Landscape Study on Green Areas of Some Resorts at Port Said City
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ABSTRACT

This research was conducted during June 2014- July 2016 for studying green areas of resorts in Port Said city as an example of coastal residential cities overlooking the Mediterranean Sea: 1) Marhaba resort, 2) El. Kanary Beach resort, and 3) Creative El. Fayrouz resort. The study revealed that Resorts in design and plants. Some resorts were considered to be a good place for recreation as Marhaba resort, El. Kanary beach resort then Creative El. Fayrouz resort. Marhaba resort was the best resort in green spaces, about 25,000 m², using different types of ornamental plants but El. Kanary beach resort was more caring in using facilities and aesthetic features as statue of fisherman in the entrance and fountain in the end of same line form the statue as well as mosaic art and Pergolas. Creative El. Fayrouz resort didn't make attention neither to green area nor to its maintenance although used deer statue at the swimming pool. The used plants in resorts were specific types of palms, trees and shrubs without using any types of herbs or climbers except Creative El. Fayrouz resorts and Marhaba resort used annuals and climbers plant. It was recommended for using plants of different types and colors as well as utilizing of facilities like statues, wall fountains, mosaic and artificial waterfall especially for Creative El. Fayrouz and Marhaba resorts.

Keywords: Recreation, Landscape, Landscape design, Port Said, Resorts, Green spaces, Green areas.

INTRODUCTION

Population is constantly increasing especially in urban areas. The world population reached 7.3 billion in mid-year 2015. It was found that population had a growing rate about 1.13% per year. The current average population change was estimated by around 80 million per year (United Nation (UN), 2015). The current population of Egypt in 2016 was about 93 millions, and about 39.8 % of this population in urban (Worldometers, 2016). The population density of Egypt was 84 persons per km² with Cairo having the heaviest density at 46,349 P/Km² (World population review, 2016), as result of population, it made crowded places more vulnerable to pollution than other places. In Africa, the higher recorded rates of pollution were in Cairo caused a lot of health problems (World Health Organization (WHO), 2016). The few epidemiological studies of air pollution in Egypt have indicated a significant increase in chest problems for those exposed to high levels of particulate in the residential industrial areas (WHO in Eastern Mediterranean Regional Office (WHO/EMRO), 2010). Therefore, people in these areas needed get a far away from crowded and contaminated environment to good cleaner ones, that increased demanding to recreation places with other factors of leisure time and income that helped to spent time and money away from home and made the chance to recreation possible.

People had lot of free time either in normal days, weekends or holidays. This time could be used in activities and recreation. In several places as America, Australia and Egypt and in six or five workdays per week, people spent their day work or school between 7-8 hours and about 10 hours in personal care, the rest of the day and holidays was divided between sleeping and leisure time (Population Council, 2010; National Centre for Social and Economic Modelling (NATSEM), 2011; Bureau of Labor Statistics (BLS), 2015).

GDP per capita was gross domestic product divided by midyear population. It was a measure of a country's economic output per person. In 2000, GDP per capita in the world was estimated to 5,448.7 dollars, it increased to 9,995.5 in 2015. GDP per capita in Egypt constantly increasing every year, it was estimated to 1,561.08 dollars in 2000, it increased to 3,614.7 in 2015 (World Bank, 2016). That effected in the people income which increased as well.

Comparing Egypt with the rest of world, population and pollution were very high with increasing income. That made the needs of a good and clean places with ability of time and money, also they needed a place to recharge their energy away from work, crowded cities and polluted environment, even these cities contained open and green areas, they weren't enough with all of negative factors.

Open space was defined as any area including water, where there was with a few buildings or without buildings only water. The purpose of open spaces with recreation facilities for enjoyment of people (The Gov. Of The Hong Kong Special Administrative Region, 2015). Green spaces are subset of open spaces, consisting of vegetated land or structure, water, or geological feature within urban areas. It was a term used to describe parks, public gardens, playing fields, children’s play areas, forests, nature reserves. Gardens, linear and other open green spaces like seashores as an important example for recreation (Al-Hagla, 2008; Spray, 2012).

Port Said city was a recreational place in many ways, the main feature was that it overlooking the Mediterranean Sea which the cause of resorts existence to be another a recreation place too. It considered recreation places with the advantage of green spaces of the resorts that caused rising their value.

The aim of the study was studying Port Said city as suitable environment for recreation and green areas of three resorts and evaluated in landscape perspective, plant materials and facilities. These resorts were: Marhaba, El. Kanary beach, Creative El. Fayrouz resorts.
MATERIALS AND METHODS

This landscaping study was conducted in the period from June 2014 to July 2016. The study aimed to refer to green spaces in some resort of the city. The design principles of green spaces were based on (Abo Dahab and Mohamed, 1998) and it used Google Earth and Autodesk AutoCAD 2D to display the resorts. In this study the general landscape analysis was performed according to (Sharaf al-Din, 1979). The analysis included the following aspects:

A. Port Said City: the research included site analysis in two features: 1-Natural features which included (location, topography and climate). 2-Human features included (land use distribution - residential-industrial areas and transportation), 3-Social features contained (population- distribution of population by selected age and type groups). 4-Aesthetic features includes water surfers and open and green spaces.

B. Resorts
1. Marhaba resort.
2. El. Kanary Beach resort.

C. Evaluation of green areas in these resorts
1. Design: In this element, it based on some design basics in resorts as a purpose of design, Emphasis (focal point) and simplicity in both of resort design and green areas on it.
2. Plant materials: The plants types and spices that used in resorts in trees, palms, shrubs, climbers and herb plants.
3. Facilities: They included roads and walkways, entrance of resorts, booths and structures, recreation facilities and seats.

RESULTS

A. Port Said
1. Natural feature
Location: Port Said was located on the Northeastern side of Egypt, directly on the Mediterranean Sea at the northern gate of Suez Canal which was central between Port Said and Port Fouad cities on the other side. The governorate was located between latitudes of 30° 50’N and 30° 30’N; longitudes 32° 0’E and 32° 30’East (El. Raey, et al., 1999).
Topography: Considered as an island, it was surrounded from each side with water, starting with The Mediterranean Sea and end up with Manzala Lake (Suez canal Authority, 2016). It consisted of Pleistocene-Holocene rocks, and it was located in a very sensitive and fragile zone in Egypt. It located on the border of two major edges: the African and Asian edges and on the tip of the Suez Canal which had been dug along a large fracture (Gaber, et al., 2014).
Climate: The temperature in Port Said was moderate all over the year on average 14-28°C. Sunshine hours in Port Said ranged between 6:00 hours daily in December and 12:00 hours for each day in July and August. The average of relative humidity was 67-72%. The total amount of rain water was 80-100 Mm per year, most of this rain was fallen in November to March. The wind speed ranged almost from 17.2 km/hour during November to January to 8.1 km/hour during July and August (Egyptian Environmental Affairs Agency (EEAA), 2007; Central Agency for Public Mobilization and statistics (CAPMAS), 2015; WeatherSpark beta, 2015; Climatemps, 2016).

2. Human feature
Land use distribution: The total area of the city about 1369.24 km², it divided to residential area, Industrial area, recreation areas and burial ground.
(a)Residential area: Included modern buildings and Archaeological and historical buildings which had a big value to Port Said history. Beside these buildings, there were libraries, archaeological areas, museums and religious features.
(b)Industrial area: Divided to two main areas: 1) Port Fouad city, and 2) Port said city. In Port Fouad city, there were marine shipyard for shipbuilding and other relative activities and extracting salt from the sea. In Port Said city, it was divided into: 1) north and south the harbor which included storages and factories, 2) El. Ganoub district, 3) Northwest El. Zohour district, and 4) in the international coastal highway. These factories worked at cloths, food, chemical and metal industries beside extract salt in Port Fouad city and oil and natural gas at Petroleum Companies in the international coastal road between Port Said and Damietta cities (EEAA, 2007; General Organization for Physical Planning (GOPP), 2008).
(c)Transportation: In the city, Roads included arterial roads which were high capacity urban road. It provided three paths on it, these roads were in the way to Ismailia (desert road) and Damietta (International coastal road). Inside the city there were main roads connected the districts together with two paths for vehicles and divided in secondary roads inside districts. There was the port of Port Said which divided to Port Said Port and East Port said Port, also using train to travel in parallel with the Suez Canal way to Cairo and Alexandria, and Port Said Airport that connected Port Said with the world by local flights to Cairo and Alexandria and international fights with other countries. Another important main transport was the ferry. It connected the Asian part ‘Port Fouad’ with the African part ‘Port Said’ across the Suez Canal (EEAA, 2007; Port Said Gov., 2016).

3. Social feature
Population: It was about 653,264 Thousand people and the rate of population density 477 person/km². It was divided into five districts as it cleared in (table 1), it displayed the most higher ratio of population density was El. Arab district after that was El. Monakh and the lowest was in El. Ganoub and Port Fouad.

Distribution of population by age and type groups: population was divided to three groups according to age: 1) less than 15 years old, 2) the age between 15-59 years old, and 3) 60 years old and more. It was displayed in (table 2) (GOPP, 2008). And according to (CAPMAS, 2015) the ratio of males to females was...
about 50.8% to 49.1%, estimated to 332,434 thousand males to 320,830 thousand females.

4. Aesthetic features

**Water surfers:** Port Said City was considered as an island, it was surrounded from each side by water, starting with The Mediterranean Sea and end up with Manzala Lake. The Mediterranean coast of Egypt extended between Salloum and El Arish, Port Said was nearest to El Arish side. Its coast extended for more than 55 km from east with North Sinai, from west with Damietta. The Suez Canal was an important international navigation canal linking between the Mediterranean Sea at Port said and the red sea at Suez in a distance of 162 km and if added to entrances at Port Said and Suez could be estimated by a length of 190 km (EEAA, 2007). It separates the African continent from Asia, and it provided the shortest maritime route between Europe and the lands around the Indian and western Pacific oceans. It was one of the world's most heavily used shipping lanes (Suez canal Authority, 2016). Manzala Lake located in the western part of the Governorate and the eastern side of Delta. It was about 50 km ling with a maximum width of 22 km, having an area of about 1071 km² (EEAA, 2007).

**Open and green spaces:** It was represented in the beach, tourism walkway with the base of statue of De Lesseps, the archaeological areas as Tennis island, El Farma city and squares as Mansheya, Al. Shohda, Al. Mohafiza and Al. Sayed Metwally. Green spaces covered 29.1% of total space in the city which included Plant nursery, gardens and streets, it was divided in the districts as the following (table 3). As (table 3) indicated that the gardens in total area about 114901m², the highest number of gardens was in El. Arab district. About 17 gardens While the highest size was in El. Monakh dis., only 11 gardens, and El. Ganoub was empty from gardens because it was industrial area, only had one plant nursery and the other green spaces was in the streets. Table (4) showed the most popular and historical gardens in the districts and its size.

**Table 1. Statistics and population census in Port Said districts in 31/12/2013**

<table>
<thead>
<tr>
<th>Districts</th>
<th>Area (km²)</th>
<th>Population (Person)</th>
<th>Density (person/km²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port Fouad city</td>
<td>505.695</td>
<td>86196</td>
<td>170.45</td>
</tr>
<tr>
<td>El Shark</td>
<td>5.017</td>
<td>37625</td>
<td>7499.5</td>
</tr>
<tr>
<td>El Arab</td>
<td>1.592</td>
<td>54532</td>
<td>34253.768</td>
</tr>
<tr>
<td>El Monakh</td>
<td>3.312</td>
<td>71939</td>
<td>21720.712</td>
</tr>
<tr>
<td>El Dawahi</td>
<td>62.671</td>
<td>112314</td>
<td>1792.12</td>
</tr>
<tr>
<td>El. Zohour</td>
<td>262.586</td>
<td>237464</td>
<td>904.32</td>
</tr>
<tr>
<td>El.Ganoub</td>
<td>504.09</td>
<td>53197</td>
<td>105.53</td>
</tr>
<tr>
<td>Desert</td>
<td>24.28</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>1369.24</td>
<td>653264</td>
<td>477.09</td>
</tr>
</tbody>
</table>

**Table 2. Distribution of population by age in Port Said city.**

<table>
<thead>
<tr>
<th>Districts</th>
<th>Population (Thousand People)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 15</td>
<td>152.6</td>
<td>26.7</td>
</tr>
<tr>
<td>15-59</td>
<td>376.3</td>
<td>65.9</td>
</tr>
<tr>
<td>60+</td>
<td>42</td>
<td>7.4</td>
</tr>
<tr>
<td>Total</td>
<td>571</td>
<td>100</td>
</tr>
</tbody>
</table>

B. Resorts

In Egypt, there were 1193 hotels, resorts and floating hotels 54 of them are located in Port Said (CAPMAS, 2014). Hotels were focused in El. Shark, El. Arab and El. Monakh districts, however, resorts were in El. Shark, El. Zohour, El. Monakh and Port Fouad city. Marhaba, El. Karawan, Ganet El. Noras, and El. Noras style beach resorts were in El. Shark district and El. Kanary Beach was in El. Monakh and Creative El. Fayrouz resort was in El. Zohour at Saad Zaghloul St.

1. Marhaba Resort: Marhaba Resort was located in El. Shark district at Atef El. Sadat street (Tarh El. Baher St.) and the sea was in its north side. It was divided into four section: 1) Administrative offices, 2) commercial shops, 3) tourism area, and 4) green spaces.

The administrative building was at the resort gate in both sides; it connected to the commercial shops in all over the resort in both side of the gate in two floors as showed in (fig.1). Tourism area was considered to be the apartment, villas, recreation and sport facilities which were about 107 apartments and villas in this resort beside two swimming pools and Multi-Purpose playground.
2. **El. Kanary Beach Resort**: Like all the resorts, El. Kanary Beach resort was located in in Atef El. Sadat street (Tarh El. Baher St.) at El. Monakh district. The resort included chalets and swimming pools. Recently, the resort was built beside the gate places for commercial shops but it open yet.

3. **Creative El. Fayrouz resort**: This Resort unlike the others was located in El. Zohour district at Saad Zaghloul Street in the end of the city at El. Gamil customs outlet. The total area of it was 35,000 m². In general, El. Fayrouz resort designed away from the center of the city and the other resorts which added good feature of the place because it was more quiet and isolation, it was designed as a civic place which characterized by the Islamic architectural heritage.

   Administrative area considered as reception which was one of the three gates of the resorts and the two Conference room. In the tourism area there was 150 chalets beside four swimming pools for kids and adults, festival hall, restaurant and coffees, there were several booths as shops in random places inside the resort (fig.3). There was no shopping of commercial area in this resort. The organic fertilization was added in March and the chemicals when the plant need it. The purpose of plant trees surround the resort was for protection from the winds when it became higher in the future.
C. Evaluation of green areas in these resorts

Total size of green spaces in Marhaba resort were in total size 25000 m², it contained different types of trees, shrubs and herbaceous plants. The plant maintenance was good comparing with the other resorts because the existence of team workers and their supervisor agriculture engineer. The organic fertilization was added in the winter December or January, however, the chemical fertilization was added every 15 days to the plants. The irrigation in the winter was almost every three of four days when the plants needed water, this period became less short in the summer was about one or two days in moderate temperatures and about twice per day in high temperature. Total green spaces size was about 4081 m², however it wasn’t caring about green spaces in this design, it was less than the other resorts. The green spaces just were in small playground for kids and fence of new and small trees surround the resort inside its wall. The organic fertilization was added in March and the chemicals when the plant need it. The purpose of plant trees surround the resort was for protection from the winds when it became higher in the future. Green spaces in El. Kanary beach resort was about 5583 m², the main plant in this resort was Phoenix dactylifera, the plant maintenance was low comparing with other resorts. The fertilization was added every year in the winter and irrigation was every day regularly.

1. Design: In the design of the resorts there were some general design basics in general and in green spaces design which were: 1) the purpose of the design, 2) Emphasis (focal point), 3) simplicity.

The purpose of design: The resorts in Port Said achieved the purpose of design in different levels. In this goals to provide the quiet and isolation from the other facilities or the street of the city that happened by building high walls surround the resort and plant trees inside the resort beside the walls. However, that was weakness point of the resorts because it prevented accessing to the sea. Also, it was important in the resorts to provide recreation facilities without needing to go outside the resorts like swimming, playing football, going to shopping or cinema. These were in all of resorts except El. Kanary Beach resort. The green spaces, purpose of the design was to confirm and complete the design of resorts. It made a combination of good view of sea and green spaces form the rooms in the tops of the resident building of the resorts. Green spaces were determined places of the building with the walkways. Types of green spaces in resorts differed between symmetrical design as in El. Kanary beach resort, simple modern design in Creative Fayrouz resort and mixed design (symmetrical and asymmetrical Design) in Marhaba resort.

Emphasis (focal point): Marhaba resort, the appearance of green spaces especially at the entrance of the resort. The plant density of this resort was high that made it became unique unlike other resorts that was low which made them had a weak point. The type and color of the plants attracted eyes and made sense of the place, in Marhaba resort, plants considered as focal point were shrubs, palms and trees croton shrubs Codiaeum variegatum in Amber (yellow reddish) color, Acalypha shrubs Acalypha wilkesiana with leaves had red colored, pineapple palm Phoenix canariensis, and Araucaria Trees Araucaria heterophylla that tree was only planted in Marhaba resort. In El. Kanary beach resort, the focal point was swimming pools and the palms in different types which were Cycas palm Cycla revoluta, royal palms Roystonea regia and Doum palm Hyphae thebaica. Creative El. Fayrouz resort characterized by the Islamic architectural heritage of the buildings beside swimming pools.

Simplicity: Resorts were in simple shape and color in each one of them. In Marhaba resort, the dominant color was cream (yellowish-white) color in the buildings with brown pitched parts of the roof but plants were crowded which make the design of the resort not clear enough as united place or separated parts of the resort form other, on the other hand, it was a strength point to provide the wanted isolation for residents in the resort. El. Kanary beach resort, the main color like Marhaba resort was cream color in the building with brown pitched parts of the roof. In Creative El. Fayrouz resort, the simplicity was depended on showing the function of design only, the playground was grass and some play structures on it. Trees were planted surround to protect the resort from winds. Some types of palms as Phoenix dactylifera, Chamaerops humilis, and Phoenix canariensis; and trees as Cassia fistula and Ficus spp (benjamina, hawaii, nitida)were used. The design in green spaces of these resorts the borders of green spaces took simple
curve overlooking the buildings and it was separated with walkways to led to the entrance of every building and connecting every block with others in the resorts. Plant types in these resorts were in palms like Roystonea regia, Phoenix dactylifera, and Chamaerops humilis; in trees Ficus spp (benjamina, hawaii, nitida); and in shrubs Hibiscus rosa sinensis and Nerium oleander.

2. Plant materials: The resorts focused on planting types and species suitable to the environment. So, there were trees, palms and shrubs in specific types showed in (table 5). On the other hand, resorts didn’t use climbers or herbs except Creative El. Fayrouz resort used Bougainvillea alba and Bougainvillea glabra. In Marhaba resort, they used Bougainvillea glabra as climbers and pelargonium zonale as annuals, and in all resorts, they used Cynodon dactylon (paspalum) as lawns connecting all of the plants together.

The used plants succeed in planting in sandy soil and coastal environment. There were types of trees were used to sustain the sea winds as Araucaria, Ficus and Washingtonia filifera trees, other types suitable to sandy soil as Cupressus, Acalypha and Oleander, Codiaeum and Bougainvillea.

Table 5. numbers and types of plants in resorts.

<table>
<thead>
<tr>
<th>Types</th>
<th>Plants</th>
<th>Mar.</th>
<th>Cre.</th>
<th>El. Kan</th>
</tr>
</thead>
<tbody>
<tr>
<td>palms</td>
<td>Phoenix dactylifera</td>
<td>64</td>
<td>38</td>
<td>114</td>
</tr>
<tr>
<td></td>
<td>Washingtonia filifera</td>
<td>56</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chamaerops humilis</td>
<td>84</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Phoenix canariensis</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Roystonea regia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Araucaria heterophylla</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ficus nitida</td>
<td>fence</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Ficus benjamina</td>
<td>43</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Ficus hawaii</td>
<td>23</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Trees</td>
<td>Cassia fistula</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ficus decora</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cupressus macrocarpa</td>
<td>22</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dodonea viscosa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Codiaeum variegatum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acalypha Wilkesiana</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shrubs</td>
<td>Hibiscus rosa sinensis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nerium oleander</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lantana camara</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Bougainvillea glabra</td>
<td>*</td>
<td>fence</td>
<td></td>
</tr>
<tr>
<td>Climbers</td>
<td>B. Alba</td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annuars</td>
<td>Pelargonium zonale</td>
<td>*</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Lawns</td>
<td>Cynodon dactylon</td>
<td>*</td>
<td></td>
<td>*</td>
</tr>
</tbody>
</table>


3. Facilities
Roads and walkways: Paved roads in Creative El. Fayrouz resort were about 4-meter width in both of resort sides used for cars and parking and they increased in the entrance of every block of the buildings and decreased again at these buildings. Paths and roads was Granite paving rectangle stones in dark Apricot color, it changed to light brown stones at the stairs and surrounding swimming pools.

In Marhaba and El. Kanary Beach resorts, roads were similar in type and color of the rectangle stones in the entrances and parking area in 6-meter width, other walkways inside were Granite paving hexagon stones shape in about 1.5-meter width, Creamy color in the middle and in Apricot color in sides and corners of the walkways. They were lighter in sidewalks ending with light brown in stairs in the entrance of the resort. Furthermore, walkways in green areas were broken white stones paths, irregularly shaped interchangeably with grass.

Entrance of resorts: In Marhaba resort, the entrance of this resort was different in its shape containing shopping stores in two floors in both sides of. This main gate, this main gate was in the middle for cars and both sides of it was for walking people, it took white color with brown pitched parts of the roof and Islamic architectural heritage small windows from wood in the top of the gate. Unlike El. Kanary Beach resort was three big parts in black glasses that led to the reception for people with two brown pitched roof in each side of the gate. The entrance of Creative El. Fayrouz resort was similar to Marhaba resort in shape but the color was like the buildings of the resort, Apricot color with pitched roof in darker.

Booths and structures: Marhaba resort was empty from additional structures or booths, it focused the resort be as residential place with good looking of green spaces. On the other resorts, El. Kanary Beach contained two gabled pergolas in both sides of swimming pool without chairs on it in cream color with...
dark brown roof. These pergolas located beside the stairs to swimming pools and in their entrance a small fence of ceramic mosaic art showing a paint of deep of swimming pools in each resorts and all over the waves a minimum of 9 seas, however, in Port Said this suggested that every city should have a maximum of 9 m² of green spaces per person (in: Morar., et al.,2014), however, in Port Said this rates was very low, it was 0.4 m² of green spaces per person, in high population and more green spaces than Port Said, so it was recommended to Port Said city the following:

1. Plan to develop and increase green areas in new expansions around the city and in the whole city it could be used methods of gardening such as green roofs, green buildings and vertical gardens that would able to raise the rates of the mount of green spaces per person in Port Said city.


In Port Said city open and green spaces were concentrated in limited places as the beach, tourism walkway with the base of statue of De Lesseps, the archaeological areas as Tennis island, El. Farma city and squares as Mansheya, Al. Shohda, Al. Mohafza and Al. Sayed Metwally, Green spaces covered 29.1% of total space in the city.

World Health Organization (WHO) (2010) suggested that every city should have a minimum of 9 m² of green spaces per person (in: Morar., et al.,2014), however, in Port Said this rates was very low, it was 0.4 m² of green spaces per person, in high population and more green spaces than Port Said, so it was recommended to Port Said city the following:

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DISCUSSION

The research discussed Port Said city in general and green spaces in resorts of Port Said city. Green spaces were the green lungs of any city that contributing to improving people's physical and mental health by providing places for recreation.

Port Said city, open and green spaces were concentrated in limited places as the beach, tourism walkway with the base of statue of De Lesseps, the archaeological areas as Tennis island, El. Farma city and squares as Mansheya, Al. Shohda, Al. Mohafza and Al. Sayed Metwally, Green spaces covered 29.1% of total space in the city.

World Health Organization (WHO) (2010) suggested that every city should have a minimum of 9 m² of green spaces per person (in: Morar., et al.,2014), however, in Port Said this rates was very low, it was 0.4 m² of green spaces per person, in high population and more green spaces than Port Said, so it was recommended to Port Said city the following:

1. Plan to develop and increase green areas in new expansions around the city and in the whole city it could be used methods of gardening such as green roofs, green buildings and vertical gardens that would able to raise the rates of the mount of green spaces per person in Port Said city.


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دراسات لئنيسكيه المساحات الخضراء في بعض القرى الساحات بمذون بوسع ذٍن، محمذ نزٍه شرف الذٍن، محمذ عبذ الله عبذ الله، محمذ عبذ العاح حزاً حسن، ومناح محمذ عبذ الرحمن الرٍس
قسم الخضر والزٍنت – كلية الزراعة – جامعة المنصورة.

أجري هذا البحث بمحافظة بورسعيد خلال الفترة من يونيه 2014 حتى يوليه 2016. بهدف دراسة المساحات الخضراء في المنتجعات السياحية بمدينة بورسعيد وكامل المنتجعات السياحية في مدينة سكينة ساحلية تطل على البحر المتوسط، تمثل هذه المنتجعات في قرى مرحبها وأقرية الكهرباء وقرية كريتيف الفيورز. تناول البحث عدد من العوامل لتقاسم المناطق الخضراء في هذه المنتجعات السياحية. أظهرت النتائج أن: هذه المنتجعات السياحية تعاني من تدهور البيئة صغرى ومساحات الخضراء داخل هذه القرى بصفة خاصة. وعلى الرغم من ذلك أنه البعض يعيش في القرى السياحية ويتبع مكان جذب للاستثمار مثل قرى مرحبها السياحية بيلة قرية الكهرباء تم قرية كريتيف الفيورز تعتبر قرية مرحبها تعتبر أفضل المنتجعات السياحية بما يحتضن بعض المناطق الخضراء بمساحة حوالي 35,000 متر مربع، ومع ذلك، يستخدم أتباع من الرياضة التي تعتزم تطوير المساحات الخضراء مثل القدحور والمجماليات والبتروليات، يتم استخدام نظام الصرف الصحي المتن奖项 المستخدم في القرى الساحات في منطقة بورسعيد على حسب ذلك قرية كريتيف الفيورز.تانو قرية الإقامة بالمناطق البيئية والمساحات الخضراء في القرى الساحات. استخدم نمط معينة من الأسعار والأخير والشجار، ولكن لم يتم استخدام أي من النباتات العشبية أو النباتات السامة. كانت توصيات الدراسة كالآتي:

- إضافة وزراعة اغصان مختلفة من النباتات ذات الولاء مختلفة وأعشاب النباتات العشبية كشجرة تعيش في البيئة المائية مثل نباتات أشجار النخيل. وتعتبر النباتات العشبية والرياح الطويلة. كما يوصي باستخدام العناصر الجمالية الإضافية الأخرى مثل الجمعيات والناشئات والشلالات لقرية مرحبها وقرية كريتيف الفيورز السياحية، والتي تعمل على ربط المساحات الخضراء داخل القري السياحية بخارها.