Urban law and sustainable cities: Reasonable analysis of the case in the Republic of Ecuador

José Albert Márquez¹, Jaime Alfredo Alarcón Zambrano²*

¹ Universidad de Córdoba, Córdoba City 140114, Spain.
² University San Gregorio de Portoviejo, Manabí 130101, Ecuador. E-mail: jaalarcon@sangregorio.edu.ec

ABSTRACT

The purpose of this article is to analyse the current relationship between urban law and sustainable cities, based on concepts of a general nature, the case of Ecuador. In this regard, the current reality in Ecuador is a model, because there are a limited number of appropriate legal regulations, the lack of practice in the academic community of urban planning law, the lack of policies to implement these regulations and, in your case, sanctions for non-compliance. From another perspective, this situation provides the possibility to propose real policies conducive to sustainable urban development. Finally, the purpose of this study is to test the following hypothesis, that is, the laws and regulations of the urban law are not truly autonomous, enough, consistent and appropriate, and can not guarantee the sustainable urban development. We will take the realistic temporal and spatial framework of Ecuador as a reference.

Keywords: city; urbanization; urban planning; urban law; sustainable cities

1. Introduction

Contemporary society is characterized by a continuous process of urbanization. In this process, the way of urban management and construction directly affects the environment and the quality of life of citizens. Cities all over the world have various structural models, such as shopping centers, historical centers, centralized or decentralized construction areas, as well as new urban expansion and renewal trends. In recent years, such coexistence has resulted in the waste of soil, infrastructure and natural resources in some areas, resulting in new and serious problems of habitability and sustainability[1]. In fact, today, cities—especially when urban law is in its infancy are experiencing an increasing process of polarization and social exclusion, as well as an urban system characterized by worrying social spatial imbalances.

The rapid growth of industrialization and the ensuing urban chaos have led to the serious deterioration of natural resources. The increase of human settlements in urban fringe areas has in many cases resulted in the loss of large green areas and strategic wild ecosystems, the pollution of aquifer resources and the improper treatment of domestic, industrial and pharmaceutical solid waste. In this case, nature plays a secondary role. The main motivation is to address immediate needs. In this regard, the most important is urbanization and urban
expansion, regardless of respect for the environment, as a structural and expressive element of the environment, and respect for human life[2].

Therefore, the city must be a guarantee area of an environment conducive to the physical and mental health of its residents, which now appears to be an institution of pollution, waste of resources and social exclusion[1].

This dilemma in cities was initially obvious and obvious in the environment and local governments, but later aroused the real concern of governments. Governments began to think and strive to develop the concept of land management to solve the problems described, and finally welcomed by the international community because of its vital importance, countries integrate the importance of environmental protection and balanced urban growth into international instruments to achieve sustainable cities.

However, by their nature, documents of an international nature lack timely accuracy in addressing all specific issues in each case, and they have not been strengthened by violations and sanctions regimes to ensure their effectiveness. It is therefore clear that the implementation of sustainable development must be strengthened at the regional and local levels through new planning policies based on sustainable urbanization[1].

Therefore, we are faced with the indispensable relationship between urban planning and landscape planning, which reflects the necessity of spatial planning and urban planning. The first framework is formulated in the overall context of the whole territory, with the purpose of achieving balanced development in all regions; In addition, the second area is limited to smaller local planning areas, so there is a need for sectoral planning for integrated land planning[3]. In both cases, the plan is needed, which is a tool for managing regional and urban development in a specific geographical space.

Urban development plans help to determine population distribution and delineate the space required for public roads, public service networks and infrastructure, which are necessary for comprehensive development. Similarly, soil types are also defined, classified and classified; Allocate the elements of urban equipment required for the harmonious development of the city, and protect the basic rights of residents in education, health, entertainment, commerce and transportation. In other words, urban planning enables people to plan the physical space of the city in an orderly manner in accordance with the principle of human dignity and considering the policies of environmental protection, economic development and social cohesion unique to sustainable urban design.

The implementation of urban development plans based on sustainable urban design has created tension between individual and collective rights in cities, which leads to the need for legal norms to regulate this social phenomenon in order to develop a sustainable city. This provision is formulated by the urban planning law.

Urban law although it is a unique, specific and special discipline in the broader branch of administrative law, which was initially closely related to civil law, with the passage of time, it has formed its own form and object based on the idea of rational use of land and space and these ideas and activities, and began to have its own principles and systems, And intervention technology to become part of an institution with a special identity. In this case, the urban planning law is a legal system composed of principles and rules regulating the activities of public authorities and individuals. These principles and rules are to seek a reasonable order in the use and activities of urban and rural land.

Therefore, the above situation determines that cities, and more importantly, sustainable cities, are the objectives and challenges of modern urban law[4], because it plays a key role in the legal system and is a tool of land organizations in respecting the environment, promoting a fair economy and strengthening a balanced social structure. In this
context, this paper expounds the close relationship between city, urban design, urban planning, urban law and sustainable city. But most importantly, it attempts to prove that the content and implementation of urban regulations have a significant impact on the appropriate behavior of urban residents in the environmental, economic and social fields, with a view to achieving sustainable cities.

Vallicelli[5] asks the question: What is the bet on sustainable cities? He replied that in the next 50 years, more people will live in cities than in rural areas, which means that if we do not create dynamic, humanized and environmentally sustainable cities, we will become a generation of species that may end life on earth, because it is so terrible, so dramatic and so real. This will lead us to think deeply about the major problems in urban life, and force us to study, propose suggestions and alternative solutions from different fields of knowledge through research.

2. Development

2.1. Modern city, the main object of urban planning

Rivero is a discipline that is conducive to the continuous development of the environment and the quality of life of citizens (it is always a discipline that aims to help create different habitats and habitats in 2018). The unique historical, political, social and economic changes, war conflicts and the migration of hundreds of people from rural areas to cities in the 19th century and the whole 20th century have led to chaotic urban development and weak functions. Fernandez[6] believes that this has led to the trend of population concentration in cities. Cities need to find larger living space and find alternatives for their economic and social welfare.

In the process of industrialization, the reality of human settlements is typical, because the entry of technology enables citizens to obtain the source of wealth and large-scale production of goods, but the cost is very high, because excessive progress has not only caused the isolation of social strata, but also caused overcrowding, ill health and environmental pollution.

The overall number of urban populations has increased and continued to grow. Trends in 2012 indicate that by 2030, the urban population will reach two-thirds of the world’s population and the urban land area will triple. The United Nations study in its 2014 review report[7] also found that the global population in urban areas is more than that in rural areas, and there is a growing trend. Therefore, by 2050, the urban population will double, and urbanization will be regarded as the most transformative trend in the 21st century[8].

Similarly, the urban population and the number of cities in all Latin American countries are growing rapidly[9]. By 2020, the urban population of Latin America is estimated to reach 80% of the total population.

The trend of rural populations seeking refuge in cities has even led to the fact that not all citizens have ventilated and safe rooms[10]. For example, in the past half century, Mexico has experienced this global reality, where the population has become very urbanized (three quarters of the population live in cities), which is a scenario without proper planning and regulation[11]. However, many of the political, administrative and financial rules and instruments developed for a world where population growth is much lower than in the current world are still applicable to the new reality.

Therefore, this situation must be reversed with a view to establishing environmentally friendly cities and ensuring the physical and mental health and decent life enjoyment of residents. The control of urban space enables it to use the property on it and obtain other property and services related to housing location or economic infrastructure, such as education, entertainment, work, health care, transportation or public services[12].

In order to achieve this goal, we believe that it is necessary to formulate appropriate territorial
systems and relevant laws and regulations to organize, guide and control the use and distribution of land and urban development according to the living standards and quality of life of residents, This is what led to the emergence of land and urban planning, which is supported by a legal framework that regulates the interests and behavior of urban residents for the benefit of collective well-being.

2.2. Sustainable urban design

Urbanization emerged as a social policy in the second half of the 19th century to address health and discrimination in large cities\[13\]. For many years, it has been regarded as art and science, and has always been closely related to urban planning. It is defined as a science that manages cities and urban agglomerations by determining the spatial organization and land use of cities, urban facilities, road systems, building regulations, management systems and urban controls\[14\]. For example, on the other hand, Tarrago\[15\] defines urban planning as a tool that has an impact on the environment, whether through environmental destruction activities or environmental protection activities.

On the other hand, the development of urban design is constrained by the spatial needs of each era, and appropriate alternatives and mechanisms need to be found to solve the problems of land, property and destination in cities\[10\].

In addition, authors like Roca pointed out that urban design in the 1920s was like the “intersection” of art, technology and science; moreover, it was always evolving. Similarly, Garcia beliedo and Capel regarded urban planning as two aspects of art and technology. Castro Pozo also believes that urban planning is still developing and faces challenges and difficulties brought by territorial expansion and environmental pollution.

In recent years, issues related to urban internal reform, environmental sustainability, energy efficiency, combating speculation and the appropriate allocation of housing rights as the basic rights of the new generation have increasingly been regarded as public interest issues requiring new urban design\[16\]. Therefore, when seeking alternative solutions to environmental problems and trying to manage cities to improve the quality of life of their residents, modern urban design regards sustainability as a feasible paradigm, so that people can have an overall view of urban development; This view includes three key aspects: Ecosystem protection, economic development and social participation\[17\].

In this regard, Martin pointed out that urban design is an automatic science aimed at shaping cities according to the principles of sustainable urban development and urban residents.

The concept described determines the evolution of urban design relative to its intervention routes. These intervention routes increase due to the long-standing problems in the city. These problems are not only related to landscape planning, but also “involve the relationship between man and environment, making land and soil the axis of its operation”\[6\]. We share the conceptual evolution process, because we believe that urban design must now have a new perspective, a comprehensive and comprehensive perspective, which not only involves a simple technical reference for the process of architecture or public decoration and beautification, but also meets the requirements of sustainable development.

The comprehensive integration of environmental, economic and social variables into urban design means that the conditions for improving the quality of urban life are based on the material determinants of the environment and the improvement of human living conditions. Therefore, economic progress and social development are needed to determine sustainable urban design.

Therefore, the task of sustainable urban design is to find solutions, optimize the material space in urban expansion, allocate social and economic activities, and implement new architectural design to promote the compatibility between urban environmental services and the city’s own human
activities, so as to minimize its negative impact on the environment and promote the equitable development of economy and society.

In short, sustainable urban design must include environmental, economic and social sustainability.

Environmental sustainability must ensure that urban growth has minimal impact on the environment and space, which means that urban development must be at the cost of minimum resource and energy consumption and produce as little waste and emissions as possible.

Economic sustainability must plan an economically viable urban development without compromising the resources needed for priority projects that contribute to the economy of the city and its residents.

The goal of social sustainability must be to enable urban projects to meet the social needs of their environment by improving people’s quality of life and allowing citizens to participate in the design, dissemination and approval process of projects, so as to ensure that all people can know these projects in advance, so as to ensure greater acceptance and commitment to these projects.

As we have said, the implementation of urban development plans based on sustainable urban design often creates tensions, which is why such implementation cannot leave the free will of public authorities and urban residents. Therefore, since all aspects of urban planning are an inalienable responsibility and authority of public authorities, it needs a law and regulation to regulate and control the coexistence of interests in order to promote harmonious coexistence and sustainable development of cities.

In addition, territories and human settlements must be inherent aspects of national social and economic policies. Territories and human settlements have become strategic actors in national and local socio-economic development. Therefore, urban planning and land management should be regarded as the spatial expression of any socio-economic, social, cultural and environmental policy. It is unimaginable not to update the legal instruments guiding the background of the new urban land policy, which is an important parameter for achieving sustainability.

2.3. Overview of the historical evolution of urban design

The management and management of urban construction have traditionally been the responsibility of municipal authorities. Therefore, many early urban planning was closely related to urban law and civil law, which were responsible for regulating property rights.

In Western European culture, the first feature of urban layout appears in Roman cities. The governor of the city and the governor of the pilgrimage are the first batch of managers of the city.

Around A.D. 64, after the Roman fire, the city put forward some restrictions on private land ownership. These restrictions stipulated buildings and building parameters, such as maximum height and online buildings, which enabled it to build a more orderly and planned city and have more public space. In a city, measures in line with today’s city law were taken for the first time.

Later, in the middle ages, cities were characterized by sudden separation from their surroundings by defensive walls until the industrial revolution began and population growth began to undermine social responsibility, causing chaos, pollution and disease.

The problems described need to be solved. This is the outline of urban standards, which enable cities to establish and expand through the convenience of land use. The foundation was established through so-called municipal institutions, which formed a new human group and divided the terri-
tory. Moreover, expanded legislation, the technology then used for orderly and planned urban growth recognized urban growth to territory outside the walls. Expropriation is also considered to be a feasible means of creating public space.

In the American continent, before and during the Incas era, cities developed special vision and technology. For example: Chan-Chan (9th century), a sacred building built with adobe, with reservoirs and residential houses. In addition, Machu Picchu is a large complex with various entrances, temples, palaces, aqueducts, steps and walls[^14].

The historian Enrique Estrada[^14] said that Inca cities used the Kancha style urban module, which gathered small walls around the central open space to form a block, which in turn formed orthogonal parts, and squares, narrow streets, roads and the whole building complex were organically connected with the site. The infrastructure of the Inca city is designed to meet agricultural production (reservoirs, canals, reservoirs, etc.). And is always suitable for its landscape and valley.

Inca urban planning has been widely developed. It is worth noting that this blueprint has been used as expected in the reconstruction of Cusco, which is a bright spot of the future city and stipulates that no other Indians can settle in it in order to maintain its “prominent city”[^14].

Spain’s conquest of the Americas will replace the pre-Columbian process of urbanization based on the discovery and discovery of new populations. Therefore, shortly after the so-called colonial era, the decree of Philip II was issued on July 13, 1573, which stipulated the mechanisms and guidelines for the establishment, construction and management of a city.

On the other hand, Philip II’s decree further stipulates that, despite the growing population, there must always be a policy of creating public space so that people can recreate themselves[^20]. This urban legislation sets two basic standards for today’s urban legal system, namely:

(a) Create public space in cities to enable human beings to exercise their civil rights. These places have become so important that they are above private property, making streets, parks and squares more popular than buildings and buildings.

(b) Citizens’ right to use, use and enjoy urban public space. For example, the Republic of Ecuador is currently referred to in the constitution as “urban rights”.

In the early 17th century, a major urban reform occurred in Europe, which will lead to one of the most important technologies in urban law, namely “redevelopment” (internal reform), the demolition of old and unhealthy communities to build higher quality buildings and public spaces, and provide better public services, which have improved the order and aesthetics of cities.

The 18th century marked the beginning of the first urban planning action in France from the perspective of the health and safety police (Louis XV act of 1765 or Louis XVI declaration). In addition, the Royal Decree of 15 October 1810 reorganized the police health protection for dangerous, uncomfortable and unhealthy places[^16], which were then characteristic of the city of Paris. Similarly, Governor George Hausman continued to open up new streets, creating beautiful prospects for symmetrical facades to beautify the city[^13]. Therefore, two very relevant mechanisms have emerged, namely: (a) building permit and (b) police control of buildings, which still exist in modern urban planning law.

In Italy, two legal instruments have been proposed at the same time as a means of solving the problem of urban population density: (a) Building regulations, some of which were formulated at the beginning; and (b) the expropriation ordinance[^14], which is currently regarded as the basic basis of the urban planning law.

On the other hand, in order to solve the problem of land use, Spain adopted the land law of 1956[^13], which affected the subsequent land laws being drafted in Latin America, such as Chile in
At present, all Latin American countries have urban law rules, which are formulated within the legal framework of urban planning, such as the organic law on territorial organization, autonomy and Decentralization (cootad) of the Republic of Ecuador. Land management, use and management law. And development and territorial administration plans and supplementary plans formulated and approved by decentralized self-government.

To sum up, urban design continues to evolve with the development of society and urbanization, trying to adjust and meet every human demand for the environment. Unfortunately, the changes in society and the material space known as the city are almost always sudden and huge, and the complexity of urban life, including various situations and conditions, make it impossible to quickly connect with these changes in its historical evolution, resulting in an outdated and inefficient period of urban policy.

3. Urban planning and law: Necessary relationship

3.1. Concept of urban law

The role of law in the field of urban planning has always been determined by formulating a set of rules and giving planning elements, which are very important for the orderly development of urbanization, architecture and construction process. Therefore, “the current city can not be an indifferent phenomenon”.

In the current theory, Castro Pozzo believes that the urban planning law is a set of rules. According to these rules, the administrative authorities on behalf of the public interest and the property rights holders on behalf of safeguarding personal interests must regulate their positions and respective actions on land planning.

Palada believes that the urban planning law is a set of rules that regulate the land planning process and its physical transformation through urbanization and architecture. Therefore, it systematizes very clear public powers, such as the management of territory, the process of urbanization and the monitoring of resulting buildings, that is, controlling the right of owners to transform their land by building buildings for housing, commercial, industrial and other purposes. As a set of rules, urban laws in all countries are guided by sectoral laws or urban planning laws. Similarly, Galvis, Cordero Rajevic and Rivero regard the urban law as a set of rules regulating the spatial planning of human settlements and urban land use, limiting private property, giving priority to the public interest, and finally regulating the formation, protection and development of cities. Martinez Gill said that urban law is a set of legal norms designed to regulate the behavior of residents affecting the operation of cities. In this regard, Rivero pointed out that the birth and evolution of cities are not random, but because they are designed, built and developed by people with specific goals, ambitions and ideologies in a specific historical period.

Fernandez insisted that today’s urban planning law must correctly plan our land use, just as it must ensure an appropriate balance between all land needs, so that land can be used for the benefit of all people, not all available material resources, and land is the only thing that cannot be increased.

To sum up, we can think that urban law can be regarded as a legal discipline to standardize the urban planning process and control the land use right by coordinating the planning, management and control process of urban development and putting general interests above personal interests.

3.2. Principles of urban law

According to Galvis, the principles of the urban planning law are:

(a) The general interest is paramount. Despite the need for coordination between the public (Public Administration) and the private (property rights holders), the general interest and the interests of the
community prevail over the individual interest.

(b) The social and ecological functions of property. Urban justice must be sought to restrict private property and establish mechanisms to ensure the effective use and enjoyment of urban rights and protect the environment and natural resources.

(c) Share burdens and benefits fairly. Coordination between public and private is important. The imposition of burdens and sanctions must be accompanied by the provision of benefits and incentives to private property and public administration, whose regulations often have restrictions and loopholes.

We agree with the above principles, because the purpose of these principles is to enable all citizens to effectively use and enjoy cities and ensure that cities enjoy equal use rights and the same rights and obligations under equal conditions. In short, as axiological principles, they can form the basis of sustainable urban design and urban concept.

3.3. Contents of city law

According to Castro Pozzo, the urban planning law should include the following:

(a) An administrative organization composed of public power and power, citizen participation and the protection of the managed.

(b) Land system, through land classification and grading, through urban planning, land management and zoning, stipulates the impact of urban planning on property rights, makes corresponding functional analysis on different urban activities, and standardizes and shapes the social functional policies of property.

(c) Rules and procedures for urban management, land use, recovery or distribution of capital gains and financial arrangements of urban planning carried out by the executive body. They are not only members of relevant public administration departments, but also landowners, entrepreneurs and neighbors. They participate in the urbanization and construction activities of different spaces in the city.

(d) A set of urban rules constituting urban law, including not only texts or regulations, but also a set of general rules and regulations and technical tools, such as urban planning.

(e) Urban planning control, that is, preventive intervention in land use and construction, measures to protect the legitimacy of urban planning, infringement and punishment, and damage compensation for urban planning infringement.

Similarly, Rengifo pointed out that the urban planning law consists of three basic branches: Planning, management and control.

In contrast, Cordero said that the content of the urban planning law can be summarized into the following four points:

(a) Urban planning, involving urban planning categories.

(b) Urban land ownership system, involving urban zoning, land types and the rights and obligations of owners.

(c) Urban management, that is, all ways of implementing urban planning.

(d) Urban planning discipline, including preventive intervention in construction and land use, violations and penalties.

Therefore, the content of the urban planning law can be basically summarized into three aspects: planning, management and control, which must be exercised by the public administration because of competition. In theory, this can be defined as “assigning functions to an administrative agency through clear rules, and its performance is the effectiveness requirement of each action”[14]. Competition is one of the basic elements of administrative behavior, and its ownership of public administration must be clear.

In this regard, urban planning capacity is a
basic tool of public administration, as it is the legal recognition that the national constitutional framework usually gives local governments to implement the rules of urban planning law. Mr. Borja said that this recognition defined the scope of action of the above-mentioned governments, that is, what they should and can do in cities.

4. Urban planning and planning are the core concepts of urban law

The term “plan” was introduced into positive law under the guidance of the first urban planning rule. In this case, it has the meaning equivalent to common law[6]. In other words, the graphical representation of a given physical space has its own characteristics. More specifically, according to the action and project plans contained in the plan, what should be done in the material aspects of the space.

Land planning is the best tool for detailing population distribution. And space for public roads, basic service networks and infrastructure for social and economic growth. Similarly, for environmental, historical or cultural reasons, the plan identifies land that should be protected through a special system; In addition, the architectural space of urban facilities includes: Health, education, entertainment, commerce and public transport, which are the spatial elements required to ensure the exercise of basic rights by urban residents.

Therefore, in this regard, we agree with Rincon that the territorial planning plan enables us to outline the city we aspire to and each of its components in order to achieve a space for coexistence consistent with human dignity based on the principle of solidarity that establishes and upholds the values and interests of collective welfare.

Land and urban planning plans should strengthen the future face of cities, including goals, guidelines and policies, and identify and determine the best alternatives to appropriate land use for authorities representing society in order to achieve sustainable development. They must be the result of procedures that allow the active participation of the community. They must be sustained over time, as they seek long-term decisions rather than responses to easily identifiable short-term urban problems. They must be dynamic and allow review and feedback. Moreover, they must be technical.

Mr. Calvo stressed the importance of planning more sustainable cities through plans to ensure the physical and functional allocation of cities to achieve sustainable urban development.

Therefore, land use planning is the basis for the development of urban planning and the promulgation of the legal norms of the city law. They can be seen as complex tools that depend largely on improving the quality of life index of the inhabitants of a territory, which we support because they are not only a means of enforcing previously defined obligations of urban expansion. In addition, it also includes soil protection to protect important natural space and generally reduce the negative impact of human activities on nature.

5. Sustainable urban planning

At present, cities are adopting a vague urbanization model, that is, they often occupy an increasing area, expel certain activities (administrative offices, residential areas, educational institutions, shopping centers, medical and hospitals, etc.). From the urban boundary and occupy agricultural land[1]. This urbanization undoubtedly leads to urban dispersion, plunder and waste. Double its surface and, in some cases, exceed its length, resulting in an increase in distance, thereby increasing its dependence on the vehicle. Become consumerist rather than productive. Moreover, their increasing demand for energy and materials makes their sustainability worse and worse.

Continuing to expand cities rather than choosing compact cities will greatly reduce the opportunities for a decent, healthy and productive life in cities. Moreover, it will reduce our future happiness. The results showed that there was an urgent need
to slow down the process, but surprisingly, there was a lack of policy and planning to stop it.

Solving this problem is closely related to sustainable urban planning. Based on sustainable urban planning, through comprehensive spatial, economic and sociological analysis, we should take measures to achieve a city with better urban environmental quality, sustainable economic development and stronger social cohesion.

In this regard, the introduction of appropriate urban planning as a guiding and operational tool in the pursuit of sustainability is very useful for achieving a more livable and equitable environment. Urban planning basically requires the participation of citizens in order to understand it in advance and properly to ensure its acceptance and successful implementation. In addition, it is not only a set of tools and management mechanisms conducive to the rational use of land, but also means the spatial projection of social, economic, environmental and cultural policies for a city to manage citizens’ economic and social life.

As an urban design technology responsible for shaping the physical model of urban organization, urban planning should be the basic tool of urban sustainability. Its general principles are: saving consumption, process efficiency and renewable sources of resources. Specifically: moderate resource consumption, meeting housing needs, establishing communities, using alternative building types, streamlining basic service systems, urban livability and quality[23].

In any case, we believe that sustainable urban planning should consider the following aspects:

(a) Designing a compact city, which means transforming and upgrading existing space, adopting energy efficiency standards in buildings, implementing minimum population density, and placing basic services, shops and entertainment places in strategic areas. All this will reduce citizens’ mobility and dependence on vehicles.

(b) Optimize land use in various activities to ensure that some uses do not inconvenience other uses; This will also save distance, energy and time.

(c) It is determined that the use of agricultural land is prohibited. If new housing land needs to be used, it should be required to use alternative construction models and materials in new housing.

(d) Restore the riverbanks occupied by buildings that violate the urban planning rules of specific areas, and encourage the establishment of passive entertainment areas, which can become tourist areas.

(e) Planting green belts on the edge of the city, reforesting the possible hills around the city, stimulating citizens’ contact with nature and creating “lungs” for the city.

(f) Restore the city for pedestrians, create and increase safe and spacious pedestrian areas, turn some streets into pedestrian areas, expand sidewalks, design eye-catching routes, and encourage walking and the use of environmentally friendly means of transportation.

6. Sustainable city

From a static point of view, a city is composed of an interrelated system in which the driving forces (economic departments and population) exert pressure on the environment (land use, resource consumption, waste...). In a specific environment, Build a country (environmental reality) and impact (environmental, economic and social) and respond through sectoral policies[1].

From another point of view, Ruda defined the city as a dynamic open system, in which the input and output of the city itself exist as an urban model. The input stream corresponds to resources and information. With the transformation of the city, these resources and information are transformed into the output stream of goods, services and waste; All these constitute an ecosystem. According to
this view, they are also classified as metabolic cities\textsuperscript{[24]}, distinguishing between linear cities and circular metabolic cities. The behavior of linear animals is excessive to some extent, because they supply what they need in a wide area, grow in an unreasonable way without any control, produce long-distance transportation, increase energy consumption, and dispose of waste outside the city. The value of circular metabolic cities is different because their development, commercial and industrial activities are obtained from the recent environment. They reuse all waste in their production system to reduce the impact on the environment.

If we realize that in the process of urbanization, the way of urban construction directly affects the nature, environment and residents’ quality of life, we combine the vision of the city with the dynamic model of circular metabolism, because it allows the rational use of land, respect for the environment and proper management of resources without damaging the ecosystem.

From the perspective of ecology, this means that urban land is regarded as an ecosystem and its interaction is established through resource utilization and waste recycling. It is important to establish the behavior procedure of residents in their environmental relations, which is regulated by objective standards, i.e. Legal norms\textsuperscript{[11]}.

According to Rueda, the impact of pollution on the environment and the development of natural resources will depend on the city’s management and management of the environment, that is, the correct or inconsistent behavior of the population determines the pressure on the environmental system, which will depend on the organization and management mode of the city and the education mode of citizens, how to implement and control compliance with urban planning regulations.

In addition, the Brundtland Report is the first official document to introduce the term “sustainable development”, which is defined as “meeting the needs of contemporary people without compromising the ability of future generations to meet their own needs”\textsuperscript{[1]}.

In this report and other reports issued by several international agencies, sustainable development incorporates a three-dimensional perception, including three basic aspects: Ecology, economy and society, which is also welcomed by the World Bank\textsuperscript{[1]}.

In the final analysis, it can be said that for cities to be sustainable and ecologically viable, they must adjust their operations through sectoral and macroeconomic policies and by integrating environmental factors into local management. In terms of environmental management, we are talking about the relationship between natural resource maintenance, energy consumption and waste generation. Management is inevitable because cities are high energy consumers and because the operation of the urban system itself requires a lot of energy, which requires a higher demand for resources, resulting in waste\textsuperscript{[25]}.

The above concepts and standards enable us to determine that sustainable cities can achieve the following objectives: Protect resources, coordinate the built environment with the natural environment, improve environmental quality, support economic and social equity, and encourage participation in urban policies. In this regard, López\textsuperscript{[13]} pointed out that sustainable cities must have a more strategic and participatory urban planning, and the management objectives must be more and more environmentally friendly, multi-ethnic and multicultural.

The current and projected progress in urbanization by 2050 has led many cities around the world to see it as a challenge and to define development plans and strategies to enable them to manage their land-use systems wisely to achieve sustainability.

However, the main and most important challenge is to formulate and implement policies, strategies and indicators guided by the principle of protecting and protecting the environment, which is a
To this end, we believe that sustainability indicators help to have a vision of the proposed recommendations based on an understanding of the territorial characteristics related to land use and distribution, enabling us to develop future strategies related to the protection and prevention of different types of soils, and the parameters of economic development and social actors involved in the process of economic development.

The concept of indicators comes from the Latin verb indicare, which means to reveal, symbolize and relate to sustainability. It is a parameter that provides information on the state of socio-natural-economic relations\(^\text{[27]}\). That is, indicators related to sustainable urban design.

Indicators can also be defined as meaningful variables, which come from their own scientific allocation. They comprehensively reflect the social interest in the environment, which can be consistently integrated into the decision-making process\(^\text{[28]}\). Indicators are not fixed standards or models for all cities, but depend on the conditions and methods used in each city and country. However, we suggest that human rights for territories and cities, developed by the United Nations Organization in 2015 and published by Llop and Vivanco\(^\text{[28]}\), should be regarded as a reference indicator to assess the level of urban sustainability, as it includes the environmental, economic and social aspects of sustainable urbanization. These are: Economic and social order (property rights, social functions of property and social functions of land); appropriate environment (protection and protection, risk protection and pollution-free environment); the use and enjoyment of natural assets and resources (public domain in marine and coastal areas, protection of natural areas and sustainable use of resources); cultural and natural heritage (protection of heritage, promotion of science, culture and cultural expressions); water and sanitation (drinking water, sewage, rainwater treatment and waste treatment); adequate housing (rooting, urban and social inclusion, access to housing and self-management); urban security (Urban Accessibility, infrastructure network, location and appropriate area of green space and public parks, public facilities and services); citizen participation (number of appropriate information, suggestions and initiatives); non discrimination and equality (respect for diversity, respect for identity, economic, social and cultural inclusion of cities and territories); in addition, the general public interest in this issue (public initiatives on territory and cities), all of which are directly related to three aspects of sustainable urban design: environment, economy and society, as we have analyzed.

We believe that in order to develop urban sustainability indicators for each city, these indicators must be strictly selected and adjusted to adapt to their applicable environment, because they will play an important role before and after the formulation of sustainability strategies. It is advisable to collectively participate in the work and use strategies to compare with the indicators formulated by other cities or countries.

Through comparison, we can determine the indicators of the required countries, and can determine our current situation and our gaps. In these gaps, we must focus and strengthen interventions to achieve the required sustainable goals.

We also provide an example of indicators designed for a city in Mexico. According to Moreno\(^\text{[26]}\), the city belonged to Chimalhuacan in 2013, as follows: economy, environment and society.

Economic indicators include: the population engaged in economic activities in the city and various departments, the average minimum wage, the average household energy expenditure, the number of banks in the city and the number of registered motor vehicles.

Environmental factors include: Soil erosion
rate in the past ten years, protected area, land use change area in 10–20 years, in-service drinking water treatment plant, basic service coverage, groundwater availability, etc.

Social indicators include: Overall poverty index, labor demand, underemployment and unemployment rate, vulnerability of housing services, population density, average enrollment rate, and urban environmental management of local governments.

Finally, indicators are an essential element in verifying the achievement of sustainability goals. Their importance lies in that, whether sectoral or holistic, they are formulated in a unique and non-repeatable context at the social, administrative and territorial levels. They enable us to understand whether urban reality is sustainable, as it is essential to assess the effectiveness of policies; assist in monitoring action results and cost-benefit analysis; support the establishment of a platform for the participation of civil society and the private sector in local government; provide a set of objective data to provide information for the review of governance strategy. Most importantly, they enable us to assess sustainable development strategies and their application in urban planning law.

### 7. Urban law and sustainable cities

The city is the home of all its residents. Space “from today on, build a socially balanced future, allow a dignified, fair and creative life, and respect nature.” Moreover, the right to such space should be the right to social and economic opportunities related to housing or the workplace. However, as we have described, in the past few decades, social polarization and exclusion have become increasingly serious. The urban system is characterized by an alarming imbalance at the social spatial level, affecting nature and the quality of life.

Therefore, the above situation requires that the urban law include environmental, economic and social indicators in its applicable instruments to ensure the sustainability of urban planning. Ruiz and Maritan believe that land and urban planning are tools of a legal nature because they require a properly implemented legal framework, and in order to make rational use of land, this means defining the content of ownership. The existence of legal rules is inevitable, which are the coverage that social groups believe is necessary to ensure that specific patterns of behavior that respect sustainable urban planning are binding. The legal framework needed to implement sustainability oriented public policies.

Escobar believes that the urban planning law selects and collects a set of normative parameters related to urban planning, incorporates legal technologies such as sanctions, remedies, time limits and procedures, and endows them with legal binding force, so as to safeguard urban policies, coordinate the correct exercise of individual and collective rights, and realize social welfare.

In conclusion, it can be ensured that the urban planning law plays a key role in sustainable urban development, because without legal standards and technologies to build sustainable cities, it is impossible for the competent administrative authorities to implement sustainable urban planning within the judicial framework. In addition, urban planning laws must be truly autonomous, have their own principles and institutions, be sufficiently clear, and consist of rules that encourage citizens’ good practices in the environmental, economic and social order, rather than punitive rules.

### 8. Status of the question of the Republic of Ecuador

Article 3, paragraph 5, of the constitution of the Republic of Ecuador provides, inter alia, “planning national development, eradicating poverty and promoting sustainable development...” Article 30 provides that “everyone has the right to safe and healthy housing and to adequate and decent housing, regardless of their social and economic status”. Article 31 stipulates that “everyone has the right to
fully enjoy the city and its public space under the principles of sustainability, social justice, respect and balance between urban and rural areas”. Paragraph 2 of Article 66 of the above-mentioned constitution “recognizes and guarantees the right of individuals to live in dignity in order to ensure housing and other necessary social services”. In addition, Article 11 (1) provides that “rights may be exercised, promoted and demanded individually and collectively before the competent authorities, and the competent authorities shall ensure the implementation of these rights”. Paragraph 3 of the article stipulates that “the rights and guarantees provided for in the constitution and international human rights instruments shall be directly and immediately applied by any public official, administrative or judicial officer ex officio or at the request of a party.” Article 241 provides that “planning shall ensure territorial order and shall be binding on all decentralized self-governing governments.”

Article 3 (g) and (h) of the organic law of the Republic of Ecuador on territorial organization, autonomy and Decentralization stipulates that the two principles of decentralized self-government in the exercise of power and public power are, inter Alia, “citizen participation” and “sustainability of development”. Article 4 (b), (d) and (f) of the act stipulates that within their respective territorial constituencies, the purpose of decentralized self-government is, inter Alia, “to ensure the full realization and effective enjoyment of the individual and collective rights set forth in the constitution and the rights set forth in international instruments without any discrimination and in accordance with the conditions set forth in the constitution of the Republic”. “Restore and protect nature, maintain nature and maintain a sustainable and sustainable environment.” “Provide citizens with safe and healthy housing within their respective functions and powers and protect their right to housing.” Separately. In Article 54 (a) and (b), senara states that the two functions of the municipal government are, “Promote the sustainable development of its state territorial constituencies to ensure a better life through the implementation of state public policies within its constitutional and legal powers”, “Establish a land use and urban planning system to determine the conditions of urbanization, plot division, zoning or any other form of zoning according to the state planning, so as to ensure the percentage of green space and community area.”

In other words, in the Republic of Ecuador, in order to realize the civil rights stipulated in the constitution, the national legal framework stipulates in the exercise of people’s rights on the ground: the right to safe and healthy housing, The right to adequate and dignified housing, Urban rights; Citizens’ right to participate and all forms of property rights. It also incorporated human rights in cities into its constitutional framework.

Despite the above legal provisions, the total population of the Republic of Ecuador in 2010 was 14,483,499, of which 62.7% lived in cities. According to the prediction of the National Bureau of statistics, it will increase to 64% by 2020. However, it will change from 39.5% and 60.5% in 1970 to a country dominated by cities by reversing the distribution between urban and rural population. This transformation leads to chaotic urban development, no planning, supervision or control, lack of basic services and serious territorial inequality.

The report also points out that most cities in Ecuador have the following characteristics:

About 2.8 million citizens of the Republic of Ecuador live in unstable and abnormal settlements.
It is estimated that approximately 37,064 families are located in threat areas that cannot be mitigated, protected and or declared uninhabitable. As the urban greening index IVU is 4.7 square meters per capita, which is far lower than the internationally recommended index, there is a lack of green space and leisure areas. There is evidence that the poorest people in the country lack land and affordable housing supply, and speculation in the land market is dominant. Urban growth is out of control, beyond the urban boundary, leading to social and territorial division, and causing huge man-made pressure on ecologically sensitive and agricultural production areas. The municipal government has weak financial capacity in mobilizing resources to improve services, reduce the formal housing deficit, improve public transport and create high-quality public space.

The urbanization process in the Republic of Ecuador has produced social space conflicts, which have a serious impact on the population and territory. These conflicts can be summarized as follows: Limited access to housing, equipment and public space in low-income sectors related to ownership concentration and speculation. The isolation of urban space, coupled with the phenomenon of exclusive closed residential areas and the growth of personal motor traffic, ignores the pedestrian and socio-cultural driving force to create the quality of urban life. The impact of ecological protection areas, agricultural land or other areas whose characteristics are not necessarily synchronized with infrastructure construction. Promote low-density, inefficient and dysfunctional urban structures, making it difficult to ensure the provision of adequate urban services. In addition, the above-mentioned shortage of affordable land, lack of control and lack of clear and appropriate urban regulations have led to a surge in settlements in risk areas.

In addition, Llop and Vivanco[^32] pointed out that most medium-sized cities in Ecuador face some problems in the process of spatial planning, such as insufficient legislation, confusion and decentralization. Failure to respect the implementation of these rules, regulations and restrictions by municipalities. Outdated or insignificant urban policies and indicators, financial restrictions. The connection with academia is weak, and citizen participation is the main.

In this regard, we believe that this situation is due to the limitations of urban planning in central Ecuador and the obvious trend of urban practice related to land production and infrastructure. These restrictions are reflected in the technical personnel in small and medium-sized cities, who are only committed to solving daily business problems, lack the conditions to think about urban problems from an overall perspective, lack of real policies to ensure the equitable distribution of economic resources, and have a more formal relationship with academia than they actually do. Among other things, there is a lack of a permanently updated single city territory information system.

In the Republic of Ecuador, most land and urban planning plans are either not approved or have no regulations. Moreover, if regulations are passed, their implementation has been hampered by the lack of a strong and autonomous legal body[^32]. The completed plan rarely evaluates management and control, which is an essential part of land law.

Therefore, in view of the above population data, the Republic of Ecuador is in the process of consolidating its status as a major urban state, which has a significant impact on production and consumption patterns, social mobility and internal migration, which is expected to deteriorate further in the future. The formation of values and the openness of development concept stimulate the motivation of man as an individual and condense the society he lives in. Therefore, it should be recalled and emphasized that the state has the responsibility to realize the individual and collective rights guaranteed by the 2008 constitution, especially those related to the right to safe and healthy housing, the right to adequate and dignified housing and the right to cities.
At the local level, for example, in Potoviejo, the capital of Manabi province of the Republic of Ecuador, rapid and unorganized growth has provided space for large urban fringe areas, exacerbated territorial imbalances and increased the deficit in basic services. Urban settlements develop spontaneously without planning, and there is no clear boundary between urban and rural areas. More and more protected areas, steep slopes, river banks and mangroves are occupied. The city often suffers from flooding in densely populated areas in winter due, inter alia, to non-compliance with regulations requiring settlements at least 50 meters from the riverbed. This city is not an isolated example, but an example of the reality of urban development in Ecuador, because it is one of the cities in central Ecuador. It is most affected by the earthquake in Ecuador on April 16, 2016, and the reconstruction process is slow, which is conducive to the implementation of sustainable urban development policies.

In this regard, it can be determined that the current urban planning models in the Republic of Ecuador, such as development and land management plans, are insufficient to achieve sustainable cities. They reflect problems of scale, lack of specificity and detail, which make them unable to operate or apply, but mainly because they lack prospects for territorial, environmental, social and economic sustainability. And well-known, systematic and strong legal instruments to effectively manage sustainable cities.

In this regard, in order to achieve real autonomy in urban law, the author López Velarde pointed out that there are three requirements that we fully agree with: (a) teaching autonomy, that is, urban law should be regarded as part of the curriculum and taught as a separate discipline independent of the head of the Department of law, architecture and urban design; (b) Legal autonomy to enable it to have its own legislature; (c) Scientific autonomy, so that it has its own methods and technical principles.

Urban planning law is a relatively new discipline in the Republic of Ecuador, which needs to comply with these budgets in order to be considered autonomous. In addition, it is little known and has not been deepened or incorporated into the curriculum structure of university related majors; In terms of law, it has certain autonomy, but it does not have a complete normative system. Scientifically require the method of administrative law. In addition, it pays more attention to the regulation and control of land use and buildings, that is, the physical and decorative aspects of the city, while ignoring the environmental, economic and social aspects, which are the pillars of sustainable urban development. Therefore, we believe that in the Republic of Ecuador, urban laws and regulations must be autonomous, including sustainability strategies, and consistent with urban planning to ensure proper implementation, involving not only municipal and, where appropriate, provincial and state authorities, but also citizens, who must be fully aware of the principles and provisions of urban law, All these are the changes needed to achieve sustainable cities.

9. Conclusions

(a) Cities are adopting a vague urbanization model, that is, they tend to occupy an increasing area and exclude certain activities from the periphery of cities, resulting in their need for more energy and material consumption, which makes them less livable, less healthy, less responsible, less attractive, less inclusive and ultimately unsustainable.

(b) If the style and form of cities are still scattered, ignoring environmental protection and responsible economic and social inclusion, rather than choosing a compact city, it will damage the future well-being and life of its residents.

(c) Solving this problem is closely related to effective urban planning. Based on comprehensive spatial, economic and sociological analysis, urban planning stipulates measures to implement “for its residents”.
(d) In this context, effective urban planning must involve citizens and, of course, an appropriate legal framework to ensure its timely and correct implementation.

(e) The legal framework required for the implementation of urban planning is composed of urban law, which is composed of a set of legal norms. These laws regulate the process of land use planning and its material transformation through urbanization and architecture, thus consolidating the status of urban planning as a spatial planning technology.

(f) In order to address and promote the sustainable development of cities, urban laws must include rules on the appropriate conduct of urban residents in the environmental, economic and social fields in order to promote a more livable and equitable environment.

(g) Communication and advocacy strategies need to be developed to ensure that people recognize the importance of the content and application of urban law rules to the process of achieving sustainable urban development.

(h) The rules of urban planning law must not only be normative and punitive, but also provide incentives for citizens’ good environmental, economic and social practices.

(i) Ecuadorian legislation should have autonomous urban planning rights, which have a significant impact on the realization of sustainable cities.

Conflict of interest

The authors declare no conflict of interest.

References

2. Rincón Córdoba JL. Planes de ordenamiento territorial, propiedad y medio ambiente (Spanish) [Land use, property and environmental plans]. República de Colombia: Digiprint Editores EU; 2012.
9. Carrión Mena F. Ciudad, memoria y proyecto (Spanish) [City, memory and project]. República del Ecuador: Crearimagen; 2010.
10. López Velarde O. El futuro de la legislación urbana en las entidades federales de México (Spanish) [The future of urban legislation in Mexico’s federal entities]. México: Ciudad Universitaria; 2011. p. 3–32.
13. López Ramón F. Introducción al derecho urbanístico (Spanish) [Introduction to urban law]. España: Marcial Pons; 2013.
15. Tarrago M. La ciudad y el urbanismo (Spanish) [The city and urban planning]. España: Manual de gestión municipal democrática; 1987.
16. Rivero Ysern JL. Manual básico de derecho urbanístico (Spanish) [Basic manual of urban planning...


20. Wyrobisz A. La ordenanza de Felipe II del año 1573 y la construcción de ciudades coloniales españolas en la América (Spanish) [Philip II’s ordinance of 1573 and the construction of Spanish colonial cities in America]. Estudios Latinoamericanos 1980; 7: 11–34.


25. Rueda S. Un nuevo urbanismo para una ciudad más sostenible (Spanish) [A new urbanism for a more sustainable city]. Encuentro de Redes de Desarrollo Sostenible y de Lucha contra el Cambio Climático; 2005; Victoria-Gasteiz.

26. Moreno Sánchez E. Indicadores para el estudio de la sustentabilidad urbana en Chimalhuacán, Estado de México (Spanish) [Indicators for the study of urban sustainability in Chimalhuacán, State of Mexico]. Estudios Sociales 2014; 42(33): 159–186.


29. Llop JM, Cruz LV. El derecho a la ciudad en el contexto de la agenda urbana para ciudades intermedias del Ecuador (Spanish) [The right to the city in the context of the urban agenda for Ecuador's intermediate cities]. Ecuador: Imprenta de la Universidad de Cuenca; 2017.

30. Ruiz ME, Maritan GG. Los planes de ordenamiento territorial y urbanismo: Principales consideraciones sobre su naturaleza jurídica (Spanish) [Land use and urban development plans: Main considerations on their legal nature]. Town Planning 2012; 1: 1–25.

31. Escobar Rodríguez R. Derecho urbanístico chileno: Régimen de fuentes formales y conflictos normativos (Spanish) [Chilean urban planning law: Regime of formal sources and regulatory conflicts] [Master’s thesis]. Santiago de Chile: Pontificia Universidad Católica de Chile; 2016.
