Activating the ecological role of urban management tasks in the city environment

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Abstract

That the city and its development and the growth of environmental problems in it generated the use of methods that help reduce urban problems, as they were used for planning directives in developed countries to adopt the concepts of modern urban construction for the environment that preserves the right of nature and man, using systems that work to sustain and achieve the system of integrated urban performance and a section of the system Natural performance, as is the practice in eco-cities, and from the contemporary modern directives in urban planning, there is an ecological phenomenon, which helps ecosystems by reducing the negative effects of the urban environment. And that the absence of interest in the urban environment of the city, testing the existence of an integrated urban structure for the city, following the methods and objectives of urban ecosystems in planning and designing the city and reducing the problems of the urban environment, and the formation of environmentally friendly complexes that achieve the goals of an integrated urban environment based on the foundations of the ecosystems taken from laws, foundations and standards that seek to preserve The natural structure, achieving the objectives of urban management and preserving the environment and forming an integrated environmentally friendly urban construction and adopting it locally by adopting the methods and methods used in planning and designing the eco-friendly city.

Key words: urban environment, ecology, urban management

Research problem: The growing problems of cities and the lack of knowledge of the objectives sought by the ecological use in urban planning and design increases the problems of the city environment.

The aim of the research: To identify the effect of the ecological scale, its use and its importance for urban planning and the extent of preserving the urban environment in the city, with the existence of a database on the planning and design foundations for the use of ecology in the city for local adoption to reduce the city’s problems.

Research hypothesis: the use of ecosystem methods that support urban management and achieve protection of the city environment and reduce its problems.

Ecosystem
It is the functional relationship between society and its environment and is concerned with the relationships between the physical environment and living organisms and the study of environmental influences and their components. The ecosystem is the relationship between living and non-living organisms through cooperation and joint action (1) and it is concerned with a specific scope of a geographical space and a specific place, where it is represented by cooperation and relationship between the external and internal environment, i.e. It is a spatial space of whatever size it contains a number of elements, activities and interactions of living and non-living organisms within this space and its surroundings from the external environment (2).

**Ecological and city.**

The interest in ecology and what it seeks to achieve requires knowledge of its interconnectedness with the city. Urban ecology is a study of the interconnectedness between the city and its community by supporting and analyzing the city’s stable functions. Interest in urban ecology, which is concerned with the development of ecology and human systems at sites in the city in which the preparation is constantly growing (3). It is the interest in external spaces and the city environment that gives an impression of the beauty of studying the city’s society and its visitors (4).

**Urban environment.**

The city and its contents require attention, follow-up, and finding scientific methods and methods that seek to preserve them, as the urban environment is all that surrounds a person from the uses of land distributed and expanded to form the city. The urban environment is the coordination of jobs, activities and sites in which people work (5) and also controlling the process of construction, planning, improving the environment and planning for it, which is reflected in the city and its function and efficiency in the requirements of humanity that achieve the ideal model in the formation of cities (6).

**Planning and its relationship to the urban environment of the city**

1- Taking care of the city’s environment requires providing requirements that serve the community by studying urban planning for it, which works to reduce problems as much as possible, and to provide requirements that make the city’s environment fulfill all the requirements of its community, and one of the most prominent processes of beauty and success of urban planning is the distribution of land uses in a thoughtful manner. And the presence of green spaces and distributed spaces between their buildings (7).

2- Where the urban designer and planner tries to operate the ecological design and architecture tasks to serve the city environment and reduce its problems resulting from human activities by reducing the negative effects generated from changes in the urban environment that affect the ecosystem, and the urban planner and designer tries to activate the ecological design in architecture, to solve environmental problems The city by reforming and protecting the environment by creating a balance in the urban environment, thus activating the role of urban management by linking the spatial level and supporting the protection of the environment by applying urban laws and legislation to serve the city community and not bypassing the basic design and components of the city (8).

**The role of planning standards in preserving the urban environment of the city.**
One of the advantages of the formation of urban planning is the provision of human conditions for it through standards, laws and legislations that help balance the distribution of land uses in a balanced manner, that fulfills the requirements of society and its well-being that achieve a number of basic design paragraphs that provide well-being, psychological and aesthetic impression of the city’s society and its great importance in it. (9) And that the tangible and increasing environmental impacts require preserving the city’s environment according to criteria based on capabilities and proportions according to its needs, most of which focused on the following (10).

A- Taking the optimal distribution of land uses.

B - Taking a number of sites in the city and knowing their basic requirements to protect the environment of these sites and their development.

C- Using percentages and adopting a strategy to determine these percentages to distribute the use of land and green areas based on the approximate number of souls and future expansion.

D - Taking the basics for the external influences of the city environment, studying the industrial site and its effects, and adopting standards in the establishment to reduce pollution to the city environment.

And that one of the most important components of the city that affects its environment and is reflected in its community and life conditions is the presence of green spaces. Most of the laws and legislations have sought to regulate urban distribution according to standards, and the United Nations has put in place a proposal to neutralize green areas, provided that the per capita share in cities is not less than 60 square meters, and the following table shows the most important standards that are taken in urban planning in cities (11)

### Urban requirements of the city and its development environment.

The most prominent of the main elements that help in the development of the urban environment with environmental dimensions by integrating these dimensions to activate the advantages of urban cities, which are as follows (12)

- - Activating the role of environmental management based on "indicators and using knowledge of modern technological techniques and applying them in all fields of work to serve the community of the city."

- Paying attention to environmental indicators and the quality of the environment (water, air, noise) and taking care of them and limiting the problems that affect them

Through what has passed, the most important standards, requirements, planning, and its relationship to the urban environment and its protection with the ecological use of the city are identified and its importance that supports urban management in the city. Knowledge of the use of ecology requires studying a number of selected global experiences in the field of establishing the ecological city according to a descriptive, analytical and comparative perspective. This is in order to verify the possibilities of applying what was reached by the theoretical framework and solving the problems of a newly formed city and being in the process of construction and to benefit from the experiences on the ground by choosing these experiments to select the most applicable to the city's
ecological goals, and the most environmentally sustainable - according to global statistics - provided that the treatments that came Its planning and design is more than technical, social or economic.

**Swedish experience**

The Swedish experience is one of the global experiences in the field of creating environmentally friendly eco-cities is its remarkable success in adopting the principles of ecological urban design for the Hammarby Sjöstad region) and methods have been found for ecological use to find a solution to the bad ecological reality of the region, which is known for its multiplicity of industries, environmental pollution and reliance on the redevelopment of lands. The fact that the city’s location is located within the suburbs of (Stockholm) city that is closest to the center of the capital and the most in need of change, and the method of improving human settlements management and strengthening planning and management of sustainable land use (13) has emerged in the city, and the use of urban flows management within this region has emerged as (the cycle Eco cycle), which essentially seeks to merge separate anchor structures systems in one cycle, and the use has emerged in a more sustainable manner by using the outputs of one system as inputs to another system, since this circle acts as a holistic approach to providing the anchor infrastructure services, and defines the ecosystem. For the urban environment in a tangible way by using the heat generated by this purification process in CH The removal of the main heating station in the area and the use of rain water in the irrigation of park areas, or it may be invisible, integrated with other systems for another use, and the increase in the interaction between the water bodies on the site and the urban environment built within it has emerged, and it is considered one of the methods that the Stockholm municipality administration sought to expand Its urban area and with distinction for the development processes of this site, where a unique planning and design was adopted with the adoption of the general plan for the Hammarby Sjöstad area)) to integrate both public places, transportation and amenities according to a balanced distribution mechanism with management and provide great opportunities for the natural focus of population and commercial activity around these sites and made a balanced distribution The use of the land is based on the most important planning and design foundations (14).
Images of Hammarby Sjöstad) before and after planning, ecological integration and urban environmental protection of the site with a balanced planning and formation consistent with the natural characteristics of the site (14)

The Emirati Experience Masdar City

Masdar City is one of the ecological city in global experiences on the nature of its location located within the region near Iraq, and its climate similar to it, so its study is necessary to find out the extent of harmony and suitability of the planning and design foundations of the global ecological city components with the climatic and ecological nature of Masdar City in the region of the United Arab Emirates It is one of the largest ecological initiatives undertaken by the government of the United Arab Emirates, specifically the government of the Emirate of Abu Dhabi in the field of renewable energies, and minimizing the harmful environmental impact of urban existence. Masdar City planning strategies seek to achieve the principle of (actual sustainability) in all aspects. These strategies included emphasizing the elements of passive design (such as orientation and the general shape of the city) from the early stages of the planning process, by giving them priority over the elements of effective design as the most effective and least expensive come effective design systems (Represented by the smart energy grid and the recycling of sewage water and photovoltaics) in later stages of the design systems The passive, and in a complement to it (15).

As the planning and design foundations for the components of Masdar City, the Masdar City project administration in the area of taking into account the natural context of the site and respecting its ecological specificity through many studies, the most important of which was the environmental impact assessment of Masdar City, which was carried out in the year 2009 and represented the most important planning foundations on which planning relied These structures, which are communicative parks as the lungs of the city, ease of access and streamlined design and distribution of roads and green spaces in order to provide shades for all roads in them throughout the day in a way that reduces building walls gaining thermal radiation, and facilitates the flow of cold air breezes throughout the city while the buildings are distinguished by treatments It is the corrugation of the facades of residential buildings and covering them with decorative concrete nets inspired by the traditional mashrabiyya element, while the corrugation provides an angle that prevents the view of those outside from the users and residents inside, and the networking provides protection for the internal spaces from direct solar radiation, as the city administration seeks Masdar aims to achieve three main goals represented in relying (100%) on renewable energy sources, and zeroing in waste And zero carbon emissions (16).
An image showing an aerial view of Masdar City from its northeastern side presented by the company that designed it (Foster + Partners) in 2013, after it made some detailed changes in its construction proposal (www.fosterandpartners.com)

Among the local experiences is the formation of the city of Basmajah, which is one of the largest development projects in Iraq that seeks to achieve all the principles of development and sustainability. One of the modern cities on the outskirts of Baghdad is distinguished by the diversity and performance of land use at multiple levels and different levels, including housing - health - education - Tourism - security and other services that require provision in cities, and Basmajah is one of the modern cities in Iraq and was established according to integrated strategic planning. Final integrated reports were prepared for the strategic planning of the city, its contents and what could limit it to make it integrated cities (17). The existence of a core working on it after the picture becomes clear about the current situation and future expectations for the development of the city and its adoption by the competent authorities, and the presence of a number of gaps that have not been achieved and requires achieving them as a city that has not yet been completed for all services and housing published to avoid mistakes that shrink upon change and correct the current reality and expectations The survey was conducted on the Basmaya residential project and based on the field studies that were prepared through the questionnaire model adopted in the research to know the reality of the situation and what its implementation requires of a study and strategic planning based on the urban administration that works on developing the city and relying on the outputs of the field study that most seek Eco-cities that have achieved development and sustainability (18).

The most important thing that was devised and concluded from scientific research

The development of cities is one of the basics that all countries, including Iraq, seek to achieve according to a legislative system and framework and the application of a number of laws and decisions to the authorities concerned with the enactment and implementation of laws and the interaction and participation of competencies to perform monitoring and follow-up tasks and evaluate the distribution of tasks, according to specializations to improve service and tangible results of urban development Resulting from balanced urban management.
Pictures showing a perspective of the city of Basmajah during the stages of its construction and its integrated formation after the completion of its implementation https://images.search...

Which is known for the use of the Swedish experience as well as, "including the study of Masdar City, which helps to know the extent of harmony and effectiveness of cities with a climate close to Iraq by taking it as a basis in establishing effective ecological Iraqi cities. The Swedish experience was represented by balanced management and ideal distribution of land uses and transforming an industrial site into a service for society and development. A tangible urban environment, and experiences were known to form ecological cities and protect the urban environment in them by implementing decisions related to urban development management in cities. As for the city of Bismayah, the services and protection of the urban environment were defined by studying the questionnaire to determine the proximity of its objectives to the formation of ecological cities seeking to develop the city and protect its urban environment. Concerned with urban development, non-specialized executive bodies despite their specialization and lack of interconnection between the service departments of neighboring cities and Bismayah city, which results in a lack of optimal investment of resources and the absence of rules, regulation and effective follow-up, which generates a clear lack in many areas and control of many things on the application of the rules. The foundations taken in the era of the city, which generate problems on The short term and arose in these days, which were known through the questionnaire by specifying rates that estimate weakness in the urban environment by 45%. Interest in it inside the city, outside it represents 25%, and services provided are estimated at 52%, while in cities and standards it is not less than 60%. As for maintenance and follow-up inside the city, it is 43%. Outside it is somewhat non-existent, or 23%, and interest in providing services and distributing land uses according to standards, the percentage of service
provision to the city was 60%, while outside it 24%, which creates a gap between the city and its neighborhoods, a lack of interest in the urban environment and the impression of divergence between the city and its neighborhoods. And prepare an urban context for harmony and cohesion to some extent to protect the urban environment and develop the city and its neighborhoods. It requires activating urban laws and legislation to serve the city and its neighborhoods and protect the urban environment according to an interconnected urban context that is concerned with highlighting the city, and providing services to protect its environment depending on a number of standards and foundations for providing services to it, and the interconnectedness of the authorities concerned with providing these services and not making a city isolated from the other, but in an interdependence of protection and development. The urban environment in cities, and the activation of ecological principles to develop cities and make them sustainable cities, and requires empowering specialists involved in developing city development plans and activating the principle of ecology to make their decisions completely freely by following a general government policy that gives them the opportunity to experiment with their ideas and achieve a sustainable vision. Such a procedure requires the existence of a general policy that enables planners from all fields to work with complete freedom while striving to provide all that their work needs in terms of legal legislation, financial supplies and scientific equipment.

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