DETERMINING THE WORST ENVIRONMENTAL STATE AND THE POOREST AREAS IN HILLA CITY

Mohammad Ali Alanbari

University of Babylon, Iraq

This research includes an evaluation of the state of some areas in Hilla City, to determine which of them have the worst environment and the more poorness. This evaluation had been achieved depending on three factors; population, services and environment, and physical factors. Seven areas had been studied in the city and the scores of each area for each factor had estimated. The total of scores will help to arrange the areas due to the worst environment and the more poorness. From other side, these will help the decision maker to determine the priorities of the urban local development.

Keywords*: Urban environment, poverty, social and urban services

INTRODUCTION AND OBJECTIVES:

Man lives in the urban environment (in cities) or rural areas (outside cities) by integrated relationship, "cannot be considered to the environment without seeing its human, also it cannot be considered to humans without seeing the environment. Correlation between them is a measure essential to denote the state of equilibrium between these two fold, and therefore the deterioration of the economic and social backwardness, declining levels of income of individuals and communities to levels of the poverty line or less, would lead to further deterioration of the humanitarian environment and the environment in general "(Hannouche, 2004). The interaction between poverty and the environment often leads to the deterioration of the environmental characteristics, and treatment of the problem of poverty is not just a moral imperative, but is an essential task of development, which requires the reform of economic systems and to improve the poor income and provide more services through reform of the environment of those of the wide range of community The aggravation of poverty and the spatial and temporal spread between rural and urban inequality, in income distribution, and social and urban services (such as housing, education and health) has been dominated steadily on the cities, and major cities, especially those born low urban slums, unregulated and which are randomly construction and low environmental conditions, high densities population and low level of provision of urban services such as water and sewage networks, electricity supply, telephone, roads and the spread of social forms of poverty and deprivation. The rate of poverty during the eighties in the Arab states (25%), while the poverty rate was estimated at the level of the West Asian countries (27%) in 1992 (Economic and Social Commission for Western Asia, 2001).

The phenomena of poverty in Iraq, since the features evident, since the early eighties and when nineties was held, the proportion of the population living below the poverty line increased to approximately 45% which makes it more complicated. The continuing population growth (an annual rate of about 2.8%) adds to the weak labor market additional numbers of short-term as well (Hannouche, 2004). The preservation of the environment has become an essential element of access to the sustainable development of cities in an urbanizing world. The face of the urban environment (city environment) is associated with the situation of a group of important factors and the relationship between them (United Nations, 1994) and is including the following:

A - Population factor: this includes the following variables:
- population size
- population density
- household average size
- household rate income

B - Services and the environment factor: this includes the following variables:
- drinking water availability
- drinking water network efficiency
- drainage network existence
- waste collection services presence
- electricity grids efficiency
- telephone network existence
- emergency services existence
- streets paving proportion
- education services presence
- health care services adequacy
- recreation and sports presence

C - Physical factor : This includes the following variables:
- old building proportion
- location in the old city

The assessment of these factors and its variables for any urban area will help to reveal the reality of the environmental and poverty situations confronting them .So that, the objectives of the research will be to examine the situation of urban areas and assess how bad are the environmental situation, poverty and deprivation, which will help to arrange the priorities of local development.

THE CASE STUDY

 For practical purposes and to achieve the objectives of the research above, the adoption of the Hilla city, as a case study, , and set of areas (seven areas) within the city was chosen ((see Table (1) and Map No. (1)). Each area consists of residential neighbourhoods.

Table (1) illustrates the different areas within the Case Study.

Population size	Study areas
26363	First area consists of six residential neighbourhoods • Krad neighbourhood • Taees neighbourhood • Aljbawin neighbourhood • Mahdia neighbourhood • Altaq neighbourhood • Aljameen neighbourhood
10349	Second area consists of four residential neighbourhoods • Alwardia neighbourhood • Algalag neighbourhood • Althayla neighbourhood • Algrataa neighbourhood
18735	Third area consists of one residential neighbourhoods • Althawra neighbourhood
12918	Fourth area consists of two residential neighbourhoods • Alafrah neighbourhood • Nader neighbourhood
18972	Fifth area consists of three residential neighbourhoods • Alshawee neighbourhoods • Algdaida neighbourhoods • Algemhori neighbourhoods
10952	Sixth area consists of three residential neighbourhoods • Alibramimia neighbourhoods • Mustafa Ragib neighbourhoods • Almashta neighborhoods
8859	Seventh area consists of one residential neighbourhoods • Iskan neighbourhoods

Then been studied the factors of population, services and environment and physical aspects, and then the adoption of data and various information for these areas in coordination with the authority of Strategic Planning for Babil province, in addition to the surveys and field visits and dialogue with a group of experts of reference of subject factors above.. These factors are of a different nature, and the evaluation process needs to put a mechanism linking the levels of different factors in the urban area. For the purpose of facilitating the assessment of multiple variables of these factors, the variables values had been calculated and converted to points (scores) (on the basis of available information and discussions with experts) as the following conditions:

A - Population factor:

1 - Population size: one point per5000 person.

2 - Population density: one point per100 people / ha.

3 - Household rate income:

        100 - 200 thousand dinars / month = and low / three points.

        201 - 300 thousand dinars / month = Average /two points.

        301 and above --- thousand dinars / month = high / one point.

4 - Household average size:

        5 people or less = small / one point.

        6 - 8 people = Medium / two points.

        9 people and above = large / three points.

B - Services and the environment factor:

  1 - drinking water availability:

        Available / one point.

        Scarce / two points.

  2 - drinking water network efficiency:

        Valid / one point.

        Invalid / two points.

  3 - drainage network existence :

        Present / one point.

        Does not exist / two points.

  4 - waste collection services presence

        No / three points.

        One time / day / two points.

        More than once / day / one point.

  5 - electricity grids efficiency:

        Valid / one point.

        Invalid / two points.

  6 - telephone network existence:

        Present / one point.

        Does not exist / two points.

  7 - emergency services existence :

        # Fire

        Present / one point.

        Does not exist / two points.

        # Ambulance:

        Present / one point.

        Does not exist / two points.

  8 - streets paving proportion:

        100%, one point

        75% two points.

        50% three points.

        25% four points.

        Zero% five points.

  9 - education services presence:

        25 - 30 Student / row / one point.

        35 - 50 student / row and up / two points.

  10 - adequacy of health care services:

        Inadequate / one point.

        Inadequate / two points.

  11 - recreation and sports presence:

Park
   Present / one point.
Does not exist / two points.
Sports club:
   Present / one point.
Does not exist / two points

C - Physical factor:
1 - old building proportion
              100% four points ..
              75% three points.
              50% two points.
              25% one point.
2 - location in the old city:
              Within the old city /two points.
              outside of the old city / one point.

Search Results

The table (2) shows the study areas and the points obtained for the population factor , services and environment factor and physical factor .

Table (2) shows the study areas and the points obtained for the population factor , services and environment factor and physical factor .

Physical factor	Services and environment factor	Population factor	Study areas
6.00	12.50	10.25	First area
6.00	15.25	6.06	Second area
3.00	14.00	7.25	Third area
2.00	15.00	6.08	Fourth area
6.00	13.10	9.79	Fifth area
4.00	13.00	9.69	Sixth area
4.00	11.00	4.62	Seventh area

The table No. (3) illustrates the different study areas and the total points obtained on the assumption that the weight given to each factor is (1).

Table (3) shows the study areas and the total points obtained by each area.

Total points obtained	Study areas
28.75	First area
27.31	Second area
24.25	Third area
23.08	Fourth area
28.89	Fifth area
23.69	Sixth area
17.62	Seventh area

The number of points obtained by each area in the above table, represents the level of the poor condition of the environment and poverty, and it can be arranged according to the areas of worst environmental reality and the poorest, as shown in table No. (4), follows the assumption

that the weight given to each area is (1) which mean that the importance of the areas are equal, if the weight changed, the results may vary.

Table No. (4) Shows the study areas of the environmental situation worse and poorer

Areas rankings by the worst environmental reality and poorest	Study areas
2	First area
3	Second area
4	Third area
6	Fourth area
1	Fifth area
5	Sixth area
7	Seventh area

The above table shows, the fifth area is the area with worst environmental situation and the poorest, followed by the first area and then the second area and so on until the seventh grade where it came from the latter.Inferred that the order of the study areas will help the decision maker to determine the priority of development in these areas, in the sense that the fifth area is the first priority area in development followed by the first and the second area, and thus, the seventh area is the area of last priority in development.

Research findings and recommendations:
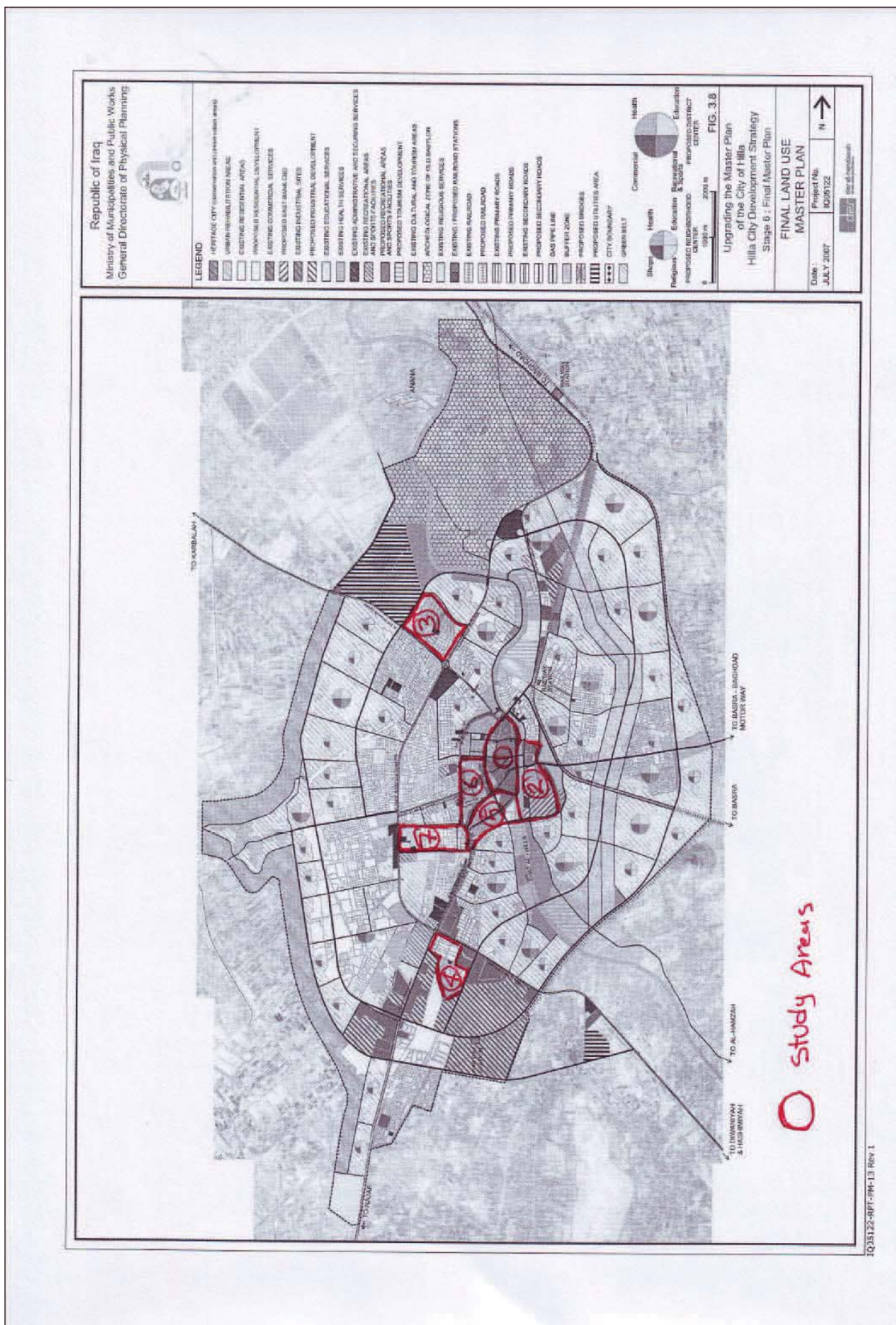
It may be obvious conclusion that:

- The fifth study area in Hilla city, is the worst environmental situation and poorest, and it represent the first priority area for local development in Hilla city, followed by other areas.
- The methodology, used in determining the levels of access to the environmental situation and the situation of poverty, is based on:
    • Provide information and statistics on multiple factors including the population factor, services and the environment factor, and physical factor. Also other factors can be added.
    • Dialogue with a group of experts of reference of subject factors above .
It may be useful to recommend the following:
- Follow the methodology used in research to identify the worst environmental state and the poorest areas in cities and from which, the priorities of local development can be arranged.

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