URBAN ENCROACHMENT ON THE GREEN AREAS OF THE SOUQ AL-SHUYUKH DISTRICT

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ABSTRACT

The green areas are one of the natural resources that people care about and seek to preserve, as they are either productive agricultural lands or recreational areas or grazing areas where natural plants grow. However, the problem of urban sprawl on those areas, especially on agricultural lands, is one of the most important problems that have emerged in a great way in recent years. The reason for this is due to the population increase that results in an increase in the need for housing units, and then their prices and land prices increase, especially in urban areas, which prompted citizens to crawl into agricultural lands, as well as the expansion and fragmentation of families, which pushes their members to build on their agricultural lands, and resort Citizens in light of the high prices to neglect in order to change their nature from agricultural lands to residential lands that can be divided into small residential plots and sold (Majed Abdullah Jaber Al-Frejawi, 2008: 208).

Keywords: Souq Al-Shuyukh, Fadhilliyah, Jabbayesh, Urban encroachment.

INTRODUCTION

The Souq Al-Shuyukh district consists of four administrative units called Al-Nawaha (Al-Tar, Karmat Bani Saeed, Al-Askikah, and Al-Fadhliyah) in addition to the Judicial Center, which is also an administrative unit. The district of Souk Al-Shuyukh is considered one of the districts in Dhi Qar Governorate, which suffers from the problem of urban encroachment on green lands in it, whether agricultural or non-agricultural, especially after the spread of random housing (or the so-called slums) that appeared significantly in recent years after a year 3002, and awareness is one of the important problems that must be identified in order to limit its spread in order to preserve green lands, especially agricultural lands.

Geographical and astronomical location

The district of Souk Al-Shuyukh is located in the south of Dhi Qar Governorate, bordered to the north and west by the Nassiriya district, to the east by the Jabbayesh district, and to the south by the Muthanna Governorate. As for its astronomical location, it lies between the longitude 22°33'13" 64 O and 30°2.81"63" 64 O east and between the latitude 14°2462"22" 20 O and 32°2024"2" 21 O north.
Study Significance

The importance of the study lies in identifying the encroachment on green areas in Al-Shuyukh district, as well as explaining the difference in the decreasing green areas between the areas of the judiciary between the years 1.0 and 3014. In addition to stating the damages of that creep on the green lands and the resulting problems and limiting its continuation. The problem of urban encroachment on green lands in eliminating environmental problems that threaten the life and future of its residents, as it eliminates the natural outlet for the residents of urban areas in it, and also limits agricultural products, many of which have entered the local market by importing from neighboring countries.

Reasons for choosing the research topic

1. Reducing the problem of urban sprawl on green lands.
2. Directing government attention to the problem of urban expansion on agricultural land and its impact on economic development, especially agricultural products.
3. Explaining the effects of diminishing green spaces, such as the environmental damage resulting from them, as they are the natural outlets for the residents of the judiciary.

Research Objectives

1. Stating the size of the encroachment and urban sprawl on the green lands in Souk Al-Shuyukh district.
2. Government officials' attention to the extent of the problem and its environmental, economic and social impacts.
3. Clarifying the difference in the urban distribution in the areas of the district and its status between 1.0 and 3014 A.D.

Research Hypotheses

1. The lack of green spaces in the district.
2. Increasing demand for residential lands due to population growth.
3. The judiciary's lack of agricultural crops that the population depends on for their daily food, and the local market’s dependence on crops imported from neighboring countries or other governorates.

PREVIOUS STUDIES


2. Sherif Abdel-Moneim Kamel Sayed, (3012), Urban growth on agricultural lands in the cities of Fayoum Governorate, a study in the geography of urbanism, PhD thesis, Department of Geography, Faculty of Arts, Cairo University.
3. Sadiq Nghaimish Jasim Al-Jayashi, (3016), Urban encroachment on the green areas in the city of Samawah and its environmental effects, Master Thesis, Department of Geography, College of Arts, University of Qadisiyah, Iraq.


5. Ahmad Al-Omar (3012), monitoring the urban sprawl in and around the city of Homs between 3.41 and 1333 using remote sensing technologies and geographic information systems, Al-Baath University Journal, Volume 24, No. 2, Syria.

**RESEARCH METHODOLOGY**

1. **Descriptive Method**: Studying and diagnosing the urban reality in the Al-Shuyukh district.
2. **Analytical Method**: analyzing and evaluating the change in land uses, the factors affecting them, and the impact of urban sprawl on agricultural lands in the district.
3. **Take advantage of aerial photos, maps, and plans to spend the Souk Al-Shuyukh in different years, in addition to the GIS technology in the analysis process.**

**The study covers the following axes:**

**First A- Causes of urban sprawl**

Urban encroachment on agricultural lands is one of the environmental problems that must be stopped and limited by knowing the reasons for crawling and finding suitable alternatives for the citizen.

Among the causes of urban sprawl in the judiciary are:

1. Increasing the number of residents in the judiciary and splitting the same family, which leads the citizen to establish new housing units.
2. Practicing the trade craft and converting some lands into commercial shops, even if it is on a small scale.
3. Transportation methods, especially the transportation methods of cars, where construction of new housing units was accompanied by the establishment of transportation methods to meet the needs of established housing units.

In order to study these reasons and know the infringed areas, we will study in detail each administrative unit.

<table>
<thead>
<tr>
<th>District</th>
<th>Percentage %</th>
<th>Area m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Al Tar</td>
<td>11.03</td>
<td>154.26</td>
</tr>
<tr>
<td>Qarmat bani Saad</td>
<td>21.22</td>
<td>296.85</td>
</tr>
</tbody>
</table>
Al-Fadliyah District has the largest area occupied by the judiciary by 244,288 km$^2$ and 41.32% of the total area of the judiciary, followed by Karma Bani Saeed and Al-Askikah two regions by 296.85 and 296.69 km$^2$ with a percentage 21.22 and 21.21%, respectively, then Al-Tariq district at 154.26 km$^2$, at a rate of 11.03% of the total area of the judiciary, and finally, Al-Shuyukh Center, at 72.96 km$^2$, and 5.22% of the total area of the judiciary. The study took the changes that occurred in the urbanization and vegetation, using Lansat visuals.

<table>
<thead>
<tr>
<th>Number of Bands</th>
<th>Acquisition Date</th>
<th>Sensor Type</th>
<th>Row</th>
<th>Path</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0990/2/2</td>
<td>Strokes 2</td>
<td>22</td>
<td>061</td>
<td>0</td>
</tr>
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<td>Strokes 2</td>
<td>29</td>
<td>061</td>
<td>8</td>
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<tr>
<td>00</td>
<td>8006/2/82</td>
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<td>29</td>
<td>061</td>
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</table>

<table>
<thead>
<tr>
<th>Percentage %</th>
<th>Area Difference $m^2$</th>
<th>Area Difference $8006$</th>
<th>Area Difference $0990$</th>
<th>District</th>
</tr>
</thead>
<tbody>
<tr>
<td>226.03</td>
<td>1.29</td>
<td>1.29</td>
<td>0.57</td>
<td>Al Fadhiliyah</td>
</tr>
<tr>
<td>62.76</td>
<td>2.94</td>
<td>2.94</td>
<td>4.69</td>
<td>Shook Al Shyukh Center</td>
</tr>
<tr>
<td>119.56</td>
<td>0.31</td>
<td>0.31</td>
<td>0.26</td>
<td>Qarmat bani Saad</td>
</tr>
<tr>
<td>606.65</td>
<td>6.11</td>
<td>6.11</td>
<td>6.31</td>
<td>Total</td>
</tr>
</tbody>
</table>

Where we note in Table (2) that the Al-Ukayyah and Al-Taar areas were excluded from the calculations due to the fact that the visuals used in the analyzes are of the Landsat type and they are of medium accuracy, where the features that have an area of only more than 00 square meters appear and that the buildings in these areas are separate and found in the orchards And there are no clear urban agglomerations (villages or cities), so these individual houses did not appear in these visuals clearly, and therefore it is difficult to draw clear boundaries for them.

We also notice from Table (2) a large difference in the percentage of increase in urbanization in relation to the aspects of the judiciary, although all aspects have an increase in the urbanization rate, due to the different motives for urban expansion, as follows.
Through Table (2), we see that the Al-Fadhliya area has increased its built-up area from 0.57 km\(^3\) in 0.11 m to reach 1.85 km\(^3\) in 3014 m, to achieve the largest increase in comparison with the rest of the administrative units by a rate of 226.03%.

As for Karma Bani Saed, it ranked second (relatively) in this urban expansion, where we note that the built-up area in the year 1.0 m was 0.26 km\(^3\) to reach 0.56 km\(^3\) in 3014 AD, constituting an increase rate of urbanization 119.56%.

While we see that the center of the Senate market was enjoying the largest area in the year 1.0 m and by 4.69 km\(^3\) and the area of urbanization in it increased to 7.64 km\(^3\) in 3014 m, forming the largest increase in the area of urbanization while the percentage of this increase was 62.76%.

Thirdly - vegetation and water bodies

Moreover, the vegetation and water surface areas were calculated for all administrative units in the district according to Table (4).

Table (4): the areas of vegetation and water bodies for each area in the years 0990 and 8006

<table>
<thead>
<tr>
<th>Coverage Type</th>
<th>District</th>
<th>Percentage</th>
<th>Area m(^8)</th>
<th>Percentage</th>
<th>Area m(^8)</th>
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</thead>
<tbody>
<tr>
<td>Water Cover</td>
<td>Al Tar</td>
<td>28.16</td>
<td>43.44</td>
<td>32.66</td>
<td>50.38</td>
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<tr>
<td>Non-vegetation cover</td>
<td></td>
<td>49.50</td>
<td>76.36</td>
<td>60.39</td>
<td>93.15</td>
</tr>
<tr>
<td>Vegetation Cover</td>
<td></td>
<td>22.33</td>
<td>34.45</td>
<td>6.95</td>
<td>10.73</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100.00</td>
<td>154.26</td>
<td>100.00</td>
<td>154.26</td>
</tr>
<tr>
<td>Bodies of Water</td>
<td>Qarmat Bani Saad</td>
<td>37.50</td>
<td>111.31</td>
<td>68.94</td>
<td>204.65</td>
</tr>
<tr>
<td>Non-vegetation Cover</td>
<td></td>
<td>38.84</td>
<td>115.30</td>
<td>23.40</td>
<td>69.47</td>
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<tr>
<td>Vegetation Cover</td>
<td></td>
<td>23.66</td>
<td>70.24</td>
<td>7.66</td>
<td>22.73</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100.00</td>
<td>296.85</td>
<td>100.00</td>
<td>296.85</td>
</tr>
<tr>
<td>Bodies of Water</td>
<td>Aqeeqa</td>
<td>12.22</td>
<td>36.27</td>
<td>26.09</td>
<td>77.40</td>
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<tr>
<td>Non-vegetation Cover</td>
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<td>67.80</td>
<td>201.16</td>
<td>58.57</td>
<td>173.74</td>
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<td></td>
<td>19.98</td>
<td>59.24</td>
<td>15.34</td>
<td>45.53</td>
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<tr>
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<td>296.67</td>
<td>100.00</td>
<td>296.67</td>
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<tr>
<td>Bodies of Water</td>
<td>Souq Al-Shuyukh Center</td>
<td>9.40</td>
<td>6.86</td>
<td>16.36</td>
<td>11.94</td>
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<td>Non-vegetation Cover</td>
<td></td>
<td>61.92</td>
<td>45.18</td>
<td>60.98</td>
<td>44.49</td>
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<td>Vegetation Cover</td>
<td></td>
<td>28.68</td>
<td>20.93</td>
<td>22.66</td>
<td>16.53</td>
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<tr>
<td>100.00</td>
<td>72.96</td>
<td>100.00</td>
<td>72.96</td>
<td>Total</td>
<td></td>
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<td>--------</td>
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<td>--------</td>
<td>----------------</td>
<td></td>
</tr>
<tr>
<td>9.86</td>
<td>56.98</td>
<td>10.63</td>
<td>61.41</td>
<td>Bodies of Water</td>
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<tr>
<td>86.32</td>
<td>498.79</td>
<td>87.21</td>
<td>503.92</td>
<td>Non- Vegetation Cover</td>
<td></td>
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<td>3.82</td>
<td>22.11</td>
<td>2.16</td>
<td>12.54</td>
<td>Vegetation Cover</td>
<td></td>
</tr>
<tr>
<td>100.00</td>
<td>577.88</td>
<td>100.00</td>
<td>577.88</td>
<td>Total</td>
<td></td>
</tr>
</tbody>
</table>

Where we note from Table (6) that the Karma of Bani Saeed area has the largest water bodies by 204.65 km³ in the year 1.0 m, then it starts decreasing to reach 111.31 km³ in 3014 m, thus completing 37.50% of the total area of the area.

Then followed by the Al-Taar district, where its water bodies occupied 50.38 km³ in the year 1.0 m to reach 43.44 km³ in 3014 m, forming 28.16% of the total area of the district.

After that, Al-Akikah comes to take the water bodies 77.40 km³ of its area, then this area begins to decrease to reach 36.27 km³ in 3014, forming 12.22% of the area's area. As for the water bodies of Al-Shuyukh Center and Al-Fadhliya area, they were close to their percentage of the total area of the administrative unit, by 9.40% and 9.86%, respectively. As for the vegetation, it was on the faces of the center of the Al-Shuyukh market, to form 28.68% of the total area of the center, then it is followed by Karma Bani Saeed district, then Al-Tar, then Al-Askikah, and it is almost close to it: 23.66%, 22.33%, 19.98%, respectively, of the total area of each administrative unit. Whereas, Al-Fadhliya area ranked last in terms of area of vegetation to constitute its percentage 3.82%.

**Urban encroachment on agricultural lands**

Through what has been studied above, the process of urban expansion in each administrative unit and its encroachment on green lands can be restricted to the following reasons:

**Al-Fadhliyahah District**

A. Increasing the number of residents in the district, where the population was 38006 people in the year 1.84 AD *, and it reached 224.6 people in 3014 AD (the Central Bureau of Statistics, Dhi Qar Statistics Directorate, 8009), which required the construction of new housing units

B. Increasing service activities in the district, where the increase in the population was accompanied by the establishment of service and educational institutions represented in primary and secondary schools, health centers and some other service departments.

C. Commercial stores: The establishment of housing units far from the center of the district, which has been increasing around the outskirts of the city, has pushed the residents of those areas to establish commercial stores to meet their daily needs of food as well as other consumer goods, which led to increased encroachment on green areas.

D. Transport roads: The urban expansion has pushed towards the creation of new transportation methods for motor vehicles (see picture No. 2).

E. All of these reasons combined pushed to increase the urban areas at the expense of green lands.
Souq Al-Shuyukh City

A. The city of Souk Al-Shuyukh is the capital of the judiciary. Therefore, most administrative and service institutions for the judiciary and its subordinate areas are concentrated in it.

B. In addition to that it is considered the commercial heart of the city, so the population density increases, as the population was 20233 inhabitants in the year 1.84 AD, and reached 136838 people in 3014 CE (the Central Bureau of Statistics, Dhi Qar Statistics Directorate, 8009), and the trade is concentrated in it more than the rest of the judiciary.

C. The increase in the prices of residential lands within the district due to their use as commercial shops, which have expanded significantly in recent years due to the improvement in the economic level of the population of the judiciary and the growth of that craft due to its economic returns and ease of practice.

D. Decrease in the price of agricultural classified lands compared to the status of the Judiciary Center, which led the citizen to use it to build housing units.

E. Existence of the motive for using agricultural lands as areas for establishing housing units as they are close to the city center.

F. There are some commercial activities that need large areas that cost their owners large sums of money due to the high prices of lands within the district, or they may be polluting to the
environment and prevent the competent authorities from establishing them in or near the city as exhibitions of construction materials.

All of these reasons combined pushed to increase the urban areas at the expense of green lands see the picture below:

![The area of vegetation in the district of Souk Al-Shuyukh converted to Urban in 8006](image)

Karmat Bani Saeed district

A. Increasing population density in Karmat Bani Saeed area, which is the most populated area, as the population was 22.33 people in the year 1.84 AD, and 28,243 people in the year 3014 AD (the Central Bureau of Statistics, Dhi Qar Statistics Directorate, 8009), which pushed for the construction of new housing units in which the share of agricultural land was relatively large.

B. The increase in the population was accompanied by an increase in service, economic and educational activities at the expense of agricultural lands and green areas due to the limited area of the city center and the inability of the district to absorb these buildings.

C. The drying process of the marshes carried out by the previous regime in 1.1 AD led to the relocation of the marshes residents to the outskirts of the district, taking advantage of the low prices of those lands to build their housing units.

D. The economic level improved after the year 3002 AD and the high level of employee income, which helped to establish new housing units and split the single family.

E. The rise in the prices of lands within the city center due to their exploitation in trade or other industries such as blacksmithing and carpentry.

F. Its geographical location linking the center of the judiciary with the administrative units to the east of it, such as the Al-Tar district and the Al-Jabbayesh district, which helped to revive transport routes, especially cars, thus facilitating access to agricultural lands located on the outskirts of the district and exploiting them as residential areas.

All these reasons combined pushed to increase the urban areas at the expense of green lands.

It is clear from the study that:
1. Karmat Bani Saeed area was the most aggressive aspect of the judiciary in the green areas.
2. The increase in the population, the cleavage of one family, and the increase in the prices of lands in centers of administrative units, which led to the construction of housing units at the expense of agricultural lands, especially orchards, after neglecting them for a period of time in order to contain them in residential lands.
3. The nature of horizontal construction is common in most areas of the district, which leads to an increase in green areas encroaching upon it.
4. Trade activity activity in recent years, and the expansion and diversification of commercial stores and their establishment at the expense of agricultural lands, especially in the periphery of the districts due to the low sin of those lands.
5. The transportation methods had a prominent role in encroaching on agricultural lands and green areas to meet the needs of the citizen.
6. The unregulated housing expansion at the expense of farmland has given rise to so-called slums (Transcendence), this phenomenon carries many disadvantages, including irregular transportation methods, unorganized construction, poor building materials used in it and the absence of sewage networks, which helped the spread of diseases in these areas, and therefore these areas are a manifestation of environmental pollution. See Picture No. 3

The spread of polluted water due to the loss of sewage networks) taken on April 04,2008.

RECOMMENDATIONS

1. Working to spread the culture of environmental awareness by clarifying the damages and risks of expansion on agricultural lands through educational institutions and curricula, as well as visual and audio media.
2. Work toward vertical construction rather than horizontal construction, because the latter takes on larger areas.
3. Urging local and central governments to activate laws not to encroach on agricultural lands and continue to cultivate them with agricultural crops or fruit trees as mentioned in Article Two of Instructions No. 123 of 1.44: Those with disposal rights in state-owned agricultural lands (princely lands, delegated to the Land Registry, granted in lieu and suspended) Invalid Endowment) Continuing to exploit the lands at their disposal, such as the previous ones, and to invest them in field farming, planting fruit trees, forest trees, or developing livestock and other areas of agricultural development ,Public Religions Legal Affairs and Municipal Properties, - 8008, 812.

4. Working to find effective and feasible solutions consistent with the reality of Iraqi society by granting residential plots within their administrative units.

5. Finding some kind of penalties (such as being financial) for everyone who exceeds building on agricultural lands. Sources and references 0- Resources 0- Ministry of Municipalities and Public Works, Directorate of Urban Planning in Dhi Qar in 3016.


7. Central Statistical Organization, Department of Statistics, Dhi Qar, 301.

REFERENCES


