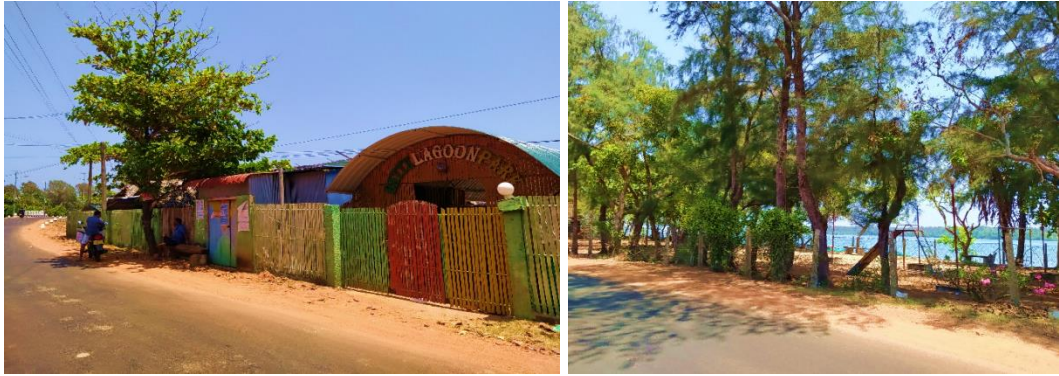Source: Author

4.4.5. Health Development Strategy

4.4.5.1. Locational Advancement

The existence of green space could reduce the negative impacts of health. The below mentioned graph shows the record of receiving health complaints. Accordingly, nearly 12% of complaints here were recorded in the Kallady area, about 8% complaints were recorded in the Mugathuvaram area and 13% were recorded in the Palameenmadu area. Localities are associated with the locations of green space within 3 km radius around their home.

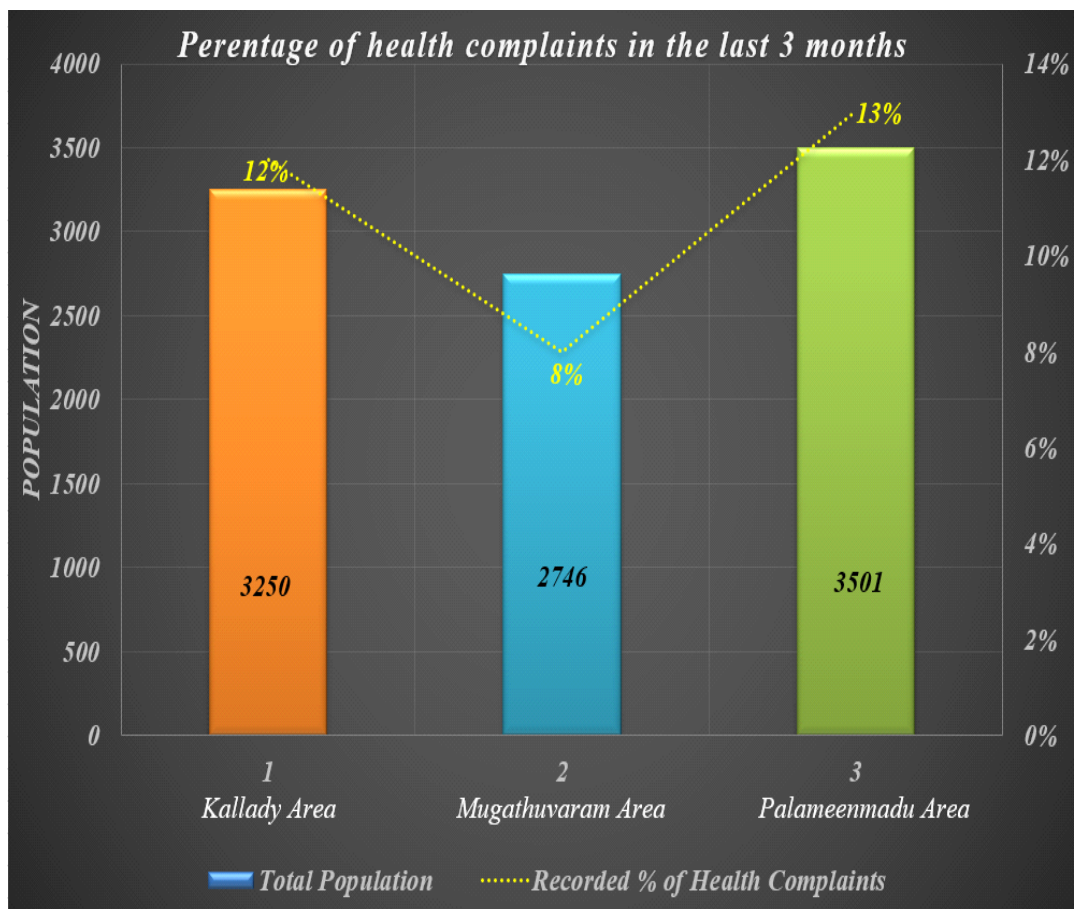**Figure 38: Percentage of health complaints in the last there months**
Source: Author

The frequent visitors result analysis, of which is recorded as 'perceived mental health', shows that nearly 63% of the people feel excellent at the Kallady Beach Park, nearly 51% of people feel excellent at the Mugathuvaram Lagoon Front and nearly 38% of people feel excellent around the Light House Park area.

As same as the frequency visitors' results of the analysis, which is recorded as 'perceived general health' shows that nearly 55% of people feel excellent at the Kallady Beach Park, nearly 37% of people feel excellent around Mugathuvaram Lagoon Front and nearly 45% of people feel excellent in the Light House Park area.
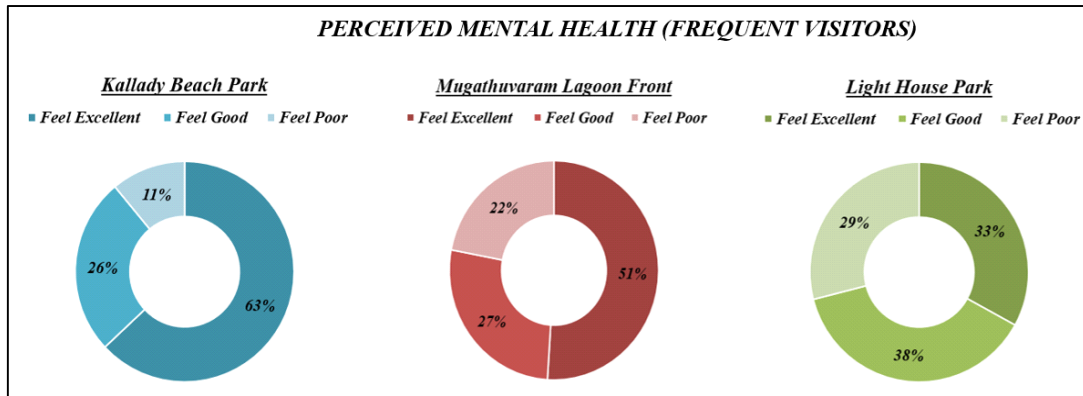
PERCEIVED MENTAL HEALTH (FREQUENT VISITORS)

Kallady Beach Park
■ *Feel Excellent* ■ *Feel Good* ■ *Feel Poor*

Mugathuvaram Lagoon Front
■ *Feel Excellent* ■ *Feel Good* ■ *Feel Poor*

Light House Park
■ *Feel Excellent* ■ *Feel Good* ■ *Feel Poor*

11% · 26% · 63%   22% · 27% · 51%   29% · 33% · 38%

Figure 40: Percentage of the Perceived Mental Health
Source: Author

PERCEIVED GENERAL HEALTH (FREQUENT VISITORS)

Kallady Beach Park
■ *Feel Excellent* ■ *Feel Good* ■ *Feel Poor*

Mugathuvaram Lagoon Front
■ *Feel Excellent* ■ *Feel Good* ■ *Feel Poor*

Light House Park
■ *Feel Excellent* ■ *Feel Good* ■ *Feel Poor*

21% · 24% · 55%   32% · 31% · 37%   16% · 39% · 45%
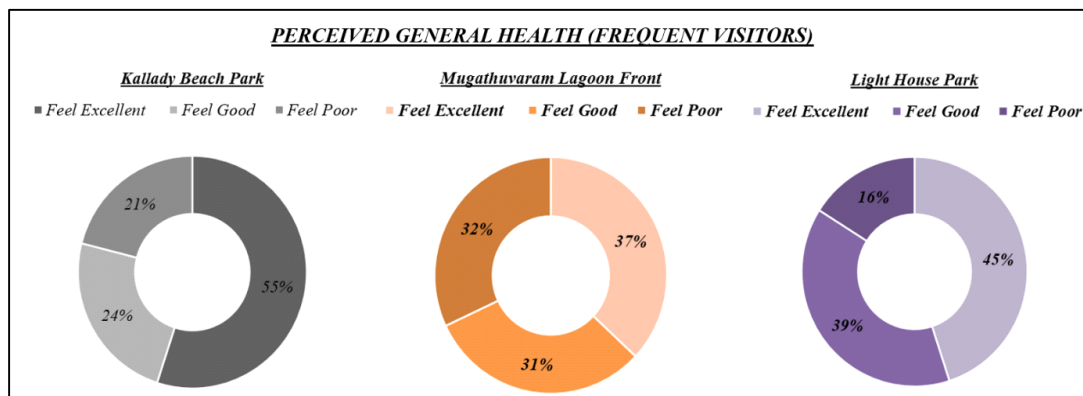
Figure 39: Percentage of the Perceived General Health
Source: Author

4.4.5.2.Improved General Mood and Attitude

A research that is related to the athletic walk and meditative walking in the jungle and enclosed settings is exposed to those situations which meditative walk produced more confident psychological impacts than active walk. Further researchers have identified indications of minor avoidance and improved brain action, approaching consideration, which affects in green blue space along with existence in selling and commercial zones that have no water body and trees. Apart from that, but meditative walk also along

water bodies and greenery are the most active in increasing happiness and creates a positive emotional mind-set.

Most people in Batticaloa do prefer the Mugathuvaram Lagoon Front area, the Light House area and the Kallady Beach Park area and a small, little number of people use the main roads that lead from the Trincomalee Road, the Lake Road and the Bazaar Street for walking.
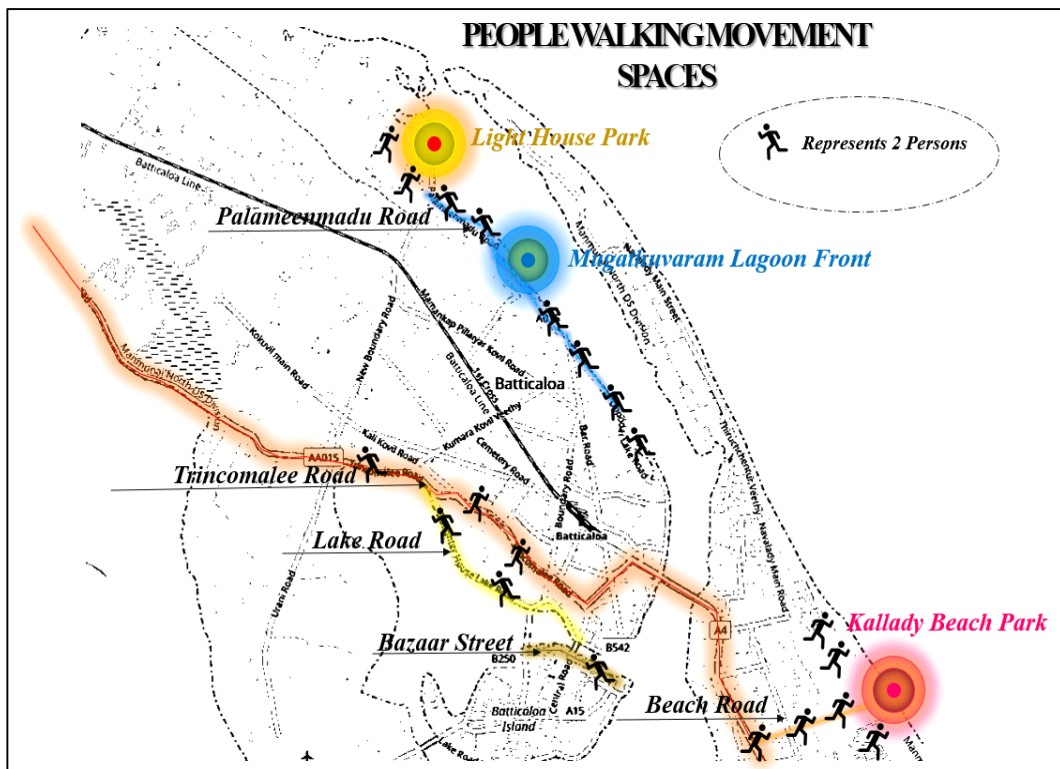
Figure 41: People's movement
Source: Author

4.4.5.3.Stress Reduction

Stress is a main cause to ill health. Long-term stress could lead to threatened system disease and problems. Form of many trees along the small coastal areas reduces the stress. Therefore, the coastal parks contribute a lot of stress reduction as of those are comprised with different trees habitation.

Figure 42: Form of trees, grass and mangroves near to the Light House Park
Source: Author

Figure 43: Form of trees along the Mugathuvaram Lagoon Front
Source: Author

Figure 44: Form of trees at the Kallady Beach Park
Source: Author

4.4.5.4. Better Mental Health and Functioning

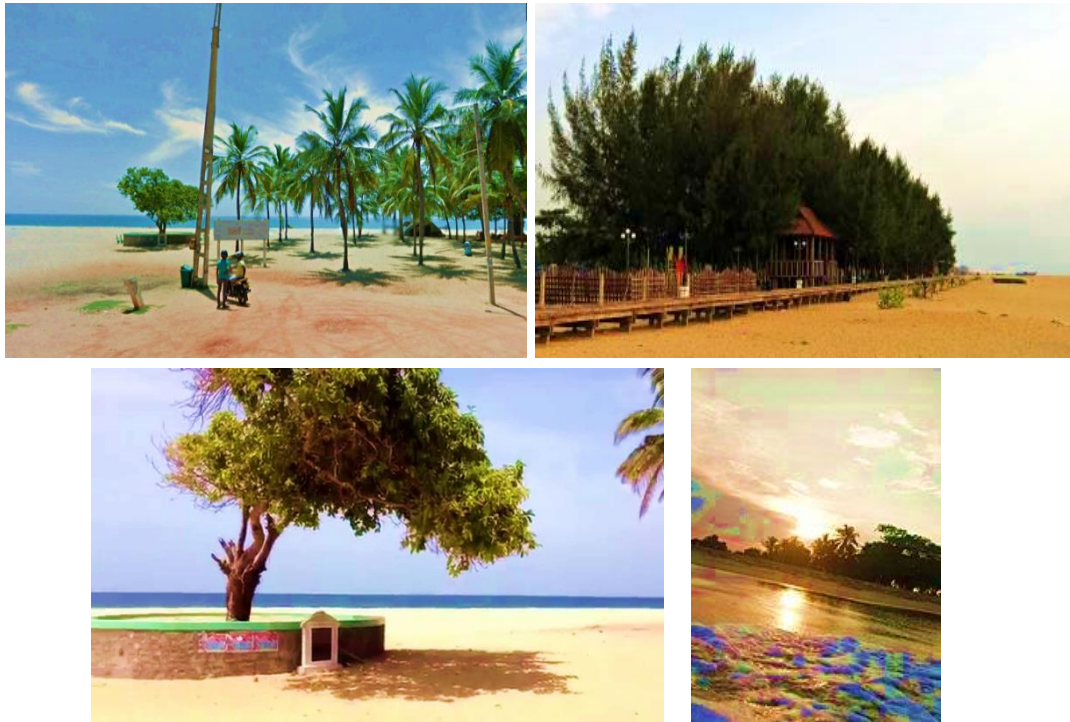Understandings of a natural environment contribute much to the direction of improving the psychological health and increase one's ability to be creative base of Attention Restoration Concept. The current lifestyle frequently demands sustained concentration on developments, and then this energy could help to mental overwork, and to stop impatience and incapability to function resourcefully, frequently with physical signs. Previews or short-term involvements of natural environment help to re-establish the attention from mental tiredness, as environmental situations provide with relief from the extremely intensive attention desired for most responsibilities in schools or at the place of work. This might support considerably to a top-level efficiency in the workroom as investigation reflects that staffs with a view of nature are able to attend to works and report fewer cases like sicknesses so that they have a higher occupation fulfilment. Improved time of nature understanding (up to 1.5 hours) increases the healing outcome.

- *"Whenever I feel stressed with workload, I come to the Kallady beach with my family to enjoy and feel relaxed". (Respondent who works in an office near the Kallady Beach)*

- *"Always I come to this place for fishing. Whenever I come to this place, I feel more motivated, and I also feel this place as sacred because this place is intricately connected to my heart and life". (A Respondent who is a fisherman in the Palameenmadu area)*

Figure 45: Discussion with the fishermen.
Source: Author

4.4.5.5.Improved Mindfulness and Creativity

Modern lifestyles are the types of demands. There is a necessity for planned rests to be mindful. Educational trainings at workshops, held for healthy, clinically and mentally low individuals, the show profit's cognitive function, improved immune and mood response. The nature itself offers sensual efforts that are spiritually uplifting than stand-in ideation. According to the researchers, nature involvements improve creativity by suggesting new habits though, by promoting interest and inspiration more elastic with thoughts. An environment renews and could provide creativity, as reinstated mind is healthier at examining and for developing ideas.

Figure 46: Water recreation improves the creativity.
Source: Author

4.5.Adaptability of Findings to Develop Similar Parks

The case studies imply that the existing situation of Batticaloa Municipal Council area is still at a controllable condition when compared with other mega urban cities in Sri Lanka. However, the fast growth of urban population is the cause for approaching nature based coastal parks are considered in this study. Yet, Batticaloa generally has a, reasonably, increasing rate of urban population growth. Therefore, if the green and blue space promotion rate would be considered, Batticaloa could be the healthy city with the optimum rate of healthy in terms of relaxation compared with other cities. Hence, this study recommends analyzing the issue at a micro level to deliver a better and effective solution to design the urban nature small parks. The results would vary significantly if analyzed using urbanized administrative areas such as Grama Niladhari Divisions. It would lead to recognize the particular areas which do not uphold sufficient green and blue spaces for the urban residents. As a practical solution to design and to regenerate urban nature parks, green development strategy, blue development strategy, social development strategy, aesthetic development strategy and health development strategy can be introduced to get the attraction of the wide-

ranging user groups. This would be a better design application to develop user relaxation and to develop healthy city. Moreover, these kinds of urban design strategies could be adopted in similar urban nature friendly spaces.

CONCLUSION

Views of parks have been considered important and useful in many backgrounds and are extended from a natural or imaginary to the private urban area. There is not at all research at all regarding perceptions of the parks in the coastal communities. High altitudes regarding sense of attachment have been identified for people currently in reachable public coastal parks in public. Coastal community people who leave their sense incredibly involved in the coastal parks could recognize it. Visual aspects have been strong-minded to be enough reasonably low importance, it is meant in an optimistic sense of attachment, because these coastal parks do not feature any moral materials or the high value visual design. Wellbeing and relaxing actions of physical coastal parks play an added important part. Based on this dissertation, it is conceivable that a fully 'non-designed' or 'nature- based design' coastal parks develop as a high altitude of the public space. In fact, people are permitted to adapt space according to their desires and needs, nature based coastal parks would usually get automatically better through each variation.

Plenty of scholars address distinct aspects of sense of attachment (person, place and process) but their research is different from their connections and links, mainly in the coastal community areas. This dissertation finds these links in a subsequent way. In coastal community and nearby public places, individuals first produce the methods of creation and management. This process effect in relation to ever-evolving nature based on the coastal areas. Specific coastal parks attract particular people, and they could also be fascinated openly to the method itself. These coastal communities have the chance to further modification which the parks afford to their favourites and their needs. They unlock a possibility for a positive opinion loop mechanism, which could lead to the trick of relaxing space. People relax in these spaces having specific perceptions about them. The east coastal parks are known as one of the vital civil activists' spaces in the Batticaloa coastal area with amusing meanings and history. The east coastal parks depict their appearance of an alternative space and address the problems of environmental and community sustainability in Batticaloa.

The perceptions, place and processes of the coastal parks altogether produce the built-up atmospheres. These signify the essential response to a question. "What kind of park is this in terms of providing relaxing mind?" Natural water-based parks include inner perceptions, stories and senses the peripheral aspects like physical spaces, people and activities. Towards the coastal based design urban space, influence of atmospheres of nature is essential. This could be completed by affecting specific features of atmospheres in trial. This realization limits the place creation disciplines like the urban design and planning; "it is a very small case".

Conventional creation of the coastal parks can also remain contextualized to take place in an exceedingly small case for the existence collected from people, place and process. But the method in this instance is fixed in the municipality area by means of policy and legislation. Because of this, a small number of people are fascinated directly to the procedure. People who could appreciate parks have chosen them on merit and nature. These individuals, following the procedure, produce public spaces. They do ensure that making stories to share besides their self-recognition with the space is likely to be high, whoever it may be.

In line for processing and determining guidelines for nature based on the urban design strategies can misfire and produce places that are not needed by the community. There are, however, signs of change in the formal production of nature based on the urban design. Trends like nature based on the design and flexibility of parks are of a commencement to test top-down production of space. By way of new kinds of coastal parks emerge, processes and guidelines of production could be modified to be capable of enabling creation and being of the innovative uses and activities. If coastal parks are available to foster the public engagement and constructive place-related feelings, it would be designed by strategies of adaptability for the coastal community requirements. This locates place-making disciplines for the urban design in a part of mentors and organizers for developments with the purpose of allowing people to generate their relaxation spaces in the cities.

Respective findings begin regarding the data composed and analyzed in this dissertation. Findings of sensed relaxation and urban nature are commonly reliable across contained by the user groups. A slight marginal of users holds different opinions on both abilities, and this could be more inspected further with more samples of user group categories.

The below mentioned recommendations for future study have been found from results in this case study and conversations with designers who design and plan small urban coastal parks:

- Analyze the essential for protection of small urban parks for eco-friendly, environmental in addition to relaxation benefits. Most importantly the environmental value of nature friendly urban parks depends on the occurrence of fresh air, water body and natural flora, in each costal nature like backgrounds or in designed parks by designers. What is clearer throughout this case study is the respondents' observation regarding the calm with green and blue nature based environmental backgrounds and the conceivable benefits it offers.

- Community awareness of upkeep and preserving urban nature connecting towards small coastal parks and their environments. In general, urban nature is connected with open spaces with extensive view distances and with symbols of growth and nearby populated urbanized areas. A study of a user's view urban nature in a small public space enhances the existence of sense of relax in nature friendly space could deliver a factual reference to the research topic.

- This study is only focus on five strategies of urban design that could influence the effective use of urban nature for user relaxation. However, the urban design could be discovered in wide characteristics. Thus, the further study could explore more urban design elements that are also influence the user relaxation of the small urban parks.

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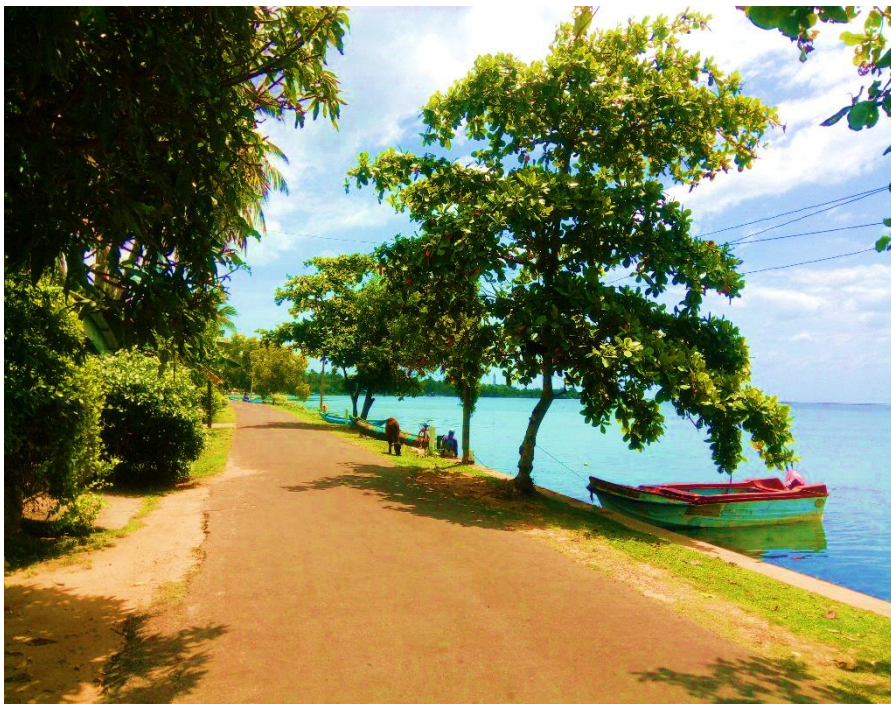WHO (World Health Organization) "Why Urban Health Matters." Last modified April 7, 2010.

ANNEXURE

1. **Identified Native Plants at Mugathuvaram Lagoon Front Area**

Coconut tree

Terminalia catappa tree

Neem tree

Casuarina tree

Gular tree

Mango tree

2. **Identified Native Plants at Light House Park Area**

Neem tree

Coconut tree

Terminalia catappa tree

Palmyrah tree

Casuarina Tree

3. Identified Native Plants at Kallady Beach Park Area

Terminalia catappa tree

Coconut tree

Casuarina tree