The Ecological Balance Restoration in Existing Cities

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Abstract
Over time, the environmental issues that cities face, have grown as a result of a variety of causes, including population growth, increased densities and built-up areas, and changes in numerous land uses. Because of these difficulties, our cities have lost many of their natural qualities and ecological balance. As a result, finding solutions to these urban problems and implementing measures to restore the lost ecological balance in existing cities becomes vital. In order to restore the ecological balance and reduce its negative effects on city life, a number of ways have been used. One of these ways is "Protecting forest and green areas". So green areas are one of the most important environmental treatments in urban spaces. And because this importance is more evident in cities than in the countryside. Balancing the green areas leads directly and indirectly to the balance of the rest of the elements that affect the ecological balance within the city.

Key Worlds: *Green areas, Ecological balance, Ecosystem, Eco-cities.*

1. INTRODUCTION

The world is becoming more urbanized, linked, and dynamic. Over the last few decades, there has been a growing awareness that human population growth and development, particularly in cities, is changing the entire planet's ecology. Cities are complex social-ecological systems with closely and loosely connected components interacting dynamically over space and time, making it difficult to develop resilient, egalitarian, and sustainable cities. The ability of the urban system to maintain social and ecological functions at the same time is critical. Ecosystem services are a crucial foundation for connecting ecological and social infrastructure in cities, potentially benefiting both humans and ecosystems. Recent population growth has been followed by increased demand for housing, higher production rates, more transportation options, and energy consumption, all of which have led to an increase in pollution and environmental imbalance. Despite the fact that numerous recent studies have emphasized the significance of urban ecological services, little is still known about how to design, build, and restore the components and ecological processes, functions, and services that are lacking in urban environments. Man's dominance in the global ecosystem, and his careless alteration of it to meet his need and greed, is the primary cause of global ecosystem imbalance. The problems of ecological imbalance are the result of a group of intertwined and complementary problems, and each of them leads to other problems. Many studies that dealt with ecological balance and Ecosystem and try to defining and review these terms.

Table 1. Studies that dealt with Ecosystem, and Ecological balance.

Research title	Date Issued	Summary about it
Ecosystem Restoration for People, Nature and Climate [1]	2021	The book describes the vital role played by ecosystems, from forests and farming to rivers and seas, and analyzes the losses that arise from our irresponsible management of the planet. It does this by drawing on the most recent scientific findings. Despite the fact that restoration science is a relatively new field, we already have the information and resources required to stop ecosystem deterioration and restore them. For instance, farmers can use tried-and-true restorative techniques like sustainable agriculture and agroforestry. All parties involved in the decision-making process are included in landscape methods, which promote both social and economic growth and ecological health. The enormous need for and potential for green investment is also becoming clear to policymakers and financial institutions.
Understanding Urban Ecology an Interdisciplinary Systems Approach [2]	2019	The complexity and interactions of many elements of a city's ecosystem are explored by the authors using a systems approach, with a focus on the energy and resources needed to maintain such dense hubs of human activity and consumption. The many urban subsystems, their distinct parts and roles, and the interconnections that shape the social-ecological contexts in which we live are all described in detail in the respective chapters. Students will have the knowledge and tools necessary to evaluate proposed policies for urban sustainability in terms of ecosystem capacity, potential positive and negative feedbacks, the laws of thermodynamics, and socio-cultural perception and adaptability thanks to the book's emphasis on social-ecological metabolism.
The impact of the built environment on the ecological and urban balance Example: the city of Damascus [3]	2013	The complexity and interactions of many elements of a city's ecosystem are explored by the authors using a systems approach, with a focus on the energy and resources needed to maintain such dense hubs of human activity and consumption. The many urban subsystems, their distinct parts and roles, and the interconnections that shape the social-ecological contexts in which we live are all described in detail in the respective chapters. Students will have the knowledge and tools necessary to evaluate proposed policies for urban sustainability in terms of ecosystem capacity, potential positive and negative feedbacks, the laws of thermodynamics, and socio-cultural perception and adaptability thanks to the book's emphasis on social-ecological metabolism.

2. THE CITY AS AN INTEGRATED ECOSYSTEM

It had signaled the start of a new environmental period following World War II. It referred to the building's environmental design as a machine (dubbed "machines to live" by Le Corbusier in the 1920s). It's a method for dealing with Earth stock disruptions caused by high pollution levels and overall environmental degradation. If the consequences of these changes, which are followed by changes in land use, are not assessed at the expense of the ecosystem, there could be considerable costs associated with the loss of this natural environment (for example, increased rates of natural warming Increased flood damage). Although there has been a major increase in study interest in ecosystems in recent years, the ecosystem of cities or urban regions has received little attention [4].

However, in the early eighties of the twentieth century, social and economic concepts began to take an integrated space with sustainability. Sustainability had more political dimensions than the environment as an issue of concern to the world, and that the global trend towards sustainability was not a decision belonging to a particular party and then adopted by other parties, but rather a rapid

development For global efforts that lasted for several years, during which meetings were held, conferences were held, symposia were held, reports and documents were issued, goals were unified, plans and strategies were drawn up, and the means for implementation were suggested. Among these efforts [5]:

Stockholm Conference 1972: During the Stockholm Conference, the link between the environment and development was discussed, as well as the extent to which countries benefit from specific advantages as a result of development. In general, the relationship between the environment and development has become a real gamble, as progress and development are still contingent on global environmental preservation [6].

Brandt Commission 1980: The focus of this committee is on the damages caused to the environment resulting from the population explosion and social injustice. A definition of sustainable development was established that focuses on the relationship between ecosystems and humans, through the efforts and cooperation of the countries of the world to achieve them.

World Commission on Environment and Development and Brundtland Commission 1987: This approach focused on two basic concepts, the first concept being to meet the needs of human beings for their living requirements in a way that guarantees them an acceptable standard of living [5].

Rio Earth Summit 1992: The Rio Conference focused on climate change, achieving development and environmental protection, calling for international collective action, adopting the concepts of sustainability and reducing environmental damage, including the three aspects of environmental, social and economic sustainability.

Climate Change Conference in Kyoto 1997: The conference dealt with climate change and an attempt to reduce the economic effects of reducing emissions, as mechanisms include joint implementation, sustainable development and trading in gas emissions, which collectively work to keep climate changes within acceptable limits [6].

The World Summit on Sustainable Development (Johannesburg Conference) 2002: The conference focused on working as quickly as possible to reduce the loss of natural resources, which are threatened with decay, and working to reuse and recycle them. Conferences at the Johannesburg Summit recommended that companies be urged to follow best environmental practices when doing their business.

The Melbourne Principles in Sustainable Cities 2002: The conference emphasized a set of principles that are not mandatory, but allow cities to develop sustainable solutions relevant to their specific circumstances:

1) Recognize, protect and conserve the intrinsic value of biodiversity and the natural ecosystem.
2) Building the characteristics of the ecosystem in the development and support of healthy and sustainable cities.
3) Societies' ability to reduce their environmental footprint [5].

U N. Conference on Sustainable Development (Rio+20) 2012: The conference focused on:

1) The institutional framework for sustainable development.
2) The green economy in the context of sustainable development and poverty eradication [6].

The directions in all conferences and committees were the following:

1) Reduce pollutants caused by excessive energy consumption.

2) Finding alternative sources of energy for fossil fuels.
3) Preserving nature for the integrity of the ecosystem and creating balance.
4) Taking the principles of sustainability as a way to solve all environmental, economic and social problems.

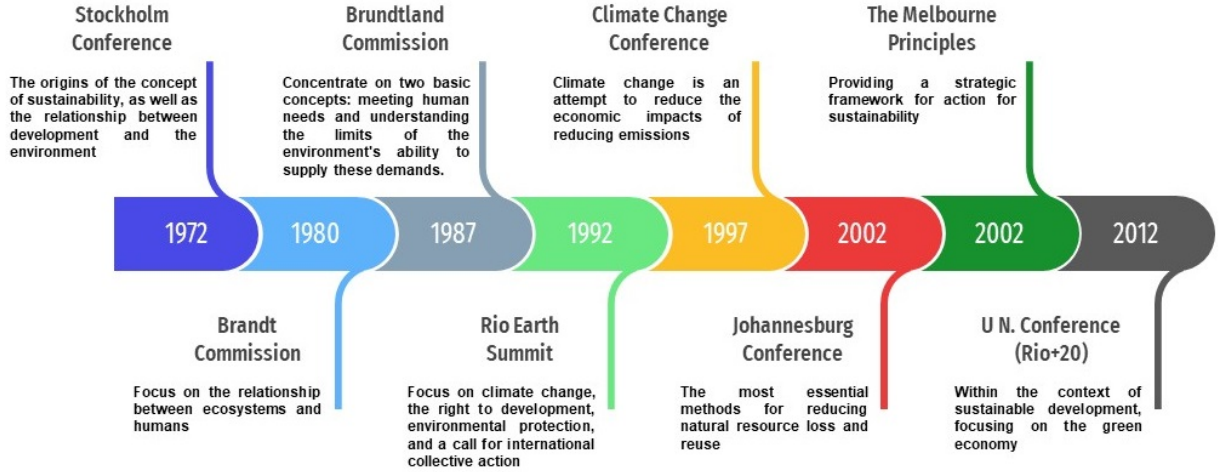

Figure 1.Timeline of the most important international conferences on sustainability [6].

The ecosystem concept has shown to be one of the most beneficial in ecology, as well as being widely accepted by non-ecologists and the general public. While there are disagreements between these two groups about what exactly constitutes an ecosystem, the concept's potential utility when applied to urban systems, where people live and work, justifies increased efforts to bring the ecological concept to urban systems. And can argue that cities can be viewed as ecosystems, and that the ecosystem idea is well suited to comprehending both natural and social dynamics (and their interactions) in cities [7].
In 1935, the British Arthur George Tansley was the first to define an ecosystem biologically as (a system consisting of an interrelated and varying set of living and inorganic components in a rather stable equilibrium), a biological definition. Contemporary geographers have used the term "ecological system" to describe the environment as a system of overlapping relationships between human and natural forces inside an integrated unit of mutual interactions between its constituents. In the field of urban and architectural design, the ecosystem is made up of a number of components, each of which has its own structure and internal interactions as well as interactions with likes and non-likes who share the spatial space [8].

Components of a City's Ecosystem
The ecosystem can be divided into two main components:

2.1 Natural Surroundings or (Natural Environment)

The non-human-made surroundings and conditions in which all living and non-living organisms exist on Earth are referred to as the "natural environment." The conventional understanding of the natural world includes two distinct elements:
Ecological units that function in the same way as natural systems (such as soil, vegetation and so on).
Universal natural resources (such as air and water).
The strong interrelationships between (land, building materials, trees, plants, climate, environment, latent and acquired resources), as well as the need for urban expansion to meet society's needs and aspirations, made it critical to find planning and design methods and foundations in urban works to achieve

compatibility between natural determinants and the environment in order to provide a balanced and homogeneous urban environment [9].

Natural factors create the framework of a human's external environment, which varies in circumstances from one region to the next. When there is an imbalance between these interrelated components, and patterns emerge that are unsuitable for human life and development, intervention is required to correct the situation through appropriate planning and design for the data and needs of the location and the individual [8].

Excessive use of available natural resources, as well as illogical consumption that results in environmental element depletion, result in unhealthy and diverse urban communities. It is critical to construct balanced urban communities by taking into account the natural and environmental conditions of the site, as well as its qualities and advantages, as well as the population's economic, social, and cultural conditions. In the field of urban design and planning [10].

2.2 Built Environment

It is the environment that man created, built, and established in the biosphere space, such as cities, human settlements, industrial centers, farms, transportation networks, water, sewage, and energy networks. (8).

Urban Land Use in the City

Cities resulted from the spatial concentration of economic and social activities, and the rate at which they grow is proportional to their absorption capacity. They do not become an out-of-balance city in this situation, because their development derives from the phenomena of urbanization, and thus the hierarchy of urban settlements remains balanced or close to equilibrium, as in the case of major cities. It emerges as a result of urbanization, and due to an increase in the number of immigrant populations in addition to the natural expansion in its population, it may lose its balance due to a rhythm that surpasses its absorptive capacity.

Housing, commerce, industry, transportation, public services, green areas, and open spaces for enjoyment are just a few of the ways land used in cities.

Several classifications of land uses have developed in the city, each with its own set of criteria, and one of the most thorough is that brought by the researcher (Norman William), which includes the following uses [11]:.

Residential Use: It takes up the majority of a city's land area, forming the environment in which residents spend the majority of their lives. It is the most visible aspect of the urban fabric, and it varies from one city to another, and within one city from time to time. It takes up between 50 and 60 percent (50%-60%) of the city's total area on average.

Public Use: Administrative buildings, schools, religious institutions, hospitals, and other uses are examples. Because this use is vital to inhabitants, it always occurs at different locations across the city, where it is sorted according to its ranks, importance, and degree of service.

Commercial Use: The main business area, local commercial centers, commercial locations for entertainment, and commercial establishments dealing with instant consumer products are all represented by these applications [11].

Industrial Use: The industrial areas include two types of industries: light industries, which are those industries located within the city, which are characterized by their small size compared to the other type, as well as the low waste of solid or liquid waste. They include small factories. And heavy industries, which are characterized by their large size

and raw materials, which need stores and yards, in addition to their discarded waste, which is very high compared to light industries.

Green and Open Uses (Green Areas): Green spaces are described as spaces that are largely covered in vegetation, and green areas are also classified as open spaces within the city, with the goal of connecting people to nature through this natural environment and improving the overall conditions. And it was created with sculpture and architectural issues in mind. And Green space can define as open, cultivated area that is commonly used for leisure purposes [8].

3. The Concept of Ecosystem and Ecological Balance

Ecological Balance means an interaction between the components of the living and non-living environment in a way that ensures the continued functioning of the ecosystems. It also defines as "the environmental interaction between living organisms with each other and the non-living masses around them such as water, air and soil.

This means that every living organism is part of the ecosystem and contributes to its balance, and that the increase or decrease of any element of the ecosystem due to external influences, such as air or water pollution or the extinction of some animals leads to an environmental imbalance [12].

The interaction between the components of the environment is a continuous process that ultimately leads to the environment maintaining its balance unless an imbalance arises as a result of changing some natural conditions, such as very high temperature, very heavy rain, or as a result of changing vital conditions, or as a result of direct human intervention in changing environmental conditions.

The change in natural conditions leads to the disappearance of some organisms and the emergence of others, which leads to an imbalance, which takes a period of time that may be long or short, until a new balance occurs [13].

However, direct human intervention in the environment is considered the main cause of the environmental imbalance, changing the natural features of drying lakes, building dams, uprooting forests, filling swamps, extracting minerals and with it sources of combustion, such as oil and human waste, liquid, solid and gas, in addition to the use of pesticides and fertilizers, all of which lead to a disruption of the ecological balance, as there are many environmental circles threatened by grave dangers that threaten to destroy life in its various forms on the surface of the earth [12].

The industrial activities of man and his economic ambitions have led to an imbalance in the ecological balance, as information, studies, reports and live observations refer to the negative effects of mishandling the environment, and to the heavy losses and health risks that countries are exposed to, due to pollution that threatens the universe [14].

The stability between production and consumption of each element in the ecosystem is referred to as ecological balance. In other words, ecological balance entails a balance of energy input and output, as well as the regular functioning of various bio-geo-chemical cycles and stable levels of all elements [15].

The ecological balance ensures the survival of the entire biota, which in turn ensures a healthy environment on the planet. The ecological imbalance, on the other hand, results in irreversible loss and deterioration of natural ecosystems, as well as climatic change, global warming, pollution, and other factors that decrease biodiversity. The greenhouse effect, ozone layer depletion, and acid rain are the main consequences of an ecological imbalance [13].

Human Impact on Ecological Balance

Man is one of the living creatures that affect the environment; therefore, it needs a balanced ecosystem in order to live a healthy life, but it performs many activities that lead to disturbance in the ecosystem, such as: cutting trees, overfishing, and converting green lands into residential and industrial lands, in addition to activities that lead to soil pollution. Air and water, which would pose a major threat to the environment.

On the other hand, people engage in some activities that contribute significantly to maintaining the ecological balance, such as: the use of biofuels instead of fossil fuels, which leads to a decrease in the proportion of materials and air polluting emissions, the exploitation of arable lands and the cultivation of trees in them, and the prohibition of the use of materials that lead to Environmental pollution that is difficult to get rid of, such as plastic [16].

In addition, The Ecological Balance is threatened by human population. Because human population growth has been exponential, meaning that the rate of expansion has remained constant regardless of population size. As the population grows greater, this causes it to increase even quicker.

Populations may grow exponentially for a time, but they eventually reach a carrying capacity when resource availability becomes a constraint. Humans, on the other hand, have continued to work around carrying capacity as they invent new technology to assist in the sustaining of an ever-increasing population [17].

On the other hand, urban areas (where people live) produce a lot of garbage and emit a lot of pollution. Cities, according to estimates, produce 70% of global carbon emissions and consume two-thirds of global energy. Air pollution is a major health hazard: more than 80% of individuals living in urban areas where air quality is monitored are exposed to levels of pollution that exceed WHO limits [18].

Ecological Imbalance

Man's dominance in the global ecosystem, and his careless alteration of it to meet his need and greed, is the primary cause of global ecosystem imbalance. The following are some specific reasons of ecological imbalance [15]:

Urbanization: Many socioeconomic, environmental, and health issues arise as a result of unplanned urbanization. As well as the environmental problems that were mentioned in the previous chapter, which certainly affect the ecological balance within cities and lead to imbalance.

Industrialization: To provide the fundamental necessities and comforts of life to our rising population, industrialization is required. Improperly planned industrialization, on the other hand, has resulted in major environmental contamination and ecological imbalance around the world.

Clearance of Forests and Green Areas: At least 6 billion hectares of forest and green areas are available for natural vegetation, and several billion hectares more may easily support woody vegetation. By the mid-twentieth century, civilization had diminished the world's original forest acreage by at least 33%, according to estimates. Forests, green areas, and croplands have been changed to urban and industrial areas by man. Forests are being destroyed for lumber and fuel wood, in addition to being cleared for agriculture and animal husbandry.

Green-House Effect: Carbon dioxide levels are growing, which is raising concern because the greenhouse effect will result in a greater average temperature on the earth's surface (so-called "global warming"). If this occurs, widespread climate change will occur, with potentially severe results. The melting of the polar ice caps could result in the submergence of much of the low-lying land mass and

numerous coastal cities. Similarly, due to global warming, productive area might become desert and agricultural production could plummet.

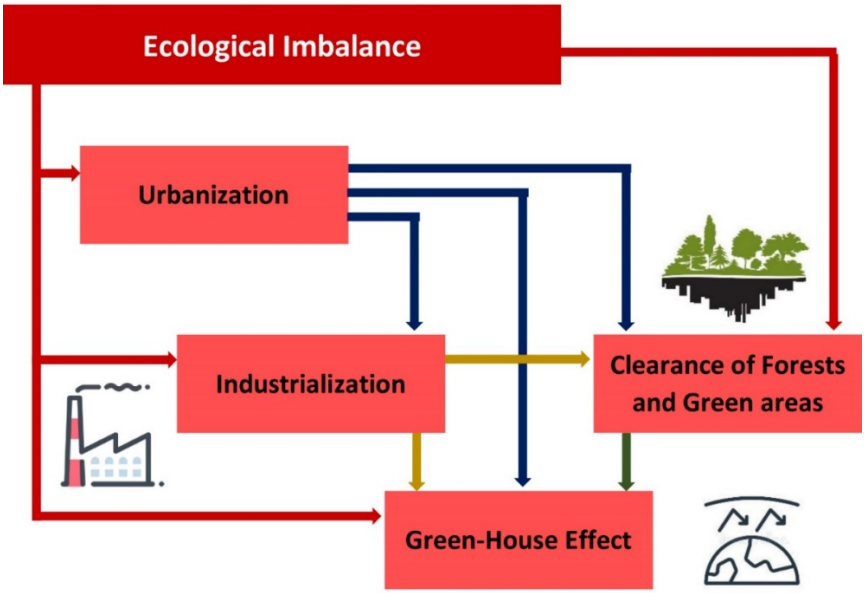

Figure 2. Summary of problems of ecological imbalance and its interrelationships [15].

Through the above, it can be noted that the problems of ecological imbalance are the result of a group of intertwined and complementary problems, and each of them leads to other problems, but it can also be noted that one of these problems (Clearance of Forests and Green areas) may be a cause In stopping this intertwined relations affecting the ecological balance in cities, it works directly to reduce the impact of (Green-House Effect) as well as reduce the side effects of a problem (Industrialization) which are harmful to the ecological balance, as well as determining the proportion of Green areas within the city in relation to The individual works to determine the population growth within cities, which has a positive impact on the urban ecological balance for the whole city.

3. Ecological Balance Restoration

Recently there has been a rising recognition that human life, as well as the future of economic and social growth, is threatened by ecological recklessness caused by human effect on the environment. Today, Ecological balance restoring has become a pressing issue and a significant obstacle for human communities, whose fundamental aim is to establish a relationship. The ideal relationship between humans and the environment, based on mutual benefit, continues to remain in balance, providing humans with a good living and healthy environment [14].

Restoring ecological balance it is a method of dealing with the environment that takes into account its balance and limited resources in order to remain a comfortable shelter for humans, i.e. the balance between the environment's productive capacity and population growth, where productive capacity refers to the basic necessities that preserve human life and dignity, such as food, drink, and housing... and others. It also means the maintenance of its constituent elements to keep them in their natural state, without causing any changes that distort them, in order to achieve an ecological balance.

And it is also about confronting the collateral damage resulting from the progress of modern industry from the

smoke of machines, factories and cars, and industrial materials such as liquids, waste, human and animal remains, noise and overcrowding of the population...etc., and the environment is improved through coordination between the areas of industrial and social development so that there is no imbalance in this balance that affects man and his societies [19].

4. Ways to Restore Ecological Balance

The current ecosystem is degenerative because it is linear, extracting resources from farms, mines, forests, watersheds, and oil fields to feed cities. By-products with garbage damage the air and water and are buried in the ground, affecting the carbon and habitat balance. According to a recent 2019 global assessment report on biodiversity and ecosystem services, human impact affects 75% of the world's land surface area. Restoration can happen in many ways [20].

Population-Control: Consumption, technology, urbanization, and other variables play an important role in the environmental impact of population expansion. Slower population growth, on the other hand, could relieve pressure on natural systems that are already overburdened, Research suggests that a slew of environmental issues, such as greenhouse gas emissions, water scarcity, and biodiversity loss, would be easier to address if the world population peaked at 8 billion people rather than 11 billion or more [22].

Climate change is anticipated to reduce agricultural production in many regions of the world, making the already challenging task of managing limited water supplies even more onerous. Slower population increase would aid individuals in adapting to climate change, minimize human vulnerability to its effects, and allow countries to invest more in health care, education, and long-term economic development [21] Figure 3.

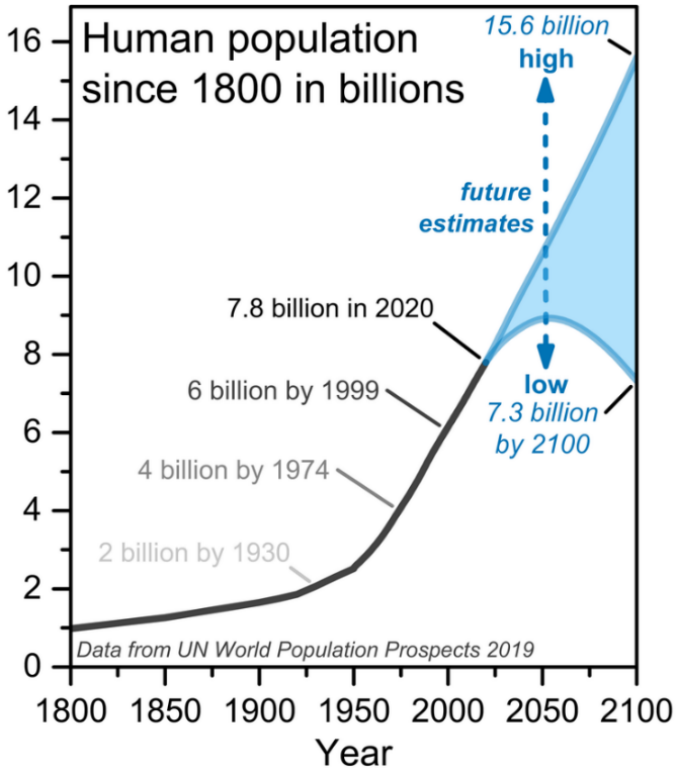

Figure 3. Human population [27].

Clean Energy Development: The significant increase in the population and the introduction of modern technologies that depend on energy in all different life activities have clearly led to an increase in energy consumption, and the global consumption of energy is expected to increase by 50% during the period 2005 and 2030.

It becomes clear the great trend towards an increase in the global consumption of conventional energy, which threatened its current sources to deplete within a few dozen years, and also that the dependence of countries on non-renewable energy sources seriously threatens their growth, and affects their economic entity and political independence to a large extent. Not to mention the negative effects of traditional energy sources on the environment, which is still the main source of energy in the world, and hence the importance of the international trend towards developing alternative energy sources as an economic and ecological solution [14] Figure 4.

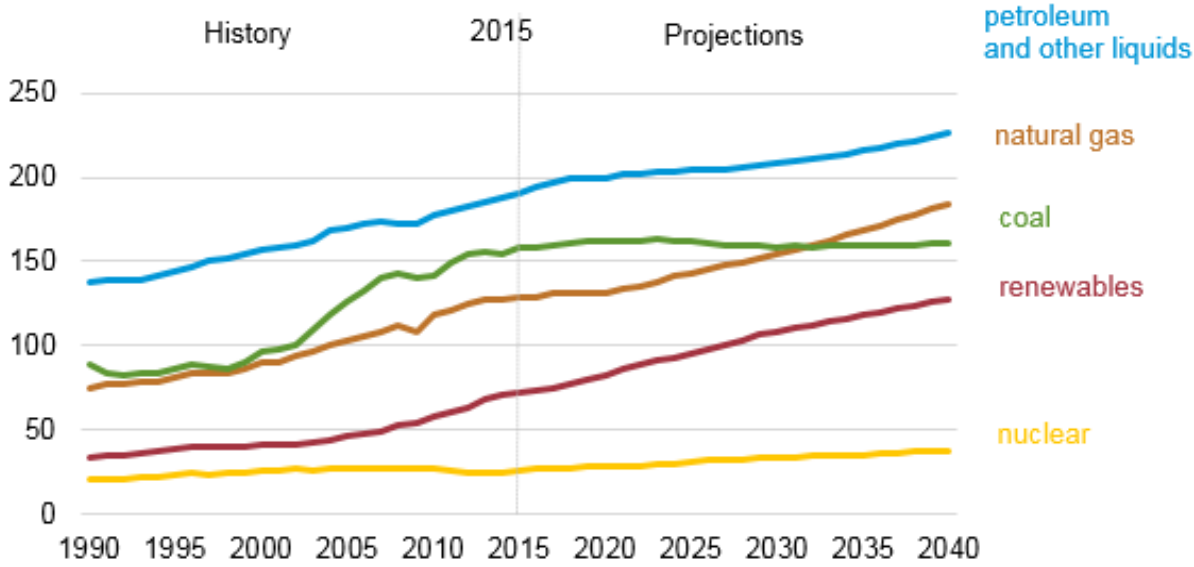

Figure 4. Global energy consumption by type [28].

As energy is the main source of environmental pollution in its various forms, and the primary reason behind the emission of greenhouse gases and climate change, countries have tended to develop renewable energy sources, as a future strategy to reduce the effects of high oil prices on the one hand, and protect the environment from the problems arising from large consumption. On the other hand, fossil energy and its economic consequences. The energy policy in many countries is directed towards investing in the development of clean and renewable energies as a means to achieve sustainable development [14].

Water Protection: A large number of scientists have underlined the importance of natural balance. It is highly dependent on the water quality. Unfortunately, sewage pollution, pollution from agricultural farms, and pollution from industrial plants all upset the world ocean's natural balance. Sewage, waste agricultural fertilizers, and industrial effluent all contribute to the growth of algae in lakes, rivers, and seas, obstructing oxygen supply to aquatic plants and animals and disrupting the natural ecosystem's balance [22].

Reducing Greenhouse Gas Emissions: Another ecological issue worth addressing is greenhouse gas emissions. When fossil

fuels (coal, petroleum, and natural gas) are burned, carbon dioxide is released into the atmosphere, resulting in greenhouse gas emissions. When carbon dioxide is released into the atmosphere, it contributes to the development of the so-called greenhouse effect, which traps heat near the Earth's surface. The temperature of the Earth's surface is rising every year: the average annual temperature has risen by 5 degrees since the middle of the last century. As a result, the glaciers that cover the North and South Poles are melting, and the sea level is rising, causing flooding, hurricanes, storms, and other natural calamities. The Earth's climate is changing, and there is need to emphasize the importance of ecology. By driving less, consuming less electricity, and producing less garbage, we may begin to improve our unhealthy consumption habits. Additionally, employing a personal carbon footprint calculator can aid in the reduction of greenhouse gas emissions. We can achieve a balanced ecology, reduce carbon emissions, and limit global warming this way [22].

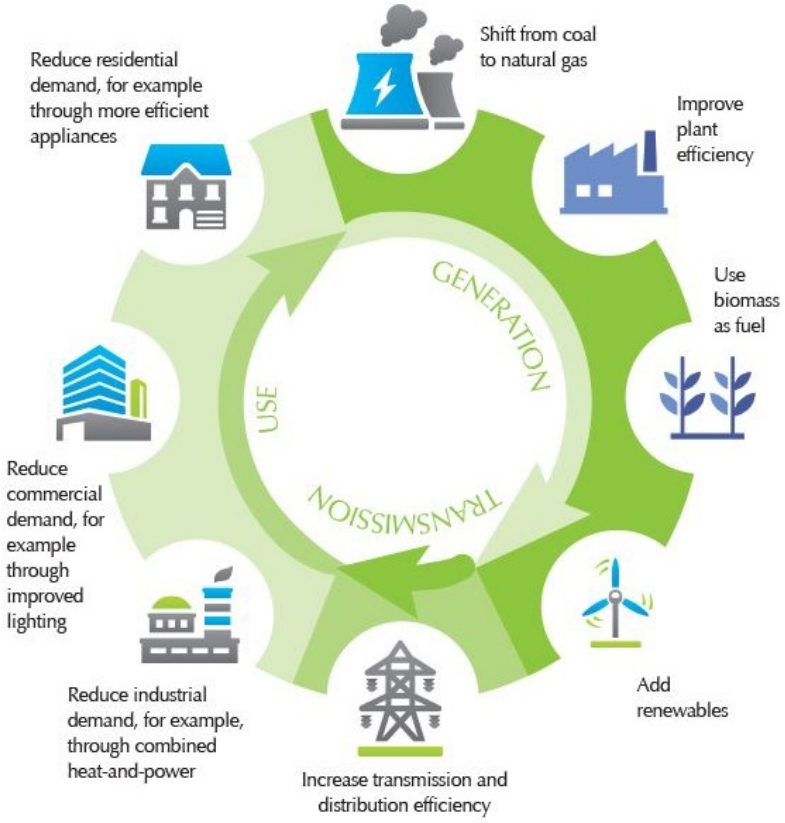

Figure 5 Reducing Greenhouse Gas Emissions [28].

Changing Consumption Patterns: Natural Resources are being consumed at a much faster rate than they can be produced. It is anticipated that if current consumption patterns do not change, the world's consumption would increase by 2050 to meet demand.

Changing consumption patterns, combined with population growth and food insecurity issues, could offer difficulties to environmental sustainability. When people's buying habits change, they tend to gravitate toward things that aren't widely available or aren't produced in sufficient quantities in the area. As a result, increased demand can lead to significant changes in production practices, land usage, land cover, and commerce on a regional and global scale [23].

Sorting and Recycling Waste: Increased waste and pollution is a global issue that

hurts the environment in a number of ways. Concerns have been growing around the world as many landfills reach their maximum capacity.

As a result, recycling is the process of collecting and processing materials for new production rather than discarding them as waste. This process keeps materials moving in the natural world. Recycling lowers pollution and ensures that the environment is preserved for future generations. It also benefits the economy by conserving energy, natural resources, and producing jobs.

Sorting waste helps to ensure that recyclable waste does not end up in landfills. This minimizes the amount of landfill space used and the amount of greenhouse gases emitted. In addition, recycled waste can be delivered to a recycling center and put to good use [24].

Protect Forest and Green Areas: Parks and sports fields, as well as forests, meadows, wetlands, and other ecosystems, are important components of every urban ecology. Green urban environments encourage physical activity and relaxation while also offering a respite from the city's noise. Trees produce oxygen and aid in the filtering of hazardous air pollutants, such as particles in the air. The temperature of water, from lakes to rivers and fountains, is mild.

Urban green areas help to keep cities cool by providing safe walking and cycling routes, as well as places for physical activity, social contact, and relaxation.

As the city's lung and the only field for offering enjoyment and entertainment in the urban environment, green spaces are essential for any city that aspires to attain an element of comfort, prevention, and picnic for its citizens. In addition to its aesthetic function of producing beautiful views that add value to cities and neighborhoods, it also serves a practical purpose [25].

The green spaces constitute one of the basic components of the city, as they share with the buildings, streets and squares in determining the general urban configuration of the city, so the city plan must be familiar with the rules and principles of planning and design for the sake of creating harmony and compatibility between the urban fabric of the area and the type The shape and method of distributing green spaces within the city, and it must be noted that green spaces, in addition to their functional, recreational and aesthetic role, play an important environmental role in positively affecting the global climate of the city [26].

Table 1. Analysis table of ways to restore ecological balance, and a way to achieve [29].

Ways to Restore ecological balance		a way to achieve ecological balance
Population-Control	→	Family plan
	→	Government laws and orders
Clean Energy Development	→	Use renewables sources (sun, wind, biomass)
Water Protection	→	Control sewage
	→	Control industrial output and agricultural
	→	Protect green and wetlands land
Reducing Greenhouse Gas Emissions	→	Use clean energy
	→	Protect green areas and forest in and around city
Changing Consumption Patterns	→	Educating the population about Natural Resources
	→	Increased green and productive land
Sorting and Recycling Waste	→	Educating the population about sorting and recycling
Protect forest and green areas	→	Control Population,
	→	Control industrialization
	→	Compensation for cleared green areas
	→	Reducing Greenhouse Gas Emissions

Through the above, it can be known that there are a group of ways that partially lead to achieving ecological balance in the city's ecosystem, and each of these ways there is a group of deities or methods that must be adopted. It can be realized that the protect green areas within and around the city it has a major and essential role in achieving the ecological balance and preserving the city's environment, protecting green areas within the city can be an essential and accidental reason in achieving the other ways required in achieving ecological balance (Reducing Greenhouse Gas Emissions, Water Protection, Changing Consumption Patterns).

Green areas are one of the most important environmental treatments in urban spaces. And because this importance is more evident in cities than in the countryside. Balancing the green areas leads directly and indirectly to the balance of the rest of the elements that affect the ecological balance within the city, this chapter will address in its second axis the classifications of green areas and the standards and foundations to be followed when designing and planning this use in the city.

5. CONCLUSIONS

The ecosystem concept is well adapted to understanding both natural and social dynamics (and their interconnections) in cities, and one can argue that cities can be thought of as ecosystems. The ecosystem in the field of urban and architectural design is made up of various elements, each of which has its own structure, internal relationships, and interactions with likes and non-likes who share the spatial space.

The Concept of Ecosystem and Ecological Balance: An interaction between the elements of the living and non-living environment that supports the ecosystems' continuing health is referred to as ecological balance.

This entails that every living thing is a component of the ecosystem, contributes to its equilibrium, and is influenced by outside factors when any constituent of the ecosystem increases or decreases. Natural environment changes cause some creatures to disappear and others to arise, creating an imbalance that lasts for an uncertain amount of time before a new equilibrium is reached.

Ecological balance is the consistency of production and consumption of each component of the ecosystem. In other words, a balance between energy input and output is necessary for ecological balance.

Ecological Imbalance: The imbalance in the global ecosystem is mostly caused by man's dominion over it and his thoughtless altering of it to satisfy his needs and greed. Here are some particular causes of ecological imbalance:

1. Urbanization
2. Industrialization
3. Clearance of Forests and Green Areas
4. Green-House Effect

The challenges of ecological imbalance are the outcome of a number of related and overlapping issues, each of which breeds new issues.

However, it can be highlighted that one of these problems, the clearance of forests and green spaces, could be a contributing factor. The individual works to determine the population growth within cities, which has a positive impact on the urban ecological balance. In order to stop these intertwined relations from harming the ecological balance in cities, it directly works to reduce the impact of (Green-House Effect) as well as reduce the side effects of a problem (Industrialization) that are harmful to the ecological balance.

Ecological Balance Restoration: A strategy for dealing with the environment that considers its balance and finite resources in order to keep it a suitable place for people to live is called restoring

ecological balance. Restoration can happen in many ways:

1. Population-Control.
2. Clean Energy Development.
3. Water Protection.
4. Reducing Greenhouse Gas Emissions.
5. Changing Consumption Patterns.
6. Sorting and Recycling Waste.
7. Protect Forest and Green Areas.

It is recognized that a number of ways go toward establishing ecological balance in the city's environment, and that for each of these ways, a number of deities or methods must be followed. It is clear that protecting green spaces within and around cities is crucial to preserving the environment and achieving ecological balance. Additionally, protecting green spaces within cities can serve as an accidental but crucial catalyst for achieving other ecological balance-related goals (Reducing Greenhouse Gas Emissions, Water Protection, and Changing Consumption Patterns).

One of the most significant environmental enhancements in urban areas is the presence of green spaces. And because cities exhibit this importance more so than rural areas. This is confirmed by the emergence of numerous urban ecological theories, which emphasized dealing with cities in a more integrated manner and on more than one level at the same time, as well as the possibility of coexistence between man and the environment around him. Balancing the green areas leads both directly and indirectly to the balance of the other elements that affect the ecological balance within the city.

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