

# RECOMMENDATIONS ON THE PLANNING PROCESS OF CITIES FOR THE RATIONAL USE OF NATURAL RESOURCES IN THE CONTEXT OF GLOBAL CLIMATE CRISIS, URBANISATION AND ENVIRONMENTAL PROBLEMS



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## Abstract

In addition to the environmental problems caused by urbanisation, drought, irregularity in precipitation regime, floods, landslides, storms and fires are experienced in the world due to global warming and climate change. This situation is also valid for our country. These events negatively affect the lives of all living things. Necessary arrangements are being made by the relevant authorities for the solution of the problems caused by urbanisation and global climate crisis, and central and local administrations assume duties in accordance with the updated legislation. This process brings new approaches and administrative structures to the agenda for the planning of settlements, especially cities, to utilise natural resources effectively and efficiently. In the urban planning process, it is thought that there is a need for a comprehensive, visionary approach with physical, social, economic, and cultural content regarding the use of natural resources in the context of urbanisation and environmental problems.

In this article, the processes of re-planning urban areas are examined by reviewing the literature on global warming, climate change and environmental problems caused by urbanisation. In order to solve these problems, it is thought that a new administrative structure is needed in order to formulate urbanisation policies and in the process of planning and construction of cities. With this study, it is aimed to evaluate the issue within the framework of an approach based on the protection of water, air and soil components, which are the basic input of planning in the urbanisation process and are of vital importance, and to propose solutions for urbanisation and environmental problems.

## 1. Introduction

In addition to the problems brought about by urbanisation, the global climate change experienced in the world in recent times adversely affects the living spaces of all living things in the short or long term. This process, which is defined as climate change or climate crisis, directly or indirectly affects ecosystems such as agricultural areas, water resources, forests or pastures, and cities, which contain water, soil and air elements. This process brings the measures to be taken in the process of climate change together with urbanisation to the agenda. This situation raises the issue of taking climate change into account in the process of planning

cities, establishing a new administrative structure with new policies, and updating the legislation.

Cities are the most important settlement areas where the need for shelter is met and production other than agricultural production is carried out. These areas show differences in terms of size (area and population density), type and quality of the functions they fulfil, physical structures, functions, and production possibilities in the regulation-planning process.

With the industrial revolution, cities such as Istanbul, Izmir, Bursa, Kocaeli and Sakarya have expanded rapidly, unplanned

and uncontrolled. In these cities, important environmental problems such as water, air and soil pollution have emerged due to rapid and unplanned urbanization, industrialization and economic development. In addition to these problems, global warming and climate change have also brought environmental problems such as floods, landslides, fires, droughts and irregularities in rainfall regime to the agenda.

Environmental problems caused by economic development affect both human and social welfare directly or indirectly. Naturally, this situation negatively affects all living beings living both in urban and non-urban areas. Especially the quality of life of those living in the region decreases significantly. This situation leads to the discussion of issues related to the sustainability of cities. In this process, water, air and soil-based urban planning approaches have been brought to the agenda for the effective and efficient use of water, soil and air resources and social welfare.

Today, the definitions of sustainable city, eco-city, green city are the definitions that are emphasised in the planning agenda. As Adil (2010) quoted from Gülersoy, ecological city is defined as "improving degraded areas, having balanced urban development, creating a compact city, creating a healthy and safe environment, glorifying social justice, giving history and culture the value, they deserve". As can be understood from this definition, cities are ecosystems formed by living and non-living environments that are in constant interaction in a certain area.

It is a necessity to plan these ecosystems with a holistic approach at the urban scale. Sustainability and protection of natural resources such as water, soil, air and cultural resources are the basic principles of planning. It is considered that planning by competent authorities and taking planning decisions through this structure will provide significant benefits.

## 2. Conceptual Framework

As stated by Aristotle Teles, one of the ancient Greek philosophers, "...the structure of everything living and non-living consists of four main elements. Water, air, earth and fire." The protection and sustainability of lands, water resources, plains, rivers, forests or pastures that harbour these four components, which are the basic inputs of life, are of vital importance. Disasters such as floods, landslides and fires as a result of global warming and changes in precipitation regimes bring new approaches to the agenda in urban planning. When the issue is evaluated from this point of view, it emerges as a necessity to plan the city for housing and production purposes by central and local actors together with the relevant stakeholders in line with rational and scientific realities and to manage this process.

### 2.1. City

Undoubtedly, it is possible to come across many definitions in the literature of the city. The definition of city may vary according to disciplines, fields of interest, countries and perspectives.

Population density, the existence of sectors such as non-agricultural industry, trade, education, health, culture, finance and tourism, and definitions within the public administration system can be used as criteria for defining a city.

A city is defined as "a settlement whose population exceeds a certain size and density, whose economy is concentrated in non-agricultural activities, and which provides services to those living within its sphere of influence in addition to its own population" (Aydemir, 2004).

At the same time, as defined by Aydemir (2004), a city is "an area where agricultural production is not dominant, where the distribution and control functions of both agricultural and non-agricultural production are gathered, where the degree of organisation and uniformity is high, and which is the focus of a dense population."

A city is "an economic mechanism where the ever-changing needs of society are met, where goods and services are produced, distributed and consumed" (Aydemir, 2004).

In other words, a city as a unit of administration (Aydemir, 2004) is "the area within the boundaries of a certain administrative organisation." In this definition, the criterion of administrative boundaries is essential (town, district, province, metropolis). Places outside these borders are defined as villages. Within the administrative structure, all district and provincial centres are accepted as cities regardless of population size.

As Aydemir (2004) quotes Harvey, the city is "a series of constructed forms. It is a series of objects arranged in space according to certain patterns. At the same time, the city is a functioning whole and everything is related to everything."

A city is "...a collection of people and structures that have come together in a way that can be considered large according to place and time and have some distinctive features." (Aydemir, 2004).

### 2.2. Urban Planning and Zoning

Zoning is a word of Arabic origin. Its original form is 'i-mar', derived from the verb "a-m-r". Dictionaries give this verb the meanings of "to dwell (in a place), to live long, to visit (a place), to build (a building), (for a place itself) to be inhabited with people-animals, to be inhabited, to be kept in good condition; to

keep a place or a thing in good condition, to treat it." Likewise, "umrân" means "public works, prosperity, bliss" (Işık, 2022).

In other words, zoning activity is "an activity carried out to make a place a better, healthier, more livable, happier and safer place in line with technical and health norms by protecting natural and cultural resources and taking into account environmental conditions."

With the establishment of the republic in our country, special importance was given to urbanisation. Expert planners from abroad were invited to the country for urban planning works. One of these planners was Jansen, who prepared the zoning plan for Ankara. When the sources on the Jansen plan are examined, a dialogue between Jansen and Atatürk is mentioned. According to the dialogue, "Jansen stated to Mustafa Kemal Atatürk that urban planning is a job that should be taken seriously and asked whether the implementation of his plan was fully possible and suggested the establishment of a strong administrative organisation to ensure the controlled execution of planning in order to ensure the success and sustainability of his plan" (cited in Duvan, 2021; Özer & Bozkurt, 2017).

In this direction, necessary legal arrangements have been made for the regulation of zoning activities in our country. With the Zoning Law No. 3194, which is the basic regulation in this regard, it is aimed to "ensure that settlements and settlements in these places are formed in accordance with the plan, science, health and environmental conditions". The scope and rules regarding zoning activities have been determined with the provision "Plans to be made and all public and private buildings to be constructed within and outside the boundaries of municipalities and neighbouring areas are subject to the provisions of this Law." (Official Gazette; 1985)

Between the years 1923-1985, all authorities were concentrated in the central administration. Zoning Law No. 6785, which entered into force in 1956, guided the planning activities in the country until 1985, plan levels were determined and the authority to approve plans was given to the Ministry of Housing and Settlement (Kaynak, 2001). With the Zoning Law No. 3194, which entered into force in 1985, the authority to make and approve plans was transferred to local administrations. It is approved by the municipal council within the boundaries of municipalities and neighbouring areas, and by the special provincial administration in areas outside these boundaries. On 04.07.2011, with the establishment of the Ministry of Environment and Urbanisation, direct and indirect changes in authority have caused the powers delegated to local governments

to move closer to the central government and to limit local governments (cited in Taşar, 2018; Sönmez, 2017).

The Ministry of Environment, Urbanisation and Climate Change, Housing Development Administration, Ministry of Culture and Tourism, Privatisation Administration, Metropolitan Municipalities, Provincial Municipalities, Provincial Special Provincial Administrations, District Municipalities and Town Municipalities are the administrations with zoning planning authority.

According to the legislation, plans are hierarchically organised as "Spatial Strategy Plan", "Environmental Plan", "Master Development Plan" and "Implementation Development Plan". In the planning process, master development plan and implementation development plans should be made in accordance with the regional plan and environmental plan decisions. In the planning hierarchy, these plans are made by different administrations authorised according to scales. While the spatial strategy plan and environmental layout plan are made by the ministry, the master development plan is made by metropolitan municipalities and the implementation development plan is made by district municipalities.

During the planning process, issues such as silhouette, protection of natural and cultural resources, identity, historical memory and the function of the new city within the country or region are still not clearly defined. These issues are evident in cities as lack of identity, failure to protect natural and cultural resources, water, soil and air pollution, poverty and security problems.

In addition to these issues, it is still a matter of debate how and by whom the costs are covered in the process of transforming the land, which is the basic input of planning, into land ready for construction with drawings and notes defined as a plan.

## **2.3. Urbanisation and Environmental**

### **Problems:**

Cities are complex and dynamic systems. Therefore, cities can be affected positively or negatively by production processes or changes in the amount of production. It is possible to define this process as urbanisation process. The most important factor that grows cities and directs urbanisation is the economic changes in production processes on sectoral basis. As a result of the limited production potential in rural areas and the increasing population and use of technology in these areas, less labour-intensive production processes emerge. For this reason, the surplus labour force is directed to cities. "It can be said that the actions carried out for the purpose of finding a job from agricultural areas to cities as labour movement are related to the opportunity to find a

job from the east. This uncontrolled action, which is defined as migration, can be seen as a kind of problem transfer to cities." (Aydemir, 2004)

In the process of urbanisation, migration and mobility vary according to region and time. Migration is an action that can cause significant problems in terms of meeting accommodation and other needs. In this process, natural and cultural resources in the city and urban peripheries can be adversely affected. Unplanned and uncontrolled production and consumption processes and environmental problems such as soil, water and air pollution arise as a result of the misuse and misuse of these resources. These problems become evident in the form of deterioration of the employment structure in urban areas, formation of marginal business areas, unavailability of qualified labour force, unemployment and social and security risks. The cities of Istanbul, Izmir, Kocaeli, Bursa, Sakarya and Gaziantep can be given as examples.

In our country, the purchase of land on the urban periphery, on the development or expansion axis of the city, without zoning application, for purposes other than agricultural production is a form of investment that is internalised in order to make money from land, to become rich or to accumulate capital. Qualified agricultural lands, drinking water resources, forests and pastures are under development pressure. As such, natural and cultural resources (agricultural areas, water resources, forests, etc.) in or around the city periphery are negatively affected by this process. On the other hand, water, soil and air are indispensable resources for the continuation of life in cities. The lack of sufficient level of these resources is a problem area. So much so that big cities such as Istanbul, Ankara and Izmir have had to meet their drinking water requirements from neighbouring cities. Pollution of natural resources such as water, air and soil are the most important problems threatening life in cities. All kinds of pollution, unhealthy spaces, difficult access to food, poverty, deprivation and security are the most important problems. In addition to these, disasters such as drought, floods, landslides and fires, which are frequently experienced as a result of changes in precipitation regime due to global warming, are current problems.

## 5. Conclusions

It is a known fact that unplanned or uncontrolled urbanisation causes significant environmental problems. In addition, disasters such as floods, landslides, droughts and fires, which are frequently experienced today as a result of global warming and climate change, bring environmental issues to the agenda. These disasters cause significant loss of life and property, especially in cities that are not built within the framework of technical and health norms.

As Jansen emphasises, "urban planning" is a task that should be taken seriously. It requires expertise and it is a necessity to establish a strong administrative organisation in order to ensure that the plan is fully implemented and the planning is carried out in a controlled manner" (cited in Duvan, 2021:44, Özer, Bozkurt, 2017:78). Therefore, it is clear that new approaches and administrative structures are needed in the planning of settlements, especially cities, in order to make effective and efficient use of natural resources in the urbanisation process.

In the planning process in our country, decisions are taken by the competent administrations and municipal councils. The plan decisions of the administrations sometimes overlap and sometimes contradict each other within the planning hierarchy. In the decision-making process, issues such as the integration of the plans with national development plans, their ability to meet sectoral requirements, the expertise of the administrations in zoning and urbanisation, the participation of local people in the process, and coordination with other public administrations may be the subject of discussion. In particular, the competence of the municipal councils where the plans are approved in terms of zoning or urban planning is open to discussion.

Although urban planning is considered to be within the field of interest of urban planners, when many related issues are taken into consideration, this subject is within the field of application of different disciplines. Since the city is the space of social life, it is within the field of interest of sociology and social anthropology. Since political, administrative and economic decisions are taken and policies are determined, the subject is the field of study of public administration (central and local administration), politics, economy and finance disciplines. Regarding the ownership structure of the land, the subject is closely related to the discipline of law. In addition, the geomorphological characteristics of the city and the protection of its natural and cultural resources, its historical identity and its place in historical memory are also related to the disciplines of geography, environment, ecology, history, etc. Public participation in the planning process is also important.

In this sense, urban planning is considered as a multi-stakeholder activity that requires expertise, cooperation and decision-making of related professional disciplines and public participation. In short, urban planning is a common working area of disciplines such as architecture, engineering, sociology, public administration, law, economics, geography, history, anthropology and ecology.

As a result, it is clear that there is a need for rational policies, administrative structures, legislation and approaches that can

ensure maximum protection of components such as water, soil and air, which are the basic inputs of planning. It is considered a necessity to establish administrations, commissions or boards in which people with expertise in planning and the authority to take decisions will be assigned. In addition to this, it is considered that the establishment of assemblies or boards consisting of competent people and ensuring the participation of local people will also provide significant benefits.

## References

1. Adil, S. (2010). Ekolojik kentleşme ve toplu konutlarda ekolojik planlama yaklaşımının Başakşehir 4. etap örneğinde incelenmesi, Yayınlanmamış Yüksek Lisan Tezi, Bahçeşehir Üniversitesi, İstanbul.
2. Akel, N. (2022). Küresel ısınmaya bağlı iklim değişikliğinin yukarı murat nehri havzası üzerindeki etkileri, Yayınlanmamış Yüksek Lisans Tezi, Ağrı İbrahim Çeçen Üniversitesi Lisansüstü Eğitim Enstitüsü Coğrafya Anabilim Dalı, Ağrı.
3. Aydemir, Ş. (2004). Kent, kentleşme ve sorunlar, kentsel alanların planlanması ve tasarımı. Trabzon: Akademi Yayınevi.
4. Aydemir, Ş. (2004). Planlama ve planlama türleri, kentsel alanların planlanması ve tasarımı. Trabzon: Akademi Yayınevi.
5. Duvan, S. (2021). Ekolojik Kent Teorisi Ankara Örneği, Hacı Bayram Veli Üniversitesi Lisansüstü Eğitim Enstitüsü Kamu Yönetimi Anabilim Dalı Kentleşme Ve Çevre Sorunları Bilim Dalı, Yayınlanmamış Yüksek Lisans Tezi, Ankara.
6. Gülersoy, N. Z. (2009). 8. Ekolojik Kentler Dünya Zirvesi, İstanbul. (Erişim Tarihi:28.09.2022). <http://www.ecocity2009.com/index-tr.htm>
7. Işık, V. (2022). Medeniyet tartışmalarına umrân kavramı ekseninden bakmak. Lale Kültür, Sanat ve Medeniyet Dergisi, 6, 60-67.
8. Taşar, E. (2018). İller bankası anonim şirketi imar planı sürecinde yerel halk katılımı ve ilan-askı-itiraz aşamasının planlar üzerindeki etkisi, Uzmanlık Tezi, Ankara.
9. Resmi Gazete, 3194 sayılı İmar Kanunu, 1985, Sayı:18749.