

# A BEACHFRONT LODESTONE:

The Gambia's First Recreational Park

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# A Beachfront Lodestone: The Gambia's First Recreational Park

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# ABSTRACT

The Gambia is a beautiful country in West Africa that attracts many European tourists because of its warm beaches, captivating wildlife, and entertaining culture. The Gambia offers a variety of activities for one to engage in however, what is lacking is a recreational park for children and adults to enjoy the sports they love. I am taking on the opportunity to design the country's first recreational park in hopes to cater to both the Gambian residents as well as the tourists. My goal is to research and design a functional recreational park that will motivate people to take part in recreation, minimize human impact on the wildlife of Bijilo Forest Park, and enhance The Gambia's existing beauty.

# ACKNOWLEDGEMENTS

I would like to give special thanks to my committee members:  
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# INTRODUCTION

# SIGNIFICANCE OF THE STUDY

The Gambia has a number of national parks and reserves containing a wide range of wildlife, including monkeys, birds, butterflies, crocodiles, hyenas and more. Although The Gambia is rich in wildlife parks throughout the country, it lacks public parks for people to enjoy some leisure and recreational time. Since The Gambia is a tourist attraction, the majority of the activities occur along the beach.

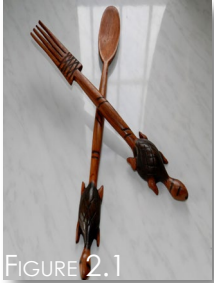


FIGURE 2.1

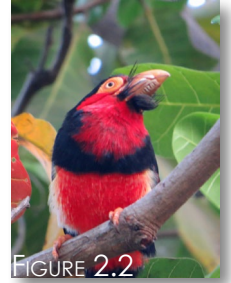


FIGURE 2.2



FIGURE 2.3

The warm Atlantic Ocean welcomes the people to the country's coast motivating business owners to line up their restaurants, boutiques, apartments and hotels along the beachfront.

Integrating a **recreational park** is a great opportunity to add a different form of a beachfront lodestone or attraction that contains beautiful native **vegetation**, spaces for **relaxation**, and facilities for sports and **recreation**.



FIGURE 2.4

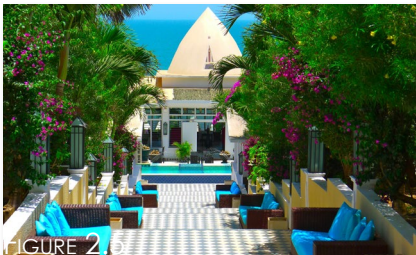


FIGURE 2.5



FIGURE 2.6



FIGURE 2.7

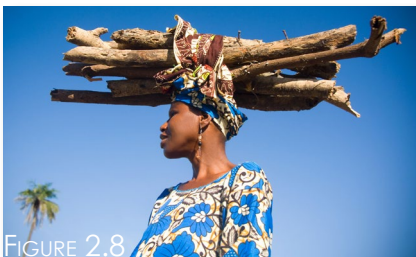


FIGURE 2.8

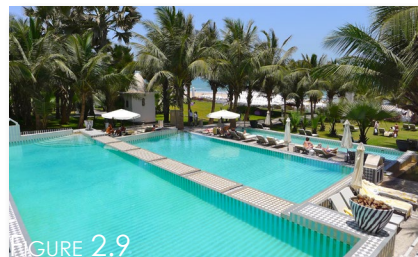


FIGURE 2.9



FIGURE 2.10

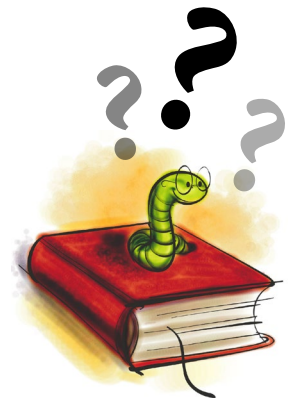
# PROJECT GOALS & RESEARCH QUESTIONS

The addition of a recreational park in Gambia will enhance both the residents' and tourists' experience by creating another kind of outdoor space to gather – a space that is different from the typical restaurant or storefront.

Designing a recreational park gives me the opportunity to create spaces for the children, youth, and adults of Gambia to enjoy the sports they love such as basketball, volleyball, tennis, and most importantly, football (soccer). My design will also incorporate spaces for picnicking, playgrounds to play in, and areas to lay on to soak up the sun.



The main constraint related to this project is the limited amount of research resources in Gambia. Required research for this project includes topics on native, drought tolerant vegetation that can survive along the coast, vegetation that attract certain bird and monkey species, information on the wildlife that currently exist on the project site, Gambia's reserves and national parks, and of course the country's history and culture. Research challenges include obtaining information on the project site's current land elevation, site dimension, and useful construction materials to be used throughout the park.





# THE GAMBIA

## Geography

The Gambia is a narrow country located in West Africa and it is the smallest country in the continent of Africa. The country surrounds the Gambian River which extends from east to west for 1,130 kilometers (700 miles) and ends when it meets with the North Atlantic Ocean at the country's capital city of Banjul. The country covers about 11,295 km<sup>2</sup> (4,361 sq. mi) of land and 11.5% of it is water. Gambia has an 80km (50 mi) stretch of the North Atlantic Ocean on its western side, and is surrounded by Senegal on its north, east, and south sides (Tomkinson, 2000).



## Terrain

Gambia consists primarily of flat land with a floodplain terrain that drains into the Gambian River, and a few low hills throughout the country. The lowest elevation of the entire country is at the Atlantic Ocean at zero meters and the highest elevation has been recorded to be 53 meters. There are several habitat types throughout the country such as the coast, wetlands, farmlands, mangroves and Banto Faros (grass-covered river flats), savanna and the Sahel habitats, gallery forests and urban habitats (Tomkinson, 2000).

### *Climate*

The Gambia has a sub-tropical climate with two distinct dry and rainy seasons. The dry season is from October to mid-June and is known to be the ideal time for Gambia to attract European tourists to its warm beaches. Along the coast, the average daytime temperature is 24°C/75°F. The average evening temperature along the coast drops to 16°C/60°F (Tomkinson, 2000).

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### *Religion & Politics*

Gambia gained independence from the United Kingdom in 1965 and has been a republic ever since. Since Gambia was once ruled by the UK, its official language has become English, although there are five other national dialects spoken throughout the country and many more indigenous vernaculars used in villages. Article 25 of the Gambian constitution states that individuals have the right to practice the religion of their choice. About 90% of the population is Muslim, 8% is Christian, and 2% have indigenous beliefs (Tomkinson, 2000).

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### *Population & Tourism*

The country's population is around 1,925,527 and the country hosts about 100,000 tourists annually. Tourism is the second highest contributor of foreign revenue in the country and most of the tourists come from Europe with over 50% from the United Kingdom. One in every seven jobs relates to tourism and job opportunities continue to grow annually ("Gambia Tourism Statistics," n.d.).



## Agriculture

80% of the country depends on agriculture as their main income and food source. The main crop of Gambia is groundnut (peanut). Groundnut is the most exported crop of Gambia. Thirty-percent of the country's gross domestic product (GDP) is from agriculture. Groundnuts account for 6.9% of the total agricultural GDP. Groundnuts and cotton are harvested in the upper land elevations, and rice is harvested near the river banks in the lowland swamps. Other major crops grown in Gambia are millet, maize, sorghum, sesame, and cassava ("New Gambia", n.d.).



FIGURE 2.2 GROUNDNUT



FIGURE 2.3 GAMBIAN WOMEN AND CHILDREN FARMING



FIGURE 2.4 CASSAVA ROOTS (*MANIHOT ESCULENTA*)

## Flora

The Gambia is rich on flora with an estimated 11,600 plant species. Most of the plant species are used for food or medicinal purposes. The highest consumed vegetable crop is the Cassava plant (*Manihot esculenta*). People consume Cassava's starchy, tuberous root and it serves as a great source of carbohydrate. A great advantage of the Cassava plant is that it is highly drought tolerant and can be grown in low quality soil (Tomkinson, 2000).



# RESEARCH

# SITE LOCATION & IMAGERY

On December 2013 I visited Gambia for two weeks and conducted observations and inventory on the site, and interviewed a few of the Gambian residents regarding their opinion on Gambia's first recreational park. The concept of a recreational park is very new to them but they showed tremendous excitement envisioning an area where humans, wildlife, sports, vendors, and entertainment come together in one space. All of the resorts and hotels in Gambia are private; the local residents are not allowed to use any of the hotel facilities such as Ping-Pong tables, swimming pools, basketball courts, etc.

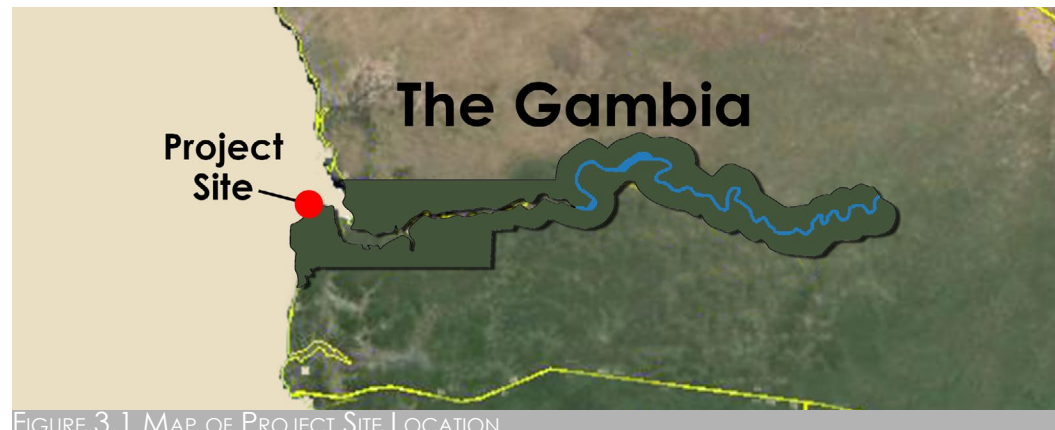


FIGURE 3.1 MAP OF PROJECT SITE LOCATION



FIGURE 3.2 PANORAMA OF SITE



FIGURE 3.3 THE SITE'S CURRENT ELEVATED LAND FORM



FIGURE 3.4 FRUIT STAND ON SITE

The project site is in the town of Bijilo, located along the coast on Bijilo Forest Park that contains wildlife such as birds and monkeys. The land naturally rises about four meters in elevation as you walk from the ocean to the site. There are juice and peanut vendors that walk along the beach and in most instances you witness football games taking place on the sand. The forest does a good job hiding the monkeys but tourists still manage to locate them.



FIGURE 3.5 RHUN PALMS (*BORASSUS AETHIOPUM*) & BAOBAB TREES (*ADANSONIA DIGITATA*) AT BIJILLO FOREST PARK



FIGURE 3.6 GREEN VERVET MONKEYS (*CHLOROCEBUS PYGERYTHRUS*) & WESTERN RED COLOBUS MONKEYS (*PROCOLOBUS BADIUS*)



# SITE CONTEXT & ANALYSIS



FIGURE 4.1 SITE CONTEXT

**Legend:**

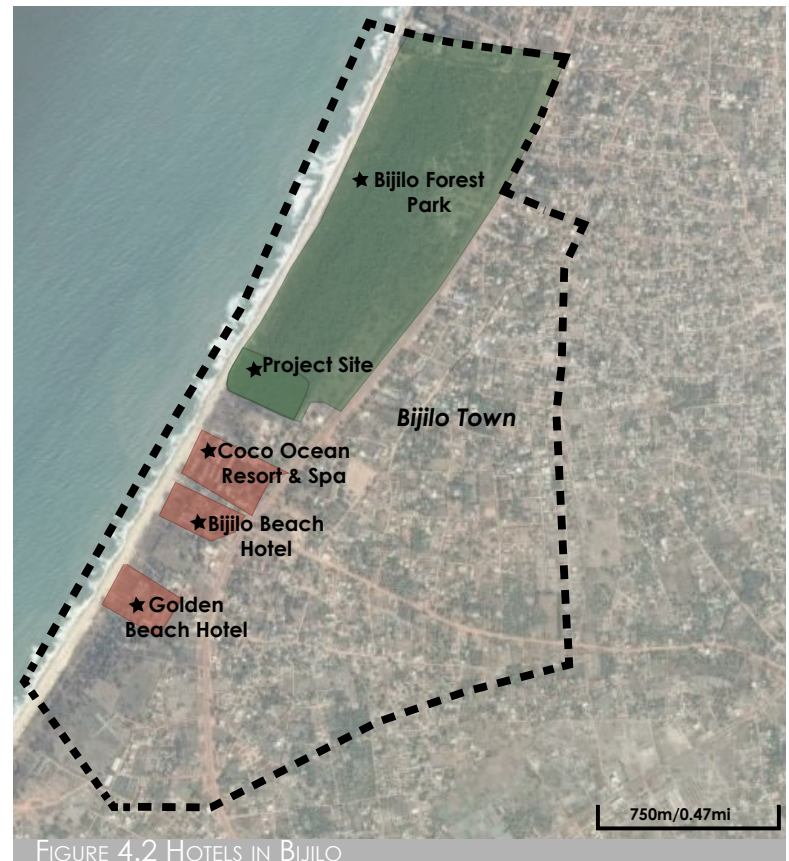
 Bijilo Forest Park Boundary

 Park Site Boundary  
 New Residential Development

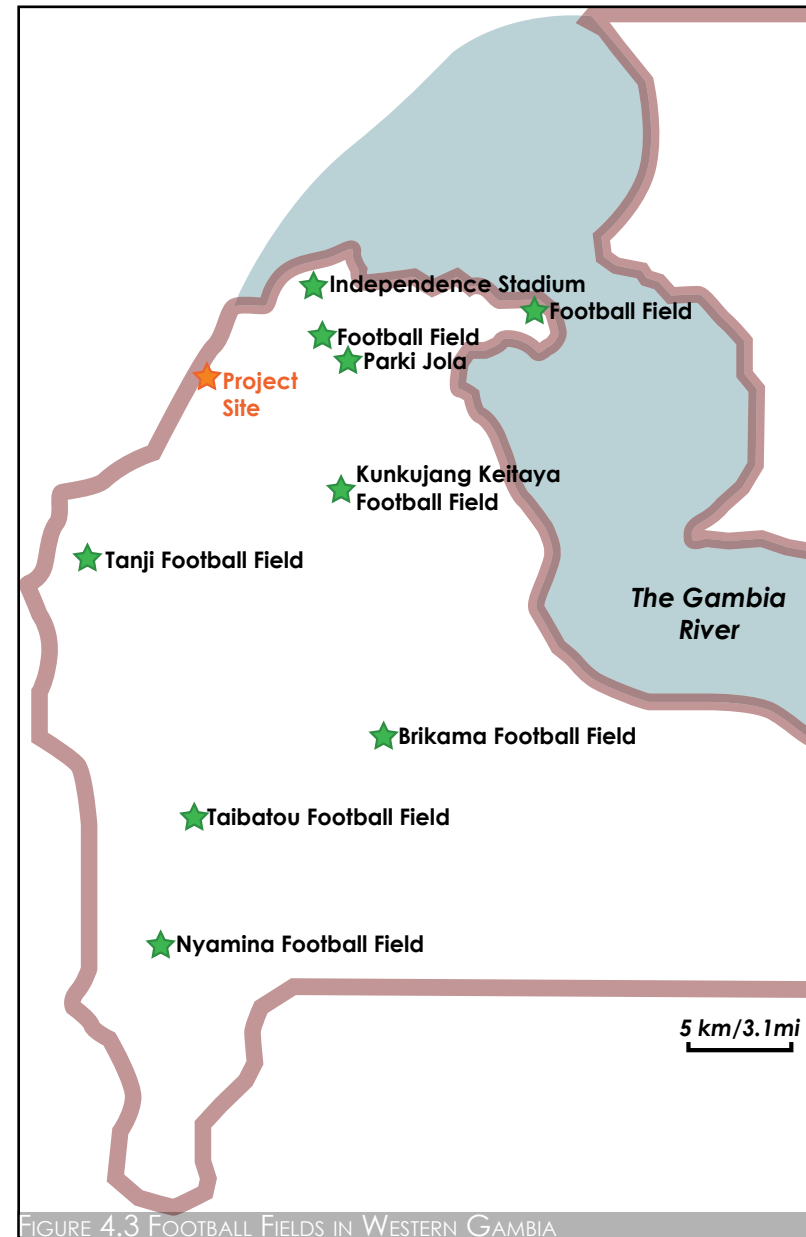
 Existing Hotels & Restaurants  
 Main Road

There is an existing wildlife forest called Bijilo Forest Park that extends from the project site. It is a 0.5km<sup>2</sup> (126 acres) reserve that contains four species of monkeys and 133 bird species. The project site is at the southern end of Bijilo Forest Park and is adjacent to a newly proposed residential development. Surrounding the project site and new residential development are three hotels, seven restaurants, and about 15 houses. The main road called Senegambia Highway runs parallel to the coast but is about 400 meters away from the ocean. There are narrow, dirt roads that run perpendicular to the main road to give vehicles access to the beach and the project site.

A recreational park on this site could also have a positive impact on the hotels and local businesses surrounding it. This park will attract more residents and tourists to the area creating more revenue for the businesses. The project site is currently next to a five-star hotel called Coco Ocean Resort & Spa, a three-star hotel called Bijilo Beach Hotel, and three-star hotel called Golden Beach Hotel. There are seven restaurants, and a few craft, peanut and juice vendors in the nearby area. The closest resort to the recreational project site is Coco Ocean Resort & Spa, it is about 200 meters (656 feet) away and it contains four restaurants; Safran Restaurant, Coco Beach Restaurant (located on the sand), Ocean Lounge Bar, and The Courtyard. Bijilo Beach Hotel is 400 meters away (1,312 feet) and has two restaurants; Clay Roof Restaurant and Ocean Bay Restaurant. Golden Beach Hotel is about 700 meters (0.4 miles) away and has one restaurant.



Having a recreational park adjacent to the townhouses and apartments that are scheduled to be built next to the site will provide future residents with a place for picnicking, sports and dining. Residents of Gambia do not have enough public facilities for sports; football is mainly played on the unpaved streets of their residential neighborhoods or at one of the eight football fields spread throughout the country. The ninth football field shown in Figure-4.3 is the Independence Stadium. This stadium is private and is open to the public during the national football games. The closest football field to the project site is 5km/3.1 miles away. Most of the football fields consist of a sandy surface rather than grass.





Project Boundary is undetermined.

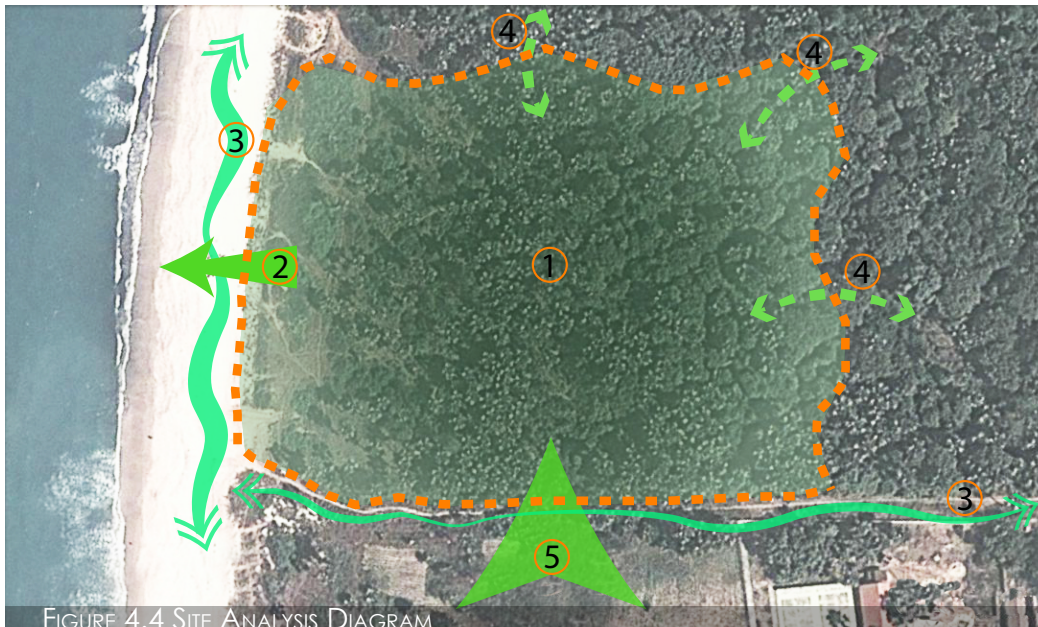
1 The park location is surrounded by businesses, residents, tourists, wildlife, and the beach.

2 The park location is a beach-front attraction.

3 Tourists and residents can access the park through the beach and side roads.

4 The site is surrounded by an existing forest connecting people with the wildlife.

5 The park will be an attraction to the newly proposed residential apartments that are scheduled to be built in the next few years.



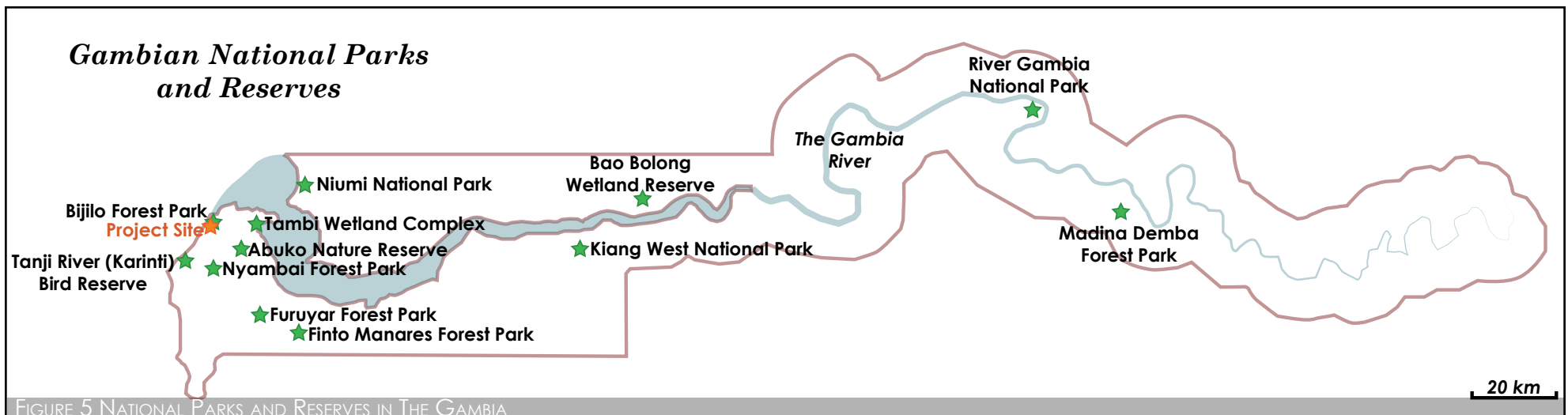
This proposed recreational park has the opportunity to blend with the forest park to attract more tourists and residents to the wildlife which in turn could have a positive economic impact on the existing wildlife park and its maintenance by receiving more entrance fees from the increase in visitors.

Visitor of Bijilo Forest Park do not always obey the forest's rules; visitors feed the animals and wander off to areas that disturb the wildlife's habitat. Since the tourists are already visiting Bijilo Forest Park my intention is to create a space where people are allowed to visit the wildlife as long as they remain within the boundaries of the recreational park site. Designating a space where humans and the wildlife can interact helps minimize human impact on the species by preventing humans from wandering off to areas that interrupt the wildlife's habitat. The recreational park will be designed to least disturb the wildlife habitat. I will create pockets of recreational areas for humans to use but still keep as much of the forest feel that the wildlife are used to.



# GAMBIAN NATIONAL PARKS & RESERVES

There are seven areas in Gambia that are protected under the Department of Parks and Wildlife Management. The protected areas are Niimi National Park, Kiang West National Park, River Gambia National Park, Bao Bolong Wetland Reserve, Abuko Nature Reserve, Tanbi Wetland Complex and the Tanji River (Karinti) Bird Reserve. These national parks and reserves cover about 3.8% of the country's land area. The percentage of current parks and reserves covered amounts to 38,000 hectares. The current wildlife policy expects the protected land area to increase to 5% (New Gambia, n.d.).



# WILDLIFE OF BIJILO FOREST PARK

## HABITAT FOR BIRDS

Gambia is famous for its diversity of birds. There are over 560 species of birds found throughout Gambia and 133 species in Bijilo Forest Park (Tomkinson, 2000). It is important to remember that this recreational park will not only be for humans but also for the wildlife that either live in the forest or from time to time stop by. These two birds are an example of what is found on the site.

### Bearded Barbet (*Lybius dubius*)

Habitat: forest patches, dense woods, gardens etc.

Diet: a variety of insects including ants, termites, flying insects and soft-bodied insects. It also feeds on fruits from lantana, figs, muhesu etc.



FIGURE 6.1



FIGURE 6.2

### Malachite Kingfisher (*Alcedo cristata*)

Habitat: Aquatic, including slow-moving rivers and streams, sheltered shores, coastal lagoons, tidal estuaries.

Diet: Mainly fish, as well as frogs, crabs, tadpoles and aquatic insects.



FIGURE 6.3

# MONKEYS ON SITE



Vervet Monkey (*Chlorocebus pygerythrus*)

Habitat: coastal forests and mountains, riverine woodland, and savanna. They are also found near rural and urban areas.

Diet: vegetarian, mainly feeding on flowers, leaves, seeds, and wild fruits.



Western Red Colobus (*Procolobus badius*)

Habitat: forests, primarily 'closed forests' where the forest is densely vegetated.

Diet: vegetarian, mainly feeding on unripe fruit, young leaves, and flowers. Occasionally they eat charcoal or clay to help digest the cyanide that is found in some of the leaves that they ingest.



Calithrix Monkey (*Chlorocebus sabaesus*)

Habitat: wooded habitat, edge of rainforests, and coastal regions.

Diet: fruits, invertebrates, and seashore food such as crabs.

# PARK SIGNAGE

The care and well-being of the wildlife in Bijilo Forest Park is crucial. Signage such as this will be placed throughout the recreational park to help inform visitors of the importance of respecting the wildlife found on site and to help minimize human impact on the wildlife. Feeding the wildlife causes problems such as diseases and species' overpopulation which visitors need to be aware of. Since the site originally belongs to the wildlife we need to respect their natural diet and habits, and not disturb their natural way of life. These educational signs may also be used throughout Bijilo Forest Park to constantly remind visitors of respecting the wildlife.



PLEASE DO NOT FEED THE ANIMALS!

WILD ANIMALS ARE NOT PETS  
RESPECT THEIR WILDNESS

FEEDING LEADS TO HUMAN INJURY,  
ANIMAL OVERPOPULATION, AND DISEASE

“A FED ANIMAL IS A DEAD ANIMAL”



# CASE STUDY #1: HECHT PARK - HAIFA, ISRAEL

I have chosen to do three case studies on topics that I think closely relate to my goals and ideas for my recreational park design. The first case study is regarding the overall idea of a recreational park on the beach. After spending one year in Haifa, Israel, one of the most enjoyable experiences I had was visiting the beaches. Apart from the ocean, what was extremely welcoming was the number of activities that take place on the beach.



FIGURE 8.1

Hecht Park is located in Haifa, Israel and was built in 2008. The park is the largest stretch of public green space in the city of Haifa and runs parallel to the ocean for 1.2 kilometers (0.75 miles). The park's area is 7.5 hectares (18.5 acres). Hecht Park was designed by the landscape architects Greenstein-Har-Gil whose company is located on Mount Carmel in Haifa. Hecht Park contains a wide promenade for walking, running and cycling that meanders throughout the park along a 3 kilometer (1.9 mile) perimeter. Hecht Park's width extends to 60-70 meters (198-230 feet) and is situated between the coastline and the highly used railway tracks ("Hecht Park," 2014).

Other than the long promenade and pathways, Hecht Park also contains playgrounds for children, large lawn areas for visitors to picnic and sun bathe, and outdoor exercise equipment stations for active people to use. There is a miniature football (soccer) field on the south end of the park that is enclosed with tall screens yet still has the ocean view and breeze for the players to appreciate. There are benches spread throughout the park with some being underneath trees or structures for shade. The landscape architects chose typical, Mediterranean vegetation such as limonium and evening primrose that can withstand the saline, coastal environment. The city of Haifa has plans to increase the number of features in the park by adding a sculpture garden, an outdoor amphitheater, as well as a skating ring (Shachar, 2014). People of all ages are seen enjoying these spaces which are a great inspiration for my recreational park design.



## CASE STUDY #2: FARMERS MARKET - DAVIS, CA

When I tried to envision types of programmatic elements for my recreational park design I immediately thought of the Farmers Market in Central Park in Davis, California. The Davis Farmers Market began in 1975 from a collaboration of local organic farmers and community members and was designed by a Landscape Architect named Mark Francis ("Davis Farmers' Market," 2008).



FIGURE 9.1



FIGURE 9.2

Central Park hosts the Farmers Market underneath a large shaded structure that accommodates about 5,000 to 7,000 people each week. The Farmers Market is held Wednesday evenings and Saturday mornings and attracts residents, students, and tourists from all walks of life. The Farmers Market initially began by hosting ten farmers and by the year 2000 the number of vendors at the Farmers Market grew to an average of 85 vendors at the Saturday market. Local vendors line up their products, such as fruits, vegetable, flowers and crafts, underneath the pavilion as the community gathers together to shop and stroll through the park. Central Park hosts the International Food Faire that brings food vendors that serve Indian, Thai, American and Mexican cuisine (Evans, n.d.).



Central Park has an extensive lawn area for visitors to picnic and play games on. The park is over 200 meters (700 feet) long and 75 meters (250 feet) wide. Other than the local food available for purchase, there is also space for musicians to entertain visitors. The Central Park Garden is another feature to the park. This garden contains beautiful vegetation and educational programs demonstrating to the public ways in which to create sustainable gardens. There is a human-powered carousel that works when one person pedals generating the carousel to spin. The park has one basketball hoop and a horseshoe pit as recreation (Podoll, 2000).



Since 80 percent of Gambians depend on agriculture as their main source of food and income, there are plenty of markets spread throughout the country selling local produce. Not only are there vendors that set up booths to sell their goods, there are also individuals who walk around town or on the beach carrying buckets of peanuts or coolers of individually packaged juice to sell to the public.

The Farmers Market pavilion and lawn area of Central Park in Davis are elements that have influenced design ideas for my recreational park design in Gambia. My intention is to allow local vendors to set up their booths, once or twice a week, underneath a large shaded structure to hopefully increase their weekly sales and also create a centralized location where the public can purchase locally grown food.



# CASE STUDY #3: ADRENALIN FOREST - NEW ZEALAND

Adrenaline Forest is a perfect example of staying active and having fun.

Adrenaline Forest consists of three parks of different sizes that have a variety of aerial obstacle courses to choose from. These parks contain ropes and nets tied between trees of various heights and lengths. These courses require people of all ages to climb, jump, swing and slide from tree to tree which gives everyone a great workout as well as an adrenalin rush (Adrenaline Forest, n.d.).



FIGURE 10.1

The first Adrenaline Forest park is located in the city of Christchurch. It contains six pathways with 102 obstacle course challenges that range from two meters high to 20 meters high. The second park is located in the Wellington region in the city of Porirua. This park contains seven pathways and 125 challenges. The third park is located in the Bay of Plenty region in the city of Tauranga with 6 pathways and 90 obstacle challenges (Adrenaline Forest, n.d.).

Adrenaline Forest has inspired me to design a space where people can have fun with ropes and logs using the existing trees on my project site. Since my project site consists of monkeys I would like to have visitors even more aware of the monkeys' presence by creating a rope playground where children and adults can climb, jump, swing, and slide, in other words, have fun acting like monkeys.



FIGURE 10.2



FIGURE 10.3



FIGURE 10.4



DESIGN



# MASTER PLAN

- ① Basketball Court
- ② Beach Volleyball Court
- ③ Terraced Grass & Sand Seating
- ④ Monkey Rope Playground
- ⑤ Picnic & Large Gathering Area
- ⑥ Pavilions for Vendors
- ⑦ Outdoor Workout Equipments
- ⑧ Tennis Courts
- ⑨ Parking Lot
- ⑩ Football Fields
- ⑪ Trail / Edge of Park
- ⑫ Boundary of Bijilo Forest
- ⑬ Earth Mounds for Seating
- ⑭ Concrete Seating
- ⑮ Garden (see plant palette)



FIGURE 11



# DESIGN SECTIONS

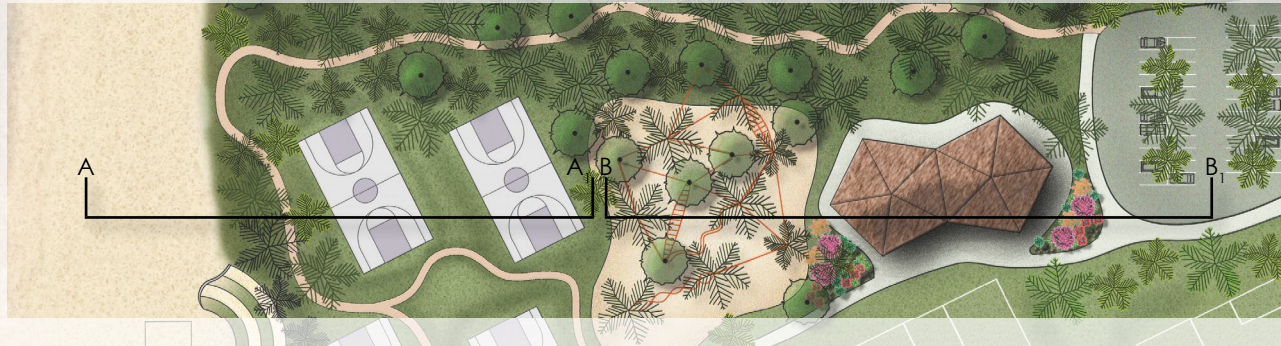


FIGURE 12.1

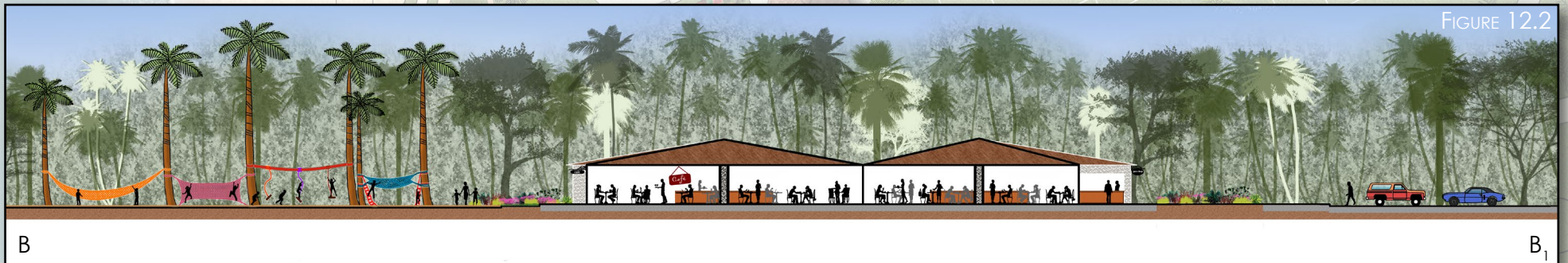
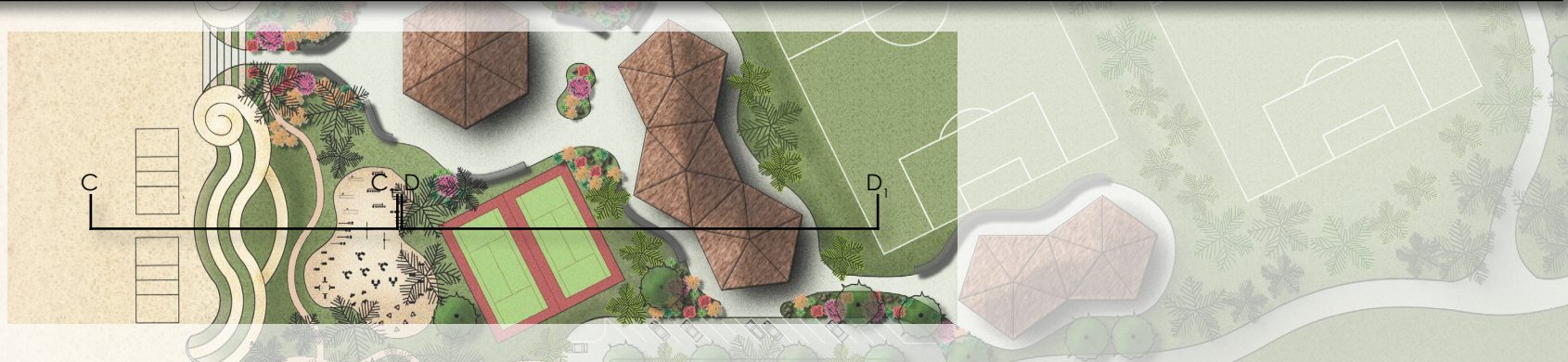
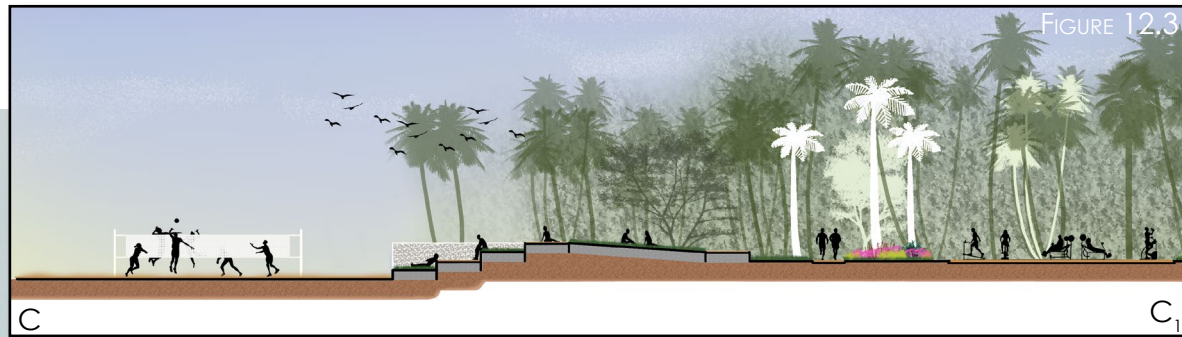


FIGURE 12.2

0 5 10 20 meters



# DESIGN SECTIONS



0 5 10 20 meters



# MAIN ENTRANCE PERSPECTIVE



FIGURE 13

The terraced amphitheater and the concrete seat-walls provide plenty of seating throughout the park. As you enter the park you are welcomed by a large shaded structure where visitors can hold gatherings or vendors can gather for a weekly farmers market event.



# AERIAL PERSPECTIVE



FIGURE 14

There are earth mounds in between most of the sports facilities for spectators to sit or lie down as they watch the games. Visitors also have a view of the sports facilities from the restaurants and storefronts.



# MONKEY ROPE PLAYGROUND PERSPECTIVE



FIGURE 15

The monkey rope playground consists of ropes tied between existing, sturdy trees. This playground will also contain recycled logs from existing trees that are removed during the construction of the park. These logs are used for playground activities as well as natural looking seating. The removed trees will also be recycled on site in the form of bark and wood chips for planting and playground areas.



# PLANT PALETTE

I have chosen a variety of shrubs, vines, and trees to plant throughout the recreational park. Most importantly, I have chosen six fruit trees for the monkeys and birds to benefit from. Although the wildlife might take over of the fruiting trees, humans are also welcome to eat the fruits. All of the chosen plants are native vegetation. Most of the plants will be planted in the main central garden of the recreational park with other ornamental ones scattered throughout the site for aesthetic purposes. The exact location of these plants depends on the location of the existing trees. We will keep as much of the existing trees as we can. The areas that do not have trees will be designated for new vegetation. For visual purposes I have assigned the new vegetation in the central garden however, their location is not final.

## FRUIT TREES



*Artocarpus heterophyllus*  
Jackfruit



*Saba Senegalensis*  
Monkey Fruit



*Carica papaya*  
Papaya



*Musa sapientum*  
Banana



*Citrus x sinensis*  
Orange



*Ficus sycamoros*  
Sycamore Fig

# SHRUBS, TREES & VINES



*Pyrostegia venusta*  
Golden Shower



*Hibiscus grandiflorus*  
Swamp Rosemallow



*Lagerstroemia indica*  
Crape Myrtle



*Malvaviscus arboreus*  
'Arboreus'  
Sleeping Hibiscus



*Tamarix africana*  
African Tamarisk



*Thunbergia grandiflora*  
Blue Trumpet Vine



*Ligustrum ovalifolium*  
English Privet



*Hibiscus syriacus*  
Korean Hibiscus



*Convolvulus sabatius*  
Ground Morning Glory



*Bougainvillea glabra*  
Paperflower

# CONCLUSION

This proposed recreational park, since it will be the first such park in the country, might end up being a beachfront lodestone that will attract residents from the neighboring towns and cities. This park is designed for the residents as well as the tourists, but what we cannot forget is that it is also a place to welcome the wildlife. It is my hope that this recreational park is the beginning of many more parks to come in The Gambia.

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