METHODOLOGY AND DATABASE REQUIREMENTS FOR URBAN REGENERATION ACTION PLANNING: THE CASE OF ZEYTINBURNU, ISTANBUL

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AHMET MERT BURNAZ

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Approval of the Graduate School of Graduate School of Natural and Applied Sciences.

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Prof. Dr. Canan ÖZGEN
Director

I certify that this thesis satisfies all the requirements as a thesis for the degree of Master of Science.

_____

Prof. Dr. Ali TÜREL
Head of Department

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Science.

_____

Prof. Dr. Murat BALAMİR
Supervisor

Examining Committee Members

Prof. Dr. Melih ERSOY	(METU, CP)	_____
Prof. Dr. Murat BALAMİR	(METU, CP)	_____
Assoc. Prof. Dr. Özcan ALTABAN	(METU, CP)	_____
Inst. Sevin OSMAY	(METU, CP)	_____
Part-time Inst. Ömer KIRAL	(M.S.)	_____

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Name, Last name : Ahmet Mert BURNAZ

Signature :

ABSTRACT

METHODOLOGY AND DATABASE REQUIREMENTS FOR
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THE CASE OF ZEYTINBURNU, ISTANBUL

Burnaz, Ahmet Mert

M.S., Department of City and Regional Planning

Supervisor: Prof. Dr. Murat Balamir

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As a result of the disregard of governments' direct urbanization policies for more than 50 years, most of the settlements in Turkey today demonstrate sub-standard environments and unauthorized developments subject to severe natural hazards.

Turkey will have to focus in the near future on the renewal and regeneration of cities built over the past six decades, rather then sticking to urban policies solely devoted to extend new urban areas. The production of legal instruments and urban policies to facilitate the new policy of regeneration in physical and social terms, seems to be the most challenging issue facing urban planning.

Urban regeneration planning aims to produce strategies and policies concurrently devoted to maintain physical rehabilitation and social transformation in built areas. For this reason, urban regeneration planning requires legal tools, regulations and methods different then those of conventional development planning.

A new approach to urban regeneration planning is the development of urban database systems. These sytems are discussed here by means of a model developed for the case of Zeytinburnu. This model is prepared by organizing and developing the urban databases produced by local governments and international institutions for İstanbul integrating natural conditions, physical assets, and the social characteristics. This requires a new set of 'Analytical Studies' approach.

The main obstacle in urban database system in Turkey is the lack of legal arrangements. New regulations are needed to describe the organisation and principles of database management in technical and administrative terms. Other implications are that an entirely new generation of urban planners need to be trained, improvement of expertise on database management, database use and updating protocols. Such systems could also constitute an essential instrument of public participation in local planning and urban management process.

Keywords: Urban Regeneration, Mitigation Planning, Local Action Plan, Urban Database

ÖZ

KENTSEL DÖNÜŞÜM EYLEM PLANLAMASI YÖNTEMİ VE VERİTABANI GEREKSİNİMLERİ: İSTANBUL, ZEYTİNBURNU ÖRNEĞİ

Burnaz, Ahmet Mert

Yüksek Lisans, Şehir ve Bölge Planlama Bölümü

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Kentlerimizde, son 50 yıldır izlenen yetersiz ve dolaylı kentleşme politikaları nedeniyle bugün yerleşim yerlerimizin büyük bir bölümü düşük standartlı ve yasadışı bir yapılaşma göstermektedir. Türkiye'de yerleşim alanlarının çoğunluğunun doğal tehlikelere konu olduğu bilinmesine karşın, bu dönem içerisinde yapı stoku bu alanlarda bir kaç kez katlanarak büyümüştür.

Önümüzdeki dönem içerisinde Türkiye'deki kentsel politikalar, imar mevzuatının öngördüğü gibi yeni alanların üretimine dönük olmaktan çok, mevcut kentsel alanların deprem tehlikeleri karşısında iyileştirilmesine ve yenilenmesine odaklanmak zorunda kalacaktır. Bu nedenle günümüzde kent planlama disiplinin önündeki başlıca sorun yapılaşmış çevrelerin fiziksel ve sosyal olarak iyileştirilmesine yönelik yasal araçları ve kentsel politikaları üretmektir.

Kentsel planlama mevzuatı, kentsel gelişme eğilimlerini belirlemeye ve yeni yapılaşma alanları yaratmaya dönük yasal araçlara ve uygulamalara sahiptir. Oysa kentsel dönüşüm planlaması, yapılaşmış alanlarda fiziksel iyileştirmeyi ve sosyal

kalkınmayı sağlamaya yönelik strateji ve politikalar üretmeyi amaçlar. Bu yüzden, imar planlarından daha farklı analitik çalışmalara, işbirliği ve katılım biçimlerine, yasal araçlara, işletme ve denetim kapasiteleri geliştirmeye ihtiyaç duyulmaktadır.

Kentsel dönüşüm planlaması için gereken yeni yaklaşımlardan birisi kentsel veritabanı sitemlerinin geliştirilmesidir. Bu sistemler tez içerisinde Zeytinburnu ilçesi için bir model geliştirilerek incelenmiştir. Bu model, kent yönetimleri ve uluslararası kuruluşlar tarafından üretilen veritabanlarından yararlanılarak üretilmiştir. Bu yaklaşım yeni bir "Analitik Çalışma" yaklaşımı geliştirilmesini gerektirmektedir.

Türkiye'de kentsel veritabanı işletmeciliği ile ilgiil bir yasal düzenleme bulunmaması en temel eksiklik olarak göze çarpmaktadır. Bu konuda yeni yasal ve idari düzenlemeler gerekmektedir. Bu düzenlemeler, veritabanı işletmeciliğinin teknik ve idari yapısını açıklamalıdır. Diğer bir gereksinim ise kentsel veritabanı işletmeciliği konusunda uzman plancıların yetiştirilme ihtiyacıdır. Kentsel veritabanı sistemleri planlama sürecine katılımın araçları olarak yapılandırılmalıdır.

Anahtar Kelimeler: Kentsel Dönüşüm, Sakınım Planlaması, Yerel Eylem Planlaması, Kentsel Veritabanları

Dedicated to Prof.Dr.Raci Bademli

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LIST OF ABBREVIATIONS

IMM	**:**	İstanbul Metropolitan Municipality
EMPI	**:**	Earthquake Master Plan of İstanbul
UN	**:**	United Nations
JICA	**:**	Japan International Cooperation Agency
SIS	**:**	State Institute of Statistics
METU	**:**	Middle East Technical University
BU	**:**	Boğaziçi University
YTU	**:**	Yıldız Technical University
ITU	**:**	İstanbul Technical University
GDDA		General Directorate of Disaster Affairs
MRE	**:**	General Directorate of Mineral Research and Exploration
SHW	**:**	General Directorate of State Hydraulic Works
GIS	**:**	Geographic Information Systems
GPS	**:**	Global Positioning System
SDSS	**:**	Spatial Decision Support Systems

DSS : Decision Support System

DBMS : Data Base Management System

UDIS : The urban development information system

UMS : Urban modeling system

UDMS : Urban development monitoring system

CHAPTER 1

INTRODUCTION

Almost 93% of the geography of Turkey is located on active earthquake belts, and 98% of the population live in settlements that face with earthquake hazards. On the other hand, as a result of movements that have taken place in last 60 years, 75% of the population live in urban areas today. During this period, 61% of the total number of houses lost due to natural disasters, are accounted to earthquakes. This loss has reached a half million units due to earthquakes that occurred in last 135 years. In addition to that, earthquakes in Turkey is the leading natural disaster in its impacts causing 90% of death and injuries. The direct economic losses caused by earthquakes are known to have reached 3% of the total GNP in the average, whereas the indirect ones have reached almost 7% of the total GNP (Deprem Şurası Mevzuat Komisyonu, 2004, 12). Table 1.1 shows the percentage of dwelling units destroyed by natural disasters during the last 70 years in Turkey. Earthquakes prove to be the most damaging natural disaster in the country.

Table 1.1 Dwelling Units Destroyed by Natural Disasters in Turkey.
(Source: Ergunay, 1999)

Natural Disaster Type	% of Total
Earthquake	61
Flood	14
Landslide	15
Rockfalls	5
Fire	4
Avalanche, storm, rain	1

Figure 1.1 shows the number of casualties and heavily damaged buildings due to earthquakes in Turkey during the last century. In total, 130 events are recorded. Total deaths exceed 80,000, with total injuries numbering more than 54,000, though some of the former records ignore injuries in older times. The total number of heavily damaged houses exceeds 440,000. Among them, the worst event was the 1939 Erzincan Earthquake that killed more than 32,000. The 1999 Izmit earthquake that killed more than 15,000 was the second worst. (www.deprem.gov.tr)

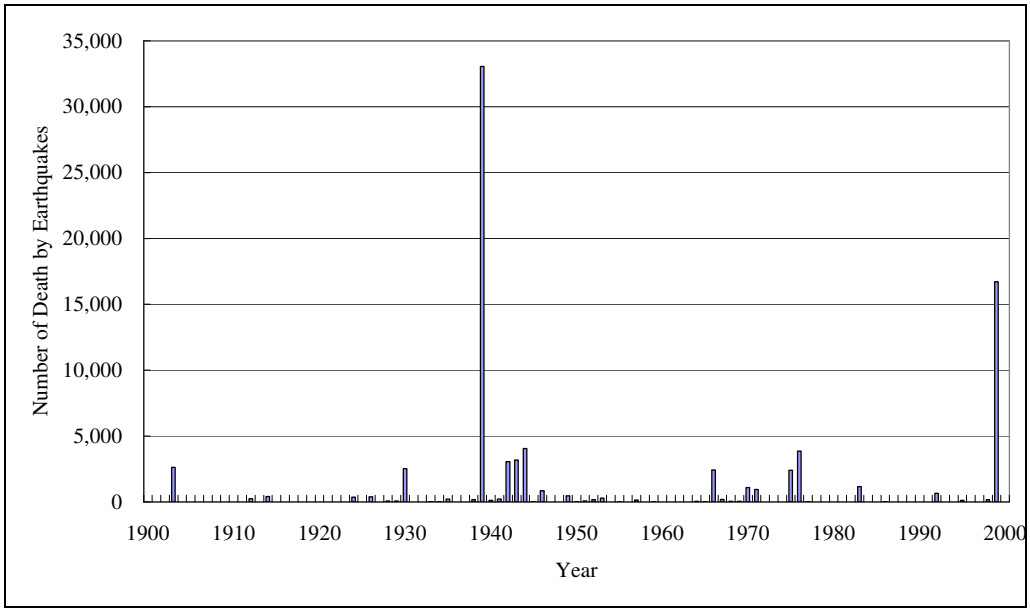

Figure 1.1 Number of Deaths by Earthquakes in Turkey.
(Source: www.deprem.gov.tr)

According to the 'earthquake zones map' that is of official current validity, the 96% of the territory of our country is located in prone earthquake regions differing only as to the degree of earthquake hazard, and 98% of the population lives in these regions. On the other hand, 66% of these areas take place in active fault zones (Figure 1.2). The 11 of 17 provinces, whose population is more the 1.000.000, are located in this area. In addition to that, 65 of 124 present energy stations (52%) are located in 1st degree earthquakes zones, and 28 of them (23%) are located in 2nd degree earthquake zones.

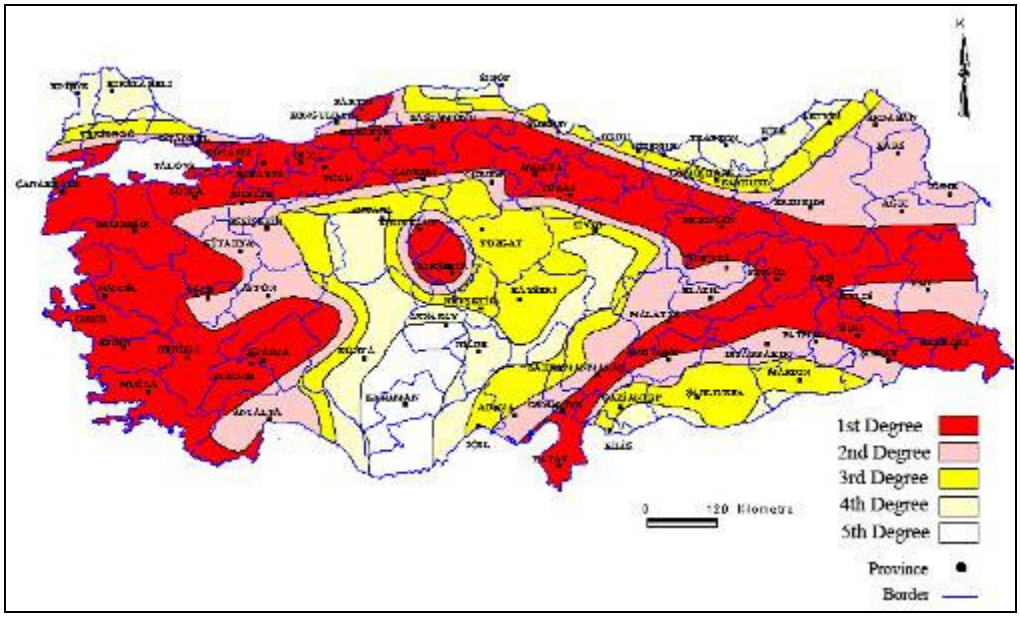

Figure 1.2 Earthquake Zones Map of Turkey. (Source: www.deprem.gov.tr)

Population increase in the country, concentration in specific centers, widespread use of new forms of development have constituted the basic characteristics of urbanization in the last 50-60 years in Turkey. The Turkish urbanization and development processes have showed a significant performance in comparison with the world experience (Balamir, 2002). As a result of incoherent and indirect urbanization policies, today most of our settlements have an unsafe and illegal stock.

Although it is known that most of the settlement areas in Turkey face the threat of natural disasters, this building stock has grown at an accelerating pace, and constituted one of the most significant examples of the 20th century worldwide urbanization experiences. The resources and tools to maintain the appropriate guidance and channeling of this growth in our cities could not be developed, illegal construction could not be prevented, the cultural heritage of centuries could not been preserved, social justice in the exploitation of this growth could not been maintained, plundering of natural resources could be curbed, and city planning has turned to be a process of legalization procedure instead of a scientific institution with powerful sanctions (Deprem Şurası Mevzuat Komisyonu, 2004, 11).

It is obvious that, in the face of these conditions immense great urban risk pools have formed. Turkey should therefore pay great attention to natural disaster management studies. However, the natural disaster management to be followed against this risk pool should not be understood as mere preparations for emergency situations. The subject that will be mostly emphasized in Turkey is works of 'loss reduction' or 'mitigation'. For this reason, a reorganization of settlement and construction processes, namely the regeneration of the construction system is obligatory in such a way to include risk management. For a start, it is a basic necessity to make the analyses regarding ground and natural conditions, and to institutionalize these operations.

Turkish cities constitute risk pools of natural and technological hazards. Local and central administrations and related authorites are in a consensus upon the judgment that active disaster policies should support urban regeneration and renewal, instead of opening up of new areas to development. This view defines also how the economical sources and powers, organization forms and roles, and the implementation of laws should be shaped. These conditions also point to the fact that, priority given to loss reduction and risk management promise multiple returns to Turkey that aim at the EU membership, in making cities safer, healthier and acquire higher standards of urban life (DPT, 2004).

The three national reports, prepared for developing strategies devoted to the reduction of earthquake losses, point to the inevitability of the urban regeneration programs for Turkish cities. These national reports are;

1. The report of : 'The National Strategy of the Reduction of Earthquake Losses' that is published by the National Earthquake Council in April 2002,
2. The report of the Earthquake Management Study Group in the 4th Economics Conference of Turkey organized by State Planning Organisation in June 2004,
3. The reports of 'Earthquake council of the Ministry of Public Works and Resettlement' in September 2004.

The report of 'The National Strategy of the Reduction of Earthquake Losses' by the National Earthquake Council

The scope of 'Urban generation' is defined in the most detailed and comprehensive report that has been prepared and published in Turkey for the purpose of developing a 'National Earthquake Strategy' as; "in areas where defected buildings, environmental units, and infrastructure and usage units are of high risk, a special image regime should be implemented; in addition to decisions directed to the building stock, policies like population dilution, bringing sage limitations should be operated by considering the social planning targets. It should be ensured that these areas are subject to common evaluations, planning, physical investments, management and administration forms as collective urban project areas, rather then being considered as the aggregate of a number of single building strengthening projects." (Ulusal Deprem Konseyi, 2002, 40).

The report of the Earthquake Management Study Group in the 4th Economics Conference of Turkey by State Planning Organisation

In Turkey Economy Conference, in the report prepared by 'Earthquake Management Study Group', under the title of 'Improvments in Development System', it is mentioned that the principles that define the standards and methods regarding the earthquake safety in physical organization of our cities, loss reduction, and risk management should take place in Development Law and bylaws, and that this issue is of great importance. In the report, it is mentioned that, the fact that a large part of the building stock especially in metropoles including squatters, illegal buildings and buildings against license and its extensions, is insufficient in terms of safety, and that such trends still continue, creates serious difficulties in reaching the targets of earthquake management. It is put forward that according to the current body of law, there is no solution other then pulling down in these areas, and that operations such as excuse, giving license, and strengthening will enlarge the problem of illegal stock and risks. Urban regeneration planning to be produced in these areas are defined in the report as: "it is essential to maintain urban regeneration in areas where such development dominates, by urban physical and social development plans original to

the locality, stimulation, and legal and administrative sanctions. Such projects of physical social and safety development have the characteristic of an Action Plan especially in areas of high risk" (DPT, 2004).

The report of 'Earthquake council of the Ministry of Public Works and Resettlement'

In the report, which aims to bring together the decrees of current body of law which are dispersed in many different laws and bylaws, and to develop a system of current body of law which is sensible concerning the earthquake phenomenon, easy to understand, and applicable, urban regeneration plans are defined as such: "they are plans in areas of high risk that require urgent intervention, in which projects aiming at physical and social development in terms of public good, and special physical implementations such as building strengthening, environmental improvement, density reduction, unification and resharing of real estates, putting construction and usage limitations together with social precautions take place" (Deprem Şurası Mevzuat Komisyonu, 2004, 46).

In addition to these studies, urban regeneration is mentioned also in the draft 'Development Law', which came into agenda as a reform scheme in the body of current laws and currently under discussion. Likewise, a draft law was prepared by the Ministry of Public Works and Settlement called 'Urban Regeneration Law Draft', to be applied especially in areas where illegal construction is dominant. However, as result of public discussions, it was decided to integrate this draft into the Law of Development and Urbanization.

The current body of 'Development Law' concerning urban planning in Turkey has an approach that enables only the enlargement of urban areas, and supports the interests of investments for this purpose. This body of law, with its mere "growth-focused" policies and instruments, does not seem to posses the necessary instruments for urban regeneration planning. Urban regeneration planning, which seeks for ways of creating safer urban environments through the upgrading of existing urban tissue and society against the earthquake threat, requires different act of instruments and methods.

Full coordination of planning, implementation, monitoring, supervision, control, and participation is the pre-requisite of the realization of the targets and programs foreseen by urban regeneration plans. The basis such a system is inevitably entail constructing correct, updated, reliable and standardized databases. Regeneration plans require detailed information on the physical and socio-economic conditions of the local environment. Such a sustainable information base should include all related urban data resources, update them, and enable the development of action oriented methods of use.

The current Urban Planning practice has a conventional approach in its data management. In the conventional approach data are believed to be acquired as a result of 'Analytical Studies'. The scope of these studies, are mostly devoted to the enlargement of urban areas and their opening up to development and construction, and do not meet the data requirements of plans for regeneration of urban built areas. Since Urban Regeneration Plans are produced for existing built areas, these plans require not only data regarding to the natural and physical structure, but also information concerning the social and economic structure of the area.

This thesis aims to identify what kinds of information requirements exist for the preliminary planning studies demanded by urban regeneration, and the methods and instruments of preparing these databases, in comparison with the methods and the instruments of the conventional system in effect. Before identifying what kind of information and database management are required for urban regeneration planning, and the methods and instruments for the preparation of such databases, it is necessary to understand comprehensively the motivations behind urban regeneration policies in Turkey, and the attitudes and fundamental objectives of urban regeneration planning.

1.1 Reasons for Urban Regeneration Policies in Turkey

The attempts for the justification of urban regeneration find a place in the world agenda as a result of reflections of global economical policies on cities, persistently rising urban risks and the destruction of environmental assests. Today, 'social development` constitutes the basic target of urban regeneration and improvement attempts. The efforts for regeneration, on the other hand, arise out of the oppornuties

and necessities of reuse or recycling of either `locational`, `stock`, or `local community` assets (Balamir, 2002, 66).

Turkey has a geography that faces extreme earthquake hazards as of its nature. In addition to that, a systematic and broad earthquake risk is created in Turkey's settlements. However, until the earthquakes of 1999, these sources of hazard were not perceived, and safety in urban environment has not been an issue of priority. The immense pools of urban risks provide sufficient reason for promoting regeneration policies. Further to justify this motivation is the poor housing stock, earthquake hazard and the destruction of environmental assets. However, this is not to claim that the necessary regulations and infrastructure are available to activate the urban regeneration efforts. Urban planning legislation in Turkey is only provisions that aims the extension of urban areas, and facilitate investments for such purposes. With such an understanding, only two types of areas are defined; rural and urban cadastral and built areas. For this reason, the basic instruments of the planning system in Turkey have been limited to compulsory purchase and the powers described in article 18 of the Development Law (Balamir, 2002, 66). With the tendency to promote regeneration process, this needs to be changed. The basic reasoning behind the promotion of regeneration is;

1. Turkey has realized an extraordinary performance in urbanization and housing production since 1950s. Although very low levels of capital accumulation and infrastructure investments prevailed, the construction rates were higher than many developed countries. Figure 1.3 (Balamir, 2002, 67) shows comparison of production of housing units in Turkey and developed countries.

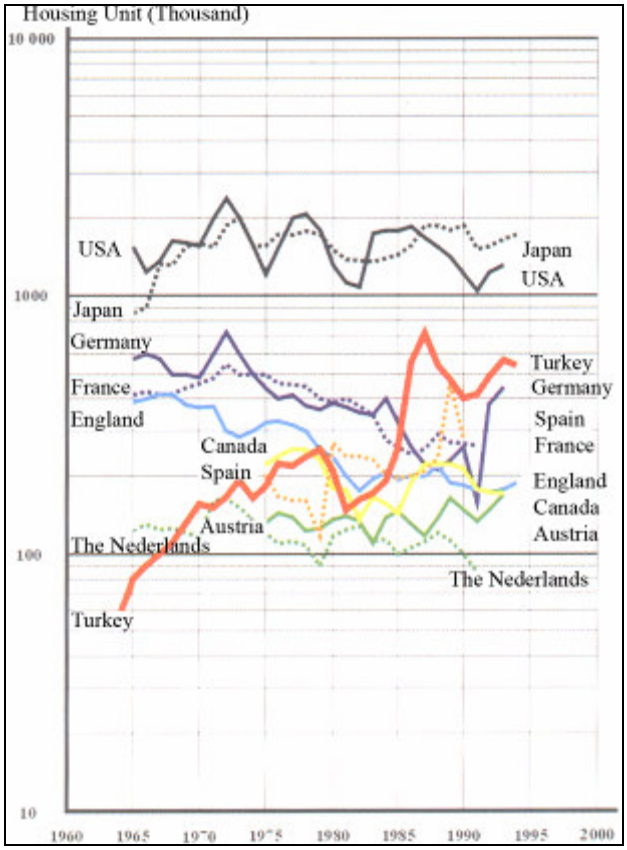

Figure 1.3 Production of housing unit in Turkey and developed countries (Source: Balamir, 2002, 67)

Balamir points to the fact that this is but a gross understatement. The ascending line indicating performance of Turkey is in reality progresses with at least another 1/3 of the figures shown here, since the unauthorized stock formation is not accounted by the official figures. This means that the red line runs at a higher trajectory than shown. The official UN figures for the other countries on the other hand, represent not only 'construction starts' but also reinvestments in existing stock. In counries saturated with housing stock, more of the cases obviously indicate reinvestments. This means that all other lines than the red will considerably drop in the chart. The final result is that the performance of Turkey within global experience is still more significiant than depicted by this chart.

This unusual volume of production is a perfect expression of the hasty and neglicent acquisition of a massive urban stock. The consequence is a dominantly unreliable, vulnerable and "a large pool of risk" (Balamir, 2002, 67).

2. The urban growth and housing production in Turkey is created as a result of spontaneous development of the form of construction and the private production relations in the market. Almost all of these buildings are constructed by small scale contractor services, without any private or public supervision. The resulting urban environments have been sub-standard and of low quality in terms of urban services and urban design.

3. Balamir claims that, as a result of such performance, housing production exceeded the urban population. As can be understood from the Figure 1.4, the excess stock is more than 20% since number households cover all urban population, whereas number of dwellings only indicates to authorized production. Thus this chart also represents an understatement. In order to make way for urban mobility, there is need for an excess stock of 3-4%, but in Turkey this rate is much higher then needed. In addition to that, the rate of increase of population and urbanization is currently in the decrease. The priority should therefore be given to the existing areas and to the regeneration of the building stock instead of increasing the volume of housing production (Balamir, 2002, 68).

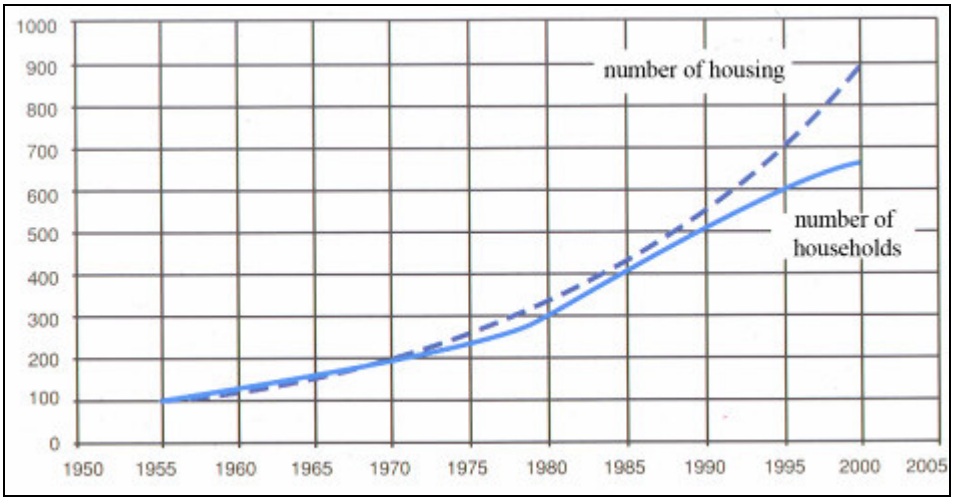

Figure 1.4 Number of households and housing units (Balamir, 2002, 68)

4. The urban building stock is produced to a large extent without control and supervision, yet face a high earthquake and natural disaster risk. Faced with

these hazards, it is necessary to develop special policies and approaches to urban areas.

5. Infrastructure, transportation and other public services in cities are sub-standard owing to the unauthorized growth of building stock constructed without the services of planning and supervision.
6. The excess stock that has been created in more then six decades, has also brought together a significant social problem. The urbanization unique to Turkey was the result of processes based on real estate possession. These caused layers of rich real estates were formed. Although tenants and landlords can live in the same location, they are separated from each other socially, and lost the opportunity of transition from one another. In other words, physical and social regeneration did not take place at the same time. For this reason, the regeneration attempts of today should include projects that maintain social justice.

1.2 Urban Regeneration Planning Approach and its Main Features

Should we turn into the world practice, it can be observed that urban regeneration studies are carried out by local governments. Within a development framework, in which physical regulations and real estate ownership rights are considered together, to constitute the legal basis of urban regeneration studies. The planning carried out at the local level is to be unifying and sustainable, even if local governments get their service from professional firms for such a purpose, and there are still precautions to be taken at local level.

First of all, urban regeneration does not imply an approach, according to which earthquake risks are determined based on an examination of conditions of the singular buildings independently and the necessary retrofittings are implemented at building scale. Such studies inevitably take place in the urban regeneration practice. However, the urban environment needs to be taken as a whole. In any comprehensive undertaking, the approach will have to consider public and private ownership of buildings, partnerships, infrastructure facilities and open areas.

In addition to that, it should not content with single and independent projects and short term undertakings in urban regeneration studies. It is needed to preserve the continuity of such undertakings unifying the tendencies and strengths of all related sides such as real estate owners, investors, and local bodies. On the other hand, regeneration projects have to rely extensively in local participation process different from simple development projects Urban regeneration plans and projects are multi-dimensional management processes, in which public participation is to be maintained, and necessary methods employed in order to solve problems of different nature in the local society, social movements are to be encouraged, and micro-political activities take place. In addition to that, urban regeneration processes generate environments which maintain the direct contacts of the social community with those who provide technical services and in this manner generate benefits for both sides.

1.3 The Necessity of Urban Database in Urban Regeneration Planning

The realization programs envisaged in urban regeneration plans depends on the full coordination of functioning of planning, implementation, monitoring, supervision, participation and control systems. Such systems are based on accurate, standard, current and reliable advanced databases. These databases should include related urban data sources, store these informations and develop new methods to facilitate implementation. An Urban Information System and Disaster Management Information System together with a common operation system for different users, by restructuring the urban databases according to “risk sectors” is needed.

Urban databases are the basis of Urban Information Systems, a powerful and unified technological system in which the data concerning the urban structure is brought together and kept in coordination. By means of this device, analyses and evaluations on plans are made, and current data is easily accessible. Databases, methods of analysis, decision processes and mechanisms, implementers and the technological infrastructure constitute the sections of this system (Information Technologies, Geographic Information Systems, Remote Sensing, Global Positioning System, Network Systems, etc.) (Deprem Şurası Afet Bilgi Sistemi Komisyonu, 2004).

Urban regeneration projects produce strategies, which enable the participation of residents in the planning process.

The introduction of the ever advancing computer technology to local governments will not only provide a multi-purpose infrastructure, but also accelerate the developments towards an information society. This system is becoming widespread as an outcome of rising facilities in data collection, storing and processing. (DPT, 2004)

Technological developments offer new opportunities for the systems of emergency management and risk management, which constitute the two components of the disaster management, and affect the environments and forms of studying. Thus, the institutional and legal structures should be reformed considering these new opportunities. Powerful communication and monitoring; remote sensing; space images; GPS equipment; intelligent systems; the methods of storage, operation and questioning of Geographical Information, and introducing them to computer technology, which affect emergency situation management, show high performance when used correctly. These same opportunities bring the capacities of forming and operating large databases; comprehensive planning; risk definition; the formation of intelligent systems and simulation; and powerful monitoring and supervision in the development of the systems of loss reduction and risk management. However, in adopting this technology, it seems there is also an obligation to renew the form of administration and the current body of law and to make them more coherent. (DPT, 2004)

1.4 The Case of İstanbul-Zeytinburnu

Istanbul has a location where earthquake hazard is most likely. It constitutes the focal point of concerns due to its population above 10 million, its production capacities and vital role in the country's economy, and one of the unique metropoles of the world. The city administrations of Istanbul who endure these anxieties have made a significant progress and reached a relative advanced level in Turkey by the studies they have carried out so far.

The Governor's Office of Istanbul has emergency plans and infrastructure. On the other hand, in addition to its significant investments so as to be prepared for emergency situations, Istanbul Metropolitan Municipality has acquired a broader perspective after the earthquakes in 1999, and using the natural data and damage estimations acquired by the studies of international establishments such as JICA (Japan International Cooperation Agency) and Red Cross, had four universities prepare the first Earthquake Master Plan of Turkey in 2003. this study, which includes the project of implementation of a program or a road map characterised as a social agreement, bringing together the various actors and shareholders of the different sectors and the sections of the society, making the risk management activities and undertakings be absorbed and accepted by broad groups, by laying common responsibilities, is not only a unique example for Turkey, but it is also observed by the whole world with great interest. In addition to these studies, the municipality has formed a unit within itself in order to form an Urban Information System. Studies to construct a comprehensive data inventory and database of the whole city have been carried out in this unit. All kinds of data of city and elements of infrastructure, transportation and urban environment have been transferred to this database. Now the city has a detailed data inventory for urban regeneration and other planning initiatives.

The first of the Local Action Planning studies that is foreseen by the Istanbul Earthquake Master Plan in areas of high risk has begun in November 2003 in the Zeytinburnu district. The analysis of the databases used in this plan putting forward their methods of production and use correspond with the purpose of this thesis, due to several factors. There is an action plan carried out in Zeytinburnu and there are rich data resources produced for the plan, and it is the most comprehensive regeneration area in Turkey with regard to its targets.

CHAPTER 2

URBAN REGENERATION ISSUES

This part of the study examines the theoretical bases of urban regeneration issues. In biology, regeneration means the regrowth of lost or injured tissue, or the restoration of a system to its initial state. And so it is with urban areas. In this definition of regeneration, is emphasized that, new growth takes place so as to replace a lost or injured part. The need to regeneration in urban area appears with loss of some features like economic, social, physical and environmental or with inconsistency of some features of that area. Regeneration deals with the regrowth of economic activity; the restoration of social function; and the restoration of environmental quality. Hence, urban regeneration is actually the planning and management of existing urban fabric rather than the planning and development of new areas.

2.1 Identification of Urban Regeneration

It is not possible to talk about an ideal definition and scope of urban regeneration. A certain type or regenerative intervention to existing urban structure may not display similar consequences in all cases. Ownership and political relations, institutional and legal framework will create significant alterations in the consequences of any type of regenerative intervention to existing urban fabric.

Different definitions of 'urban renewal' will be revealed firstly. The aim is to receive the basic understanding the concept in the literature.

> Urban renewal refers to deliberate effort to change the urban environment through planned, large scale adjustment of existing city areas to present and future requirements for urban living and working. The process involves the replanning and comprehensive redevelopment of land or the conservation and rehabilitation of areas

> which are threatened by blight or are to be preserved because of their historical setting and cultural values –all in the framework of an over-all plan for a city's development. (Grebler, 1964, 13)
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> …action to cope with actual or potential obsolescence, ranging from varying degreesof amelioration in the existing fabric to its complete replacement, we call 'urban renewal'…Since any renewal decision implies a commitment of economic resources, such factors are accordingly brought into the decision to review via economic analysis. (Lichfield, 1988, 25)
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> Urban renewal is a physical change, or change in the use or intensity of use of land and buildings, that is the in evitable outcome of the action of economic and social forces upon urban areas. (Couch, 1990)

According to these definitions urban regeneration process has three characteristics. These characteristics are;

- transmitting former peculiarities
- emerging so as to compensate the inconsistent features
- being a different production process from the previous one

Couch and Fraser describe 'urban regeneration' as the field of public policy that deals with economic, social, physical, environmental and financial problems (Couch and Fraser, 2). Although some types of regeneration types, such as 'slum clearance' and 'improvement of old part of urban fabric', have been traced since whole of the twentieth century, this type of urban policy is recent that is unique to the last quarter of the century. The big fire in Rome Nero's removing residential areas was a programme of urban regeneration like Haussmann's restructuring of central Paris. According to Couch and Frasers' assessment the difference between recent decades and the efforts in the past is the size and complexity of the problems, the speed of change, and the sophistication of policy.

Urban regeneration can be defined as a whole of physical interventions which are carried on to stimulate the economy and maintain the social peace in the parts of the city which have been subject to economical and physical depression and whose social partnership is ruined. This is seeking to bring back investment, employement, and consumption, and enhance the quality of life within urban areas. (Couch, 1990)

2.2 Historical Evolution of Urban Regeneration Issues

The changing focus of urban regeneration issues, reasons behind them and reflection of these changes into the urban areas will be reviewed in this part of the study. The goal of this part of study is not to review history of urban regeneration. The basic aim is evaluate changing issues and analyze forces behind these chances.

Urban regeneration issues were limited for the "slum clearance" before the II. World War. They were put into agenda after II. World War with the emphasis on pluralism and participation in decision making process (Özkan, 1998, 14). Couch and Fraser (2003, 3) describe this period as "since the Second World War most western European cities had tackled the problem of obsolete housing through policies of mass slum clearance and replacement. Gradually, from the late 1960s, each country moved to more sensitive programmes of housing renovation and area improvement".

Planning and implementation practices regarding issues of urban regeneration were different for European countries and United States of America. In America slum clearance actions had an ethnic dimension whereas in European countries the problems of historic city centers and related issues have been significant part of planning practice.

Urban regeneration issues shifted from 'physical' aspects to 'physical', 'social' and 'economic' aspects integratively in those post war periods. Physical condition of urban environment was in concern in 1950s. This emphasis on physical conditions was broadened to 'social' aspects in the next period so it was clear that dealing only with physical conditions could not solve the problems. 'Economic' aspects of regenerative issues were discussed in 1970s and beginning from 1980s. The term 'urban regeneration' came out after the adoption of these integrative approaches (Özkan, 1998, 15).

If the intervention types of these periods are concerned, while in 1950s efforts were focused into redevelopment of houses and moving households to better standard living areas. In terms of social concerns, improving living standards was the main object. Central government supplied economic resource and supported these efforts.

Policies and decisions were taken by central government. Residents were informed about policies and projects.

In 1960s it was seen that improving physical living standards is not satisfactory, social services and needs ought to be taken into consideration. Conservation and rehabilitation activities became significant in that period. Incentive schemes were introduced in order to activate more private capital. The participation method was in the forms of meetings, discussions and interviews.

By the mid-1970s, self-renewal was encouraged and government support is reduced. The industrial structure of many cities was changed rapidly. Unemployment and urban deprivation became the major political concerns. Informal sectors included later on because of the crisis in capitalist world in late 1970s. Participation in regeneration projects became significant in that time and the passive role of the public moved to active role (Özkan, 1998, 15).

By the l990s the long-term environmental benefits of maintaining and improving existing urban areas had been recognized. (Couch and Fraser, 3) The Green Paper on the Urban Environment (CEC 1990) argued that global environmental protection could be enhanced by urban policies that had as their primary objectives 'the creation, or recreation, of towns and cities which provide an attractive environment for their inhabitants', and that 'strategies which emphasized mixed use and denser development' were to be favored (CEC 1990, pp. 48, 60).

Up to this point changing approaches for urban planning were reviewed with respect to changing economic and social conditions of western society. In coming paragraphs shifting focus of urban regeneration issues will be identified.

In 1950s main concern was the physical conditions and the redevelopment efforts for the damaged areas. Studies and discussions of regeneration emerged at that time for damaged cities in the war and for the slum areas. Slum clearance schemes were interrupted by war and urgent reconstruction of war-damaged cities was the main practice of that time.

Slum clearance was an intervention type that was practiced since the beginning of 1900s. The goal was to clear the areas that were built within the industrializing

economy because of the problems of obsolescence (Özkan, 1998, 17). By using the central governments funds, these areas were cleared and redeveloped. There are irrefutable differences between slum clearance operations in Europe and America in terms of the scale of the projects, their meaning, aim, etc. In America, the scale of the clearance projects was so large and all the existing fabric was totally cleared. While in Europe, slum clearance operations were implemented under housing policy, so as to clear unhealthy housing areas and residents were subsidized by social housing.

In UK, slum clearance efforts began with the Housing Act of 1956. The war years had emphasized the case for comprehensive planning, involving the redevelopment not just for housing, but all other land uses as well, including industry (Ward, 1994, 152). Large scale comprehensive re-development programmes were managed by local municipalities. Clearance began with the declaration of unfitness either of an individual house or a wider area. This part of the process was controlled by the public health acts (Özkan, 1998, 19). Over a million dwellings are evaluated as *'unfit for human habitation*'. Local municipalities acquired these properties. They were demolished and replaced by municipally owned and managed housing called social housing. Social hosing areas were designed with new schools, public open space, and other community facilities. These programmes were a major component of UK housing policy in the 1950s, 1960s and early 1970s (Gibson and Kocabaş with Öztaş, 2003, 2).

Main characteristics of these development programmes were municipalities that made all the decisions without any discussion with local people. The organizational model was a 'top-down' centralized. Residents were wholly passive actors and have no participation to local authority's decisions.

The financial model had two main components. Dwelling units called 'unfit for human habitation' had no value. The land costs in slums were very low, so the acquisition costs were low. Municipality only had to pay the land cost. Second, central government helped tenants of slum housing for paying the rents of modern social housing. This made the programme very popular.

All the metropolitan and district municipalities developed staged neighbourhood programmes of large scale "Comprehensive Redevelopment Areas" which included 5000-7000 dwellings, the homes of 25,000 to 35,000 people (Gibson and Kocabaş with Öztaş, 2003). However, towards the end of the 1960s this model began to fail and it lost the support of the public and central government.

In America, with the Housing Act of 1934 slum clearance works accelerated. While it was designed to develop housing for poor residents of urban areas, that act also required cities to target specific areas and neighborhoods for different racial groups, and certain areas of cities were not eligible to receive loans at all. This meant that ethnic minorities could only secure mortgages in certain areas, and resulted in a large increase in the residential racial segregation on the United States. This was followed by the Housing Act of 1937. It was the beginning of the large public housing projects that later became one of the hallmarks of urban renewal in the United States: it provided funding to local governments to build new public housing, but required that slum housing be demolished prior to any construction. The next one was The Housing Act of 1949 and it contained an urban redevelopment program. This act is evaluated as "a shift from economic and social situation of the slum resident to the needs of private enterprise" and being "totally irrelevant to the needs of the dwellers in that area" (Bellush, Hausknecht, 1967, 10-14). The forth one, The housing act of 1954 had introduced the "term of 'urban renewal' as a new term because of urban decay and growing slums" (Bellush, Hausknecht, 1967, 15). In this housing act, emphasis was on the rehabilitation of houses and conservation of neighborhoods as alternatives to bulldozers.

Early slum clearance projects were just what the term implies. Claire describes these period as "usually whole blocks or neighborhoods were condemned and cleared, useful buildings along with the dilapidated" (Claire, 1969, 106). "After all there had been few programs successfully completed because they are very costly and diffucult to resolve conflicting neighbourhood interests" (Bellush, Hausknecht, 1967, 16).

Clearance typically began with the declaration of unfitness and compulsory purchase either of an individual house or a wider area. This part of the process was controlled

by the public health acts. Involvement of town planners in determining the scale of the intended clearance was needed because "it was rare for large areas suitable for redevelopment to be entirely unfit. To compensate for this, housing legislation allowed the removal of sound or well-maintained buildings that would otherwise prevent a more comprehensive approach to rebuilding" (Ward, 1994, 153).

In 1961, Jane Jacobs published The Death and Life of Great American Cities, one of the first - and strongest - critiques of contemporary large-scale urban renewal. Jacobs attempted to develop a new understanding for the definition of the 'slum' by emphasizing the social aspects rather than physical. She defined 'a key link' that makes an area slum which means "too many people move out of it too fast and in the meantime dream of getting out". If this link is broken then a slum spontaneously unslums because "lack of lively urbanity" had been an original characteristic of slums. She evaluates those days as follows;

> Our present urban renewal laws; at best, merely shifts slums from here to there, adding its own tincture of extra hardship and disruption, and at worst, it destroys neighborhoods where constructive and improving communities exist and where the situation calls for encouragement rather than destruction…To overcome slums, we must regard slum dwellers as people capable of understanding and acting upon their own self-interests, which they certainly are.

Redevelopment policies displaced and destroyed low income neighborhoods and moderate income housing; that public housing and subsidized housing units were often in poor quality; and many housing subsidies went to producers rather than consumers of housing. (Smith, 1991, 147).

According to Gootdiener (1985, 2) opinion, typical characteristic of this urban renewal projects in the 1950s and even 1960s is that, "the projects displaced many more people than it now houses, and it has been halted due to lack of funds for completion."

Interrelation between physical and social aspects of 'slums' was realized when the insufficiency of the original focus was obvious. Rising social awareness was the outcome, when it became evident that redevelopment and rehousing did not solve the

problems but only moved them to another place and reproduced them somewhere else in the city. This led to an increase of concern with the social aspects, focusing on needs for social services. (Özkan, 1998, 21)

Reaction against clearance policies are explained by Günay (1995, 183) with the help of property relations.

> "Domination of space requires a domination of real property. This is why slum clearance policies generated a reaction by the owners or the users of such areas, generating in the end the 'environment and behavior' theory in favour of the small property, and the domination to the center of the city by corporate capital displaying a new production of space".

The process of large-sale redevelopment became controversial. Gibson and Kocabaş (2003) describes this period in UK "When a Comprehensive Redevelopment Area boundary was made public, the neighbourhood was seen to have no long term future. Thus a process of 'disinvestment' began, which became known as 'planning blight'". Owners of property stopped any kind of expenditure on repair. Municipal services declined and the infrastructure deteriorated. It often took many years to complete the clearance of the large areas needed for comprehensive redevelopment. The clearance process was criticised as being 'the long slow death of the slums'" (Gibson and Kocabaş with Öztaş, 2003).

In early 1960s, France, Denmark and Great Britain and Netherlands had national urban renewal programs going beyond traditional slum clearance and housing schemes. "In France and Denmark, programs are codified in specific laws; in Britain the legal and financial tools of renewal are scattered over a number of planning, housing and fiscal acts; and the Netherlands is making urban renewal an integral part of a revised town planning law" (Grebler, 1964, 51).

At that time, 'privately initiated redevelopment' discussions began and it was claimed that the national programs were inadequate to overcome renewal implementations. Some of the pressures for city renewal in Europe in these years were the increasing traffic problems and pressing need for expanded or new downtowns with the increasing demands of service sector. The Buchanan Report published in 1963 gave further encouragement to the integration of planning and

transport concerns and to the central redevelopment boom. Urban renewal projects were undertaken to reduce the housing densities of city centers and to remove industry from central residential areas (Özkan, 1998, 22). Accorging to Grebler (1964, 36-37) urban renewal for expanding central functions took two sharply differing forms: One was the "direct enlargement of existing centers through projects pushing into the surrounding gray areas, often in association with majar traffic improvements", and the second was "the building of new centers at a considerable distance from downtown."

The late 1960s, more rehabilitation and conservation of built environment with attempts to keep same occupants was important. The concepts of "human renewal" and "social renewal" were to be used. The conservation and rehabilitation of historic urban areas and cultural value was growing attention. At that time, urban renewal is seen as "a tremendously useful tool for the implementation of urban planning, if it is intelligently applied". Urban renewal program was "consists of preservation of 'good' neighborhoods, through conservation, rehabilitation of those starting to deteriorate, and redevelopment areas of advanced blight" (Claire, 1969, 278-280).

In addition, there was much organized opposition by residents to redevelopment by the early 1970s. However, some municipalities moved from large-scale comprehensive redevelopment to smaller scale 'community based redevelopment". In UK, municipalities' putted pilot projects into practice so as to launch this reformed redevelopment process. They cleared a small area of about 200 houses and built replacement dwellings on the cleared land. People from the next streets were allocated the dwellings on this site rather than moving them out of the neighbourhood. Traditional 2 storey houses were provided in the same neighbourhood, rather than 18 storey apartment blocks many miles away. People wanted these types of replacement dwellings. This approach restored public support for redevelopment (Gibson and Kocabaş with Öztaş, 2003).

However these pilot projects were not repeated as community based redevelopment was not supported by the central government. The economy began to decline in the late 1960s and went into recession in the mid 1970s. Public expenditure was cut by

government. At the same time the costs to municipalities of acquiring private houses were increasing, because of rising market values (Gibson and Kocabaş with Öztaş, 2003). Community-based redevelopment was not established as part of national policy until the 1990s.

During 1970s, economic aspects of urban regeneration issues gained importance. Lichfield (1984, 110) describes this period, "seeking conditions which would enhance self-renewal, as for example, owner occupancy was thought to do". At this time urban renegeneration programs focused on improvement of late 19th century substandard private housing. During this period, economic aspects of urban regeneration issues gained importance. Lichfield (1984, 110) describes this period, "seeking conditions which would enhance self-renewal, as for example, owner occupancy was thought to do". In UK, Over three million dwellings have been improved by private owners with financial assistance from municipalities. Similar programmes were applied in the Germany, Netherlands and France. Local municipalities have been encouraged by central government to expand a strategic and long term approach to the regeneration of 19th century neighbourhoods from the mid 1970s to 1990s.

The primary effort of the urban policies in this period was to realize urban regeneration through attracting investment by the private sector in property development (Özkan, 1998, 25). It is emphasized that political consensus and partnerships between private and public sector is essential. "Local authorities were either the landowners of redevelopment areas, or in a position soon to become so, in late 1950s and 1960s" (Ward, 1994, 143). When planning and commercial pressures come together, organizational public-private partnership was innovated. This is a dispersed period realized between 1950s and 1970s. Within this choice, it is argued that "the market-directed revitalized built fabric was in turn to contribute to economic and social regeneration through providing appropriate buildings and locales for the new rising sectors of economic activity" (Healey, et.al, 1992, 277).

In UK, Municipalities need to convince homeowners to invest their personal financial resources to apply the short term regeneration action plans in that time.

Municipalities use four types of incentives for this financial organization. First, local municipalities encouraged homeowners to invest in house maintenance and improvements. They tried to persuade homeowners by providing financial incentives - in the form of cash grants to cover part of the cost of the work and 'soft' loans - to help to fund the homeowners' share of the construction work. Second, municipalities had power to make sure that dwellings are refurbished. They had authority to acquire properties by compulsory purchase procedures, which are sold after renovation. They did the rehabilitation work and then force homeowners to pay the costs. These powers are only used when all efforts to encourage homeowners have failed. Third, municipalities improve the local environment by municipal investment in neighbourhood infrastructure, such as roads, children's playgrounds and landscaping. This public investment shows the municipality's guarantee to make certain the long term future of the area. Hence public investment gives homeowners assurance to invest in their property. And fourth, public participation was an important incentive for homeowners. This allowed homeowners to invest in their plan, rather than a plan that has been forced on them from outside. Thus a community-based approach to regeneration action plans is fundamental. Plans were drawn up with local communities as partners. The neighbourhood programme was delivered from a neigbourhood office, not the city hall (Gibson and Kocabaş with Öztaş, 2003).

The primary effort of the urban policies in 1980s was to achieve urban regeneration through attracting and assisting investment by the private sector in property development. So the importance of political concensus and of partnerships between business and public sector agencies were emphasized. Healey (et.al,1992, 277) argued that "the market directed revitalized built fabric was in turn to contribute to economic and social regeneration through providing appropriate buildings and locales for the new rising sectors of economic activity". According to this point of view, refurbished fabric would also symbolize a new image for vital urbanity.

In 1980s American experience was close to European experience. Before 1980, European countries conformed less closely to the logic of private capital than in the US; with the help of central grants they did not need to attract business and high-income residents. Since 1980, public authorities have been trying to attract

developers and defining ‘enterprise zones’ for regenerative actions in urban space. They oriented toward stimulating the private market rather than comprehensive planning. In general, the dominant objective in most countries was to use public powers to assist the private sector with a minimum regulatory intervention.

In 1990s, urban regeneration is defined as a ‘composite concept’ that is “encompassing economic, environmental, social, cultural, symbolic and political dimensions. Cultural policies, in order to be truly regenerative, should have a positive impact on all of them” (Bianchini, Parkinson, 1993, 211). According to this new perspective, “an explicit commitment to revitalize the cultural, social and political life of local residents should precede and Sustain the formulation of physical and economic regeneration strategies” (Bianchini, Parkinson, 1993, 212).

One of the most important factors encouraging the cultural renaissance of cities in Europe was the decentralization of powers from central to local and regional government. Bianchini and Parkinson (1993, 1-9) define another key trend as “the decline in working time and the increase in the proportion of disposable income spent on leisure activities”. They also relate to the emergence of cultural strategies, to the “rise of the post 1968 urban social movements - feminism, youth revolts, environmentalism, community action, gay and ethnic/racial minority activism”.

In 1990s, policies of 1960s are evaluated as the “alienating force of modernism” and urban renewal at that time, “resulted in concrete tower blocks on a inhuman scale, destroying established communities in the process” (Robins, Conford, 1992, 269). Policies of 1 990s include “the gentrification of historic city centres by affluent professionals, the segregation of low-income residents in run-down peripheral housing estates, the continuing influence of functionalist traditional zoning in European planning philosophy and practice, the mushrooming of out-of-town shopping malls, the related gradual disappearance of facilities for everyday shopping in city centers, the banality of the international style of much contemporary corporate architecture, the growing commercialization and privatization of public space, and the introduction of new forms of policing designed to rid central city shopping areas of ‘undesirables”’ (Bianchini, Parkinson, 1993, 205)

As far as Bianchini and Parkinson (1993, 15) summarize, the direct impact of cultural policies on the creation of wealth and employment was relatively small, in 1 970s. In the 1980s cultural policies gave their most significant contribution to urban regeneration by helping to construct urban images able to attract tourists, skilled personnel and investors, to diversify and strengthen the local economic base. Prestigious cultural projects acted as symbols of rebirth, renewed confidence and dynamism in declining cities -like Glasgow and Sheffield.

While the use of cultural policies are interpreted as a 'social glue' for integrating new immigrants, encouraging social cohesion and shaping civic identities, there are also writers who criticize recent implementations. The use of cultural policy as a response to the socially traumatic consequences of economic restructuring has been interpreted by Harvey as "'a carnival mask' used by local and national politicians to conceal growing social inequality, polaization and conflict within cities" (cited in Bianchini, Parkinson, 1993, 14). Inequality, segmentation and alienation inscribed in the physical and social landscape of cities, says Robins and Conford, is not a matter of urban cultural regeneration; it is the matter of urban politics and contemporary urban regeneration schemes are not the harbingers of a new urbanity (Robins, Conford, 1992, 275).

It is claimed that, in this new discourse, there are connections between leadership capacity and the complexity of regeneration strategies; and leadership creates the possibility for success -that is more investment. According to this, "leadership may make a considerable difference in whether, and how, a city regenerates its economy" (Judd, Parkinson, 1990, 307).

With the concept of place marketing and image improvement campaigns, regeneration projects for certain parts of the cities are promoted. Because of perceiving the city in a fragmented way, 'project packages' were defined and put into action to create places having certain images with regenerative actions in 1990s.

2.3 A new approach in regeneration starategies: "Sustainable urban regeneration"

Countries in Europe, especially in Northern Europe, are dealing with social and economic problems, in addition to upgrading housing and the built environment to meet minimum standards. This regeneration strategy could be defined comprehensive and integrated area-based regeneration. All EU member states agree economic and social issues of urban deprivation and social exclusion. Hence issues such as jobs, training to improve skills, the needs of ethnic minority groups, the needs of the elderly and disabled, the quality of schools, community safety. These issues are interlinked. Many of these problems of urban deprivation are concentrated in the 19th century neighbourhoods and in some of the social housing estates.

The UK has most advanced and experienced urban regeneration strategies in Europe. The major development in the UK has been the launch of A National Strategy for Neighbourhood Renewal since the election of the New Labour government in 1997. There is now a strong central government commitment to ensuring a strategic approach to neighbourhood regeneration. Central government now requires all major urban local authorities to prepare and implement a municipality-wide Local Neighbourhood Regeneration Strategy (LNRS) (Gibson and Kocabaş with Öztaş, 2003).

The new approach can be called "sustainable urban regeneration". It mixes 'top-down' strategic approaches to the development of a long-term programme, with 'bottom-up' community - based approaches to the achievement of short-term action plans. Also, small-scale regeneration action plans and programmes are part of comprehensive urban regeneration strategies and plans for cities.

Strategic regeneration partnerships are shaped at metropolitan and district levels. These partnerships bring together key strategic players, from public, private and NGO sectors. Neighbourhood Regeneration Strategies are prepared by the Strategic Partnerships for each District, as the basis of sustained long-term (20-25 years) action to improve poor quality neighbourhoods. The goals of these strategies are to identify the need for neighbourhood regeneration; to set policy objectives and

priorities a phased programme of action plans; and to mobilize the necessary public resources in a way that maximises the attraction of private sector and NGO sector funds to the target neighbourhoods, in a co-ordinated, three-pronged investment programme.

Local Action Plans are prepared for each target neighbourhood, in accordance with the phased programme. These plans should include a vision and a programme of physical, social, economic and environmental projects. The management of these plans should be implemented by multi-agency partnerships which are responsible for detailed action planning and housing, infrastructure and economic development projects. These plans identify expenditure and outputs to be delivered over a 5-10 year period (e.g. improved dwellings, new dwellings, metres of improved pavements, provision of open space, improved community facilities etc); and establish decentralized neighbourhood based project management, including a neighbourhood office which is the base for residents organizations to be fully involved in developing the plans for their neighbourhoods (Gibson and Kocabaş with Öztaş, 2003).

2.4 Motives Behind Urban Regeneration

The reasons and motives behind urban regeneration are associated with a variety of problems and processes. However, the type, forms, and the density of level of problems indicate some differences among various countries according to their peculiar urbanisation processes. These problems and motives reflected not only physical transformations but also changes in social and economic structure.

Under these conditions, there are three important categories for the motives behind city center regeneration. These are;

1. Social and economic changes,
2. Changes and transformations in the activity pattern and the inconformity of new functions with the existing urban environment,
3. Deterioration of urban environment and of urban infrastructure,
4. Earthquake risk.

The results and implications of social and economic changes can be seen both in growing and declining urban areas. Today in many urban areas, there are some important causal features related with the need for urban regeneration, such as "structural economic change", "local economic factors", "concentration of unemployment Changes in social conjunctures create the need for new urban processes including new urban development and regeneration of urban environment. Social problems may be observed under conditions of growth or decline, and they can be very complex both in their presentations and their roles within the decline process. Under this logic, migratory movements", "social and spatial segregation" and also Social decline" become crucial issues. As the result of changes in socio-economic conjectures, cities face the need for new development and or urban regeneration. (Ergenekon, 2001, 54)

During the 1990s the EU began to develop urban policies to help to deliver economic and social integration. As part of this process, urban regeneration has become an important policy instrument for reducing 'social exclusion'. Social exclusion is a term which refers to the situation where substantial numbers of citizens are excluded from access to the resources and services that the rest of society takes for granted, such as a decent house, good schools, a job, and freedom from poverty, crime, disease and discrimination. These people, mainly the urban poor, are concentrated in particular neighbourhoods - the spatial dimension of social exclusion – which are the targets of area-based regeneration programmes (Gibson and Kocabaş with Öztaş, 2003).

The 1998 EU policy paper Sustainable Urban Development in the European Union: a Framework for Action (4) states that 'The European Commission advocates an area-based approach to the regeneration of deprived urban areas under the Structural Funds, integrating economic, social, cultural environmental, transport and security aspects' (European Comission, 1998 p.1).

Although each country or city has different socio-economic characteristics, the flowing processes are visible for all cases in order to enhance the motives behind urban regeneration:

- Urbanization followed by socio-economic development;
- Sectoral developments such as industry or tourism displaying their impact on urban growth;
- Real estate investment patterns of public and private sectors in terms of real or speculative investments,
- Alternative investment decisions of public agencies for regeneration or new development,
- Natural depreciation of the physical stock. (Economic Commission for Europe, Committee on Human Settlements, 1992, 2)

The results of socio-economic developments and regional difference or inequalities lead to different urban growth patterns. With respect to these patterns, when new activities are injected into urban areas, old activities have started to observe some transformations. New dynamics and trends cause the emergence of conflicts between new activities and the existing urban environment.

New activities or functions to a certain extent create their own building stock and environment, but sometimes they choose a place temporarily in the urban environment or they change their contents or locations. In each case, there is the problem of accommodation of new demands and conformity with the existing building stock. (Kovanci, 1996)

In developing countries including Turkey, there is a tendency for growing replacement of housing from city centers by commercial and official activities. These processes lead to “tertialization” of urban centers, and at the same time cause the emergence of non-conforming uses” as well as ‘the increase in density”. Within these processes, the decreasing attention has been paid to the concept of urban image that is accepted as an important cause of lower levels of environmental and aesthetic quality. The loss of green areas, traffic problems, alterations and modifications on the building stock mainly due to functional changes, without any regard to their original characteristics historical buildings and old quarters in response to speculative motives have contributed to the decrease in aesthetic quality,

environmental degradation and physical deterioration (Economic Commission for Europe, Committee on Human Settlements, 1992)

In addition to socio-economic changes, there are some factors, which contribute to environmental deterioration; such as;

- The age of building stock,
- The lack of maintenance of the buildings,
- The circulation and transportation structure, including the public and the private systems.
- The infrastructure of public utilities including sewer and water facilities. (Ergenekon, 2001, 57)

Some implementations like the process of urban renewal itself, sometimes generates the cause of deterioration, as the problem of financial pressure.

The newcomers to cities prefer to settle in dilapidated built-up areas or to generate new haphazard development zones. Subsequent intra-urban population movements of particular social groups can result in physical deterioration in these areas. In all cases, there is a need for regeneration of urban environment arising from changes in social structure. (OECD Council Report, 1983)

One of the environmental reasons for deterioration is the existence of derelict" and "vacant" land, For example, in France and United Kingdom, dereliction arises from industrial restructuring, changing land-use requirements or rigidities in urban renewal and planning processes. In some cases, vacant land might be a temporary phenomenon, but sometimes land may stay vacant for years, blighting the area surrounding it due to many reasons such as the need for housing, open spaces or socio-cultural infrastructural facilities. Lack of resources in the public sector lead to some delays in such interventions like redevelopment in order to prevent vacancy. There are some other reasons for vacancy such as; (OECD Council Report, 1983)

- Land ownership pattern that may hinder redevelopment,
- High land-values,
- Unsuitability for re-using because of technical difficulties,
- Land-use and building regulations.

Deterioration of urban environment and of urban infrastructure is generally accompanied with urban decline in many countries. There exist some differences in urban deterioration issues because of historical circumstances and geographic situations. However, it is generalised that some developing countries including Turkey have pointed out to similar problems in their countries where the legal framework has been suffering from providing the adaptation of land-use plans on time and adequate decisions for development. (Ergenekon, 2001, 58)

2.5 Basic Principles of Urban Regeneration

Urban regeneration is a long established and planned process of state intervention in urban development. Practice in different countries has many features in common, but successive models have been adapted to specific national conditions. Thus there are important variations in practice between countries. The following principles are widely applied and could be used to help the development of the Turkish urban regeneration model.

- A regeneration action plan provides an investment framework, within which public sector resources are used to encourage private investment by homeowners and other neighbourhood investors, such as shop owners and owners of other small businesses.
- Urban regeneration reduces the gap between poor quality areas and the rest of the city by improving conditions in disadvantaged neighbourhoods, through co-ordinated re-investment.
- A long term (20 years plus) regeneration strategy is implemented through a rolling programme of action plans which are each implemented over a 5-10 year period. These local plans are implemented on a block by block,

neighbourhood by neighbourhood basis. In the early years priority is usually given to the neighbourhoods where conditions are worst – the principle of 'worst first'. The rate of implementation is determined by the resources available.

- Small scale regeneration action plans are now often part of larger scale area-based regeneration programmes which include the homes of 25,000 people or more, together with commercial areas, such as district shopping centres. In these situations, the improvement of housing conditions is part of a more comprehensive programme of action for economic, social and environmental improvement. These investment programmes often link large scale redevelopment of commercial areas with the upgrading of the adjacent disadvantaged neighbourhoods. (Gibson and Kocabaş with Öztaş, 2003).

2.6 Intervention Types Under the Heading of 'Urban Regeneration'

"Urban regeneration" represents a general identification for a number of intervention types to the existing structure. Urban regeneration issues have been expressed mostly by using the term of "urban renewal". But 'renewal' just represents a certain type of intervention mainly to the physical structure.

Renewal

Urban renewal is presented as a natural process through which the urban environment undergoes transformation (Ergenekon, 2001, 72). It has been used to define the process of physical transformation of cities but it is short of capability for explaining transformations in activity structures (Eke and Özcan, 1996). Günay defines this type of intervention as 'a physical context where individual buildings and roads, or urban fabric are subject to either demolishment or repair for purposes of new construction or conservation. This term has been extensively used to define the process of physical transformation of cities' (Günay, 1991, 3).

Clearance

Clearance used in the beginning of urban regeneration practices. Especially it was used in slum areas. It can be defined as the removal of inefficiently used urban areas for some other purpose (Günay, 1991, 3).

Redevelopment

Redevelopment consists of the removal of existing buildings and the re-use of cleared land for the implementation of new projects. 'Redevelopment operations tend to totally change the general layout of an area by rearrangement of buildings and roads, because it cannot anymore provide opportunities for second economic activity or satisfactory living conditions…this mode of urban regeneration entailed the re-use of cleared land' (Günay, 1991, 5). The objective is to remove the existing fabric and life pattern. This type of action is critiqued and more adoptive policies have been developed in time.

Improvement

The objective of this type of intervention is to improve the physical condition of the existing structure for enabling the continuation of existing use, functions and activities. It is used for the areas dereliction or insuffiency of existing fabric takes place because over-burden and over-usage. (Özkan, 1998, 33)

Rehabilitation

This type of intervention points to 'adopt the building to a contemporary use which will be capable sustaining it' (Lichfield, 1988, 26). If there is a loss in the original function and the goal is to install a contemporary use by keeping the original physical character, it is applied (Özkan, 1988, 33). This is also called 'reconditioning', 'renovation', 'remodeling' and 'adaptive use'.

Preservation

According to Fitch evaluation "preservation implies the maintenance of the object in the same physical condition to prevent further decay. Nothing is added to or subtracted from the aesthetic corpus of the object. Any interventions necessary to

preserve its physical integrity (e.g. protection against fire, theft, or intrusion; heating, cooling, lighting) are to be cosmetically unobtrusive" (Fitch, 1976, 46).

Conservation

This type of regeneration action used in historical areas so as to 'preserve the urban fabric displaying architectural quality or basic characteristics of specific historical epochs' (Günay, 1991, 6). This type of operation is differentiated two sub-types as 'direct' and 'indirect' by Lichfield. Direct conservation is to add or apply supportive materials into the actual fabric so as to ensure its continued durability and structural integrity. In the case of indirect conservation, the goal is the prevention of deterioration by a sound maintenance program and controlling environmental pollution (Lichfield, 1988, 26).

Restoration

This type of intervention implies "reviving the original concept, either or both in reletion to the fabric or use (Lichfield, 1988, 26).

Reconstruction

Lichfield defines reconstruction as "rebuild a new in imitation of the old, as necessitated by disasters such as earthquake, fire or war. The reconstruction could take place on the same site or in extreme cases, another" (Lichfield, 1988, 269)

2.7 Legal Aspects for the Urban Regeneration Issues in Turkey

This part aims to provide an evaluation of legal framework for the subject of urban regeneration. The legal aspects and procedures will not be given, here, in detail. The legal standing will be examined with reference to 'urban regeneration'. What is required here is to understand the legal dimension in which regenerative activities take place.

If Turkish development legislation is examined, it is seen that there is no specific law or regulation for urban regeneration activities. It is obviously because of the lack of public policies in this field. Public authority, by having no particular policy for the regeneration of urban areas, has not defined an entire, purposeful, uninterrupted and

regular decision making process for this reorganizing action. Hence, there does not exist any specific regulation for the subject either in the form of a particular law or in the form of a clear codification in other related laws. On the other hand, in countries having a public policy for urban regeneration, it is officially declared by producing specific legal documents. It is noteworthy here, to remember the 'urban renewal programs' in the United States, 'housing acts' in Britain and 'careful urban renewal strategy' in Germany as examples of those official policies.

In order to review development legislation, there may be more than one way to evaluate the process. Different dates and, thus, different periods may be deduced depending on the used criteria.

One possible alternative may be by using the enactment dates of the laws by considering the conditions and formations which produced those laws.

- before 1923 (before the Turkish Republic)
- 1923 - 1950 (beginnings of Republican Period)
- 1950 - 1980 (Republican Period after 1950 with special emphasis for the years of 1960s)
- after 1980

In this option, there will be three basic periods and their sub-periods. The first one is the Republican Period up to 1950s with the main concern of newly developing areas. Second period covers the years between 1950 and 1980; an important period both for the existing built up area and surroundings of the cities because of high rates of migration. In this period a sub-division will be needed in order to give special emphasis to the years of 1960s. Last one is the period after 1980.

2.7.1 Development Legislation Inherited From Ottoman Empire

Ottoman Empire tried to control urban development, mainly, in the second half of the 19th century. The Law of (Public) Buildings of 1882 was a product of that need to control urban development. It can be said that the Law provided a comprehensive approach for development activities of its time. With this law, "new organizations

were introduced for city squares and open areas; widths of roads were specified; certain proportions were introduced between street widths and the height of buildings; and detailed rules were introduced relating to plot shapes and proposed buildings" (Ersoy,1992,337). Urbanization processes were not conceived by the law; it was rather a pure conceptualization of renewal and beautification of cities. It can be said that the law could not guide the planned development of cities. Nevertheless, according to Tekeli, grid-iron planned neighbourhoods for immigrants and arrangements made against fires are the products of that Law (Tekeli, 1980, 45). This law, to cite a conclusion, includes regenerative issues for existing tissue.

2.7.2 1923-1950 Period

New Republic's aim was to create a new society in all fields. The willingness for changing the appearance of cities and for the creation of cities similar to western ones was the repercussion of that aim in the field of urbanization. The Ebniye Law was an insufficient legal frame for the aims of new republic.

Law of Buildings and Roads no. 2290 was enacted in 1933. Preparation of development plans and base maps became an obligation by this law. The basic aim of the development legislation of that period was to change the appearance of cities and to create cities of Western standards. It is assumed that production of 'ideal settlements' would be possible under the control of new legislation, and settlements fitting into 'ideal city model' would be created if all the details were defined in the law. On that account, law no 2290 brought very detailed regalations about construction and defined the contents of the development plans in their land-use decisions and, even, the widths of streets. As a result of this detailed coding, it is claimed that Law of Buildings and Roads was a "continuation of the 'Ebniye' Law with respect to the subjects it covers and its stipulations" (Akçura., 1982,52).

During 1930s, apart from development law of 2290, a number of laws (Law of Municipalities (1930) , law no 1580; Law of General Hygine (1930), law no 1593; Law for Foundation of Municipality Bank(1933), law no 2301,' Law for expropriations of Municipalities (1934), law no 2497; law no 2763 (1935) as an addition to Law of Municipalities) were enacted in order to fasten the development

activities all over the country and most of them were made by considering the experiences obtained in the development process of Ankara. Those laws and regulations were implemented through the years of 1 940s. A controlled and a healthy urban development were aimed by edicting all those laws. (Özkan, 1998, 60)

Peculiar characteristics of Turkish cities which were a product of completely different processes than western ones were not sufficiently taken into consideration while making new regulations. The history of cities, the level of social development and the gap among regions were not given necessary importance. “It is thought that production of ‘ideal settlements’ was possible under the control of new legislation” (Türksoy, 1987, 50). ‘New neighbourhoods’ emerging in the limited number of cities in which new legislation was implemented, could not work with the order of the old city. Whereas in the cities in which ‘new neighbourhoods’ could not be created, old tissue was destroyed by regenerating those areas. In this case, as a result of being together -new with the old- settlements could not have perceptible identities.

As a conclusion, it can be claimed that development legislation and related implementations of 1923-1950 period did not develop a policy for conservation of that fragile tissue. Creation of new development areas was difficult because of the insufficient capital accumulation in the country. So some interventions such as introducing new roads in the existing built-up areas were inevitable. Those interventions that were done to create settlements fitting into ‘ideal city model’, had some destructive affects and they even led to clearance of spatial features of cities in some cases. Nevertheless, even this ‘ideal city’ could not be created. For this period, 'regeneration' was the state’s policy in the field of urbanization without introducing a coherent conservation policy.

2.7.3 1950-1980 Period

Coming to the year of 1950, a new period began for Turkish cities. Starting from this year urbanization rate began to increase and reached very high levels; at the end, urban population exceeded 50 % of the total. This is mainly because of the migrating population to the cities. Nonetheless, this population was not attracted by

industrializing cities; it was rather as a result of push from rural areas. And the reason for this push was economic policies for rural areas and agriculture.

This policy of the state then would be declared in the Second Five Years Development Plan for the years of 1968 and 1972. It is stated that "urbanization will be encouraged and will be used as an economic motivating force. Growing of cities will not be prevented; rather it will be promoted and supported".

This agglomeration in the cities created a higher urbanization rate than the rate of industrialization. Thus, in this period cities became the center of economic and social life, and an agglomeration point as a spatial unit. There was a migration from rural areas to cities which caused a concentration in the city. In spite of the fact that post-republican policies had supported decentralization of development in urban areas, beginning from 1950, policies promoted centralized development for the cities.

1950's approach of creating compact cities led to the demolition of 5-10 years old buildings whose potential economic life, in fact, is almost 40-50 years. Continuous changes that were made in development regulations promoted this unhealthy cycle of 'tear down - build up' process (Aysu, 1981, 204). The reason of the concentration policy of those day's governments was stated as the increase in the possibility of service provision. According to this claim, local administrations will supply better service provision in infrastructure and social servicess if the cities are developed in a compact form (Aysu, 1981, 207).

Beginning from 1950, Turkish city faced with a new fact under high levels of migration; that was squatting. Weakness of (mainly financial weakness) the state "to generate sufficient amount of urban land, to extend infrastructure to the urban fringe, to maintain efficient public transportation networks for decentralization and to provide shelter for the new urban population" (Günay,1991,13) led to the development of squatters in the peripherial areas of cities. Another development, beside squatters, under high levels of migration was the regeneration activities in the existing built-up area. Cities began to be regenerated as a result of being concentration points also in economic life. While the housing stock was increasing illegally on the periphery; it increased in the city by given permissions for higher

densities. Thus, development legislation of that period brought new regulations for occurrence of higher densities (Özkan, 1998, 63).

In this period, a new development law was needed against high levels of migration and development activities. Beside a new Development law (no 6785, 1956); laws for squatters, for building amnesties (laws numbered 5218, 6188 and 5431), for ownership fragmentation etc. were, also, enacted in this period.

2.7.4 The Period After 1980

Development Law (no.3194)

Development Law numbered 6785 was replaced by Development Law numbered 3194 in the year of 1985. The serious proposal of the new development law numbered 3194 was the introduction of an important change in the instutional structure of urban planning. Local administrations were recognized as the decisive authority in the field of planning. In this context, preperation and approval of development plans would be done by local administrations. This provision of the law loosened the control of central government over urban development.

Two primary policies, according to Altaban (1985, 11) of Development Law numbered 3194 were 'transfer of authorities to local administrations' and 'accelerating and making development process and procedure easier'.

It did not propose a structural difference in comparison with the previous law; it keeps the approach of development law numbered 6785. Thus the new law, similar to previous one, failed to clearly define the planning process, how should a proper city plan evolve and what precautions should public be able to call upon during the planning process. It kept the discipline of urban planning in the frame of development law that is widespread up to that time.

Provisions of the law encouraged redevelopment oriented implementations by relaxing restrictions and dispersing the authority. Günay (1995, 262-263) evaluates this characteristic of the law as follows;

> "The limited control over development plans by the central state is almost nullified with the Law. Although the Law

> defines ‘comprehensive planning’ in essence, in practice, since the local authorities were given total control over real property, it ended in incremental planning and lessening restrictions on property, which turned planning into spontaneity, where its goal became conversion of pure land into an object of urban property at any cost, and if it is already urban real property, extending its property rights tup in the air”

The Law introduced the possibility of constructing more than one building on a single plot and of increasing the readjustment share from 25 to 35 per cent. These provisions may be evaluated as they increased the tools which can be used in regenerative processes.

Within the ‘Development Law’ 3194 that is the basis of the planning laws, ‘urban regeneration planning’ is not defined as a plan type. Also, there is no formulation specifying the data, analysis or preliminary work that should be generated by the development and regeneration planning studies. The only study that explains the data production process for the Development Plans is the “Technical Specifications on the Organization of the Development Plans” prepared by Bank of Provinces in 1986 according to the Development Law 3194 and related regulations by the Bank of Provinces.

Development Law Draft (2004)

Development Law Draft that was prepared by Ministry of Public Works and Resettlement in 2004 has been opened to a public argument. In that Draft ‘urban regeneration’ concept was considered in the definitions chapter. According to that Draft, these regeneration projects and implementation areas are defined as:

> “In settlement main strategy and development plans project and areas that have planned in order to improve the existing building stock, urban or rural environment standards; provide healthy, secure and aesthetic buildings and environments; preserve natural, historical and cultural values; reduce the losses of disasters; increase quality of life, provide sufficient service areas

comprehending one or some of the conservation, use, renewal, development, strengthen or clarification decisions including social, economic and physical decisions" (İmar Kanunu Tasarısı Taslağı, 2004).

Covering the concept of regeneration in Development Law and the efforts to create new tools for regeneration plannning are affirmative actions. However, the rules about the preparation of urban regeneration plans have not been determined yet in the Development Law. The anlytical studies and urban databases for this kind of a planning approach demands are different from the analytical planning studies produced by the developments plans These plans are not to be produced for new development and growth areas, but in built-up areas with the risk of earthquakes. Because of that the socio-economic and cultural data on the local community under the consideration of the plan is needed among the physical data.

2.7.5 Evaluation of the Legal Framework

It is clear that there is no specific law and regulation for urban regeneration activities as a repercussion of absence of public policies and unintegrated approaches on this issue. Provisions of the laws generally have indirect consequences on the regeneration process of cities. There are few laws including statements which give way for any type of regenerative action. Nevertheless, implementations under those lack and insufficient provisions of legal documents should, also, be analyzed. It may, possibly, be concluded that even those insufficient provisions of laws are not utilized as much as possible.

Between 1923 and 1950 'regeneration' was the state's policy in the field of urbanization but proposed regeneration type had certain destructive results due to the absence of a conscious conservation policy for existing built-up areas. The laws enacted between the years of 1950 and 1980 promote concentration in the existing buit-up area to ensure low cost infrastructure provision. This period's laws also led to destructive regeneration actions in urban areas on the base of redevelopment and/or renewal. After 1980, legal framework encouraged, again, redevelopment oriented implementations by relaxing restrictions and transferring authority to local

administrations (Özkan, 1998, 84). However in the Development Law Draft that has appeared in 2004 defining the ‘urban regeneration’ concept and the intervention ways on urban environment are noteworthy developments.

CHAPTER 3

URBAN DATABASE MANAGEMENT FOR THE PURPOSES OF REGENERATION

In this chapter the legal, administrative and technical context of preparatory planning work needed for constructing urban databases for urban transformation planning is explained.

First, the technical definitions of databases used in urban planning are made and the related technical terms and concepts are defined. Then, the existing situation in Turkey, about the formation and management of databases is reviewed. This part also concentrates on the issue of spatial database produced for disaster risks in Turkey. The objective is to examine the current national and local government database systems as a part of disaster management system in Turkey to learn its characteristics. This part examines the status of disaster database management in Turkey from legal, institutional, and operational viewpoints.

Preliminary anlytical studies made for the development plans, which are produced according to the Development Law will be evaluated. This evaluation tests the validity of using these study methods for the urban regeneration plans.

At the end of this chapter a proposal of a database formation model for urban regeneration plans is made. In this proposal, the questions as to ‘what kind of a legal arrangement may be possible for the formation of urban databases?’, ‘how these studies may be organized under an administrative structure?’, ‘which data should be produced technically?’ and ‘what kind of analyses may be made in the action areas? with these databases are reviewed.

3.1. Identification of Database Systems in Urban Planning

Urban database development is an essential decision support system for any local urban authority, which keeps complex urban information within itself. The data varies from transportation, infrastructure, public buildings, property, etc. All of the various urban issues, the urban authorities have to involve in the planning, development and monitoring of the various infrastructure facilities.

The Urban Database System is a part of Spatial Decision Support Systems. It contains the functions to manage the geographic data base. In this part, firstly 'Spatial Decision Support Systems' will be examined.

3.1.1. Definition of Spatial Decision Support Systems

Decision support systems (DSS) are developed for use with a domain database that has a spatial dimension or for situations where the solution space of a problem has a spatial dimension. Ayeni claims that spatial decision support systems are off-shoots of decision support systems whose origins may be traced to the frustration with the use of management information sciences in the cognate discipline of management science. DSS are designed to solve ill- or semi-structured problems, i.e. it is not possible to define objectives fully. They must have an interface which is easy and powerful to use, enable to combine models and make full use of all the data and models that are available. (Ayeni, 1997, 4)

Spatial decision support systems (SDSS) is an interactive, computer-based system designed to support a user or group of users in achieving a higher effectiveness of decision making while solving a semi-structured spatial decision problem (Malczewski, 1997). The three terms; semi-structure spatial problems, effectiveness, and decision support capture the essence of the SDSS concept.

Ayeni summarizes what should spatial decision support systems have. Spatial decision support systems are computer programs designed to bring the whole of the knowledge base to bear on a problem through a flexible and adaptive solution system that makes explicit use of both the analysts' models and the expert knowledge of decision-makers. A spatial decision support system will provide database

management, model base management, and graphical and tabular reporting capabilities under a unified and possibly intelligent user interface (Ayeni, 1997, 5).

Densham claims that a spatial decision support system should have the following attributes:

- Support for the capture of spatial and non-spatial data
- Ability to represent complex spatial relations among spatial data that are needed for spatial query, spatial modeling and cartographic display
- A flexible architecture, enabling the user to combine models and data in a variety of ways
- Methods peculiar to spatial and geographical analysis, including spatial statistics
- Ability to generate a variety of outputs, including maps and other more specialized forms
- A single, integrated, user interface that supports a variety of decision-making styles
- An architecture that supports the addition of new capabilities as user needs evolve

3.1.1.1 Historical Evolution of Spatial Decision Support Systems

The concept of Decision Support System (DSS) is based on the seminal work by Simon and associates in 1950s and 1960s. Decision Support System evolved as a field of research, development, and practice during the 1970s and 80s. The SDSS concept has evolved in parallel with DSS. IBM's Geodata Analysis and Display System (GADS) - developed in the 1970s - was one of the earliest large DSS (Sprague and Watson 1996). Densham and Goodchild (1989) claim that the development of SDSS has been associated with the need to expand the GIS system capabilities for tackling complex, ill-defined, spatial decision problems. There has been considerable growth in research, development, and applications of SDSS in the last 10 years or so. The field has now grown to the point that it is made up of many

threads with different, but related names, such as collaborative SDSS, group SDSS, environmental DSS, spatial knowledge based and expert systems. (Malczewski, 1997)

3.1.1.2 The components of spatial decision support systems

Spatial decision support systems are aimed to solve specific problems and to generate alternative solutions and incorporate performance criteria that are interest to planners. A Spatial Decision Support System is expected to contain three subsystems. The first subsystem is "knowledge subsystem" which contains data and manipulation procedures. The database development and management is in this subsystem. The second subsystem is "language subsystem" which is user interface. And, third subsystem is "problem processing subsystem" which links and coordinates models and data.

Spatial decision support systems have three components:

- Data Base Management System (DBMS) which contains the functions to manage the geographic data base;
- Model Base Management System (MBMS) which contains the functions to manage the model base; and
- Dialog Generation and Management System (DGMS) which manages the interface between the user and the rest of the system. (Malczewski, 1997)

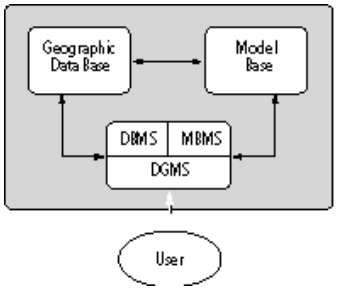


Figure 3.1 The components of spatial decision support systems.
(Source: Malczewski, 1997)

The following table (Table 3.1) shows detailed functions of these components of spatial decision support systems.

Table 3.1 The functions of spatial decision support systems.
(Source: Malczewski, 1997)

Components	Functions

Data Base and Management	• Types of data
	  ○ locational (e.g. coordinates)
	  ○ topological (e.g. points, lines, polygons and relationships between them)
	  ○ attributes (e.g. geology, elevation, transportation network)
	• Logical Data Views
	  ○ relational DBMS
	  ○ hierarchical DBMS
	  ○ network DBMS
	  ○ object-oriented DBMS
	• Management of Internal and External Databases
	  ○ acquisition
	  ○ storage
	  ○ retrieval
	  ○ manipulation
	  ○ directory
	  ○ queries
	  ○ integration

Model Base and Management	• Analysis
	  ○ goal seeking
	  ○ optimization
	  ○ simulation
	  ○ what-if
	• Statistics and forecasting
	  ○ exploratory spatial data analysis
	  ○ confirmatory spatial data analysis
	  ○ time series
	  ○ geostatistics
	• Modeling decision maker's preference
	  ○ value structure
	  ○ hierarchical structure of goals, evaluation criteria, objectives and attributes
	  ○ pairwise comparison
	  ○ multiattribute value/utility
	  ○ consensus modeling
	• Modeling uncertainty
	  ○ data uncertainty
	  ○ decision rule uncertainty
	  ○ sensitivity analysis

Table 3.1 (Continued)

Dialog Management	• User friendliness
	  ○ consistent, natural language comments
	  ○ help and error messages
	  ○ novice and expert mode
	• Variety of dialog styles
	  ○ command lines
	  ○ pull-down menus
	  ○ dialogue boxes
	  ○ graphical user interfaces
	• Graphical and tabular display
	  ○ visualization in the decision space (high-resolution cartographic displays)
	  ○ visualization in the decision outcome space (e.g. two and three-dimensional scatter plots and graphs, tabular rapports)

3.1.1.3. Spatial Decision Support Systems for Urban Planning

Densham and Batty claims that planning and management are based on a generic problem solving process which begins with problem definition and description, involves various forms of analysis which might include simulation and modeling, moves to prediction and thence to prescription or design which often involves the evaluation of alternative solutions to the problem. Decision characterizes every stage of this process while the process of implementation of the chosen plan or policy involves this sequence once again. The process takes place across many scales and is clearly `iterative' or `cyclic' in form. Processes may be nested within one another while the extent to which different professionals, managers and other decision-making interests are involved through the various stages, depends upon the nature of specific applications and their context. In practice, the process is often partial and much diluted from this more formal characterization. The typical process illustrated in Figure, however, remains a basis for action. (Densham, Batty, 1996)

Table 3.4 shows how GIS and relate modelling technologies fit within this process. Indeed, this is the kind of structure that Harris (1989, 1991) refers to as a planning support system (PSS) which links a variety of computer-based software supporting decisions at different stages of the planning process (Batty, 1995).

Ayeni claims that the development of a spatial decision support system for urban planning will depend on coupling together a number of subsystems, such as a database subsystem, a monitoring subsystem, a modeling subsystem, etc. (Ayeni, 1997) Ayeni describes these as an urban development information system (UDIS), urban development monitoring system (UDMS) and urban modeling system (UMS). The following figure shows the subsystems and the interactions between them.

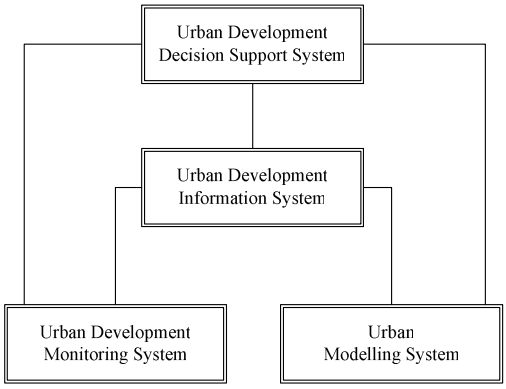


Figure 3.2 The development of an urban infrastructure decision support system. (Source: Ayeni, 1997)

The urban development information system (UDIS) is a support system for the other components and subsystems of the decision support system such as case processing and urban services impact systems. It is a specialized database that will contain certain information on land development projects. The database subsystem has been equipped with a number of expert systems that facilitate the processes of data query, data search and data analysis that constitute a geographic information system. (Ayeni, 1997)

The urban modeling system (UMS) consists of a variety of models that are being used to study, understand, predict and plan urban development. (Ayeni, 1997)

An urban development monitoring system (UDMS) is a basis for documenting and monitoring current levels of local development activity in order to assess the ability of a community to provide new development with needed infrastructure. It can be used for short-term planning and forecasting and for projecting small-area population, employement, constructing and land use changes. Therefore, it will consist of at least three components: a case processing system, an urban services impact system, and an urban information system. (Ayeni, 1997)

3.2 Urban Database Systems in Turkey

In this section the existing situation in database formation and administration in Turkey will be evaluated. Since the subject of the thesis study is the database that the urban regeneration planning in case of earthquake risk requires, in this part, the focus will be on spatial databases prepared in Turkey to minimize disaster risk. The object of this part is to examine characteristics of the current national and local government database system as a part of disaster management system in Turkey. The first part reviews how natural disasters in Turkey are managed and the existing efforts of cooperation. The second part examines the legal, institutional, and operational aspects of disaster database management in Turkey.

Natural disasters, such as earthquake, flood, landslide, heavy snows etc., can occur from time to time. These events may be insignificant if they occur in an unpopulated area. However, if it were to occur in a populated area, it could cause serious impacts on human life and the event comes to be denoted as a natural disaster.

Disaster management can be defined as various forms of organized human efforts to prepare for, to reduce, and to respond to a natural disaster. Disaster management is necessary because:

- Occurrence of disasters cannot be stopped by human efforts.
- A natural disaster causes the losses of many lives, property and hinders national development.
- The impact of the disaster will expand, if it is not managed properly. (JICA, 2002)

3.2.1 The Reasons for Requiring Disaster Information Systems in Turkey

Organized precautions measures developed to minimize damages caused by disasters, the minimization of factors that leave defenseless during the disasters, countries apply disaster administration methods and models under the guidance of sustainable development policies. The effective use of information systems has significant contributions to these models.

Rapid population growth, urbanization and the developments in the economy cause stress on limited living resources and create problems especially in the basic sectors of environment, health, education, infrastructure and security. On the other hand, migration from the rural areas to the cities deteriorate regional balances and socio-economic structures, and many problems like deterioration of the urban patterns, formation of pseudo infrastructures, consumption of natural resources and the destruction of the environment leads our cities today to a chaotic living environment (Deprem Şurası Afet Bilgi Sistemi Komisyonu Raporu, 2004).

The realization of the aims and programs that the development plans offer for the solution of the problems on disasters in our country is very much related to the organized management of planning, implementation, surveillance, and control systems.

The basis of such a system should be composed of correct, reliable and standard information. When this system is made to work in coordination among the institutions and used in an organized fashion, it may turn out to be rather efficient and productive for the development of the country. The formation of this kind of an environment would only be possible with an efficiently working administrative system, qualified workforce and infrastructure on high technology information and equipment.

3.2.2 The existing situation

In the construction of healthy decisions and administration of processes, standard information that is reliable, up to date and easily accessible is a precondition. Within the existing system, the most difficult and lasting stages in the planning activities is

gathering, synthesizing and evaluating data. Central government institutions and the local representatives of the central state that are the municipalities and governorship provide the data that is required in Turkey. These institutions produce and use data on subjects that are within their duty and service areas with traditional methods and in various types, for various spaces and scales. These data are demanded by institutions in charge of conducting plans for numerous problems and activities. However, the data that the information producing institutions gather and provide for their own sake may not be appropriate in terms of time, space, format, standards or scale for the planning institutions. Furthermore, the availability of some information may be rather limited and in some cases impossible. In such circumstances, the organization and gathering of information cause delays in the decision making processes or the decisions are made with insufficient or old information. (Deprem Şurası Afet Bilgi Sistemi Komisyonu Raporu, 2004)

In addition to that, the updating of databases and the directing of developments is very important in our country that has gone through (and still going through) a fast pace of urbanization. This can only be possible by getting reliable and up to date information rapidly.

Today the utilization of information technologies on data collection, production and organization may be seen as an important opportunity for this matter.

Recently, the initiatives on Information Systems and Disaster Information Systems are increasing in our country. In this context foreign-based studies (JICA, Red Cross, etc.) are significant. Our universities and municipalities have prepared projects, reports and implementation plans on a regional scale. The preparations are still at a preliminary state. There are many missing elements for the realization of these studies. Some of these elements are:

- the physical structure of a general disaster information system for Turkey
- educated workforce which will use the system and make research
- institutional infrastructure to be implemented
- reliable, current and standard data for fast decision making

- legal infrastructure for administration

3.2.2.1. Institutional Structuring

The institution that is founded for disasters and equipped by legal tools is The General Directorate of Disaster Affairs (GDDA) that is related to Ministry of Public Works and Resettlement under the central state. Apart from this institution, in 1999 after the Marmara earthquake, the Prime Ministry General Directorate of Emergency Management is founded with the support of the World Bank to make research on this issue. Also the Boğaziçi University Kandilli Observatory Earthquake Research Institute is making research on earthquake engineering and producing data. The Disaster Operation Center is founded under Kızılay to produce emergency strategies and provide logistical support after earthquakes in 1999. Apart from these central institutions and foundations, the municipalities in the earthquake regions continue the production of information on disasters with the local units that they have founded. (Deprem Şurası Afet Bilgi Sistemi Komisyonu, 2004)

The institutions which are produced for urban databases are listed below;

- General directorate of Emergency Management
- General Directorate of Civil Defence
- General Directorate of Mineral Research and Exploration
- State Hydraulic Works
- Bank of Provinces
- General Directorate of Highways
- State Institute of Statistics
- General Directorate of Technical Research and Implementation
- General Directorate of Disaster Affairs
- Turkish Armed Forces
- State Meteorological Service

- Municipalities
- Universities

3.2.2.1 Work on the Formation of Disaster Databases

Until today databases have been produced by various institutions in accordance with the purposes of the institution, for use in studies before earthquakes or after earthquakes. Especially after 1999, the database formation for İstanbul is intensified since it is the settlement where the risk of an earthquake is very densely felt. The studies made by the central or local governments and by international institutions are summarized below:

1. For the formation of "Turkish Geographical Databank" a data producing and utility survey has been prepared by the State Planning Organization in 1994-1995, but the study is not completed.
2. "Administration Informatics System Project" has been brought to attention by Prime Ministry of Turkish Republic. The project aims the efficient sharing of data among public institutions in a standardized format. The project is still on the agenda.
3. "The Project of Turkish National Geographical Information Systems Strategies" is prepared by the General Command of Cartography under the Ministry of National Defense. The project is not completed because some sections are not in accordance with the existing laws and regulations. The studies on the project are conducted by the Chamber of Cartographical and Cadastral Engineers under the Association of Chambers of Turkish Engineers and Architects.
4. In 2004, the geographical data production and utility survey is initiated by the cooperation of Head Office of Land and General Command of Cartography, under the European Union National Program supported by the Prime Ministry.
5. "Intervention and Coordination System for Disaster Preparation in Turkey" report is prepared by Turkish Armed Forces, Presidency of

General Staff ve Land Force Command. Some suggestions are developed in this report on disaster information systems.

6. By the General Directorate of Emergency Management descriptive documents are prepared showing the requirements in emergency. A detailed database is prepared on what kind of information is available in the institutions gathering and producing information.
7. In "The Study on a Disaster Prevention/Mitigation Basic Plan" in İstanbul Including Seismic Microzonation in the Republic of Turkey" presented to the İstanbul Metropolitan Municipality by Japan International Cooperation Agency (JICA), a database showing the base condition risks for the whole city and other urban risks at a neighborhood scale is prepared.
8. A database showing the ground risks is produced for the study of "Earthquake Risk Determination for the İstanbul Municipality Area", which is completed in May 2002 and presented to the American Red Cross Foundation. The study is prepared by the Earthquake Enginering Department of Boğaziçi University Kandilli Observatory ve Earthquake Research Institute.
9. A urban building database on the physical features and uses of buildings throughout the city is prepared by İstanbul Metropolitan Municipality.

3.2.3 Problems of Database Formation and Management in Turkey

In Turkey various institutions have worked on producing information systems for the solutions of their problems and have allocated significant amounts of money for this purpose. However, it is not possible to claim that these efforts have been successful, and that the information systems are useful and practical. Among the reasons for such failure are:

- Some of the institutions providing information for the system are not users of the system and have not taken the task of providing information seriously.

- There is no database for information sharing and data production and standards of use in our country. Because of this there are incompatibilities among the institutions providing information and the information produced is not standard.
- There is no database or yearly published catalogues to show the kind of data produced, used, or required by the institutions in charge of information production.
- There is no standard developed among the institutions on sharing data.
- The quality of data (reliability) is neglected.
- There is no institutionalized regulation of keeping, updating and managing of systems of data production. This way a system, processing dependent on people that can not work when those people are out of the system.
- The lack of faith on the necessity of the information system even within the institutions producing it, therefore the formation of a tendency of giving up instead of solving it, when a problem occurs.
- The institutions which have the system consider only their own problems and do not think of integrating with other systems. Because of this a system that reaches a certain size becomes stagnant.
- The private sector companies that construct the system work as "turnkey projects", and after the system is founded and delivered, they do not deal with the problems occuring afterwards. Also the institutions owning the system try to solve the problems within the institution and do not use expertise. (İstanbul Deprem Master Planı, 2003, 1040)
- Inefficient use of the information system because of the formats in the country's bureaucracy, insufficient staff, and technical infrastructure.
- Policies, legal organizations and user infrastructures are not formed on database preparation and information systems in our country. Therefore in the existing system these technologies are developed with the existing staff, thus

problems occur on the efficient use of systems that require knowledge, education and skills.

- Lack of coordination within and among the institutions, and insufficiency of a coordination environment ending up with the mechanisms of the system working irrationally. (İstanbul Deprem Master Planı, 2003, 1040)

3.3 The evaluation of the Data Production Methods of the Existing Planning Practice

The negative effects of earthquakes on people are caused by the risks of the built environment. The laws in our country are not developed as defining these risks and reducing the damages that they would cause in case of an earthquake. However, in the contemporary situation there are two basic laws that include these concepts indirectly. They are the Development Law and the Disaster Law.

3.3.1 Development Law

The Development Law 3194 that is put to use in 1985 is still in effect. However, in 2004 the Development and Urbanization Law Draft was prepared but has not yet been put to a final form. In the development law, the development plan is defined as: "plans in which a specific historical formation is developed in time, where development areas are formed around the existing settlement areas that are specialized functionally and that specify the most appropriate urban development form within the various areal usages with details for application". As could be understood from its definition, development plans are developed for the formation of new settlements and urban development areas.

In Turkey, within the 'Development Law' 3194 that is the basis of the planning laws, there is no formulation specifying the data, analysis or preliminary work that should be generated by the development planning studies. While not including the preparatory precautions for earthquakes and natural disasters, in the proposal of the law, a definition of disaster maps has been made and the concept of 'preparation' for the disasters is reflected to the stages of planning to some extent. In the meantime, the only study that explains the data production process for the Development Plans is

the “Technical Specifications on the Organization of the Development Plans” prepared according to the Development Law 3194 and related regulations by the Bank of Provinces.

However, today it is more valid to produce solutions according to the urban renewal/ regeneration principles for the risky built-up areas. The databases that this kind of a planning approach demands are different from the analytical planning studies produced by the developments plans in accordance with the development law, shaped by the existing urban development and “opening for development” strategies. These plans are not to be produced for new development and growth areas, but in built-up areas with the risk of earthquakes. Because of that the socio-economic and cultural data on the local community under the consideration of the plan is needed among the physical data.

3.3.2 Disaster Law

The main framework of the disaster act is formed of the “law on the measures to be taken and aids for to be made for disasters affecting general life” 7269 declared in 1959 and changed in 1968 with the law of 1051 and the laws of 4123 and 4133 declared in 1995 extending the application area of this act. The disaster act is designed with a rather detailed approach including the urgent interventions, aid, temporary shelter and permanent housing problems after disasters mainly for the rural areas. It does not include the preparatory decisions for reducing the risks before the earthquakes. Thus it is a law planning in detail the healing strategies after the earthquakes. Also the authorization of intervention after the disasters is on the central government, and the local administrations only have the role of providing the logistic support to the central organs. (Deprem Şurası Mevzuat Komisyonu Raporu, 2004)

3.3.3 Methods for Forming Urban Database in the Development Legislation with reference to "Technical Specifications on the Preparation of the Development Plans" by Bank of Provinces

In the following part, the aims and contents of the preliminary planning studies defined according to the planning act will be examined and the types of data produced in these studies will be explained. The aim is to reveal the content and quality of the database that the law envisages. The evaluations will be made according to the "Technical Specifications on the Preparation of the Development Plans" prepared by Bank of Provinces which is arranged due to the 7th item of the "Regulation for the Production and Revision of the Development Plan" (the only legal arrangement made according to the development law 3194 where all the preliminary studies and the required data is collected).

In the document, the purposes of the development plans are given as providing the best solution for the urban utilities like:

- Housing,
- Employment
- Social and cultural requirements (administration, education, health, culture etc.)
- Recreation
- Transportation,

specifying the balance between preservation and use rationally and providing the citizens with good living conditions and physical environment. As it can easily be seen, the purposes of the plan are not defined as producing plans after finding the urban and social problems of that specific settlement, but only distributing the urban uses and functions equally within the urban environment. This purpose brings the standardization of the preliminary planning studies for each residential area.

3.3.3.1 The Stages of the Production of a Development Plan

The stages of the production of a development plan are given as:

1. The collection of the preliminary information and documents before the plan: the collection of information on, existing map, geological report, State Hydraulic Works reports and projects, historical preservation areas, high voltage energy transfer lines, State Highway route, coastal areas, railway, harbor, airport, forest area, from the related institutions.
2. The designation of purposes and targets
3. Collection of information and research (analysis)
4. Sythesizing the information, interpretation, evaluation of the results
5. Planning decisions, transition to planning, planning alternatives, comparison between alternatives, evaluation
6. Final planning document and attachments, planning decisions, planning notes
7. Planning implementation programs

As it can be seen above, the first stage defined in the document is on the data collection before the planning stage and the 2., 3., 4. stages are “research and evaluation studies” within the preparation stage, which is about the collection and production of data as input for planning. The aim of the research and evaluation stage is stated as “determining the existing and past situation of the area to be planned and evaluating the potential, tendencies and limitations for development, and predicting the level that the settlement will reach in the future after the planning period as realistically as possible”. As it can be read from the aim of it, the preliminary studies for the development plan only specify the development tendencies of the planning area and produce data for the physical structure of the settlement.

3.3.3.2 The Content of the Analytical Studies for Planning

In the specifications, it is stated that the research topics, evaluation method, and the content of all the preparatory studies will vary according to the size, characteristics and development potential of the settlement. The content of the research is only determined according to the demographic features and growth tendencies of the settlement. However, for plans other than the ones designed with only a development focus, the planning tools and application methods will require different databases and data production methods.

3.3.3.3 The Data Production for the Development Plans

In the specifications the analytical studies and pre-evaluation studies are given under standard headings. The research areas are grouped in the urban areas, according to the size of the settlement or to the way the plan will be handled, like additional or revision. This grouping is made according to the planning types defined within the development law. These groups are given as:

- The development plan for settlements with a planning area of 500 hectares or more, or the population projection that forms the basis for the plan is 30000 people or more
- The development plan for settlements with a planning area close to 500 hectares, or the population projection that forms the basis for the plan less than 30000 people
- Additional development plan
- Development plan revision
- Local development plan
- Conservation plan
- Transportation plan

This grouping only considers the planning definitions, area sizes and population data specified in the law. It is rather evident that, the plans to be produced for the urban

settlements will vary according to specific urban problems, thus there will be a need for different databases for different planning approaches. The search for the standardization of data developed for two different planning areas according to their population and size will be inconvenient. The data to be produced during the preliminary planning studies should be specified in accordance with the planning approaches, not to the planning types. For example, the database needed for urban development plans will be different from the database needed for regeneration and renewal plans on the existing settlement pattern.

Among the research study groups mentioned in the specifications, the group for "The development plan for settlements with a planning area of 500 hectares or more, or the population projection that forms the basis for the plan is 30000 people or more" will be examined here. The aim for choosing this group is the specification of the data groups in detail and also that it is much more appropriate for the content of the thesis study.

The preliminary studies for planning are defined in two stages as "Analysis" and "Synthesis".

3.3.3.3.1 Analysis Stage

In the specifications, the data types that are to be produced at the analysis stage are specified as such:

1. The location of the city within its country and region: the general definition of the city, its place within the region and environment

   1.1. The administrative structure of the region, administrative divisions

   1.2. The regional economic structure: the population sizes of settlements within the region, their dynamics and urban-rural population balance, differences in the growth rates and reasons, migration from and to the region, the functional differentiation of the settlements and interrelations, the areas that the settlements affect, transportation links within and outside the region, the specification of the location and

function of the settlement to be planned within its region, are the data to be specified.

1.3. Environmental structure: the urban and rural areas around the city, the effects of sectoral investments and environmental resources on the city.

2. The Spatial Formation of the City

2.1. Historical development

2.2. Historical environment: The determination of registered historical environment and the urban preservation areas.

2.3. Urban aesthetics, urban image: The definition of the visual values in the city with the characteristic center-focal point, plaza-building, symbol and elements.

3. Physical structure – environmental resources

This data contains the analysis of natural thresholds, natural resources and values that are close to the urban area.

3.1. Geomorphologic and topographic thresholds: altitudes, slopes, surface shapes

3.2. Climatic features

3.3. Flora

3.4. Geological condition, earthquake, rivers and floods: the geologically hazardous areas are determined according to the earthquakes and landslides. The river-flood condition and improvement projects determine the areas where settlement should be forbidden.

3.5. Soil condition, irrigation

3.6. Drinking and potable water supplies

3.7. Mineral resources

3.8. Visual values- view points

3.9. Environmental problems

4. Urban Population- Demographic Structure:

4.1. The changes in the urban population: The population of the city within the past years, yearly rates of change, increasing or decreasing rates, average yearly changes are expected to be determined.

4.2. The determination of the tendencies of inner and outer migration of the city

4.3. The distribution of the urban population

4.4. The structure of the population: fertility rates and the analysis of population related to migration, age groups, school age children, working population, potential working population, settled population, seasonal population, number of families, average family size, number of households are expected to be determined.

5. The social structure

The size of the city, functional and social features of life according to the development level, the social development of the city related to its historical development are defined. For this purpose at the scale of neighborhoods or planning analysis units, social structure surveys are implemented by sampling. Within this, The Social Stratification, The Distribution of Occupational Groups According to the Neighborhoods, Schooling Level in the Neighborhoods and Dependency Level to the Families are specified. In addition to this, in the neighborhoods or urban segments of the major cities where individuals have a problem of adaptation to the environment, the relations between the adaptation problem and inadequacy of social facilities are searched as well as the interventions that could be made to social life.

6. Economic Structure:

The purpose is determining the existing economic structure in the residential areas, the distribution of the existing workforce to the economic sectors and the city's potential for development. In the evaluation, a

preparation for the sectoral projections is made. The work- housing relations are determined in all the urban space.

6.1. The distribution of the workforce to the economic activities

6.2. Income level, indices related to income, distribution of income, unemployment and marginal sector

6.3. Agriculture-mining; Sectoral Development Potential at the end of a research in detail on the Industrial and Service Sector economic activity branches, Sectoral Structure Analysis on Production Capacity and Workforce Requirements

7. The existing urban land use and infrastructure:

7.1. Residential areas: housing stock in neighborhoods, building quality, building and housing densities, average number of housing in the building, average household size, average housing area per person, density and standard, average numbers regionally and comfort level are examined. In the settlements that are different in terms of the characteristics of the structural order, urban pattern, problematic areas and urban areas which have lost their original qualities, dense and inadequate areas, irregular housing areas, squatters, prevention areas or renewal areas new mass settlements and mass housing areas are specified with their borders.

7.2. Urban, regional Center, central business district: the centers within the city, their functions, structural characteristics, densities, spatial level and impact areas, night and day populations, local trade centers, marketing, storage are specified with their relations.

7.3. Industrial settlement areas: the spatial distribution, functional and structural features and building densities are determined in urban and surrounding areas, mass or spread industrial or business areas, or in organized industrial districts or small industrial districts.

7.4. Urban green areas, park, playgrounds, walking areas, urban woods, open areas which may be defined as urban green areas are specified in the planning analysis units with their spatial distribution, existing size and standards and with their potentials.

7.5. Urban social facilities: education, health, social, religious and cultural facilities, urban sports areas, spatial distribution of administrative areas, their catchment areas, capacities, adequacy, recreational-touristic areas, are examined with their development potentials.

7.6. Agricultural areas

7.7. Forests

7.8. Military areas

7.9. Cemeteries

8. Urban Transportation and Technical Infrastructure:

Urban and regional transportation, sea-air-railways and highway transportation, harbors, emergency ports, docks, stations, terminals, transpasses, urban mass transport (rail and nonrail systems), urban entrances in inner city transport, existing road system, capacity, utility rates, vehicle types in daily commuting, ratios of public transportation, the physical structure of the urban transportation network, existing traffic administration and geometric organizations, private car ownership and utility time, data for still traffic, car parks and pedestrian road system, central pedestrianization are examined.

The existence, capacity, adequacy, potential for development are examined. Within this, the storage and resource areas for drinking and potable water, energy consumption, fuel systems and trash gathering systems are examined.

9. Ownership Pattern- Urban Land values:

   Treasure, Municipality, özel idare and vaqf land, forest areas, and places that belong to other public institutions and big infrastructure systems are determined. Also, land prices and changes are examined in the urban areas.

10. Previous Planning Decisions- Implementation- Efficiency:

    Previous plans made for the planning area, planned applications, planning revision topics considered frequently, and the irregular developments are specified.

11. Development Tendencies, Financial Analysis, Upper Planning Decisions and the Legal Framework:

The urban development tendencies and demands of the investor sectors on land use are determined as well as the investments and facilities that are to be implemented in the area within the planning period because of the upper planning decisions.

3.3.3.3.2 Synthesis

12. Synthesis and the Evaluation of Research Results

    At this stage it is expected that the data produced for the planning area could provide inputs to the planning decisions. Within the document, the work to be done at this stage is defined as “a synthesis map where all the research studies are shown together”. It is mentioned that the synthesis map should be organized with the same contents without taking into consideration the sizes of the urban settlements.

    The synthesis data that are expected to be produced at this stage may be detailed as:

    12.1. Threshold synthesis: It is a study in which specific data on the existing land use, natural resources, environmental values, physical, socio-economic, legal and administrative thresholds and limitations that guide development in the urban and peripheral areas are shown all together.

12.2. Highest Limit of the Development Potential: It is determined as specifying the highest limits of the development potential of the planning area following the threshold synthesis. It is supposed as overcoming all the thresholds that can be overcome and using the resources available at the urban area and environment at an optimum level. In this context, the settlement size that is to be reached without structural changes within the existing situation of the urban area and additional population will be determined.

12.3. Projections

12.3.1. Urban population projections: the predictions, determinations and assumptions on the bottom and top values of the whole urban population and distribution at the end of the planning period.

12.3.2. Sectoral projections: the determination of the workforce projection and sectoral distribution of the workforce in the planning period in relation to the population projection of the settlement.

12.3.3. Spatial projections means the determination of the sizes of land for settlement of various sectors according to the norms and standards in the regulations and the expected development potentials of the sectors.

12.3.4. The specification of the urban transportation demand: the determination of the standards on the transportation system and the urban transportation demand that will appear at the planning period in the settlement in accordance with the size of it.

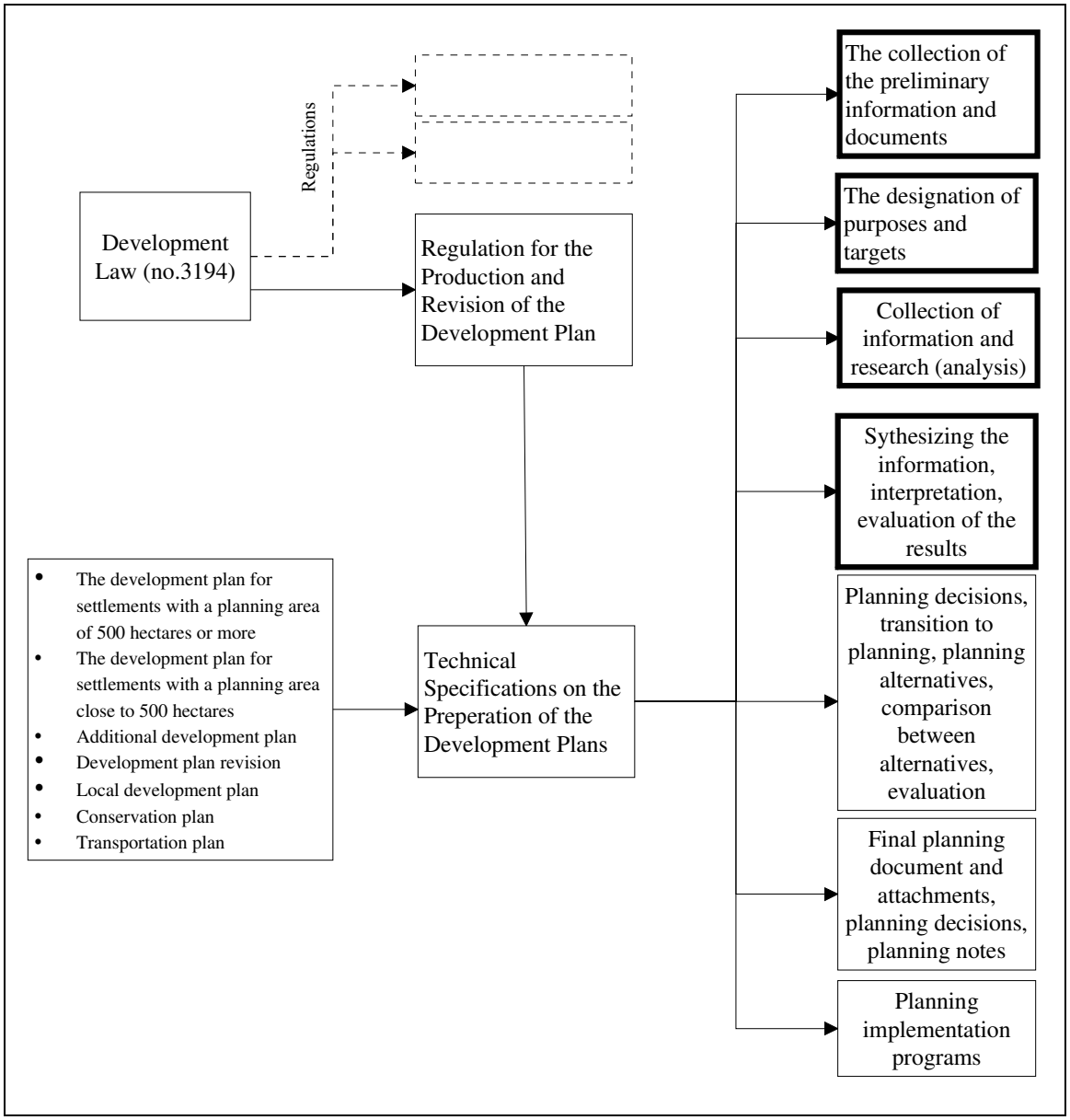


Figure 3.3 Methodology for Analytical Studies and Urban Database Formation for Development Plans.

3.4 Databases for Urban Regeneration Planning

The preparation of the built environment for the risks of earthquakes is possible neither with the conventional development planning concepts and tools, nor with the techniques of physical organizations that the law 7269 foresees. When today's science of planning, social sciences and technological advances are brought together, the need for the creation a different approach and discourse is very much evident.

The context and aim of the urban regeneration plans aiming the physical, social and administrative preparation of the built environment when faced with the risks of earthquakes is very different from the existing development plans. The database requirements of the existing urban planning regulations which aim urban growth and developing land in undeveloped areas are analysis about the growth tendencies of the city and about the physical structure. However, the urban regeneration plans aim to define the natural and urban risks in the built environment for the safety of these areas in case of earthquakes, as well as social and economic development where the plans are produced. For this reason the database of the urban regeneration systems should be composed of not only data on the physical structure, but also on natural and urban risk factors and socio-economic structure. In order to specify clearly the database requirements of such a planning approach, the contents and principles of the urban regeneration should be discussed.

3.4.1 The Scope of the Urban Regeneration Plans

The preparation, preliminary studies and database formation for urban regeneration plans does not seem possible with the existing urban planning regulations. The database that this kind of a planning approach demands should not be prepared by the analytical studies for development plans, but within the context of "Mitigation Planning" that aims the reduction of urban risks with a total risk management system. Mitigation Planning includes the determination of risks that have formed in the built environment, which have the effect of increasing the risks of earthquakes, as well as the specification of the precautions and facilities to be considered for the reduction of these risks. It has a guiding and determining role providing the reduction of earthquake damages in the course of the preparation and application of development plans (Deprem Şurası Mevzuat Komisyonu, 2004, 5). Mitigation Planning is not among the preparation stages of development plans, thus is not one of the 'analytical studies'. For the preparation of mitigation plans, different kinds of expertise than the preparation of development plans are needed. Furthermore, this kind of planning is related to the total of urban management and requires different administrative tools and authority.

Within the three national reports prepared for determining the methods on the reduction of earthquake risks, the concept of mitigation planning has found its place. Mitigation Planning and its tools are defined in the report prepared by the National Earthquake Council for developing 'National Earthquake Strategy' as such:

> "The risk information should be gathered with the prevention decisions for these in a basic institutional document called 'Mitigation Plan' composed of maps and additional reports. The duties, people in charge of these and the duration of their realization in the 'sectors, subjects and places' mentioned in the mitigation plans should be determined. Then the document should be prepared as a protocol with the introduction of the related parties for the implementation projects and programs. The 'Action Plan Implementation Areas' where special treatment will be valid should be shown on the mitigation plans, and in these areas regeneration projects, which include public-private partnerships and management systems should be developed with the definition of specific security targets. Also, in the development plans, modifications should be made in order to make them compatible with the Mitigation Plan decisions. For getting closer to the aim of 'reducing earthquake damages' that is not considered by the development law, this law should be more efficient and useful for this matter and the local government should have tools for special sanctions. However, this is a multi-dimensional issue. Initially concepts like 'Settlement Vulnerable to Earthquake', 'Earthquake risk', 'Risk', 'Areas with the Risk of Earthquakes', 'Urban Micro-Areas', 'Urban Faults', 'Special Project Areas', 'Action Programs and Projects', Mitigation Planning', 'Earthquake Insurance' should be defined directly in the law" (Ulusal Deprem Konseyi, 2004).

In the second national report prepared by the 'Disaster Affairs Work Group' in the 4. Turkish İzmir Congress of Economy organized by State Planning Organization, under the heading of 'Revisions on the Development System' it was suggested that

the Mitigation Planning should be compulsory. In the report, mitigation planning was defined as 'all the studies providing the coordination of the precautions to be taken in the sectors of risks' (DPT, 2004). Besides, it has been suggested that the development plans should be made using the future data in the mitigation plans.

In the report of the Earthquake Council Legislation Committee, organized by the Ministry of Public Works and Settlement, Mitigation plans are defined as the total of studies providing the synthesis and coordination of results and decisions gathered in different sectors as well as the studies on 'urban risk analysis and management' (Deprem Şurası Mevzuat Komisyonu, 2004, 5). In the report it is offered that the physical and spatial suggestions of the mitigation plans should be used as data for development plans. The need for the preparation of mitigation plans in areas of high risk is mentioned before the preparation of development plans by the local administration. The legislation committee suggested that the concept of 'mitigation planning should be included in the Development Law. In this suggestion mitigation planning is defined as:

> It is a plan composed of documents providing information on spatial risks to development plans, developed for the total risk management by the coordination of related administrations, private institutions, non-governmental organizations in a short, medium and long term basis, defining the risk sectors, preparing sectoral risk analysis, determining the risk management method, the database development method in each risk sector, as well as the ones in charge of management type, timing, control and surveillance, in settlements which have high risks caused by natural or technological factors. (Deprem Şurası Mevzuat Komisyonu, 2004, 44).

Mitigation planning examines the settlement areas and the systems that it contains as a spatial whole. In it, the risk levels of infrastructure, buildings and urban environments are determined separately in accordance with the micro-zoning data and risk sectors defined by geological data. (IDMP, 2004) In the mitigation plan prepared in the İstanbul

Earthquake Master Plan, more than ten risk sectors are defined. Besides, these risk sectors are suggested to be included in the Development Law by the Earthquake Council Legislation Committee. These risk sectors are:

- Loss of production (Industry/ constant and mobile infrastructure/ workforce)
- Building stock and Urban Infrastructure Systems
- Risks of urban fabric: (types of constructions/ land/ road/ car park/ open areas/ density relations)
- Macroform and urban Growth Tendencies
- Incompatibilities of utility (incompatibility on areal and building scale)
- Special Areas (liquefaction and landslide areas/ coasts/ floodplains)
- Special Buildings and Cultural Heritage: (historical buildings/ landmarks and historical environments)
- Hazardous utilities (explosives, chemical storage areas and equipment)
- Emergency Facilities (hospital, fire department, school, communication etc.)
- Administrative sufficiency (equipment, expert staff, Practice- Operation-Training
- External factors (accident, sabotage, terror, meteorological circumstances)
- Social passiveness (limitations in participation and local organizations)

All the precautions to be taken in the risk sectors and the work on their coordination form the 'Urban Mitigation Plan'. Decisions made in this plan will require changes in the development plans as well.

With the Mitigation Plan prepared for the total urban environment, there will be a need to take urgent precautions in regions with high risks. In the planning of these areas the physical, social and financial issues have to be resolved together. The Action Plans for Urban Regeneration may be considered as attempts of local total development projects where the support and contributions of local communities are very important.

The 'Action Plans for Urban Regeneration' that are specified in the mitigation plans are to be produced for areas under high risks, aim the physical organization and social development of areas that are compulsory in terms of public interest and are in need of urgent intervention. With the urban regeneration plans, the purpose is forming a synergy in the regeneration area with the total organization of social, legal, administrative and financial sources within the context of a physical plan (IDMP, 2003). This approach will be used for:

- the development of macro-physical data
- the improvement of safety level in the urban environment and building stock and the raising of the efficiency of urban service infrastructure and systems
- the application of 'Action Planning' methods for the improvement of the sub-regions under high risks
- directing of the local communities for gathering information, organization and being productive
- directing the people in charge of urban administration to coordination, self-control and cooperation
- making the legal and institutional organizations on a national basis with central administrative decisions for conducting these works easily (İDMP, 2003)

3.4.2 The organizations needed for the preparation of urban regeneration action plans

3.4.2.1 Legal organizations

The action areas for which the urban regeneration plans will be produced are the ones with high risks according to the micro zoning maps of the mitigation plans made for the whole city and the risk analysis made of the urban risk sectors. The preparation of urban regeneration plans to improve safety in the built environment is not a process that is familiar for the Turkish planning law and practice. There exists no database that this type of planning requires, no legal organization for this kind of practice or an example to apply to.

First of all the concept of urban regeneration planning that will be implemented in the action area should be considered as a new planning type in the development law. The definition of the Urban Regeneration Action Plan made by the Earthquake Council Legislation Committee for the development law is: “The plans in which the strengthening of structure is made with the projects aiming social development for the public good as well as environmental improvement, decreasing of density, combining the immovables and redistributing, building and limitation of usage, in the high risk areas requiring urgent intervention within the Mitigation Planning context.” (Deprem Şurası Mevzuat Komisyonu, 2004, 48). Apart from adding it to the definition part of the development law as a planning type, the contents and intervention tools should be included in the law.

The content and method of the Urban Regeneration action plans should be organized as a regulation within the development law. In this regulation, the urban databases needed for urban regeneration plans should be considered. The information structure determined by the urban databases, their contents, orders, preservation and management formats and the ones in charge of them, is the prerequisite of managing risks successfully. In this part, the quality, contents, utility types of the database to be produced for Urban Regeneration Plans and the analytical studies to be made should be organized. Besides, within this regulation, the preservation and updating of the database should be compulsory and the organizations on the spatializations of these databases and the data management methods in the geographical information systems where the urban analysis are to be produced, should be made.

3.4.2.2 Administrative Structure

It would be very rational to suggest that the management of the studies on the formation of a local action plan database should be conducted by the local municipalities were the plans are made. In order to reach the local data sources easily, to produce more efficient information for the local problems, to get the support of the local communities in the data production process and provide participation, these studies should be implemented by or under the control of the municipalities where the action plans are implemented. Within these municipalities

local planning offices should be founded and if qualified staff, software and other technical equipment may be obtained the production of the database should be made by the planning team in the bureau, but if the technical infrastructure cannot be provided, then the formation of the database should be made under the control of the municipality.

This organization may be included in the legal drafts, which have been prepared by the local administrations. In this draft, the municipalities should be given responsibilities on the decreasing of damages and management of risks. A regulation determining the municipality's usage of databases and data management systems with GIS should be organized and the preservation and updating of the databases should be compulsory.

3.4.3 The stages of the Urban Regeneration Action Plans

A model on the production stages and programs of local action plans is revealed in the Earthquake Master Plan of İstanbul by the METU - ITU urban planning groups. According to this study, the application of 'The Urban Regeneration' by the Local Action Planning should be organized in three main groups. These are gathering of data and the management of database, analytical evaluation studies and the synthesis and design studies (IDMP, 2003, 858-859). At this stage, the contents of these studies are summarized below:

1. Information Gathering and Formation of the database

   1.1. The Adequacy of the Local Geological Data

   1.2. The Location and Function of the Area in the Metropolitan Region

   1.3. The Research on the Urban Landuse

   1.4. The evaluation of the Existing Building Stock

   1.5. The research of Social and Economic structure

   1.6. The research on urban transportation and infrastructure systems

   1.7. The evaluation of Historical and Cultural assets

1.8. The research on Urban Risk Sectors

1.9. The research on the real propery and ownership

1.10. The determination of stakeholders

1.11. The evaluation of laws and regulations

2. Analytical Studies

2.1. The Analysis of Macro Structuring

2.2. Economic Activities and Potentials

2.3. The Capacities of Local Investment

2.4. Social Structure and Ownership

2.5. Infrastructure and Transportation

2.6. Emergency Scenarios for The District

3. Synthesis and Design Work

3.1. Alternative Macro Suggestions

3.2. Decisions on Land-use

3.3. Decisions on Transportation and Infrastructure

3.4. Physical Organization Alternatives and Definition of Sub-regions

3.5. New Structural Organization and Elements / Decisions on Urban Design

3.6. Decisions on the Existing Building Stock (Improvement, Reinforcement, Regeneration)

3.7. The Possibility in Terms of Legal, Administrative and Presence of Resources Perspectives

3.8. The Reinforcement Costs and Finance in Private Buildings

3.9. Feasibility and Finance: The Size and Stages of Investment

3.10. Designation of the Organization, Education and Participation Processes

3.11. Sustainable Local Development and the Model of Social Management

3.12. Organization of Historical Entities, Culture and Environmental Qualities

3.13. The Implementation Projects of Exemplary Structures

3.14. Organization of Infrastructure and Social Services

3.15. Designation of Emergency Services

3.4.4 The Formation of a Database

The formation of a database for the urban regenration action plans is one stage in the local action plans. This stage is considered as a preparatory stage for the local action plans. Here, the existing conditions are examined; the physical structure and carrying capacity of the building stock, utility distributions, ownership, market value, the distribution of social and demographic features, historical and cultural amenities and other information needed in the mitigation planning are gathered for the formation of a spatial database and for the management of this with the geographical information systems.

The studies for the development of a database for the local action plans will be made the development of the suggestions of the METU - ITU urban planning group in the context of Earthquake Master Plan of İstanbul. At this stage two processes can be defined as the preparation and application (IDMP, 2003, 865).

3.4.4.1 The Preparation stage

It is the process where the studies needed for the research on the implementation stage are made. The work to be done at this stage may be specified as:

1. The research standards and the determination of the method

   At this stage the methods and standards to be used at the implementation stage should be determined. By reviewing the experiences on urban regeneration a data production method should be developed. On the other hand, it is possible to make the research for the implementation stage by calling for tenders, therefore the studies should be realized with some standards. These standards should be determined within the process.

2. The protocols of data management

Databases in various formats produced for previous action areas may be provided. The synthesis, updating and usage principles of these databases should be determined. On the other hand, the utility and preservation circumstances of the data obtained at every stage should be determined. The obtaining of data in the format determined in the digital environment will spread the database formation efforts to the implementers and reduce the time needed for this purpose.

2.1. Obtaining the existing data

2.2. Determining the utility principles of data

2.3. The formats of data to be prepared in the determination of the existing situation

2.4. The synthesis and usage principles of the obtained data

3.4.3.2 The Implementation stage

The determination of the urban regeneration areas, the statement of a vision for the area and the data to be used for the determination of the urban projects will be obtained by studies to be realized at this stage. The research at this stage may be contracted as a project package in the action plan or may be produced within the local bureau.

In the implementation process of the 'Determination of the situation and the formation of the database' stage, some research projects should be implemented. The research topics are:

1. Adequacy of the data on the natural features

It includes the detailed research on the geological and geotechnical structure of the project area, as well as features like the flora, fauna and climate.

1.1. Adequacy of the geologic data

1.2. Local natural data

2. The Function of the Area in the Metropolitan Region

The research on the place of the action area in the metropolitan region will contribute to the definition of the problems and a vision for the area. For this purpose, the research will reveal the place of the area in housing, industry, trade, transportation and history-tourism sectors, thus its place in the whole city. This in turn will help in determining a vision for the area and defining new functions.

2.1. Housing

2.2. Industry

2.3. Commerce

2.4. Transportation

3. The Research on the Urban Landuse

Urban land use analysis are, generally defined, the investigation of the urban uses in terms of density, size and spatially; the evaluation of the relative risks created out of this land use in terms of ground conditions and micro-zones.

Urban use databases in present settlement areas should include the following data types;

- Type of land use
    - Industry
    - Business Centre and Working Areas
    - Housing
    - Tourism and Accommodation Areas
    - Open and Green Areas
- Settlement tissue
- Density of use
- Accessibility of the area, infrastructure and transportation opportunities

4. The Evaluation of the Existing Building Stock

For the determination of the urban regeneration areas and the risks they have, the existing building stock should be evaluated. For this reason, a detailed database should be prepared on the physical conditions of the building stock. The data types that are to be produced under this heading are:

5. The research on Socio-Economic structure

In the studies on determining the socio-economic structure of the area, the population features of the area (number of households in the neighborhood or living units), economic data and socio-cultural data should be obtained. During this research, it is very important to determine the problems and potentials on these issues. Data required for this kind of work may be obtained by surveys.

6. The Research on Urban Infrastructure

Here the adequacy of the infrastructure in the action area and the durability in earthquakes is examined. Water lines and storage areas, electricity lines, the locations of the transformers, phone lines, fiber-optical cables, natural gas pipelines and distribution stations and wastewater lines are examined and their durability in case of earthquakes are tested.

7. The Research on Urban Transportation

Transportation networks and transportation structures are equipment that has crucial in case of an earthquake and other emergency situations. They ensure the setting up of healthy connections and access possibilities between settlements. For this reason, the elimination of the inefficiencies and shortcomings in the main transportation network is of major importance in terms of reducing the risks that are faced in earthquakes and other disasters in regeneration areas.

8. The evaluation of Historical and Cultural assets

The data should put forward the historical value of the buildings and the area, building situation, the risks caused by ground structure, and environmental uses. In this group the following sit areas should be taken as basis.

9. Research on Urban Risk Sectors

The research on the urban risk sectors made for mitigation planning will provide a more detailed production for the local action plan. Also this research will show the risks in the area explicitly, help urban zoning by making it easier to determine the urban regeneration areas and contribute to the studies on strategy formation for the reduction of these risks. The risk sectors to be given in detail under this heading are:

9.1. Macroform Risks

9.2. Special Risk Areas

9.3. Risks of Urban Fabric

9.4. Risks of Function

9.5. Risk of Production Losses

9.6. Risks at Special Buildings

9.7. Risks of Building Stock and Function

9.8. Hazardous Usage

9.9. Emergency Facility (EF) Structure, Management and Spatial Distribution

9.9. Open Space Scarcity

9.10. External Impacts

10. Information on Real Property and Ownership

The ownership information of the area is very important for the possibility of the reinforcement projects. Under this heading the projects belonging to the public and private ownership should be given.

11. The determination of stakeholders
12. The evaluation of laws and regulations

Database formed for the development of spatial analysis with GIS, will help the realization of some analytical studies.

3.4.5 Analyses

After the data that is acquired in the process of 'Database Formation' is presented to the project management department in a format determined in the beginning, the project management department will carry out analytical studies in the light of this data. The results to be acquired at the end of these analytical studies can be summarized as the socio economic structure of the site; evaluation of the geological data, analysis of risks at sectors and management methods; analyses of macroform, infrastructure routes and transportation; determination of zones for renewal/ rehabilitation a retrofitting processes; evaluation of micro zoning maps and document developing zoning typologies; the standards of the project and determination of norms; identification of financial sources; analyses of potentials; and urban renewal and retrofitting decisions consultations with local community members processing household survey information.

3.4.5.1 Socio Economic Structure

After the 'Social Data' and the data on the 'Position of the Site in the Metropolitan Area' are acquired at the second stage, the social characteristics, information on ownership, economic activities and potentials, local investment capacities should be determined. The evaluations that will be done at this stage should constitute input for the stage of vision formation.

- Economic Activities and Potentials
- Capacity of Local Investment
- Ownership

3.4.5.2 Evaluation of Geological Data

The geological data will be evaluated. At the end of this study, following the addition of building stock data, the urban renewal and improvement areas will be determined. In addition to that, this evaluation will later be transformed to micro zoning maps. In other words, they can be an input for the construction of new buildings in the urban regeneration area.

3.4.5.3 Analyses of Risks at Sectors and Management Methods

The risk that each sector possesses should be put forth, after the data that is acquired by the research of urban risk sectors is processed. Urban inadequacies will be determined by this study and by evaluating these inadequacies together with 'Geological Data', 'Macro Structuring Analyses', and 'Building Stock Data', the urban renewal and urban improvement areas can be determined. Urban Risks cover;

- Macroform Risks
- Special Risk Areas
- Risks of Urban Tissue
- Risks of Functional compatability of neighbouring uses
- Risk of Production Losses
- Risks at Special Buildings
- Risks of Building Stock And Function
- Hazardous Usage
- Emergency Facility (EF) Structural safety and internal Management
- EF Spatial Distribution
- Open Space Scarcity
- External Impacts

3.4.5.4 Analyses of Macroform, Infrastructure Routes and Transportation

The features of the site concerning the macroform, technical infrastructure, and transportation are to be determined. This data should constitute input in the incoming stages for the decisions related with the macroform, technical infrastructure, transportation and density.

3.4.5.5 Determination of Zones for Renewal/Rehabilitation a Retrofitting Processes

As it is pointed out above, by evaluating building stock together with 'Geological Data', 'Macro Structuring Analyses', and 'Building Stock Data', the urban renewal and improvement areas can be determined.

3.4.5.6 Evaluation of Micro Zoning Maps and Document Developing Zoning Typologies

In the light of the 'Geological Data', the micro Zoning maps with the ground/floor information that will constitute an input for the urban renewals can be prepared.

3.6 Evaluation of this chapter

Urban regeneration action planning is a special type of plan aiming the total physical organization and the social development of the high risk areas and areas with urgency in terms of public interest, needing intervention. The urban regeneration action plans aim to create a synergy in the total organization of the regeneration area in terms of social, legal, administrative and financial possibilities. The planning studies at these areas should solve the physical, social and financial issues together. The local regeneration action plans are attempts where the support and participation of the local community has priority.

The regeneration methods to be employed for the reduction of risks that the earthquakes cause in the built environment are not included in the existing planning regulations in Turkey. The planning law in our country only provides decisions on the physical extension of cities into undeveloped areas. As a result of such this approach, the preparatory analytical studies and the data formation stages of the

development plans produced according to the development laws are limited only by the gathering of data on the physical structure and the determination of the analytical studies and the development areas of the city. However, it is very evident that urban regeneration plans aiming the reduction of urban risks by physical interventions in existing built-up areas need different preparatory stages and database production methods. The preparation of the built environment against the earthquake risks with the urban regeneration plans is possible neither with the conventional development planning concepts and tools nor with the techniques and physical organizations that the law 7269 foresees. For these plans the database for the intervention in the physical environment is not sufficient. Database enabling the formation of studies on analysis on the urban risk sectors and aiming the social development should be produced.

For this purpose, the database production model suggested for the urban regeneration action plan in the 2003 İstanbul Earthquake Master Plan may be developed. This database production model provides a database for regeneration plans, demands the development of standard for the database production and defines the analysis studies to be produced with the GIS that will be input for the spatial analysis studies. The differences of such a database system from the databases produced for the development plans may be listed as:

- The preparation of microzoning and risk maps instead of conventional geological studies.
- The preparation of database organized according to urban risk sectors
- The preparation of a detailed database in the local environment (not confined to the data provided by State Institute of Statistics.
- The production of a detailed database on the existing building stock
- The determination of preparation standards of database to be used in the analytical studies

The contents and production methods of the urban databases needed for the urban regeneration action plans should be organized with a regulation within the

development law. The information structure of the urban databases determined by the contents, preservation and management systems and the facilitators, is the prerequisite of the success and sustainability of the management of risk. With the regulation, the standards, quality, contents, types of data included and utility formats of the database produced for Urban Regeneration Action Plans should be organized. With this regulation the storage and updating of databases should be compulsory. Also the data management methods of the GIS environment where these databases will be spatialized and the urban analyses will be produced, should be regulated.

CHAPTER 4

METHODOLOGY, AND DATABASE REQUIREMENTS FOR URBAN REGENERATION IN ZEYTİNBURNU

The earthquake safety of Istanbul will be possible with neighbourhood regeneration projects that are carried out in each district. One of the projects, which focus on the earthquake safety of the urban environment, is "Zeytinburnu Regeneration Action Plan". In this respect, it would be useful to examine this project, in order to how a socio-spatial database management could be carried out in Turkey, and how it could be connected with risk management.

4.1 The Reasons for Zeytinburnu Case Selection and Methodology

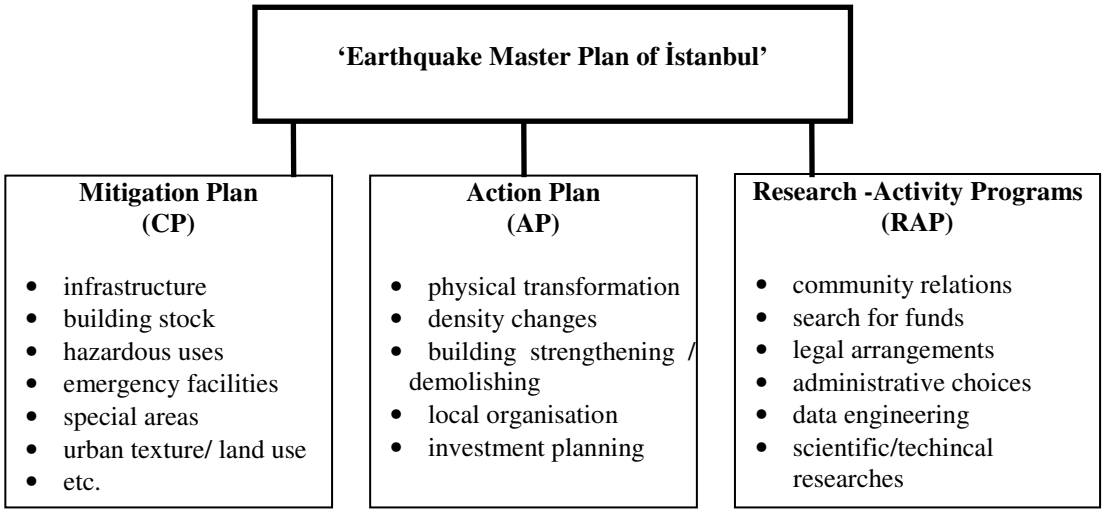
Istanbul is the focus of worries of earthquake since it has ten million of population, production relations and it is vital to the country's economy and one of the metropolitan cities of the world. Within their studies, administrations of Istanbul take these into consideration and have been in a further position in Turkey.

After 1999 earthquakes, following the natural data and damage estimations of JICA report, the Earthquake Master Plan in 2003 is characterized as being the first comprehensive mitigation report in Turkey. This plan, with projects of implementation, a program or a 'road map' characterized as a social agreement, the proposal of gathering together different stakeholders prepared for different risk sectors; and the appropriation of the risk management undertakings and activities in transparency through common responsibilities by broad groups (Balamir, 2004, 15-16), has constituted an example in Turkey and attracted special attention from all over the world. The Earthquake Master Plan of Istanbul, with its action oriented formation, contains three basic activities in its structure. The first of these is the

'Mitigation Plan', which has to be prepared for the whole city and which maintains the coordination of the different sectoral preventive measures. Mitigation Plan is the main program, in which the projects of management of the risks that caused by earthquakes and other hazards in all systems and the sectors of the city, are integrated. This plan covers the execution of high level institutional risk management together with the arrangement of the standards and the supervision activities of, and the responsible bodies for the institutional and technical preventions, by determining the risk sectors. In this extent, risk analysis are made, safety standards and appropriate forms of risk management are determined, and after the determination of the relevant sides of each sector or system and their responsibilities, the commitment of each side is assured. In addition to that, other side or sides responsible for the supervision of the implementation is determined. On the other hand, it seems inevitable the study on district at real property scale, and to take more detailed preventive measures in the sub-areas, which are understood to be of high risk and require prior preventive measures. Second is the Local Action Plan, which defines the preparation and the going into action of the sub-projects and the implementation packets, aiming at the starting up of the collective regeneration processes in areas defined as of high risk. Local Action Plan studies aim at the stimulation of the participation and the contribution of the local society, and an altogether physical and social development. Thirdly, 'Programs of Research and Activity' are determined, in order to maintain and sustain the environmental conditions required for the realization of the first two activities. The Earthquake Master Plan of İstanbul can be summarized as follows with its action oriented scope. (The Report of Earthquake Master Plan of İstanbul , 2003, 701).

Determining the high risk areas within the scope of the mitigation plan, and making safety increasing investments in these areas in a detailed and interactive way, constitutes the second activity areas of Earthquake Master Plan of İstanbul. These areas, in which both natural hazards and the human and economical resources faced with this hazard are high, are defined as the prior 'regeneration areas' of extreme risk. (Earthquake Master Plan of İstanbul, 2003, 858).

Table 4.1. 'İstanbul Earthquake Master Plan' Schema (Source: İstanbul Deprem Master Planı Raporu, 2003, 701).



The studies of Local Action Plan that is suggested in high-risk sub regions in İstanbul Earthquake Master Plan has started in November 2003 in Zeytinburnu. Due to reasons like the existence of present action plan, rich data resources produced for the project and the most extensive urban regeneration area made in Turkey, the analysis of databases used in the project, methods of production, usage forms and development of certain propositions are targeted in this stage of the thesis study.

4.1.1 The Selection Criteria

The reasons of selection of Zeytinburnu can be summarized as follows:

- High Potential of Transformation of the District

  Social, economic, cultural and present characteristics of Zeytinburnu have complicated structure and this reflects the high potential of transformation.

- Consistency of problematic buildings every category

  Storeys, types and deformity in location of buildings and differences in construction techniques are the problematic categories.

- Existence of First, Second, Third and Fourth Residence Zones

Present buildings are completed in different years and construction methods (reinforced concrete, (yığma), (karma), etc). These buildings are inadequate according to earthquake regulation.

- Characteristics of Socio-Cultural Structure

  This is the pattern of education, income level, birthplace and age of inhabitants of Zeytinburnu.

- Being the First Focus of Squatter Housing and Unauthorized Housing

  Because of increasing immigration to İstanbul, first squatter houses emerged in Zeytinburnu. Unauthorized construction increase the risk of earthquake on the basis of buildings

- Being Primary Risky Areas According to Earthquake Forecasts by JICA

  The results of the research made in five hundred meter spaces reveals those six out of fifty-four quarters are in Zeytinburnu district. The risk carried out by six out of thirteen quarters of Zeytinburnu is equaled to 45% ratio.

4.1.2 Methodology

An attempt to prepare a database and develop an application model for Zeytinburnu, which has a potential for urban regeneration. It is here aimed to determine the present situation, carrying capacity and the physical characteristics of the building stock, distribution of uses, land ownership, market values, distribution of the social and demographic features, historical and cultural assets; to collect the data that will be used in risk analysis and in the scope of mitigation planning; and to put forward the necessities of the basic database by which the spatial analysis can be produced in GIS format.

As a method, the model, which is proposed in the part 'Determination of the Situation and Formation the of Database', which constitutes the second stage of the Local action Plan pointed out in the Earthquake Master Plan of İstanbul, will be taken as a basis and developed.

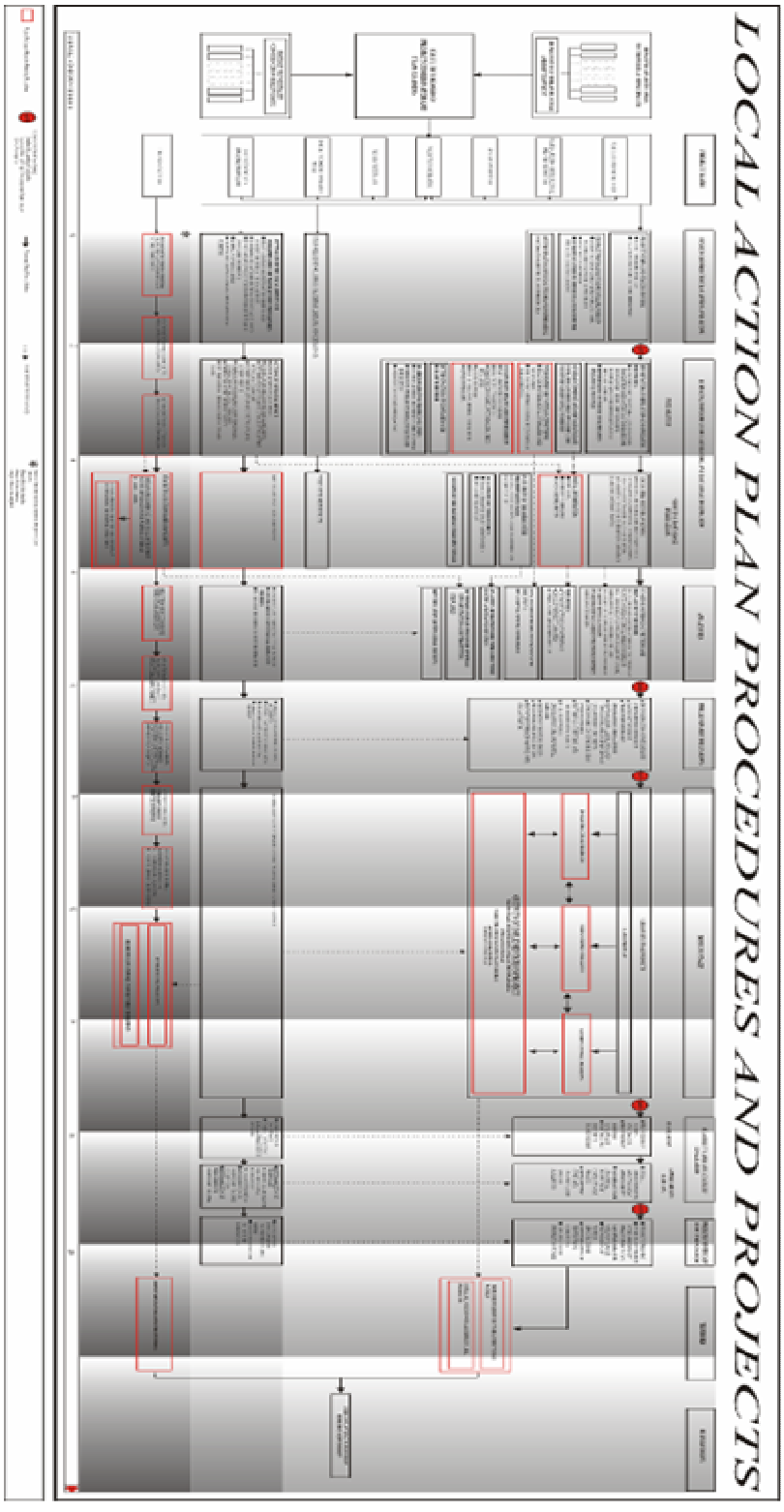


Figure 4.1. The projects and programmes of Local Action Plan (Source: İstanbul Deprem Master Planı Raporu, 2003, 851).

4.1.3 Organization

First of all, the features of the Zeytinburnu District need to be taken into consideration. In this part, location in İstanbul Metropolitan Area, administrative structure, natural conditions, earthquake risks, ground coniditions, demographic and socio economic structure, transportation and infrastructure and urban land use pattern of district is examined.

Next, the scope and the stages of the Zeytinburnu Urban Regeneration Action Plan are taken. 'Formation of Database' is taken within the example of Zeytinburnu. In the first part, preparation studies take place. In the second part, implementation stages is examined.

4.2 Characteristics of Zeytinburnu District

4.2.1 The Location of Zeytinburnu in İstanbul Metropolitan Area

The district of Zeytinburnu is located at the west side of the city wall, which includes the Historical Peninsula. The district is specialized in industry and health sectors and contains historical values as well.

Figure 4.2 Sub-provinces of İstanbul and the Location of Zeytinburnu.

The area of the district is 132 hectares. The west side of the district is under prevention because of the city wall isolation borders. At the west of the district is the Bayrampaşa district, at northwest is Esenler, at northeast is Eyüp, at the south is Marmara Sea, at east is the Fatih district and at west is the Bakırköy and Güngören districts. (Figure 4.2).

Figure 4.3 Aerial photo of Zeytinburnu.

Figure 4.4 Views in Zeytinburnu. (Source: City Planning Master Studio Archive, 2004)

Zeytinburnu has an central / strategical location as a result of factors such as its proximity to the Historical peninsula where central business district activities are intensified, existence of dense industrial activities, appropriate topographical conditions, and existence of major railway and highway connections of the city. The settlement attracts migration from other cities and its population increases.

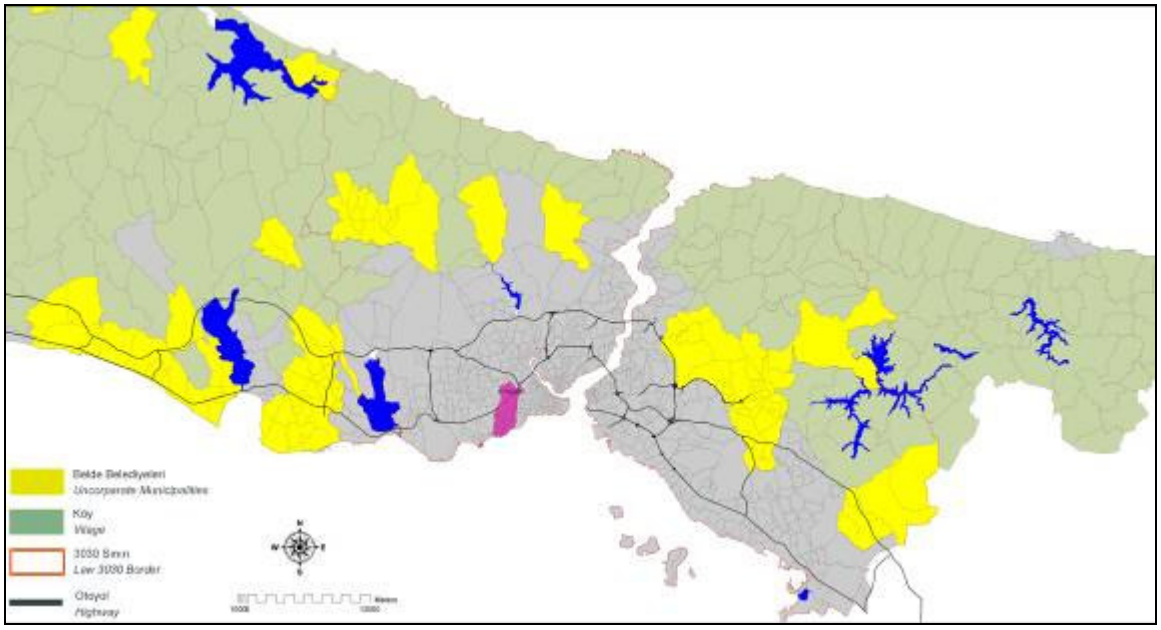


Figure 4.5 Location of Zeytinburnu in İstanbul Metropolitan Area.

4.2.2. Administrative Structure of Zeytinburnu

The district of Zeytinburnu is made up of 13 neighbourhoods. the neighbourhoods within the borders of the district are; Beştelsiz, Çırpıcı, Gökalp, Kazlıçeşme, Maltepe, Merkezefendi, Nuripaşa, Seyitnizam, Sümer, Telsiz, Veliefendi, Yenidoğan and Yeşiltepe.

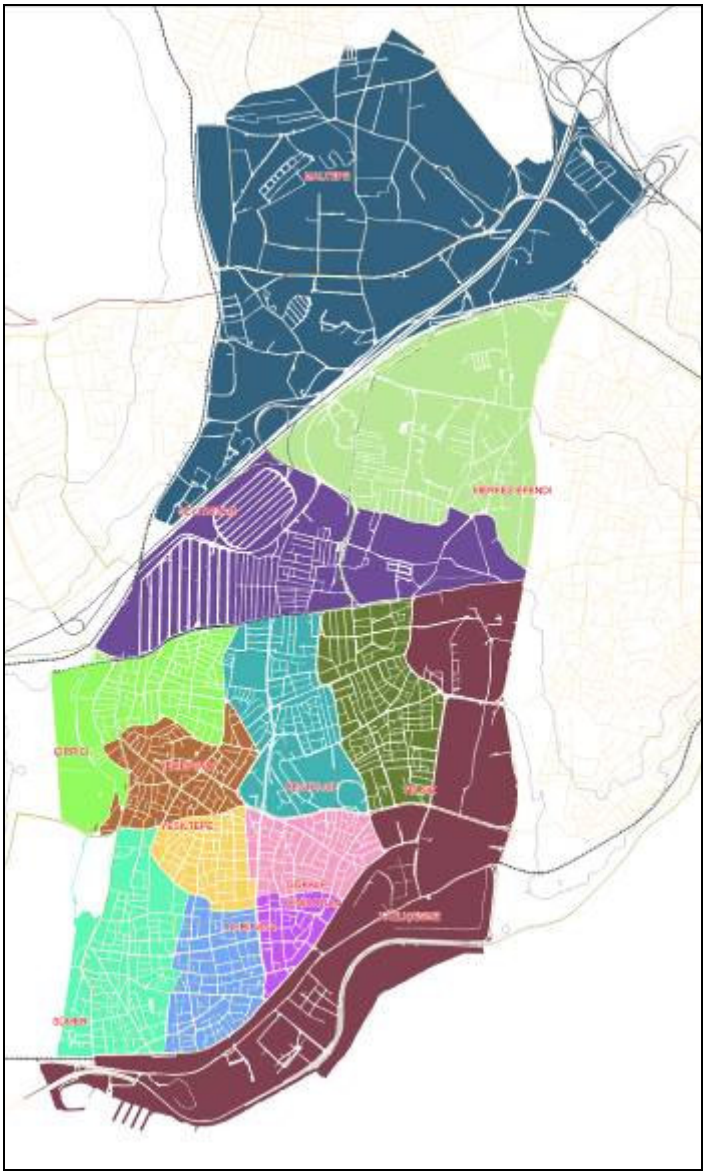


Figure 4.6 The neighbourhoods of Zeytinburnu District

As result of industrial areas, there are squatter housing areas in Kazlicesme, which is the first settlement area of Zeytinburnu. The employment possibility which comes out of industrial activities resulted in migration into this area, and, as a consequence of improvement plans that were developed according to development law no. 2981 and 3290, there has been an increase in the population growth rate especially after 1990s, and a dense development has taken place in the area. Most of the residents of this district are the ones who migrated there from abroad or from other parts of the country (Zeytinburnu Belediyesi, 2004).

4.2.3. Natural and Geological Conditions

Topography

This settlement area can said to be flat in topographical means. The neighbourhoodas of Maltepe and Yesiltepe are made of slightly steeping hills. At the west is the Cirpici river, and at the south is the Marmara Sea. The slope increases from the coast towards the north.

Ground Conditions

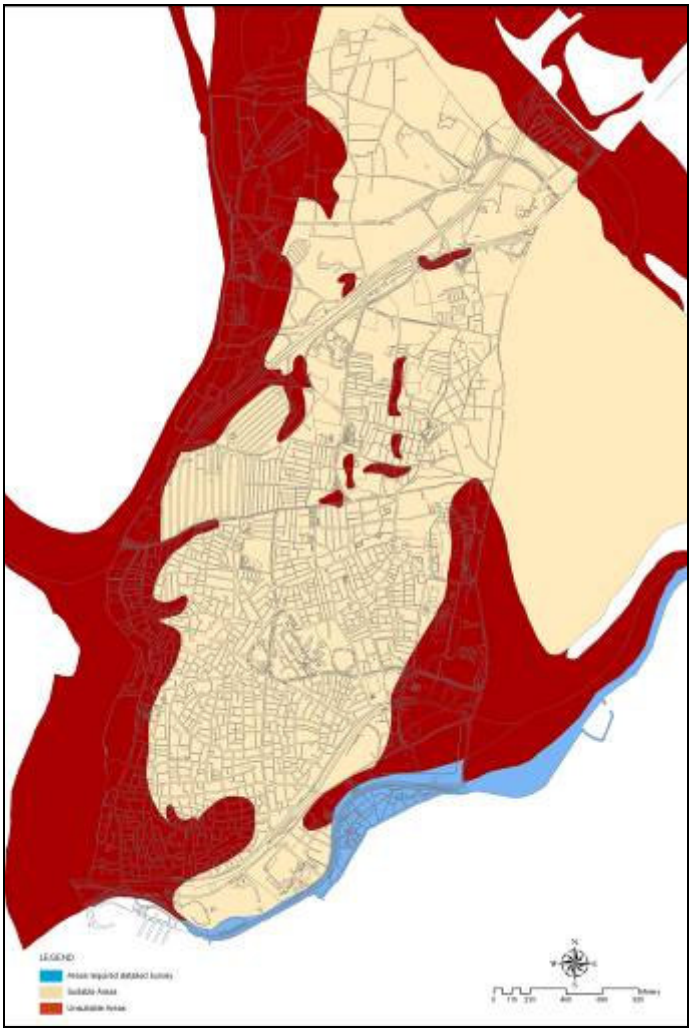


Figure 4.7 Ground Conditions of Zeytinburnu (Source: İstanbul Metropolitan Municipality GIS Studies, 2004)

There are 15.432 buildings in Zeytinburnu. 3.626 of these buildings are constructed in unsuitable areas. Appriximately %23,5 of existing buildings are in the risky areas. Table 4.2 shows building stock in suitable and unsuitable areas in Zeytinburnu according to their uses.

Table 4.2. Building Stock in unsuitable gronds

Building use	No of buildigs	Ratio (%)	No of Buildings in risky areas	Ratio (%)
Housing	10144	65,73	1519	9,84
Industry	861	5,58	259	1,68
Offices	1087	7,04	389	2,52
Commercial Units	1426	9,24	484	3,14
Shopping Centers	159	1,03	42	0,27
Public Buildings	47	0,30	18	0,12
Health Bıildings	37	0,24	13	0,08
Depot	374	2,42	127	0,82
Religious	44	0,29	10	0,06
Education	74	0,48	14	0,09
Collapsed Buildings	174	1,13	56	0,36
Hizmet	51	0,33	22	0,14
Construction	122	0,79	19	0,12
Culture	3	0,02	2	0,01
NGO	7	0,05	2	0,01
Trafo	45	0,29	11	0,07
Sport buildings	22	0,14	5	0,03
Transportation	11	0,07	3	0,02
Other	744	4,82	631	4,09
Total	15432		3626	23,50

4.2.4. Demographic Structure of the District

The increase in the migration from country to urban areas in 1950s, resulted in the fast spread of squatter housing in Istanbul. As matter of fact, new organisation requirements occurred. Zeytinburnu has been one of the districts which is formed as

a result of such requirements. It has been officially established as the 14th district of Istanbul on 01.09.1957.

The population of Zeytinburnu was 89.397 according to the census in 1960. Until 1997, the population of the district has showed an increase below the average population increase of Istanbul. In 1997 the population reached 224.768. While the population increase rate was 25, 9% in Istanbul in 1990-1997 period, it was 35,7 in Zeytinburnu in the same period. This high rate of population increase was caused by the opening up of new settlement areas in connection with the structuring of buildings having construction permission, as a result of the slowing down of squatter housing and the introduction of solutions for the TAPU problems of the present real estates. (Zeytinburnu Municipality, 2004).

According to 2000 census, the population of Zeytinburnu was determined to be 2000 247.669 (Table 4.3). The share of Zeytinburnu`s population in total population of the city was 4,7% and got back to 2,5% in 2000.

Table 4.3 Population in Turkey, İstanbul and Zeytinburnu and population increase rates (Zeytinburnu Belediyesi, 2004)

Years	Turkey	Population Increase Rate (%)	İstanbul	Population Increase Rate (%)	Zeytinburnu	Population Increase Rate (%)
1950	20947188		1166477		-	
1955	24064763	14,9	1533822	31,5	-	
1960	27754820	15,3	1882092	22,7	89.397	
1965	31391421	13,1	2293823	21,9	102.874	15,1
1970	35605176	13,4	3019032	31,6	117.905	14,6
1975	40347279	13,3	3904588	29,3	123.548	4,3
1980	44736957	10,9	4741890	21,4	124.543	3,2
1985	50664458	13,2	5842985	23,2	147.849	16,5
1990	56743035	11,9	7309190	25,1	165.679	12,1
1997	62865574	10,8	9198809	25,9	224.768	35,7
2000	67844903	7,9	10033478	9,1	247.669	10,0

4.2.5. Socio-Economic Structure of the District

The social and economic structure of Zeytinburnu can mainly be characterized by squatter housing and squatter housing life. This life style has had important influences on the determination of the socio-economic structure, formation of the social institutions, and location and distribution of the economic activities. As a result of migration it experienced in a period, Zeytinburnu shelters people from many different ethnic origins. So, the district can be described as an 'education' and 'transition area', where 'being urban' is learnt. (Zeytinburnu Belediyesi, 2004).

As a consequence of industrial units and commercial activities, the employment rate in Zeytinburnu is high in comparison to other districts. In addition to industrial areas, small scale industry and commerce that are seen in residential areas increase the employment.

According to the results of the survey which is made in 2001 by Istanbul Metropolitan Municipality Service Measurement Investigation, it is seen that 37% of the employed people who live in the district are workers and 15% of them are artisans. The fact that most of the residents of the district are workers and artisans shows that Zeytinburnu has a dynamic population structure.

4.2.6. Urban Land Use Pattern

When 'Urban Land Use' is investigated, it can be seen that, with a percentage of 23,8, 'the residential areas' have the largest share in districts total area. Roads follow the residential area with a 17,4 percentage share. When residential city blocks are seen, it can be mentioned about the presence of non-residential regions within the borders of the district. Industry and Small Scale Industry covers the 11,3% and 6,9% of the total area respectively.

TIn Zeytinburnu, there are more multi-functional buildings then the ones which have only residential function. The commercial use is intense in ground floor usage. It is seen that these areas, which occur as a result of location of wholesale and retail trade together with basic necessities, do not fit to the residential areas. Textile and wood workshops have the majority in underground usages within residential areas. In the

usage in upper surface floors, on the other hand, differ according to neighborhoods. However, in neighborhoods, where residential settlements are found, upper surface floors have housing function.

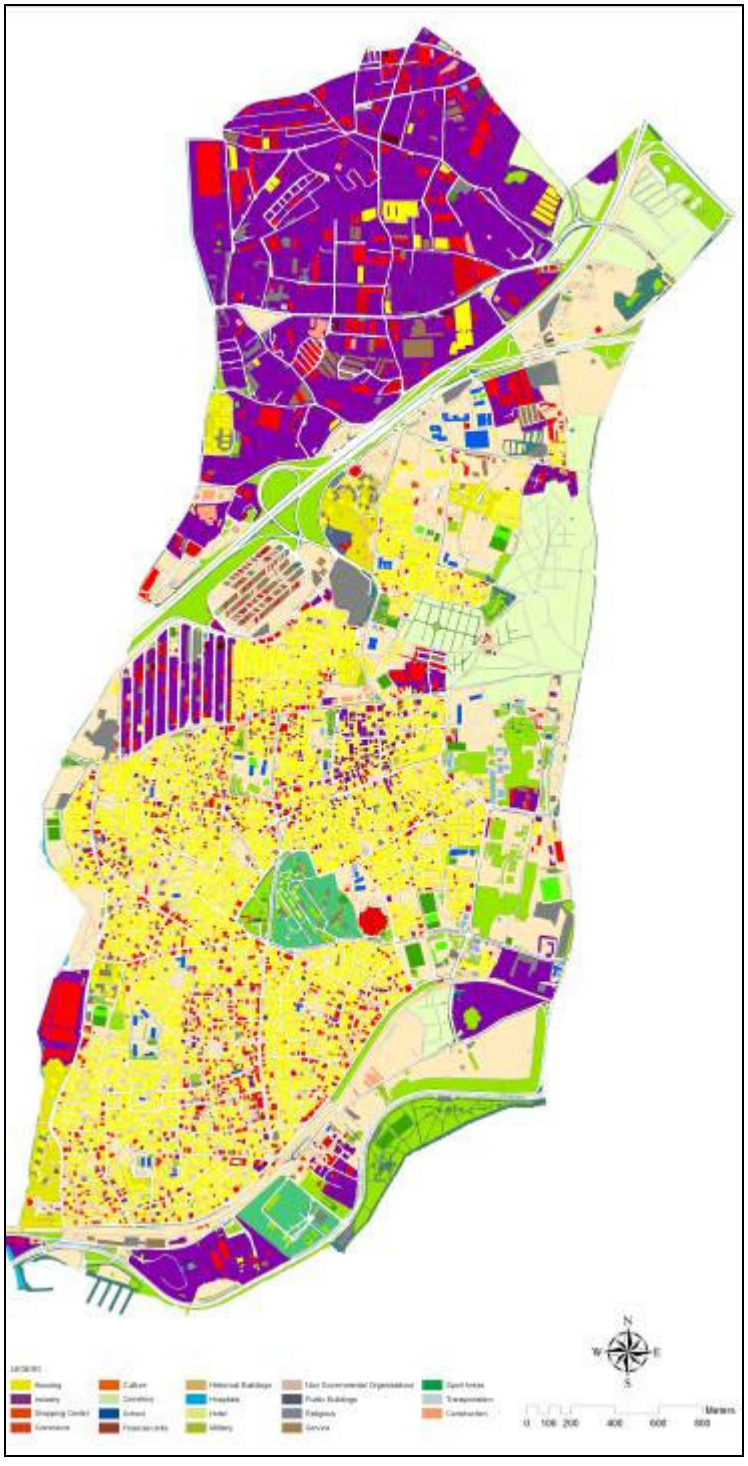


Figure 4.8. Zeytinburnu Urban Land Use, 2004

4.3. Zeytinburnu Urban Regeneration Action Plan

The second action area of Earthquake Master Plan of İstanbul is to determine the areas of high risk within the scope of 'mitigation planning', and to start safety increasing investments in these areas in advance. For Zeytinburnu is a place where not only natural hazards are high, but also human and economical resources facing the hazard is dense, it is one of those areas which are identified as of extreme risk and as 'Prior Regeneration Areas'.

4.3.1. Scope of Zeytinburnu Urban Regeneration Action Plan

The types of regeneration areas like Zeytinburnu, in which regeneration strategies oriented towards the ensuring of earthquake safety in constructed areas, are expected to have certain characteristics. These characteristics can be clarified in twelve points:

1. Zeytinburnu action plan should imply the investigation of policies and strategies, which will be used in the regeneration that aim at building a safe city, and the creation of a system (road) map. In this respect, it must be concentrated on the studies on financial, management and legal issues; and the feasibility of the project should be investigated thoroughly. In addition to that, the action plan must consider the prevailing facts of the country and the city. In other words, the Zeytinburnu action plan should be open to new applications regarding to issues of finance, implementation and participation.
2. Zeytinburnu action plan should neither be the entire demolishing and rebuilding of the area, nor mere building retrofitting. The maintenance of the earthquake safety should imply the works that aim at the determination of the regeneration and strengthening areas. For this reason, the Zeytinburnu Action Plan is neither an engineering, nor a planning/design project. The project that will be made in Zeytinburnu should be realised with the cooperation and the coordination of both fields.
3. Urban regeneration should have a purpose and a powerful strategy. It must not be forgotten that the main purpose is to reduce or minimize the earthquake risk and to create safe settlements, but additional purposes should

be given to the project. These additional purposes can be vision studies for the district and solution proposals for its problems.

4. The Zeytinburnu Action Plan has to take into account the physical and social structure, and the economic problems of the district.
5. The participation strategy of the regeneration projects is a fundemental aspect of the plan. Zeytinburnu Action Plan should investigate all the participating and targeted people, and facilitate participation to the project.
6. A local office, which will maintain the local participation and the re-management of the projects, should be established in advance.
7. The Action Plan should give rise to strategic, economic and social partnerships.
8. Zeytinburnu Action Plan should imply a high quality programme design, and be flexible in stages of project and implementation.
9. Priority must be given to the financing of Action Plan with its own resources.
10. Zeytinburnu Action Plan should aim at public benefit.
11. Zeytinburnu Action Plan should increase the local opportunities.
12. Zeytinburnu Action Plan should be sustainable. For this purpose, it must aim to set up an 'Urban Regeneration Management Model'.

4.3.2. The Stages of Zeytinburnu Urban Regeneration Action Plan

According to Earthquake Master Plan of İstanbul, the implementation of urban regeneration by Local Action Planning requires the studies to be organized in three main groups. This method should also be appropriated for the Zeytinburnu Regeneration Plan. These are data collection, database management works, analytical evaluation, syntheses and design studies. (Earthquake Master Plan of İstanbul Report, 2003, 858-859). At this stage, the studies and their contents can be summarized as such:

1. Studies for the Formation of Urban Database:
    - Sufficiency of Local Geological Findings
    - The place and Function of the Area in the Metropolitan Region
    - Research of Urban Risk Sectors
    - Evaluation of the Present Building Stock
2. Analytical Studies:
    - Macro-structuring Analysis
    - Economic Activities and Potentials
    - Local Investment Capacities
    - Social Structure and Ownership
    - Infrastructure and Transportation
    - District Emergency Situation Scenarios
    - Synthesis and Design Studies
    - Alternative Macro-Proposals
    - Land Use Decisions
    - Transportation and Infrastructure Decisions
    - Choices for Physical Organisation, Determination of Sub-regions
    - New Construction Order and Elements/ Urban design Decisions
    - Decisions Regarding to Present Building Stock (Improvement, empowerment, renovation)
    - Probability as to Legal, Administrative and Resource Existence
    - Empowerment Costs and Finance in Private Buildings
    - Feasibility and Finance: Volume of Investment and its Levels
    - The Design of the Processes of Organization, Education and Participation

- The Model of Sustainable Local development and Social Management
- Arrangements of Historical Wealths, Cultural and Environmental Features
- Sample Building Implementation Projects
- Regulations of Infrastructure and Social Services
- Design of Emergency Situation Services

Within the scope of the thesis, it will be focused on the 'Urban Database System Formation'. It is aimed here to form, evaluate and control the social and spatial database that will be produced within the scope of Zeytinburnu Urban Regeneration Action Plan to find out the basis, according to which the database of a project, directed towards the reduction of earthquake risks, is formed; and to make new extensions in the matter of how and by which departments the data base will be formed and controlled.

4.4 Formation of Urban Database System for Zeytinburnu Action Plan

The data that will be used during the analytical studies will be gathered at this stage. The databases produced here will be a data resource for spatial decision support systems. As a result of analytical studies produced by using these systems in which GIS is used as an instrument, it will be possible tp acquire spatial interrogations such as Macro-Structuring Analysis, Analysis of Economic Activities and Potentials, Analysis of Social Structure, Analysis of Urban Rick Sectors, and Analysis of Ownership. These interrogations will help producing urban regions in the planning area according to their physical and social structure, and determining the project areas.

Here, it will be useful to take a glance at the already acquired data and the availability of the rest. There are two levels at this stage as preparation and implementation.

4.4.1 Preperation Stage

This stage comprises of the studies, which are necessary for the research that will be done in the implementation process. We can summarize the things to be done in this process as such:

1. Determination of Standards and Research Method
2. Information Compilation and Operating Protocols

4.4.1.1 Determination of Standards and Research Method

Necessary studies will be carried out in order to determine the methods that will be used in the implementation process. A method needs to be developed, examining the experiences of urban regeneration and improvement. On the other hand, it is possible to award the contracts of researches to be done in the process of implementation, to private sector and universities. For this reason, the studies are expected to be fulfilled within the framework of certain standards. These standards will be determined at this stage. These methods and standards will be handled technically in the implementation stage.

4.4.1.2 Information Compilation and Operating Protocols

Istanbul Greater Metropolitan Municipality and related district municipalities have databases that can be used for regeneration plan in different format storages. These databases should be reported, joined and if neccessary updated. Different data formats have to be adapted to each other. This enables convenience while working with different databases.

There are two main databases in İstanbul case. The first one, produced by JICA (Japan International Corparation Agency), contains Micro-zoning studies, and the other one, produced by Istanbul Greater Metropolitan Municipality, contains detailed building inventory for İstanbul.

For example, the combination of the JICA studies with the GIS system of Istanbul Metropolitan Municipality, and their usage will provide convenience in the implementation process. On the other hand, it is needed to determine the usage and

storage conditions of the data that will be acquired at the end of each stage. Such an implementation –the acquisition of the data in a format that is digitally determined- will help bring together the contributions of people who separately carry out the same study of data base formation. By this way, the time needed for data base formation will be reduced.

4.4.1.2.1 Evaluation of Existing Databases

In this part of the thesis, determinations and evaluations regarding to the database that is produced for Istanbul and Zeytinburnu, and that can be used for urban transfprmation action plan, will be made. It will prevent the wasteful expenditure of time, labor and resource to put forward once again the data in already produced databases.

The presebt situation is evaluated according to the below data resources:

- The database which is produced in the study named "The Study on a Disaster Prevention/Mitigation Basic Plan in Istanbul Including Seismic Microzonation in the Republic of Turkey", which was prepared by Japan International Cooperation Agency (JICA) and presented to the Istanbul Metropolitan Municipality.
- The database of the study named 'Determination of earthquake Risk for the Area of Istanbul Metropolitan Municipality', which is produced by Boğaziçi University Kandilli Meteorological Station and Institute of Earthquake Research, Department of Earthquake Engineering, and which is submitted to American red Cross Organisation and was completed in Mai 2002,
- Building Inventory prepared by IMM
- SIS (State Institute of Statistics) Building census databases
- Databases produced by Zeytinburnu Municipality within the scope of Zeytinburnu Local Action Plan

As a method, this evaluation will be made according to the databases produced related to physical and socio-economical structure and parallel to the database

requirements of the uran regeneration local action plan. In the first part, the databases regarding to the physical structure, and in the second part databases regarding to the socio-economic structure will be examined.

4.4.1.2.1.1 Databases about the Physical Structure

4.4.1.2.1.1.1 JICA Database

JICA Data contains macro-scale data that is collected at neighborhood basis in Istanbul within the scope of the study area. In JICA data, there are data about the natural environment of Istanbul like coasts, lakes, rivers, vegetation, geological structure, and topography; settlement areas; land use at macro-scale; data about the built environment like roads and infrastructure; administrative units like neighborhoods and districts, and structural features like population, density, etc. of these units; change in years; and some other statistical data. They contain the below levels.

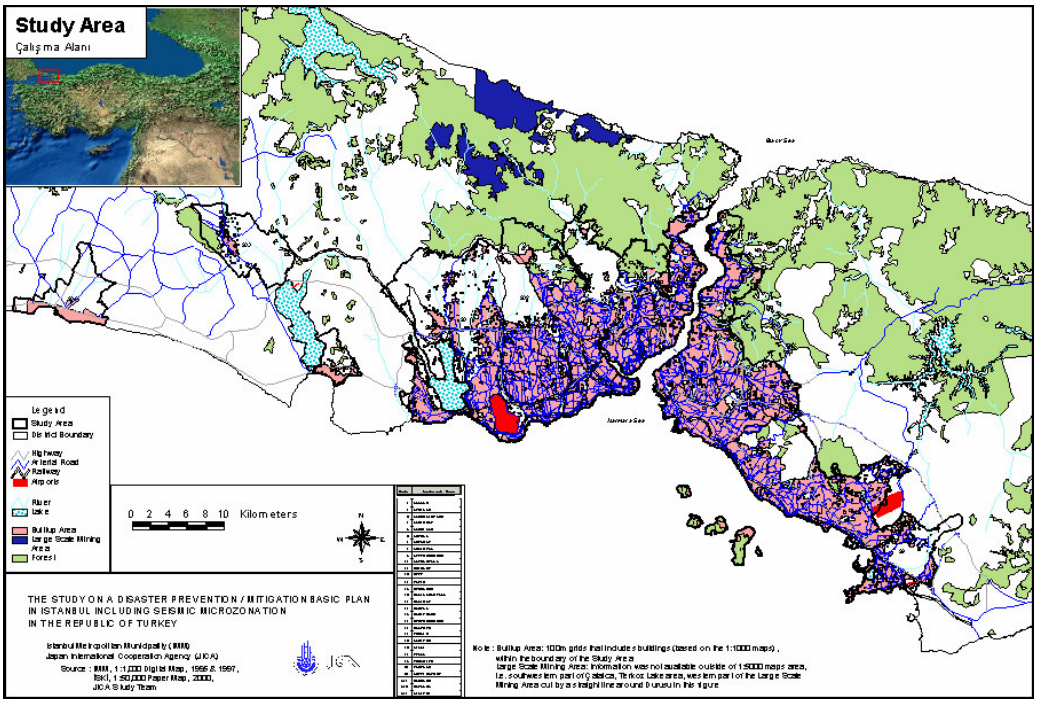


Figure 4.9. JICA Study Area

Administrative Borders

Districts, neighborhoods, borders of the Metropolitan Municipality take place in this level.

Topographical data

The most detailed information in the study is topographical data with a scale of 1/1.000. slope maps at 50 m intervals are created out of these data that is acquired quantitatively earlier. This is a sufficient interval for a micro-zoning map with a scale of 1/5000. the heights in the databases change between 0 and 500 meters and heıghts in most of the present settlements are below 150 meters. Sloope and gradient maps are created out of the topographical map.

Geology

A geological map of Istanbul MÜCAVİR area including the districts of Silivri and Çatalca are created by the JICA-IMM cooperation. In the production of the map, the geological map done at 1/50.000 scale by General Directorate of Mineral Research and Exploration (MRE), Istanbul Technical University (ITU) and Istanbul Metropolitan Municipality (IMM) was taken as basis.

Settlement

The data regarding to the settlement is investigated under these headings; land use, transportation and infrastructure, public and social service areas, urban open spaces, burning and explosive substance stores, emergency situation officials and SIT areas.

Land Use

The general land use is present in JICA report, and military zones, forests, settlement areas take place in GIS as distinct data layers. The ratio of open aras to total according to neighborhoods is present. However, JICA data is insufficient in producing land use even in macro scale.

Transportation and Infrastructure

All the road system of Istanbul is available in JICA data. Data about transportation structures like airport, ports, railways, headways and bridges can be found.

In the database about the infrastructure of the whole city; drinking water distribution lines, sewer system and drainage lines, information about natural gas network, electric lines and capacities, telecom facilities, underground and upper surface transformators and fiber optical lines are available. However, in the action area, there is a need for the formation of a detailed database for transportation and infrastructure facilities.

Public Buildings and Social Service Buildings

In JICA database, municipality and qaimaqam as administrative buildings are availabşe with their addresses and structural features. Other public bu,ildings are available in a partial, unsystematic and incomplete way. There is a need for a data inventory study in the area about these facilities.

Urban Open Areas

Parks are available in JICA report according to their location as a point and numerical distribution which is made according to neighborhoods. This data is insufficient and detailed data should be produced about urban open areas in the action area.

Burning and Explosive Substance Storing

In JICA report LPG, color, chemical substances, car LPG, fuel oil storage are determined as capacities according to neighborhoods. The locations and usages of these facilities are available in IMM building inventory databases.

Emergency Facilities

In JICA report fire brigade and police facilities are showed as information as points including detailed information. On the other hand, hospitals and schools are determined in quantity as to neighborhoods. The locations of hospitals and schools are available in IMM data. These data can be unified and used for the action area.

Site Areas

In JICA report, natural, historical, urban and archeological sites are defined on maps and general information is given. The data in IMM building inventory about this

issue is also insufficient. There is a need for the production of a detailed data inventory about the historical works of art in the action area.

4.4.1.2.1.1.2 İstanbul Metropolitan Municipality Database

This data is the one which is produced as information of characteristic features that are prepared as points connected to the buildings. They can be used both to produce land use maps at both macro and 1/5000 or 1/1000 scales, and to produce thematic maps about other characteristic features of the buildings. This database can be used in urban land use studies that will be produced for the action area. However, despite being a sufficiently detailed data resource of buildings, this database does not contain data related to the social structure. Data about the social structure is supposed to be added to this data.

The information of characteristic features in IMM building inventory are as follows;

1. Number of Housing Units
2. Number of Places of Employment
3. Number of Building Storeys
4. Building Structure : Concrete, Briquette, Wooden, Steel, Prefabric, Stone, Sun dried brick, Other
5. Building Uses: Transportation, Infrasturucture, Public Buildings and Social Service Buildings, Housing, Manufacturing Industry, Commercial Uses, Shopping Centers, Tourism, Urban Green Areas and Recreational Spaces

4.4.1.2.1.1.3 State Institute of Statistics Database

The building count information that is collected according to neighborhoods and districts, but not related to building object, have the potential to be used as statistical data by getting the neighborhood averages. This data can be used generalized at neighborhood basis in action areas. The information about buildings according to SSI building count information is as follows:

- The completion of the building (as in periods)

- The usage purpose of the building
- The constructer of the building
- The owner of the building
- Carrier system of the building
- The floor area on which the building settles
- Total lot area of the building,
- Number of stories
- Installation facilities of the building
- The heating system of the building
- Fuel for heating purposes
- The physical situation of the Building

4.4.1.2.1.1.4 Zeytinburnu Municipality Database

Studies are being carried out by Zeytinburnu Municipality in order to develop the IMM building inventory database. These studies are taken in two phases. In the first phase, the database about the physical condition of the present building stock is enlarged making a survey at the site. In addition to that, the photos of all buildings at the site are taken in the building inventory study and added to the database.

At the end of this survey, the below data was added to the building database produced by IMM:

- Building ground floor usage
- The condition of the order of the building
- The condition of the roof
- The building quality
- The features belonging to the building (parking lot, outhouses, etc.)
- The features of the ground where the building settle

An earthquake score is given to the buildings according to the engineering measurements which is done based on the building inventory that is enriched by these data. According to these scores, reinforcement and demolishment decisions will be made about the buildings at the site.

4.4.1.2.1.2 Databases about the Socio-Economic Structure

The analysis like the definition of the population and the socio-economic trends of the action area in Istanbul, and the determination of what kind of developments this are will be subject to in the future, will constitute a basis to the policies produced for the area. The interaction between the population movements and economic activities in the districts should be considered, and the regeneration in the area should be put forward together with the socio-economic change in the area (IDMP, 2003). Data that is appropriate for such targets are not available in JICA and IMM data. However, a `Household Information Survey` is prepared and implemented by Zeytinburnu Municipality in 2004 within the scope of regeneration action plan.

In JICA database, information on population and population density as to districts and years of whole Istanbul is available, and it is mapped in the study. However, data on the socio-economic structure is not available. The population data is given at district base in the database on socio-economic structure. The number of neighbourhoods, area of neighbourhoods, neighbourhood distributions are presented at district base and densities are grouped as 500 person per hectare and 700 person per hectare. These data is evaluated according to the census made by SIS in 2000. Data on the socio-economic structure is not available in IMM database.

The data types in the household information survey done by Zeytinburnu Municipality are prepared in order to determine the socio-economic structure of the area for which the Earthquake Master Plan of İstanbul is made and to produce social regeneration strategies. The survey is carried out based on the survey documents prepared during the studies done for the determination of the data types that are necessary for the formation of the socio-economic database of the action area, within the scope of the studies of METU City Planning Master Studio.

In the database that will be acquired through the survey, in addition to the building conditions, data such as the usage customs of the residents, their incomes, working place-residence relations, the reflection of the population movements in the city on the action area, and the development trends in the area are available. The population structure is put forward in relation with building features. However, a rich database on the socio-economic structure is still not available.

4.4.1.2.1.3 Evaulation

The following conclusions are reached when database samples produced for the whole Istanbul and Zeytinburnu regeneration action plan are examined.

- As a result of a comprehensive study, the structures belonging to the data that can be necessary for preliminary preparations and analytical studies needed for regeneration action plans are to a large extent realized.
- The necessary care is not taken in preparing the data tables in a related way, however, this is a study which can be easily realized.
- No unity is maintained in the data that has been kept for similar purposes, and data that are companion as for their features are presented in different tables.

4.4.2 Implementation Stage

The data, which will be used in order to determine the urban regeneration and improvement areas, and the vision and the strategies of the site, will be acquired at the end of this stage.

In the last part, a data inventory model was proposed for urban regeneration action planning. In this chapter, on the other hand, the data that will take place in this inventory and the process of data production will be detailed using the Zeytinburnu example.

The database system to be produced for Zeytinburnu Local Action Plan should be thought in 4 phases. In the first phase, the database production standards should be determined which will maintain the unification and easy usage of the databases produced by different organisations. In the second phase of the study, it is obligatory

to determine the data types and data layers that are necessary in urban regeneration areas having earthquake risk. The design of the data collection and data updating stages that will be realized aiming at meeting the already determined data requirement should constitute the third phase. In the fourth phase on the other hand, it is needed to determine the usage principles of the produced data and to describe the legal framework necessary for this.

The information system that is tried to be developed for Zeytinburnu and that includes the social and spatial databases will be named as 'Zeytinburnu Urban Regeneration Information System. In addition to the municipalities that are proposed to produce the regeneration action plans, such an information system will also be available for the following units at different stages of the regeneration process.

- Administrative units (governorships, head officials of districts, municipalities, and other sub-units),
- Earthquake protection and rescue units,
- Service sector (banks, insurance companies, construction companies),
- Research institutes,
- Public and civil society organisations that are responsible for reducing natural disasters including earthquake, intervention and improvement,
- NGOs working for public good.

The system that will be devised for Zeytinburnu in this context should provide the user organisation with accurate, up to date, standard and coherent data. It should pay regard to the share of the necessary information, unification of the related information and the usage of the interaction results of this information in a way that will prevent any information excess or complexity.

4.4.2.1 The Determination of Data Production and Exchange Standards

A generally defined data production and exchange format is a precondition for an easy information transfer and usage. A common data production and exchange

standard for databases produced by different organisations in the country and used in GIS applications do not exist. Each country uses its own standards in this subject.

The exchange of spatial data among sides according to the predetermined rules requires, on one hand, a common agreement on contents of the information, and on the other hand, the usage of common information channel. For this purpose, the system should be clearly defined, structured and systematized. (IDMP, 2003, 1038).

There is a need for some definite standards for the production of databases which belong to urban regeneration action areas and will be used as devoted to the targets of the project, which can used as decision support system for central and local governments at normal times, and which will constitute an input to a GIS based information and administration model. The 'Turkey Earthquake Information System (TABIS)', which is developed by ITU with the support of Ministry of Internal Affairs within the context of the Project of Earthquake Master Plan of İstanbul, is a high standard and systematic and comprehensive one that has been developed in our country. This model of information system standard is recommended to be used in all related organisations by a notice released by the Ministry of Internal Affairs in December 2002.

Such a system that will be devised for Istanbul will provide the user organisations with up to date, accurate, standard and coherent data. It pays regard to the share of the necessary information, unification of the related information and the usage of the interaction results of this information in a way that will prevent any information excess or complexity.

The concept of 'standard' that will be used in Istanbul earthquake Information System' has different meanings as based on the scope of GIS (IDMP, 2003, 1038). These are as follows;

1. The standards regarding to the spatial reference of the geographical information system as for the fact that earthquakes, like all other disasters, are natural events, in other words the standards devoted to the modelling (structuring) of the space,

2. The structuring of the data, spatially referenced or not, regarding to the multidirectional management of earthquake,
3. Principles devoted to the institutional structuring that will be established in order for the system to be kept up to date,
4. The investigation of the present data that will feed the system with regard to the environment where they are found, unit, concept, format and up-date-ness within the context of the analysis of the ability to be integrated to system,
5. Standards related to the software that will be used at the establishment and servicing stage of the system
6. Technical standards related to the installations that will be used at the establishment and servicing stage of the system
7. Acquirement standards of the data having different features (geometrical, characteristics, meta) for various scales (for example, the determination of the scale of the basic map, if geometrical data is to be transferred to the system by being quantified from analogue maps),
8. The rules that will determine the integration of the data acquired from different resources,
9. Standards of data exchange,
10. Standards regarding to the cartographical product (maps) that will be produced with the help of medium-scale geometrical data infrastructure,
11. Standards regarding to the presentation of the data (for example, in the form of cartographical or written documents),
12. Standards of access to and marketing of the data,
13. Metadata standards.

As can be seen from the above table, there are various exchange formats that are mostly used nationally. On the other hand, software, which can function independent of exact GIS software and by this way contains mechanisms devoted to the transfer of the data that is modelled as a database in a definite system to the database of

another system, should be developed. Such developments should be permanently monitored by experts following the establishment of the system and the adjustment of the present GIS to the developments should be ensured.

Nowadays, geographical information systems that can be used in internet began to be used widely. By this way, the urban databases will be able to be seen by different users in internet and the system will become appropriate for spatial inquiries. GML (Geographic Markup Language), whose third sale will be presented to usage in a short time by OpenGIS Consorsium, aims to eliminate the problems occur during data exchange among GIS systems that can be used in Internet. The integration of such instruments into data systems will not only facilitate the data exchanges, but enable one to make analysis as means of internet as well.

4.4.2.2 Types of Urban Databases, Data Layers and Attributes

The determination of the database inventory of Zeytinburnu Urban Regeneration Information System which will be built within the scope of the preliminary studies of 'Zeytinburnu Urban Regeneration Information System' will ensure the integration of the object types and characteristics, thus, data that will be collected by different organisations, which is required by the system. It is an obligation for many organisations and establishments to participate in the system, undertake the duties and responsibilities whose borders are defined exactly, and to carry out these duties without any defect, in order to maintain the up to date and permanent data transfer to an earthquake information system that will be built in the district.

The database inventory that was made within the Earthquake Master Plan of İstanbul, regarding to urban Regeneration Action Planning, was reported in the last chapter in an enlarged way. In this part, on the other hand, this inventory is tried to be developed for Zeytinburnu action area.

The data inventory model that is tried to be developed for Zeytinburnu, is prepared according to functional classification method. This classification type refers to the classification of the data as to its usage purpose. At this stage, the data is classified considering its function in regeneration planning studies; regardless of the organisation by which the data is produced and kept.

As it is already mentioned, this classification refers to a classification based on the functional and logical relationship among the data, and various different resources were used during its preparation. As a result of these, different pieces that give information about the present situation, especially about natural conditions, infrastructure, buildings and transportation, are classified as can be seen below.

4.4.2.2.1 Database of Geological and Natural Conditions

Database implies the detailed research of geological and geotechnical information concerning the area, and the flora-fauna characteristics of the area, such as vegetation and climate. It can be expected that JICA Micro Zoning data will contribute considerably to the geological and geotechnical research. The database can be constituted in two parts:

1. Evaluation of Geological Information and Micro Zoning
2. Other Local Natural Information (Climatic and Water Level)

The data that is acquired through the research of natural findings are expected to be used in risk zoning, determination of urban regeneration and strengthening, and at the stage of planning, within the scope of Urban Regeneration Action Plan. In other words, the results of this study will constitute an input to the studies of risk determination and reduction.

The studies to be carried out within the scope of data base formation are defined as follows:

1. The investigation of the adequacy of geological data,
2. Necessary geological and geotechnical researches,
3. Transfer of the present and acquired data into GIS system,
4. The investigation of the adequacy of other natural data (climate, flora fauna, water level etc.),
5. The research for missing natural data

For it is the basic principle of the study to investigate the adequacy of the acquired data, and to search for additional necessary data; the acquired geological data, which will be provided by the relevant departments of the Istanbul Metropolitan Municipality and concerned district municipalities, and the JICA data base, are expected to be an input for this research project.

In addition to these, the following maps, reports and data bases are needed to be prepared as the result of the studies.

- General geological map
- Geomorphologic map
- Slope map
- Hidrogeological map
- Engineering geological map
- Geophysical map and cross sections
- Land use potential map
- Basic drillings, research pits, laboratory experiment FÖY, cross sections, well logs and their evaluations
- GIS data base in which geological data is processed

Table 4.4 Database of Natural and Geological Conditions

Data Layers		Attributes	Evaluations
Geology	Geotechnical	Ground classification	The data regarding to the geological structure is produced within the scope of JICA for whole Istanbul. However, there is need for more detailed geological studies and analysis for Zeytinburnu.
		Liquefaction	
		Slope stability	
		Land slide	
		Peak ground acceleration	
		Land Fill areas	
	Earthquake	Fault lines	
		Tectonic movements	
		Seismic Data	

Table 4.4 (continued)

Natural Information	Elevation	The data regarding to the natural structure is produced within the scope of JICA for whole Istanbul.
	Slope	
	Bathimetry	
	Climate	

4.4.2.2.2 Database of Urban Land Use

Urban land use analysis are, generally defined, the investigation of the urban uses in terms of density, size and spatially; the evaluation of the relative risks created out of this land use in terms of ground conditions and micro-zones. In order for this analysis to be made, data should be collected under certain titles, the present data should be brought together, and a complete urban land use database should be formed.

The purpose of the analysis of land use in regeneration areas is to maintain that both the use types in present built urban tissue according to dangerous areas and the risks caused by forms of coming side by side are defined, and that the losses which can be caused by the effects of these risks on both the built and the socio-economic environment during a disaster are defined (IDMP, 2003). The databases that are prepared inclined towards these analysis will constitute information resources in which analysis, which will give way to define the loss reduction methods that will be applied in order to minimize the life and property losses that can occur bound to urban use risks in a possible earthquake or emergency situation, are produced.

Urban use databases in present settlement areas should include the following data types;

- Type of land use (Residential, work place, industry, etc.)
- Density of use and type of user,

- Settlement tissue (Parcelation, form of building, etc.),
- Accessibility of the area, infrastructure and transportation opportunities should be considered (IDMP, 2003).

There is need for developing new methods at both urban level (1/5000, 1/25000) and scale of building unit (1/1000), while examining the urban uses. The methods and principles of a more rational design of urban land use zones should be developed by making studies such as use types and densities, use continuities, incoherent neighborliness, insufficiency of tampon areas etc. the plan of urban land use should be restructured after being reevaluated in terms of urban risks. At the building scale on the other hand, the regions that have homogenous and mixed use should be differentiated (IDMP, 2003)

Table 4.5 Database of Urban Land Use

Data Layers	Attributes	Evaluations
Industry	Type of production activity	Information about the activity types of the plants are produced within the scope of EMPI. In addition to that, a risk ranking is made for industrial activity types in EMPI studies.
	Location of warehouses	These data are available in present situation maps produced by Zeytinburnu Municipality
	Physical structure	These data can be derived from IMM building stock inventory
	Ground conditions	The ground analysis produced by JICA and developed within the scope of EMPI can be used. However, this should be developed for Zeytinburnu.
	Infrastructure	Produced within the scope of EMPI.

Table 4.5 (continued)

	Accessibility	Produced within the scope of EMPI. In addition to that, a risk ranking in terms of accessibility is made.
	Environmental impact	Produced within the scope of EMPI. In addition to that, a risk ranking in terms of environmental impact is made.
	Risk of fire	This data can be produced using the information on hazardous substance usage and production of industrial plants, types of wastes, building materials and environmental uses. Fire statistics can be acquired from the fire brigade.
Business Centre and Working Areas	Type of commercial activity	Can be acquired from the IMM building stock databases.
	Physical structure	
	Ground conditions	The ground analysis produced by JICA and developed within the scope of EMPI can be used. However, this should be developed for Zeytinburnu.
	Infrastructure	Developed by IMM.
	Accessibility	Present situation maps, land uses and EMPI studies should be got used of.
	Situation of parking lots	Should be acquired according to present situation maps and the observations to be made at the site.

Table 4.5 (continued)

	Environmental structure	IMM building stock inventory and present situation maps should be used.
	Risk of fire	This data can be produced considering the information about commercial establishments on hazardous substance storage areas, products that are sold, types of wastes and building materials, and features of environmental uses.
Housing	City block fullness-emptiness artio	Should be acquired from present situation maps.
	Parcel size	Should be acquired from present situation maps and land ownership maps. .
	density	Can be derived from IMM building stock inventory.
	Building and parcel ownership	Should be derived from cadastral maps.
	Usage type	Can be derived from IMM building stock inventory.
	Ground conditions	The ground analysis produced by JICA and developed within the scope of EMPI can be used. However, this should be developed for Zeytinburnu.
	Infrastructure	Produced by IMM.
	Vehicle Parking Lot Condition	Should be acquired according to present situation maps and the observations to be made at the site.

Table 4.5 (continued)

	Environmental structure	IMM building stock database and present situation maps should be used.
	Risk of fire	This data can be acquired by building material, heating system and environmental uses.
Buildings and Areas Including Important Functions	Type of activity	Can be derived from IMM building stock inventory.
	Physical structure	
	Ground conditions	The ground analysis produced by JICA and developed within the scope of EMPI can be used. However, this should be developed for Zeytinburnu.
	Infrastructure	Produced by IMM.
	Accessibility	Present situation maps, land uses and EMPI studies should be got used of.
	Vehicle Parking Lot Condition	Should be acquired according to present situation maps and the observations to be made at the site.
	Environmental structure	IMM building stock inventory IMM and present situation maps should be used.
	Risk of fire	This data can be acquired by building material, heating system and environmental uses.
Tourism and Accommodation Areas	Type of activity	Can be derived from IMM building stock inventory and present situation maps.
	Physical structure	Can be derived from IMM building stock inventory.

Table 4.5 (continued)

	Ground conditions	The ground analysis produced by JICA and developed within the scope of EMPI can be used. However, this should be developed for Zeytinburnu.
	Accessibility	Present situation maps, land uses and EMPI studies should be got used of.
Open and Green Areas	Location	Should be derived out of present situation maps, IMM building island inventory, ownership and land use maps.
	Area (m^2)	
	Ownership	
	Use and Management Form	Should be derived out of ownership maps.
	Accessibility	Present situation maps, land uses and EMPI studies should be got used of.
Mixed Use Areas (residence + commerce, residence + industry, residence+ entertainment)	Type of activity	Can be derived from IMM building stock inventory.
	Physical structure	
	Ground conditions	The ground analysis produced by JICA and developed within the scope of EMPI can be used. However, this should be developed for Zeytinburnu.
	Infrastructure	Produced by IMM.
	Accessibility	Present situation maps, land uses and EMPI studies should be got used of.

Table 4.5 (continued)

	Vehicle Parking Lot Condition	Should be acquired according to present situation maps and the observations to be made at the site.
	Environmental structure	IMM building stock inventory IMM and present situation maps should be used.
	Risk of fire	This data can be acquired by building material, heating system and environmental uses.

4.4.2.2.3 Database of Existing Building Stock

It is clear that building stock evaluation should be done, in order to determine the renewal and improvement areas, and the risks that the building stock bears in regeneration area.

The building stock inventory prepared by IMM is developed as a survey to determine the building condition for Zeytinburnu. This survey is applied to 16.032 buildings in Zeytinburnu. as a result of the database formed the end of the survey, the earthquake points, which are determined according to the stability of the buildings against earthquake, for buildings are found.

Table 4.6 Database of Existing Building Stock

Data Layers	Attributes	Evaluations
Physical Structure	Building use	The database is prepared very comprehensively. Some analysis like those of building stability made for the building stock, determination of building to be pulled down or strengthened can be made.
	Use of base floor	
	Uses of other floors	
	Building height	
	Neighbor building use	
	Number of storeys	
	Material	
	Construction year	
	Emptiness / fullness ratio	
	Architectural Form	

4.4.2.2.4 Database of Historical and Cultural Assets

The data in this group should put forward the historical value of the buildings and the area, building situation, the risks caused by ground structure, and environmental uses. In this group the following sit areas should be taken as basis.

- Natural,
- Historical,
- Archeological,
- Urban.

The main sit area of Zeytinburnu is the surrounding of the ramparts of the historical castle. The castle ramparts among sit areas that have historical and urban sit features, are among the critical regions in terms of structural deficiency and ground features.

Table 4.7 Database of Historical and Cultural assets

Data Layers		Attributes	Evaluations
Historical and Cultural Areas	Site Areas	Border	Can be compiled from present situation maps, land use maps, and EMPI studies.
		Environmental Uses	
	Officially Registered Areas	Use	Can be acquired through the compilation of the data of Committee of Protection of Cultural and Natural Wealth, IMM Directorate of Historical Environment and Planning, and Zeytinburnu Municipality
		Ownership	
		Building Condition	Can be acquired through the compilation of data available in IMM building stock database.

4.4.2.2.5 Database of Urban Transportation Systems

Transportation networks and transportation structures are equipment that has vital importance in case of an earthquake and other emergency situations. They ensure the setting up of healthy connections and access possibilities between settlements. For this reason, the elimination of the inefficiencies and shortcomings in the main transportation network is of major importance in terms of reducing the risks that are faced in earthquakes and other disasters in regeneration areas.

It is necessary to make evaluations both directed to the determination of the stability of the transport structures and in terms of their roles as ADG in transport risk analysis. For this reason it is of major importance to prepare the transport database comprehensively.

There are strong highway and railway connections in Zeytinburnu. In addition to that, there is a port for freight transportation. Besides, the tramway line passing from the district increases the accessibility. The database to be prepared for Zeytinburnu is expected to include the following data types.

Table 4.8 Database of Urban Transportation System

Data Layers	Attributes	Evaluations
Road System	Type (Highway , main roads, other roads, bridge, tunnel, viaduct, Alt-Üst Geçitler, etc.)	All of the highway network can be showed in the database in the studies made by the Metropolitan and Zeytinburnu Municipalities
	Width	
	Length	
	Capacity	Can be acquired from General Directorate of Highways.

Table 4.8 (continued)

	Density	The vehicle counts made for the highways in the settlement can be acquired from the Provincial Directorate of Highways.
	Connection points (Points of connection and transition to other regions)	Can be compiled from land use data and studies produced within the scope of EMPI.
Railway System	Lines	Information about railway transportation and capacities are available in IMM transportation database and Zeytinburnu transportation inventory.
	Stations	
	Bridges	
	Tunnels	
	Railway Mass Transportation System (Light rail, metro, tramway)	
Sea Transport System	Port	Can be produced by using the data of Turkey Maritime Business Management, IMM and Zeytinburnu Municipality.
	Warehouse	
	Crane and Cargo Enterprises	
	Fuel and Supply Plants	
	Mass Transport (Domestic Lines (T.D.İ.), Car Ferry Lines)	Can be acquired from T.D.İ. and İ.D.O. data.
Airline Transport System	Helicopter Landing Runways	Available in IMM data.

Table 4.8 (continued)

Mass Transport System	Bus Lines	Data regarding to public transportation is available in the data of IMM and Zeytinburnu Municipality.
	Minibus Line	
	Bus Terminal	
	Bus Stop	
	Transport exchange points	

4.4.2.2.6 Database of Urban Infrastructure System

Infrastructure systems that constitute an important part of the investments in the urban areas have the possibility to be damaged in an earthquake, and therefore constitute a distinct risk sector. Infrastructure systems are not built considering the earthquake hazard from the beginning. For this reason, it is possible to define different risks in infrastructure systems. Network structure and geometry, route selection, material preferences, lack of standard, production and workmanship defects, imbalances of carried capacity, system leakages, lack of consideration in ranking according to scale and importance and etc. constitute distinct risk messes (IDMP, 2003)

Within the scope of Zeytinburnu urban regeneration plan, the form and level of damage of the networks of water, electric, communication, natural gas, waste water, and drainage systems against seismic dangers should be determined by examining in terms of design and implementation distinctly. In addition to that, there is need for evaluating the points of service units of these systems (Transformation stations, storages, promotion stations, centrals, distribution points, etc.) in terms of their weaknesses, locations in the network and seismic dangers. The management forms of these systems have also risk decreasing and increasing effects.

Databases on infrastructure systems should include detailed technical data about drinking water, waste water, solid waste, electrification, natural gas, and

communication systems. The main risk analysis and management forms that will be carried out with these databases should also include the following ones;

- Risk analysis of design of infrastructure network structuring;
- Network routes and production risk analysis;
- Capacities of network service areas and possible losses service losses;
- Risk analysis of the points of service units of infrastructure systems;
- Determination of the precautions (strengthening, changing place, changing capacity and scale, sparing etc.) that has to be taken at points of service units;
- Analysis of methods of providing alternative services in case of emergency;
- Examinations in terms of emergency situation necessities and ADG transportation promotions, etc. (IDMP, 2003).

Table 4.9 Database of Urban Infrastructure System

Data Layers	Attributes	Evaluations
Water System	Pipe Lines	Data regarding to networks and lines is available in IMM infrastructure facilities database.
	Water basins	
	Pumping Facilities	
	Cisterns	
	Capacity	Can be compiled from İ.S.K.İ. and Zeytinburnu Municipality
	Water storage Tanks	
Waste water system	Sewer system	Data regarding to networks and lines is available in IMM infrastructure facilities database.
	Cleaning system	
	Pumping and Discharge Facilities	

Table 4.9 (continued)

	Capacity	Can be compiled from İ.S.K.İ. and Zeytinburnu Municipality
Solid Waste System	Solid Waste Fill Area	Can be acquired from Zeytinburnu Municipality
	Solid Waste Management Stations	
Electricity	Electric Lines	Available in IMM infrastructure facilities database.
	Reducing Centers	
	Transformer Centres	
Natural Gas System	Pipelines	Available in IMM infrastructure facilities database.
	Depot and Distribution stations	
Communication System	Cable Telephone (Cable network, Distribution Facilities, Centrals, Radio-Link Stations)	Available in JICA database. Data on number of subscribers can be acquired from Turkish Telecom.
	Mobil Telephone (Base Stations, Base Station Cable Network)	
	Television Stations	
	Radio Stations	
	Fiber optic cable networks	

4.4.2.2.7 Database of Emergency Facilities

In the present urban area, the facilities that are of vital importance and must be usable in case of an earthquake or an emergency situation are use areas which are defined as Emergency Facilities - EF that is a part of the urban system. Facilities

such as hospitals, school buildings, fire brigade stations, police stations, bakery, dry storage, cold air storages, some official buildings, stadiums can be defined as EF. There is an obligation to eliminate all the risk at EFs in case of an earthquake. EFs are made of personnel/ equipment/ systems and real properties (IDMP, 2003).

The databases to be prepared about ESOs can be used in the analysis in two stages.

- the sufficiency and safety of EF real properties
- EF risks of insufficiency of spatial distribution

EFs and vital infrastructure units like main transportation roads, stations where transportation types intersect, bridges, tunnels, energy transfer stations, and water storages should be thought together, and in urban use risk evaluation, they should be considered together with other use types in terms of form of coming together and distances.

Table 4.10 Database of Emergency Facilities

Data Layers	Attributes	Evaluations
Police	Address and Coordinate	Produced in EMPI studies
	Communication	Can be acquired through contact with District Directorate of Security
	Accessibility	Produced in EMPI studies
	Wealth of infrastructure, specialized facilities and equipment	Can be acquired from security units, governorship and AKOM.
	Number of personnel	Can be acquired through contact with District Directorate of Security
	Preparation level for emergency	Can be acquired from security units, governorship and AKOM.
Fire Brigade	Address and Coordinate	Produced in EMPI studies
	Accessibility	

Table 4.10 (continued)

	Wealth of infrastructure, specialized facilities and equipment	Can be acquired from fire brigade, governorship and AKOM.
	Preparedness level for emergency	
	Communication	Can be acquired from fire brigade.
	Number of personnel	
Civil Defense	Address and Coordinate	Produced in EMPI studies. (There are no civilian defense units in Zeytinburnu. Database should be formed finding the most closed civilian defense unit.)
	Accessibility	
	Number of personnel	Can be acquired from fire brigade, governorship and AKOM.
	Wealth of infrastructure, specialized facilities and equipment	
	Preparation level for emergency	
Hospital	Address and Coordinate	Produced in EMPI studies
	Accessibility	
	Number of beds and doctors	
	Ratio of fullness	
	Capacity of emergency	These data are produced within the scope of EMPI. Emergency units, number of doctors, capacity of treatment given in the outpatient clinic can be acquired from Provincial Directorate of health.
	Capacity of operating room and morgue	Can be acquired from Provincial Directorate of health.
	Communication	Can be acquired from Provincial Directorate of health, governorship and AKOM.
	Transportation vehicles, number of ambulance, existence of helipad	
	Preparation level for emergency	

Table 4.10 (continued)

Public buildings (schools, dormitory and others)	Address and Coordinate	Produced in EMPI studies
	Accessibility	
	Communication	Can be acquired from governorship and AKOM.
	Capacity of building and open space	Can be acquired from land use data and present situation maps.
	Preparation level for emergency	Can be acquired from governorship and AKOM.
Bakery	Accessibility	Produced in EMPI studies
	Production capacity	Can be acquired by interview made with bakeries.
	Distribution capacity	

4.4.2.2.8 Database of Hazardous Uses

Dangerous substances can be defined as substances that damage the environment and living things, are lit fast, explode or spread shock waves. 'Dangerous substances are ones that wear away the other substances, explode them or are lit easily, give strong reaction with water, are indecisive when exploded to fire or an impact, or strew poison to human beings, animals and the environment' (TAME, 2001).

The sources of the risks such as fire, explosion, diffusion of dangerous gases and etc., which can be created by dangerous substances alone or after an earthquake, constitute the sources of urban hazard. Dangerous substances can be classified as to their storage and carriage conditions. The situations of hazard differentiate for their chemical features during storage and those during carriage differentiate. Dangerous substances are explosives, burnable solids, gases and fluids that can catch fire, poisons and poisonous gases, abraders, non-burnable gases, oxidizers and radioactive substances (TAME, 2001).

The uses that contain hazard in urban areas are electric and natural gas centrals, energy transfer lines, LPG stations, LPG tankers, fuel oil stations, oil tankers, natural

gas stations, garbage dumps, coal piles, dams, tankers carrying dangerous substances (in the sea or on the land), industrial facilities, (especially industry types that produce dangerous wastes), etc. an urban database that will be produced about dangerous uses is expected to demonstrate the spatial distribution of such uses and the size of the danger.

Table 4.11 Database of Hazardous Uses

Data Layers	Attributes	Evaluations
Industrial units that use hazardous substances	Industry types that use hazardous substances	Available in resources belonging to JICA, SSO and IMM. In addition to that, JICA, DİE and produced in EMPI studies
	Production, sale and storage points of hazardous substances	
	Factories using, producing and wasting hazardous substances	
	Chemical Substances Storage Areas	Available in resources belonging to JICA, SSO and IMM. Detailed information about these units can also be acquired from the firm catalogue available in Istanbul Chamber of Industry.
	Workshops using chemical substances	
	Transport Lines of Chemical Substances	
Fuel Oil and LPG Stations	LPG storage areas and stations	Produced in EMPI studies
	Fuel oil storage areas and stations	
	Tanker Carriage Lines (Lines of vehicles carrying LPG-fuel oil)	Detailed information about lines can be acquired from stations.
	Transfer Lines (natural gas, oil, waste water pipe lines, energy transferring lines)	Available in JICA and IMM databases.

4.4.2.2.9 Database of Spatial Economic and Social Structure

The definition of the population and socio-economic development trends of Zeytinburnu, and the determination of the structure of the sub-regions in the area and projection of their future developments, will provide a basis for the policies to be devised for the area. When the interaction between population movements and economic activities are considered, the (spatial or physical) regeneration in the area should be taken together with the regeneration in the socio-economic structure, and put forward and monitored for different periods.

The type of the housing and the social structure of the residents are of major importance. In addition to the condition of the buildings, factors such as usage habits of the residents, development trends, and population pressure should be considered in the examination of these areas.

The disadvantaged social groups in the society reside usually in the uncontrolled areas of the city, which have developed without a plan or were legalized after improvement plans. In addition to individuals of low socio-economic level, the necessary care should be taken of children, elderly people, handicapped and women (IDMP, 2003).

In addition to that, the arise of new problems such as alienation, increase in the crime rate, shortening of the residence durations, which affect the level of being socially organised negatively, can constitute special problems regarding to earthquake. Different problems are experienced in different residential areas in the execution of rescue and restructuring works. Due to family structures, number of children and old people facing life risk can be very high (IDMP, 2003). For example, it was seen that in the Kobe earthquake in 1995, people older then 60 constituted the largest part of the life loss.

The determination of the population structure in connection with building characteristics at neighbourhood level will increase the efficiency of the precautions before and interventions after an earthquake.

Table 4.12 Database of Spatial Economic Structure

Data Layers		Attributes	Evaluations
Production Capacity	Industry	Industry and labor information	Data about facility areas are produced within the scope of EMPI. Information about labor can be acquired from Istanbul Chamber of Industry and Commerce. A survey must be made at work places in order to determine the day-night and week-weekend populations in industrial areas.
		Value-added level	can be acquired from Istanbul Chamber of Industry and Commerce
		Input-Output relations, productivity related to specialized labor force	Can be formed according to the data to be acquired from Istanbul Chamber of Industry and Commerce and surveys made at work places.
		Export capacity	can be acquired from Istanbul Chamber of Industry and Commerce
		Ground risks	Can be calculated using JICA database.
	Service	Productivity and labor information	Information about activity areas are produced within the scope of EMPI. Information about labor can be acquired from Istanbul Chamber of Industry and Commerce. In order to determine the day-night and week-weekend population in commercial areas a survey should be made.
		Value-added level	Can be acquired from Istanbul Chamber of Industry and Commerce

Table 4.12 (continued)

		Input-Output relations, productivity related to specialized labor force	Can be formed according to the data to be acquired from Istanbul Chamber of Industry and Commerce and surveys made at work places. ,
		Export capacity	Can be acquired from Istanbul Chamber of Industry and Commerce
Real Property Market		Immovable types	Can be acquired from real estate agents and real estate companies in the area.
		Rent and sale values of immovable types (m^2)	
		Vacant lot values	
		The ratios of vacant lots equivalent to floors	
		Offices and standards	The standards of the office units in the area and their future trends can be acquired from real estate agents and real estate companies in the area.

Table 4.13 Database of Social Structure

Data Layers	Attributes	Evaluations
Population	Age and sex distribution	Can be acquired from SIS data.
	Young and elderly population	
	Number of disabled people	Can be acquired from Department of Handicapped and Ministry of Health.
	Day and night population	Can be acquired through Household Survey.
	Week and weekend population	
	Increase rate of population	Available in JICA database.
	No of employed and unemployed people	Can be acquired through Household Survey.
	Place of birth	

Table 4.13 (continued)

	Profession	
	Migration	
	Rate of prolificacy	Can be acquired from SIS data.
	Rate of death	
Household	No of Household	SIS Data
	Marital status	Can be acquired through Household Survey.
	Education	
	Household income	
	Real property ownership	
	Car ownership	
	Real Property right	
	Heating system	
	Evde ve ilçede oturma süresi, nedeni	
	Housing - working place relations	
	Social relations	
	Perception about risks	
	Measurements after 99'earthquakes	
	Knowledge about earthquake insurance	
	Point of views of transformation action plans	

4.4.2.2.10 Database of Real Property and Ownership

The ownership information of the site is quite necessary as to the possibility of the realization of regeneration and strengthening projects.

Table 4.14 Database of Ownership

Data Layers	Attributes	Evaluations
Public	Treasury Lands	Can be acquired from deed registrations and cadastral maps.
	Lands of public institutions	
Private	Indivudual	
	Company	
	Other	

4.4.2.2.11 Databases of Stakeholders

Databases should include information about all part of regeneration plan. These are the stakeholders of the plan. The stakeholders of Zeytinburnu regeneration plan are;

- Local Administration
- Public Institutions
- Research Institutions
- Non-Governmental Organizations

Tablo 4.15 Database of Stakeholders

Data Layers	Attributes	Evaluations
Local Administration	Administrative structure	The ability of interrogation will be ensured in this group in which all laws, governmental decrees equivalent to law, governmental decrees, and bylaws (that are determined by the law group) within the scope of disaster management take place.
	Resources	
	Investments	
	Supervision mechanism	
Public Institutions	Leal responsibility in reducing disaster losses, intervention and rehabilitation studies	
	Studies that are done and that have been being done	
	Relations with Local administration	
	Power of supervision	
	Investments they have done, been doing or they plan to do	
Research Institutions	Studies they have done or are doing about preparation for disasters	
	Studies they have done or are doing for the urban transformation plan	
Non-Governmental Organizations	Location and Goals	
	Communication with local administration, other NGOs and local community	

Table 4.15 (continued)

	Approach to disaster, level of information, and level of preparedness	
	Risk perception (risk algılamaları)	
	Approach to the urban regeneration	

4.4.2.2.12 Database of Laws and Instructions

The laws and instructions related to regeneration implementations are kept into these databases.

Tablo 4.16 Database of Laws and Instructions

Data Layers	Attributes	Evaluations
Laws and Bylaws regarding to disasters		The ability of interrogation will be ensured in this group in which all laws, governmental decrees equivalent to law, governmental decrees, and bylaws (that are determined by the law group) within the scope of disaster management take place.
Construction Laws and Bylaws		
Building Control Laws		
Law of Municipalities		
Floor ownership/Mass Housing/Cooperatives/Squatter Housing Laws		
All body of current law within the scope of Nazım Plan		

4.4.2.3. Data Collection and Database Update Principles

4.4.2.3.1. Data Collection

The first stage in data collection is to make the definition of the data and to determine its format. This subject is taken in the last part/chapter. The procedures of data collection and update are related to the administrative structure.

Zeytinburnu Urban Regeneration Information System Data Catalogue implies various many definitions that need to be transferred to the database system at levels of object and characteristics. It is possible that various characteristic data of an object are especially collected and updated by different units of the municipality or civil administration. The rights of the organisations that will use the system, such as access to some definite data, its delete, update etc, can also show differences. .

At this point, the question of which unit will be responsible for data collection should be asked. Data collection can be under the responsibility of various units in one organisation. In such a situation, a commission between units should make common decisions at issues such as the determination of the responsibilities, rights regarding to data share, usage and access (Earthquake Master Plan of İstanbul, 2003, 1014). In zeytinburnu case, this commission meets under the execution of a unit that is established within the municipality and produce data for the local action plan studies.

In keeping the data ready, which are proposed in the data catalogue belonging to the building objects of vital importance in an earthquake, the functioning of the mukhtar should be thought about. Muhtars, whose authorities, responsibilities, and duties are determined and given, can play a very important role in providing accurate data, especially about demographical features of the buildings, to the system. (IDMP, 2003, 1040).

4.4.2.3.2 Database Update

This is the expanded version of the data collection to a longer term. Data, here, consist of dynamic information that is updated in periods, rather then information that is collected at once and stay in the computer without ever being changed. For this reason, it is necessary to determine how frequently the data update will be made at design stage, and to design the information system capable of making update that frequently. The data can be enumerated according to their update frequencies as such:

4.4.2.3.2.1 Database not to be Updated

These are data that are collected for once and that do not change except for exceptional cases. For example, physical maps, country borders, etc. are static data. These data can also change in case of an exceptional situation. Thus, the updatability of this data should also be kept in mind. However, in doing this, rather then determining definite data update periods, updates according to demand should be made possible.

4.4.2.3.2.2 Database to be Updated in Long Periods

There are many data types in this category. Population data is an example. This data can be updated once in 5 years, for they are acquired by census. Like static data, these data may not require distinct software to be updated. They can rather be updated from the database in an aggregate way.

4.4.2.3.2.3 Database to be Updated in Short Periods

The data whose update period is under 1 year are in this group. For example, inventory data such as number of personnel working in organisations should be updated once in a year. This is the most important group in update operation, for it includes most of the data and update intervals are short. In order for these data to be updated in a reliable and efficient way, update automation studies should be devised.

4.4.2.3.2.4 Database to be updated in very short Intervals

Data, whose update period is one day or below resides in this group. A part of these data can be summary data brought out of a system that works in real times, or they can be the measurement results of a measurement instrument. For example, it can be asked to save all the earthquakes stronger then a definite and their strengths. In order to enter such data that needes to be updated very frequently, there is a need for automatical systems, whichmakes data transfer and summary from measurement instruments and in which there is no need for human intervention.

4.4.2.4 Principles of Database Use

The public participation in urban regeneration planning is essential for the need of collaborative planning approach.

The purpose of public involvement is both to inform the public and to solicit public response regarding the public's needs, values, evaluation of proposed solutions (Burdi, 2001). In order to provide informed comment, the public must receive information from the agency. So, public information is always a central element in any public involvement program. (Creighton, 1981).

The presentation of the produced urban databases in GIS format to the public will increase the participation rate. Nowadays, the most efficient way of informing the public is internet technologies. Internet is used as an information instrument all over the world, for it gives information regardless of time and space. Urban databases produced within the context of Zeytinburnu Regeneration Local Action Plan, should be shared with the public as an efficient public education instrument, by being integrated by geographical information systems.

With the rapid expansion of internet technologies public services have been announced and performed through internet. These discussions are held in the e-government title. While reasons and requirements of knowledge sharing for Zeytinburnu are discussed, the concept of e-government should be more evolved.

4.4.2.4.1 E-government Concept

Nowadays active, rational, transparent and democratic administration approach is the prevalent one. Now, administrations using the innovations in knowledge and communication technologies have transformed into "e-governments", improved and inactivated their service qualities. In other words, public institutions using the tools of 'information age' by themselves have developed inner regeneration and talents to get dynamism. On the other hand, having optimal public services by high technology has affected deeply relations between the state and the citizen. E-government that provides widespread and easy use of public services has given an opportunity to have a participatory and democratic relation between state and citizen.

The concept of E-government can be defined as operating the responsibilities of government to citizens and vice versa in electronic communication and processing environments safely and continuously. (www.izto.org.tr).

Following are the essential purposes of the E-government in general:

- To make public services widespread and accessible
- To validate the requests and tendencies of citizens in service production and administration processes effectively and to facilitate participatory citizenship
- To facilitate more rational and productive execution of public institutions
- To facilitate transparent public administration
- To avoid repetition of work and data by facilitating the information transfer among public institutions
- To increase in the number of citizens that has got much more easy life due to the accessibility of public services
- To develop and accelerate the decision processes of decision-makers based on knowledge

E-government approach cannot be considered just as transformation into the computer and network based infrastructures in public institutions. E-government, at the same time, means radical change in apprehension and management in public administration.

With the E-government following benefits can be provided;

- Public institutions will become transparent
- Public services will be conducted in an effective, productive and rapid way
- Citizen participation to administration will increase, democracy will spread into bottom
- Information transfer among institutions will accelerate, by avoiding work and data repetition time and cost saving will be provided

- The data that is required for decision processes of public decision-makers will be collected in a safe and rapid way
- Citizen satisfaction (pleasure) will increase and life quality will rise
- Economic development will accelerate
- Being in a paperless environment savings and sequrity will be provided
- In decision-making for state and citizen easiness and speed will be provided
- Requests of citizens will be appeared
- Relations between state and the citizens will be developed and environment of confidence will be created
- Human faults will be decreased into the least levels. (www.izto.org.tr).

Today the expansion of E-government concept can be used in accordance with the goals of collaborative planning approach. In urban regeneration areas; an E-government structure that can be established in order to create participatory environment for planning processes and to convey effective, fast, reliable and standard information to local citizens and actors will increase in interest, support and participation to plans. In order to strengthen the structure of the E-government there should be efficient places and training services for the use of information facilities by citizen.

In the following, the contribution of internet into participation processes and the principles of web-based collaborative approach that can be designed for project area will be discussed.

Table 4.17 E-government activity fields
(Source: Public Sector Information: A Key Resource for Europe, Green Paper on Public Sector Information in the Information Society, European Comission)

	Information Services	Communication Services	Online Services
Daily Life	○ Working life ○ Housing ○ Education ○ Health ○ Culture ○ Transportation ○ Environment etc.	○ Consultancy about daily life ○ Advertisements on housing or occupation ○ Communication by E-mail	○ Bilet rezarvasyonu ○ Registration on various programs
Remote Administration	• Public service guide • Administrative procedure guide • Public registrations and databases	• Communication with public officals by E-mail	• To fill up forms in internet
Political Participation	• Legal arrangements • Political programs	• Discussions on political issues • Communication with politicians by E-mail	• Referendum • Elections • Surveys

4.4.2.4.2. The Use of Internet to Improve Participation

New informative technologies can support public participation. Networked information technology and specifically the Internet, provides an extraordinarily flexible complement to all of the existing media. Access to the Web can empower the local organizations by giving more information to use in their own debates.

Cohen states that, the way in which planning decision are made, and the way in which the public can interact with these planning processes, are in the change because of Internet. (Cohen, 2001). The public participation will be supported by access to high-quality, media-rich information about the development proposals and the issues surrounding the decisions. The Internet promises to be a participatory medium as well an informational one.

On the other hand, Internet is not widespread enough to offer a truly democratic means of participation, that the Internet has in fact created a wider gap between information haves and have-nots. Many people are effectively excluded from planning debates already, not because they do not have computer, but because they do not have time, inclination or education to participate. Public access to the Internet is still relatively low at the moment. To avoid other sectors of society from being excluded, innovative means of engaging these people, such as the unemployed, are required. Public access points in libraries, community centers and other public buildings should be encouraged. Where public involvement in particular public participation initiatives is required systems can be set up which allow access only to information on the specific issue. This resolves the problem of providing unlimited www access, which encourages people to get distracted by other web sites. (Burdi, 2001).

4.4.2.4.3. Web-based Collaborative Data Sharing Model for Zeytinburnu

Web based public information systems will improve citizen collaboration and cooperation in any planning development. Such systems can be seen in several contexts in the world.

Broadening public involvement in the Planning Process, a new Web-based Collaborative system could be developed for Zeytinburnu regeneration action plan. This model can be possible by transferring the urban and social databases that will be produced within the scope of preliminary preparation studies into web with the help of GIS. This system is expected to be realized by the Zeytinburnu Municipality which is the executer of the plan.

In such a system, 5 stages can be similarly defined as;

- Analytical Studies Overview,
- Planning Studies Overview,
- Current Studies,
- Planning Studies Archive,
- Planning Participants.

These stages are informing, determination of the present situation, plan studies and related sides.

At the fist and second stage, analytical and planning studies overview, is probably the more informative section. It gives option to see the timeline for any each development process will give a clear image depiction of the stage of the approval process. It is informing stage, the rationales, targets and strategies of the regeneration action plan can be integrated into the system in such a way that it is accessible to all users. The reason behind the presence of this part is to ensure that the public gets information about the plan.

The second part, current studies, on the other hand, is the one, in which present databases of the area are accessible, physical and social information regarding to the area can be seen, some spatial inquiries are made through web, some information can be downloaded, and some updates can be made. Different user groups should be able to have an access to this part by a login system according to their purpose of use and necessities. To access this page is necessary to login for different entries with different sets of permissions to view, download, upload, save and so on. It is possible to see a text description of the plan, submitted material, plans, sections, elevations and anything else relevant in the process.

The third stage, planning studies archive, can be designed as one in which the studies to be done are described. All studies that are done within the scope of action plan starting with the plans done by the metropolitan municipality at metropolitan scale, can take place in this part. It will have a clear graphical representation of the timeline

and the documents by topic. Diverse databases searches on document, keywords, dates, applicant's name, communities' notes and so on, could be added and could be used as integral engine to reach quickly the concerned document. This part is accessible by all users. In this way, the public is informed about the planning studies in a detailed way, and the possibility of getting the comments of the public and making use of them can be greater.

The last part, planning participants, is the one in which information about project participants is found. The names, access information, responsibilities in the project and their studies can take place in this part. Also, detailed contact information about the technical personnel responsible for the production of the plan, administrators obliged for the implementation of the plan, representators of local people, representators of NGOs, and representatos of chamber, and their opinions about the plan unions can take place.

The development of such a public informing system will increase the participation possibilities to the project. This system should be established and made widespread in order to create an environment in which information exchange among the actors of the planning area is maintained, which constitutes actually the prerequisite of participative planning, and a consensus isensured.

4.4.2 Urban Database Management System for Municipal Administration

Data collection, updating, and share requirements of database management necessary for urban regeneration planning is taken up above in detail in the case of Zeytinburnu. Following this stage, the issue of how an urban database system can be designed legally and organisationally in a municipalitiy should be taken up, and a model should be designed.

There is need for some kind of legal regulations in order for an Urban database Management Model be structured within the structure of the municipality. It can be thought of a unit of the municipality that is responsible for urban database management by making regulations in the municipal law. This unit can be named as 'Data Management Unit'. The main duties and responsibilities of this unit can be defined as below::

- To produce the urban database,
- To determine the principles of use of urban database for planning studies,
- To share the urban database, as a part of the duties and responsibilities of the municipality, among the units of the municipality according to their needs,
- To update the data for certain periods,
- To ensure that other city administrations and public institutions that need database are able to use this database according to their needs,
- To make studies of urban data archives,
- To ensure that urban database is introduced to public use, paying regard to the rights and responsibilities of the users in the regeneration area and regulating the rights of access as to different user types,

The requirements of personel that will work in this unit of the municiality and those of technical equipment should be defined in the regulation to be made in the law. It must not be thought that only city planners take place within the 'Data Managenent Unit'. Experts who are competent in data processing technologies coming from different disciplines should take place in this unit.

The first duty of the 'Data Managenent Unit' is to make the 'main database' ready for spatial analysis to be made in GIS environment. ve GIS ortamında mekansal analizler için hazır hale getirmektir. Urban data that are collected in the plan area will constitute the pieces of this main database. Next, database that is prepared by this unit will be designed according to the purposes of the other units of the municipality and made ready for their use. For example, the information required by the transportation unit of the municipality will be prepared as 'databases of transportation' data group so that this unit can carryout the activities that it is responsible for. This operation will be valid not only for the units of the municipallity, but also for other city administrations and public institutions which may need them.

Another important duty of the 'Data Management Unit' is to instroduce the urban databases to public use. As mentioned before, the approach of participative planning began to have new instruments by the ever advancing technology.the most important of those is seen to be the internet technologies. Internet is the new and most effective instrument of participative planning, since everybody has the equal rights of access to internet, ideas and views of large crowds of people can be acquired by creating imaginary participative environments, and it gives the chance to the members of the local society and responsibles for the plan to get informed about the regeneration area. The awareness of the local society of the databases produced by the Data management unit and other studies, their understanding and assimilation by the local society will increase the participation to the plan and create an interactive environment. For all these reasons, 'Data Management Unit' should use the instruments which will introduce the urban databases to public use.

First of all the user types in the area should be determined. After the determination of the user types as to the purposes of the regeneration plans, different interfaces for the access to urban databases for each type of user, according to the needs of these users. For example, the types and details of information demanded by a the local mukhtar of a quarter and people living in this quarter will differentiate. The users will be supposed to enter into the system with their own user names determined according to their demands. These user types and accesses should also be differentiated by 'Data Management Unit'.

At the same time, some main titles such as information about the planning study, technical experts taking part in the plan, information on communication, studies made in previous periods, views about the plan should be presented to the user in this system. All of this information has the feature of forming a project archive. Together with this, it will show the current stage of the project and the stages it has passed through so far. Also, it will constitute an important part of a transparent administrative conception which encourages sharing by giving continious information to users. An Urban Database Management Model Proposal for Regeneration Plans is tried to be schematized in Table 4.24.

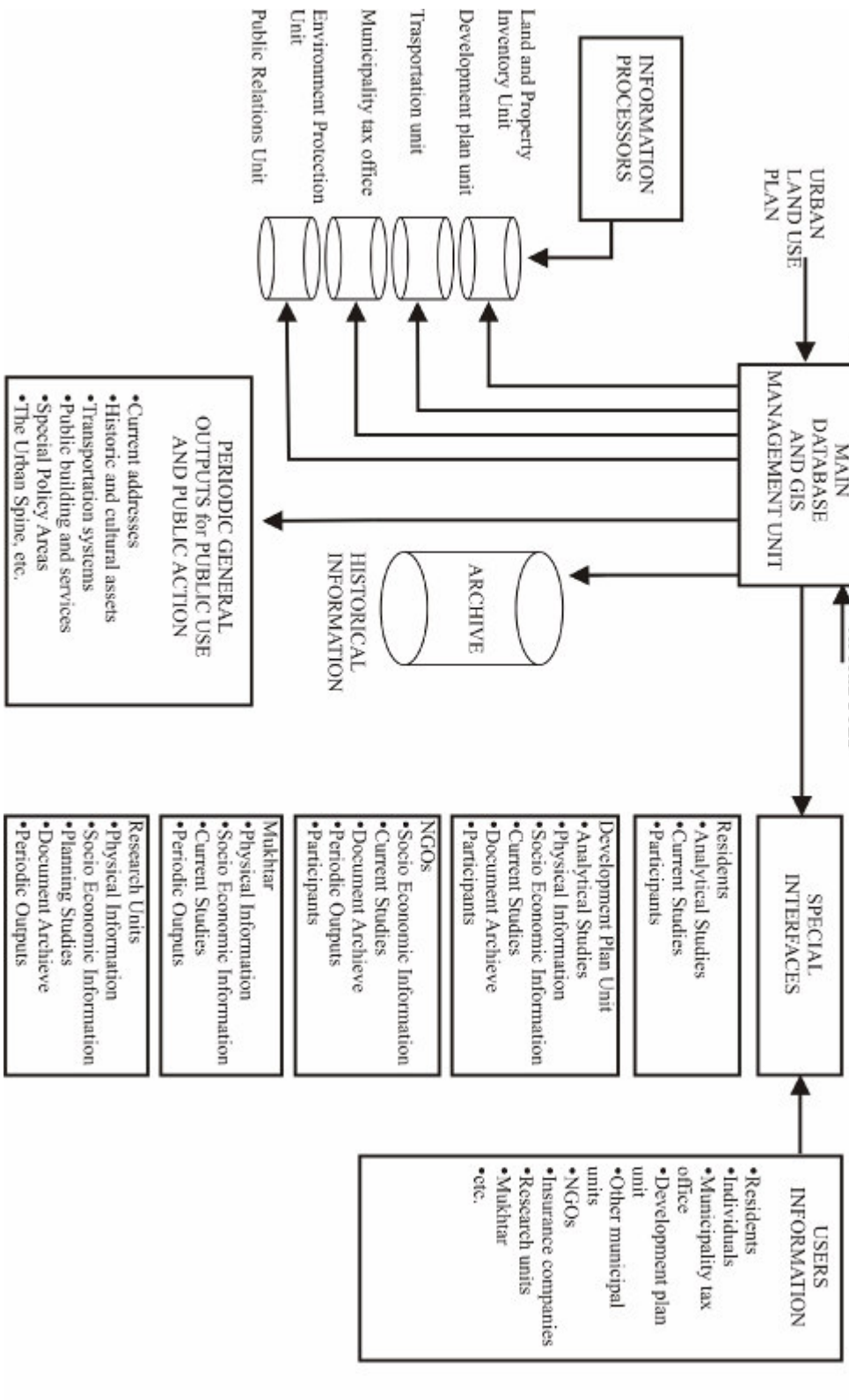


Figure 4.10 Regeneration Plan Area Database Management System for Municipal Administration

CHAPTER 5

CONCLUSION

The foregoing chapters explained the reasons why urban regeneration planning, as a new form of planning is a requirement in the settlements of Turkey. This form of planning deals not only with the rearrangement of vacant property and land, but largely with residents and their interests and rights. The context and method of planning is therefore very different from conventional forms of planning. The 'analytical studies' identified for the conventional development plans as a technical agreement of the Bank of Provinces could not meet the database requirements of urban regeneration planning. A new content for the analytical studies of regeneration planning is therefore necessary. A system model for the database management requirements for Zeytinburnu urban regeneration area is developed in this study to explore this new area of planning implementation.

The regeneration of the cities into safe living spaces seems to be the primary problem of the planning discipline. The excess of housing provision in cities, the objectives of maintaining safety, upgrading environmental standarts and quality of life, the objectives of entry to the EU, all target at the urban regeneration option. Such policy has the top priority today therefore in urban agenda of Turkey.

This determines how the economic resources and powers, organisation forms and roles, and legal implementations should be manipulated in the near future in Turkey. These conditions also point to the need to emphasize loss reduction and risk management against earthquake hazards, promises multiple yields for the improvement of the urban living standards.

As the grandness of the risks caused by natural disasters and especially earthquakes are understood, the importance of a collective urban regeneration is clearly observed. Here is a tacit range of hidden opportunities. One important feature of collective urban regeneration studies, in addition to the main purpose of the reduction of earthquake losses, is to improve the conditions in urban physical environment that lacks quality and aesthetic values, to improve the standards of built improvement by urban design, and to capitalize on cultural values.

The scope, methods of production, principles of production and use that are necessary for planning studies to be carried out in such high risk areas should be defined in the current body of law on development by a bylaw to be appointed regarding to the production of the urban regeneration plans. The production of these data resources should not only be considered as the work of the local government responsible for making the plans, but as a part of the country's data production policy. Many central and local institutions and organizations in Turkey produce and use databases within the scope of their responsibilities. It is a basic necessity to know which organization, when, in which phase, where and with which responsibility and authority will take place in the process of database production in order to form the information infrastructure belonging to the organizations that produce plans. The responsibilities of a National Data Center organised as a central research institution can be as follows:

- To regulate the responsibilities, rights and implementations among institutions and organisations that have actual responsibilities regarding to urban database production and those that are indirectly related,
- To determine with which responsibilities and rights the institutions are supposed to take place in the database production process,
- To determine the data production standards for the institutions,
- To prevent the duplications that create complexities in data combination and usage stages, by organising the data used by organizations that constitute the infrastructure of the information system,

- To provide resources in order to ensure the continuity of information production process (to educate qualified personnel through long-term programmes and to provide sufficient financial resources),
- To determine the databases that have to be produced for related plan types by analysing the current body of law on urban planning.

The urban regeneration plans aim to define the natural and urban risks in the built environment for the safety of these areas in case of earthquakes, as well as social and economic development where the plans are produced. For this reason the database of the urban regeneration systems should be composed not only of data on the physical structure, but also on natural and urban risk factors and socio-economic structure. Also, to inform local community is essential for regeneration plans. There is a need for legal arrangements and analytical studies and a model for the formation of urban databases. This legal document could be called "Technical Specifications on the Preparation of the Urban Regeneration Plans". This technical specification should be defined in the Development Law and arranged due to the 7th article of the "Regulation for the Production and Revision of the Development Plan". The regulation should be also developed according to scope of urban regeneration planning and regulation is recalled "Regulation for the Production and Revision of the Development and Urban Regeneration Plan".

The scope of "Technical Specifications on the Preparation of the Urban Regeneration Plans" could be arranged like the following headings:

1. Part: Definitions and Concepts on Urban Regeneration Planning

A. Legal basis of technical specification

B. Definitions related to urban regeneration plans

C. The types of urban regeneration plans

2. Part: The Preperation and Stages of the Urban Regeneration Plans

A. The goals of urban regeneration planning

B. The stages of the urban regeneration planning

C. The goal of urban database formation for urban regeration plans

D. The quality, scope and standarts of urban databases

E. The goals of spatial analyses using urban databases for urban regeration purposes

3. Part: Principles and Decisions Concerning the Urban Database Formation

A. Architecture of the database system

B. Organisational sturucture of the database system

C. Data management units and data managers

D. Access to database

E. Technical standarts of urban database formation

F. Features of data units and layers

G. Determination of data collection methods

H. The use of urban databases in the GIS system

J. Principles of Database use

L. Principles of database updating

4. Part: The Design of database sharing protocols

A. Identification of users in the planning area for the purposes of regeneration

B. Determimation of users' needs for database use

C. Design of user interfaces due to users'needs

5. Part: The Analyses based on urban database system

A. The types of analyses

B. The use of Geographical Information Systems (GIS) in the preperation of analysis

Database management requirements are mentioned in the 4th chapter detailed. On the other hand, database management to be developed for urban regeneration planning might have other implications. These implications can be classified as such:

- Improvement of necessary expertise on database management is essential. The database management to be designed for urban regeneration planning requires expertise in many fields. Such a system should not be thought as a structure that will be designed only by planners. This system should be seen as a dynamic and participative structure which gives way to working together of experts coming from different disciplines, and their production, use and share of urban data resources. In order to eliminate the lack of educated personell on this issue, undergraduate and graduate programs, and continued education seminars organisations within public institutions could be necessary.
- Planning schools are supposed to develop education systems that will enable the improvement of the competences of production and use of this database in their eduction systems. Today, planning schools that give planning education, in data production and preliminary studies about the planning problematics they are engaged in, use the conventional data production forms directed to development plans. Consequently, the customs of planning students in data production process have been developing in this direction. At the same time, the produced analytical studies cannot be used for planning purposes in a fruitful way. Yet, planning schools are supposed to develop methods which will improve the customs of producing databases devoted to the planning problematics that are taken up in the planning studios, and of using these database in their planning studies in an effective way. In addition to that, the lack of planners that are competent in data processing technologies necessary for urban database management can be eliminated at the first stage by education programs to be developed for this purpose in planning schools. There are several graduate programs in some planning schools, which are opened up for this purpose. However, undergradutate programs on this branch

is an obligation in terms of eduating experts who are reconciled with data processing technologies.

- Changes in the current body of law are needed in order to use the urban database management for urban regeneration planning in an effective way. First of all, regulations concerning urban database managemnt should take plave in development plan. A degree concerning the obligations of plan producing institutions about producing, using, updating and sharing with local groups should take place in the development law. Next, a regulation concerning the formation of a unit which responsible for producing and using the urban databases within the structures of municipalities, sharing these information resources with the units of the municipality which may be in need of, updating them for certain periods, and opening up the plan data to the public should be made within the Municipal Law, which regulates the inner structures of the municipalities. In addition to that, the technical personnel, minimum requirements of technical equipment, features and functioning of this administrative unit should be defined in bylaws that are made concerning this law. Third, new technical regulations concerning urban database requirements in technical means should be introduced, by using the "Technical Specifications on the Preparation of the Urban Plans" that will be prepared again based on the 7th article of the development law; "Regulation for the Production and Revision of the Development Plan". These regulations are diccussed in detail in 4th chapter.
- Urban database management should be seen not only as a preliminary study of local plans, but as an extension of a countrywide policy as well. There is a need for a national data center, which can meet the requirements of data types, regulate the data exchange among public institutions and database production standards, control the prepared databases, and which introduce regulations on basics of data share. The presence of such a national information centre which will be capable of adapting the e-state applications to public administration and which will accommodate the data produced by public institutions in its structure and provide them to the institutions that are

in need of, is important in terms of becoming widespread of urban database management.

- Dispelling the shortages of technical personel and technical equipment in the administrative units of municipality and the establishement of a technical unit specialized in database management is a basic requirement for urban database management. As mentioned above, this unit to be established by a regulation in the municipal law, should accommodate experts from different disciplines specialized in database management. The primary functions of this structure are producing urban database, preparation of this database in appropirate formats in case other units of the municipality need them, determination of the principles of datanase updating and their updating, introducing these database and plans to share and common usage by creating different usage environment for different users by using internet technologies. Such units to be established within the structure of the municipality are valuable also in terms of increasing the coordibation within the municipality and creating imaginary environments in which relations with local groups will be built.
- Urban database management is an essential instrument of the participation of the local groups into planning processes in urban regeneration areas. One of the most important instruments of the purpose of creating new forms of life in local areas, which is actually the target of urban regeneration plans, is to develop the methods which will maintain the participation of local groups. For this purpose, municipalities should introduce more participative and transparent administration forms. The question to be asked here is which legal framework the share of urban information systems, which is an instrument of the application of such an administration form, will be ensured in. These legal regulations can be defined within the development law. A regulation concerning 'broadcasting of the municipalities of urban databases and planning studies via internet and taking the opinions of the public' should be introduced. This regulation can constitute an instrument of instroducing the municipalities with a more transparent conception of administration.

- Not only urban planning but an urban management system is possible with the maintenance of a local database. Today, the urban planning studies should be seen as the regulative of an urban management system rather then mere documents that stay as paper. Urban database management on the other hand, is one of the most important pieces of this system.

There is a need for producing a comprehensive database model of regeneration planning which is done considering the available databases for Zeytinburnu. In this model, urban database management should be defined. In the 4th chapter, after determining the present situation of Zeytinburnu, a model is described. In this model, formation of database studies is examined in two stages, as preparation and implementation stages. In the preparation stage, existing databases should be investigated, the deficiencies determined, the necessary information systems, and the standards and principles of the formation of a database system should be identified. In the implementation stage, data layers should be specified, methods of data acquisition determined, data updating should be designed, and methods of access of the different actors in the planning area to the databases and of share of urban data resources should be determined.

The urban databases should be considered as instruments of participation in the regeneration planning process. It can provide important interfaces to ensure participation, to make the databases produced in the Zeytinburnu case accessible according to the different groups of the society and serve their different needs. Public participation in urban regeneration is an essential aspect of planning to enable forms of collaborative planning. The successful presentation of the urban databases in GIS format to the public will increase the participation rate in planning.

It is logical to produce the databases for regeneration areas within the structure of a comprehensive urban information system established under the supervision of local governments. The definition of urban regeneration plans should be made in the Development Law, and a 'Regulation on the preparation of regeneration plan' should be introduced. A part similar to the urban database formation model that is prepared for Zeytinburnu Regeneration Plan should take place in this Regulation. With a new

regulation in the law, the administrations responsible for regeneration planning should become obliged to act according to this in the preparation of regeneration plan.

Regeneration planning concerns will more strongly be in the agenda due to many reasons besides natural hazards in the country. Introduction of a new approach for urban planning. This study aimed to develop a model of the urban database requirement for urban regeneration planning. Further studies are neccessary for the analyses of using urban databases, the design stage of regeneration planning studies and methods of use of this database in the planning decisions.

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APPENDIX A:

LAWS AND REGULATIONS USED IN THE THESIS

Law No.	Name in English	Name in Turkish	Publication Year
1580	Law of Municipalities	Belediyeler Kanunu	1930
1593	Law of General Hygine	Umumi Hıfzısıhha Kanunu	1930
2290	Law of Buildings and Roads of Municipality	Belediye Yapı ve Yollar Kanunu	1933
2301	Law of Foundation of Municipality Bank	Belediyeler Bankası Kurulması Kanunu	1933
2497	Law for Expropriations of Municipalities	Belediyelerin Kamulaştırma İşlemleri Hakkında Kanun	1934
5431		Ruhsatsız Yapıların Yıktırılması ve 2290 Sayılı Belediye Yapı ve Yollar Kanunu'nun Değiştirilmesine ait Kanun	1949

6785	Development Law	İmar Kanunu	1956
634	Flat Ownerhip Law	Kat Mülkiyeti Kanunu	1965
775	Gecekondu Law	Gecekondu Kanunu	1965
1605	Amendment of Some Articles of Development Law	İmar Kanunu'nun Bazı Maddelerinde Değişiklik Yapılması Hakkında Kanun	1972
3194	Development Law	İmar Kanunu	1985
	Regulation for the Production and Revision of the Development Plan	"İmar Planı Yapılması ve Değişikliklerine ait Esaslara Dair Yönetmelik	1985
	Technical Specifications on the Preparation of the Development Plans	İmar Planlarının Düzenlenmesi ile Teknik Şartname	1986

APPENDIX B:

ENGLISH-TURKISH GLOSSARY

A

accessibility: erişilebilirlik

additional development plan: ilave imar planı

article: madde

attribute: öznitelik

B

Bank of Provinces: İller Bankası

building block: imar adası

building order: blok dozen

building stock: yapı stoku

C

climate: iklim

conservation plan: koruma amaçlı imar planı

construction ratio: KAKS

D

database: veritabanı

data layers: veri katmanları

density: yoğunluk

development area: gelişme alanı

development law: imar kanunu

development plan: imar planı

development regulation: imar yönetmeliği

development plan revision: imar planı revizyonu

disaster law: afet kanunu

district: ilçe

district municipality: ilçe belediyesi

E

earthquake: deprem

emergency facility: acil durum görevlisi

F

fault line: fay hattı

Five Years Development Plan: Beş Yıllık Kalkınma Planı

G

Geographic Information Systems: Coğrafi Bilgi Sistemleri

General directorate of emergency management: T.C Başbakanlık Acil Durum Yönetimi Genel Müdürlüğü

General Directorate of Disaster Affairs: Afet işleri genel müdürlüğü

General Directorate of Technical Research and Implementation: Teknik Araştırma ve Uygulama Genel Müdürlüğü

General Directorate of Mineral Research and Exploration: Maden Tetkik Arama Kurumu Genel Müdürlüğü

General Directorate of Highways: Karayolları Genel Müdürlüğü

General Directorate of State Hydraulic Works: Devlet Su İşleri Genel Müdürlüğü

I

improvement plan: ıslah imar planı

information technologies: bilgi teknolojileri

Istanbul Metropolitan Municipality: İstanbul Büyükşehir belediyesi

L

liquefaction: sıvılaşma

land slide: heyelan

M

Ministry of Development and Settlement: İmar ve İskan Bakanlığı

Ministry of Public Works and Resettlement: Bayındırlık ve İskan Bakanlığı

Mitigation planning: sakınım planlaması

O

ownership: mülkiyet

P

parcel size: parsel büyüklüğü

parking lot: otopark

participation: katılım

R

regulation: yönetmelik

remote sensing: uzaktan algılama

S

settlement area: yerleşme alanı

slope: eğim

solid waste system: katı atık sistemi

storey: kat

State institute of statistics: devlet istatistik enstitüsü

supervision: denetim

supplementary article: ek madde

T

Turkish Armed Forces: Türk Silahlı Kuvvetleri

transportation plan: ulaşım planı

U

urban project: kentsel proje

urban site: kentsel sit

W

warehouse: antrepo

waste water system: kanalizasyon sistemi

working areas: çalışma alanları

APPENDIX C:

İMAR PLANI YAPILMASI VE DEĞİŞİKLİKLERİNE AİT ESASLARA DAİR YÖNETMELİK

Birinci Bölüm: Amaç, Kapsam, Tanımlar

Amaç

Madde 1- Bu Yönetmeliğin amacı: İnsan, toplum, çevre münasebetlerinde kişi ve aile mutluluğu ile toplum hayatını yatından etkileyen fiziksel çevreyi sağlıklı bir yapıya kavuşturmak, yatırımlarının yer seçimlerini ve gelişme eğilimlerini yönlendirmek ve toprağın korunma, kullanma dengesini en rasyonel biçimde belirlemek üzere hazırlanacak imar planlarının ve bu planlar üzerinde yapılacak değişikliklerin hangi esaslar dahilinde yapılacağını belirtmektedir.

Kapsam

Madde 2- Bu yönetmelik hükümleri belediye ve mücavir alan sınırları içinde ve/veya dışında yapılacak her ölçekteki imar planı değişikliklerini kapsar

Tanımlar

Madde 3- Bu yönetmelikte adı geçen terimler aşağıda tanımlanmıştır.

1) Nazım İmar Planı: Varsa bölge ve çevre düzeni planlarına uygun olarak halihazır haritalar üzerine yine varsa kadastral durumu işlenmiş olarak çizilen ve arazi parçalarının genel kullanış biçimlerin, başlıca bölgelerin gelecekteki nüfus yoğunluklarının, gerektiğinde yapı yoğunluğunu, çeşitli yerleşme alanlarının gelişme yön ve büyüklükleri ile ilkelerini, ulaşım sistemlerini ve problemlerinin çözümü gibi hususları göstermek ve uygulama imar planlarının hazırlanmasına esas olmak üzere düzenlenen, detaylı bir raporla açıklanan ve raporu ile beraber bir bütün olan plandır.

2)Uygulama İmar Planı: Tasdikli halihazır haritalar üzerine varsa kadastro durumu işlenmiş olarak nazım imar planı esaslarına göre çizile ve çeşitli bölgelerin yapı adalarını bunların yoğunluk ve düzenlenen yolları ve uygulama için gerekli imar uygulama programlarına esas olacak uygulama etaplarını ve diğer bilgileri ayrıntıları ile gösteren plandır.

3) Revizyon İmar Planı: Gerek nazım ve gerekse uygulama imar planlarının ihtiyaca cevap vermediği ve uygulamasının problem olduğu durumlarda: planın tümünün veya büyük bir kısmının plan yapım tekniklerine uyularak yenilenmesi sonucu elde edilen plandır.

4) İlave İmar Planı: Mevcut imar planının gelişme alanları açısından ihtiyaca cevap vermediği hallerde mevcut imar planına bitişik ve mevcut imar planının genel arazi kullanış kararları ile tutarlı ve yine mevcut imar planı ile ulaşım açısından bütünlük ve uyum sağlayacak biçimde hazırlanmış bulanan plandır.

5) Mevzii İmar Planı: Mevcut imar planı sınırları dışında olup bu planla bütünleşmeyen bir konumda bulunan alanlar üzerinde hazırlanan ve sosyal ve teknik alt yapı ihtiyaçlarını kendi bünyesinde sağlamış olan plandır.

6) İmar Planı değişikliği: Onaylı imar planı sınırları içinde arazi kullanışlarının büyüklüğünde, konumunda, yoğunluğunda veya ulaşım sisteminde, imar planı ana kararlarını bozmayacak biçimde mevzii olarak farklılık getiren değişikliklerdir.

7) Sosyal Alt Yapı: Sağlıklı bir çevre meydana getirmek amacı ile yapılması gereken eğitim, sağlık, dini, kültürel ve idari yapılar ile park çocuk bahçeleri gibi yeşil alanlara verilen genel isimdir.

8) Aktif Yeşil Alan: Park, çocuk bahçesi ve oyun alanları olarak ayrılan sahalardır.

9) Teknik Alt Yapı: Elektrik, havagazı, içme ve kullanma suyu, kanalizasyon ve her türlü ulaştırma, haberleşme ve arıtım gibi servislerin temini için yapılan tesisler ile açık veya kapalı otopark kullanışlarına verilen genel isimdir.

İkinci Bölüm: İmar Plan Yapımına Dair Esaslar

Madde 4- İmar Kanununun 9 uncu maddesindeki esaslara göre Bayındırlık ve İskan Bakanlığı'na verilen plan yapma, yaptırma, değiştirme ve re'sen onaylama yetkileri saklı kalmak kaydı ile, imar planları ile ilgili idarece doğrudan veya ihale suretiyle yaptırabileceği gibi İller Bankası Genel Müdürlüğü'ne yetki verilmesi suretiyle de yaptırılabilir.

Madde 5- İmar planının ilgili idarece doğrudan yapılması durumunda ilgili idarenin planlama grubunda veya sözleşmeli olarak istihdam edilenlerin o yarleşmenin imar planlarının hazırlanmasında geçerli olan yeterliliği haiz olması şarttır.

İlgili idare, planlama grubunda görev alacakları Bakanlığa bildirmekle yükümlüdür.

Madde 6- İmar planlarının ihale suretiyle elde edilmesi durumunda;plan müellifinin, imar Planlarının Yapımını Yükümlenecek Müellif ve Müellif Kuruluşlarının Yeterlik Yönetmeliği" nde o yerleşme için belirlenen asgari yeterlilik bölgesine haiz olması şarttır. Planlama yarışmaları sonucunda yapılan ihaleler bu hükmün dışındadır.

Madde 7- İmar planı ihalelerinde iller Bankası Genel Müdürlüğü'nce bu amaçla hazırlanan tip sözleşme ve teknik şartlaşma esaslarına uyulur.

Bu esaslar; sit, sanayi. turizm gibi ağırlıkları nedeni ile özel ve tafsilatlı çalışma gerektiren durumlarda veya bölge şartlarına uymak amacıyla değiştirilmek suretiyle, özel sözleşme ve teknik şartlaşmalar yapılabilir.

Madde 8- İmar planlarının hazırlanmasında, varsa bölge ve çevre düzeni ana kararlarına uyulur.

Madde 9- Uygulama imar planlarının tamamı bir aşamada yapılabileceği gibi etaplar halinde de hazırlanabilir. Ancak bu durumda etap sınırlarının varsa nazım planlar üzerinde gösterilmiş olması gerekir. Uygulama imar planlarından. yapı adaları içinde imar parselleri düzenlenir ve bu planlar imar planlarının ayrılmaz parçasıdır.

Madde 10- Hazırlanacak her ölçekteki imar palanlarında Ek 1 deki tablodan belirtilen standartlara uyulur.

Madde 11- Nazım planları üzeride gösterilen teknik ve sosyal alt yapı alanlarının konum ile büyüklükleri toplam standartların altına düşülmemek şartı ile uygulama planlarında değiştirilebilir.

Madde 12- Her ölçüdeki palanlar EK 2 de verilen lejant ve plan çizim normlarına göre hazırlanır.

Madde 13- Belediye ve mücavir alan sınırları dışında şahıslarca yaptırılan her ölçekteki planlama çalışmalarında planlaması yapılan alanını kendilerine ait olduğunu belgelemek amacı ile; tabı senedi mülkiyete dair kesinleşmiş mahkeme kararı ve bu mahkeme kararına müstenit yetkili diğer makamlar tarafından verilmiş belge veya özel kanunlara göre tahsisi yapılan henüz tabu siciline kaydedilmemiş, ilgili kamu kuruluşlarınca verilmiş tahsis belgesi ibraz edilmesi mecburidir. Plan gereği veya zaruri olarak farklı mülkiyetteki arazilerin plan sınırları içine girmesi durumunda ilgili maliklerin noter tasdikli muvafakatname ile arazilerinin planlamasına izin verdiklerinin belgelenmesi şarttır. Planlanan alan için de mülk sahiplerince muvafakatname verilmeyen veya sahipleri belli olmayan veya bulunmayan yerler bulunması halinde bunların,

Valiliklerce hukuki bir belge ile belirlenmesi ve planlanan alanın %20 'sini aşmaması şartı aranır. Bu tür araziler üzerinde, planda parsel alanının %35 'ini aşan sosyal ve teknik alt yapı kullanım kararları getirilemez.

Madde 14- Belediye ve mücavir alan sınırları içinde; belediye meclislerince aynen veya değiştirilerek onaylanıp yürürlüğe giren imar planları Belediye Başkanınca mühürlenir ve imzalanır. Mühür ve imza süresindeki gecikmeler, imar planının tatbikatını engelleyemez. Belediye Meclislerince uygun görülmeyen imar plan teklifleri gerekçeleri belirtmek suretiyle, Belediye Başkanlığınca 15 gün içinde ilgisine yazı ile bildirilir. Belediye ve Mücavir alan sınırları dışında; il idare kurullarınca karar verilen imar planları Valilikçe uygun görüldüğü takdirde onaylanarak yürürlüğe girer. Valilikçe uygun görülmeyen imar planı teklifleri gerçekleri belirtilmek suretiyle 15 gün içinde ilgisine yazı ile bildirilir.

Onaylanmış planlar; Onay tarihinden itibaren ilgili idarece herkesin görebileceği şekilde ilan yerlerinde asılmak ve nereden nasıl görülebileceği mahalli haberleşme

araçları ile duyurulmak suretiyle 30 gün süre ile ilan edilir. 30 günlük ilan süresi içinde planlara itiraz, ilgili idare nezdinde yapılır. Belediye ve mücavir alan sınırları içinde kalan yerler; Belediye Başkanlığınca Belediye Meclisine gönderilen itirazlar ve planlar, Belediye meclisince 15gün içinde incelenerek gerçekleri de belirtilmek suretiyle kesin karar bağlanır ve karar tarihinden itibaren 15 gün içinde Belediye Başkanlığınca ilgilisine yazı ile bildirilir. Belediye ve mücavir alan sınırları dışında kalan yarlarda; Valiliğe yapılan itirazları, Valilikçe 15 gün içinde incelenerek gerekçeleri de belirtilmek suretiyle kesin karar bağlanır ve bu tarihten itibaren 15 gün içinde Valilikçe ilgilisine yazı ile bildirilir.

Madde 15- Uygulama veya revizyon imar planı yapılan kentlerde, "3030 sayılı Büyük Şehir Belediyelerinin Yönetimi Hakkında Kanun hükmünde Kararnamenin değiştirilerek kabulü hakkında kanun Kapsamın dışında Kalan Belediyeler Tip İmar Yönetmeliği" nin 6 ıncı maddesi uyarınca gerekli görülen ilave yönetmelik maddeleri, imar planı ile birlikte düzenlenerek onaylanır.

Madde 16- Onaylanan imar planı ve eklerinden birer takım onaylamaya esas olan karar ile birlikte Bayındırlık ve İskan Bakanlığı ile İller Bankası Genel Müdürlüğüne muhafaza edilmek üzere gönderilir.

Madde 17- İlgililerce hazırlanacak mevzii imar planlarının yüklenicilerinin "İmar Planlarının Yapımını Yükümlenecek Müellif Kuruluşlarının Yeterlilik Yönetmeliği"nde anılan Yeterlilik Belgesine sahip olması gerekir.

Madde 18- Belediye Meclislerince veya Valiliklerce onaylanan her ölçekteki imar planları; büyüklükleri veya pafta adedi gözönüne alınarak, kitap halinde veya pafta pafta çoğalttırılmak suretiyle talep sahiplerine bedeli mukabilinde verilir. Bedel Belediye Encümenlerince veya Valiliklerce pafta ve sahife bazında tespit edilir.

Madde 19- Nüfusu 10.000'in altında olan belediyelerin imar planları yürürlükte olup, 3194 Sayılı İmar Kanununun 44 üncü maddesi gereği çıkarılan yönetmeliklerin hükümlerine tabidir.

Madde 20- Plan revizyon ve ilaveleri de bu bölümdeki esaslara tabidir.

Üçüncü Bölüm: İmar Planı Değişikliklerinde Uyulması Gereken Esaslar

Madde 21- İmar planlarında bulunan sosyal ve teknik alt yapı alanlarının kaldırılması küçültülmesi veya yerinin değiştirilmesine dair plan değişiklikleri zorunluluk olmadıkça yapılmaz

Zorunlu hallerde böyle bir değişiklilik yapılabilmesi için

1- İmar planındaki durumu değişecek olan sosyal ve teknik altyapı alanındaki tesisi gerçekleşecek ilgili yatırımcı bakanlık ve kuruluşların görüşü alınacaktır.

2- İmar planındaki bir sosyal ve teknik alt yapı alanın alanının kaldırılabilmesi ancak bu tesisin hizmet götürdüğü bölge içinde eşdeğer yeni bir alanın ayrılması suretiyle yapılabilir.

3- İmar planında yeni bir sosyal ve teknik altyapı anlamı ayrılması durumunda 1 inci bentteki esaslara uyulur.

Madde 22- İmar planında verilmiş olan inşaat emsalinin,ta adedinin, ifraz şartlarının değiştirilmesi sonucun nüfus yoğunluğunun arttırılmasına dair imar planı değişikliklerinde,

1)Artan nüfusun ihtiyacı olan sosyal ve teknik alt yapı alanları da Ek 1 de belirtilen standartlar muvacehesinde arttırılacaktır.

2) Kat dedi arttırılmasının istenmesi durumunda; önerilecek kat adetlerinin tayininde aşağıdaki formüle göre bulunacak bir yoldaki karşılıklı bina cepheleri arasındaki asgari uzaklık sağlanacaktır.

Madde 23- İmar planında gösterilen yolların genişletme, daraltma ve güzergahına ait imar planı değişikliklerinde

1) Devamlığı olan bir yol belli bir kesimde daraltılamaz.

2) Yolların kaydırılmasında, mülkiyet ve yapılaşma durumu esas alınır.

3) İmar planlarındaki gelişme alanlarında (7.00)m. den dar yaya ,(1.00)m. den dar trafik yolu açılamaz, Meskün alanlarda mülkiyet ve yapılaşma durumlarının elverdiği ölçüde yukarıdaki standartlara uyulur.

4) İmar planı değişikliği ile çıkmaz sokak ihdas edilemez.

5) İmar planı içinde kalan karayolu, kent içi geçişinin değiştirilmesi durumunda, Karayolları Genel Müdürlüğü'nden alınacak görüşe uyulur.

Madde 24- İmar planlarında sosyal ve teknik alt yapı kullanımlarından başka herhangi bir amaca ayrılmış olan bir alanın kullanılışının değiştirilmesi durumunda:

1) Nazım plan ana kararlarının bozucu fonksiyonel değişiklikler plan değişikliği yolu ile yapılamaz.

2) Yeni belirtilen kullanışın ihtiyacı olan sosyal ve teknik alt yapı alanları Ek 1'deki tabloda belirtilen standartlara ve nüfus şartı aranmaksızın otopark yönetmeliği hükümlerine uygun olarak birlikte düzenlenir.

3) Yerleşmenin gelişme yönü, büyüklüğü ve arazi kullanımlarının fonksiyonel dağlımı ve genel yoğunlukları gibi nazım plan ana kararlarının değiştirilmesi ancak imar planının yeniden yapılması için mümkün olabilir.

Madde 25- İmar planı değişikliklerinin onaylama, askı, onaya itiraz, itirazların değerlendirilmesi ve dağıtımı konularında 14 ve 16 ıncı maddelerdeki esaslara uyulur.

Madde 26- Bayındırlık ve İskan Bakanlığına gönderilecek imar planı değişiklik paftalarında; yerleşme adı, pafta numarası, kuzey işareti, koordinat değerleri, ölçeği, kıyı ile ilgili ise kıyı kenar çizgisi işlenir.

Dördüncü Bölüm: Yürürlük ve Yürütme

Madde 27- Bu Yönetmelik 3194 Sayılı İmar Kanunun ile birlikte yürürlüğe girer

Madde 28- Bu Yönetmelik Hükümlerini Bayındırlık ve İskan Bakanı yürütür.

APPENDIX D:

İMAR PLANLARININ DÜZENLENMESI İLE İLGİLİ TEKNİK ŞARTLAŞMA

1. Bölüm: Tanımlar-Kavramlar

1.01 Madde: Yasal Dayanak

1.02 Madde: Kavramlar

2. Bölüm: İmar Planı Düzenlenmesi Ve Aşamaları

2.01 Madde: İmar Planının Nitelikleri ve Amacı

2.02 Madde: İmar Planının Aşamaları

2.03 Madde: Araştırma ve Değerlendirme Çalışmalarının (Ön Çalışmalar) Amacı

2.04 Madde: Araştırma Kapsamının Belirlenmesi

3. Bölüm: Araştırma-Değerlendirme Çalışmaları

3.01 Madde: Büyuk Kentsel Yerleşmelerde (A, B, C, D Grubu) Yapılacak Araştırma-Değerlendirme Çalışmaları, Plan Kararlarına Geçiş - Plan Alternatifleri

3.02 Madde: Küçük Kentsel Yerleşmelerde (E, F Grubu) Yapılacak Araştırma ve Değerlendirme Çalışmaları, Plan Kararları, Plan Alternatifleri

3.03 Madde: Ek İmar Planı (İmar Planı İlavesi) İçin Yapılacak Araştırma ve Değerlendirme Çalışmaları, Plan Kararlarına Geçiş

3.04 Madde: İmar Planı Revızyonu (İmar Planı Yenilemesi) İçin Yapılacak Araştırma ve Değerlendirme Çalışmaları, Plan Kararlarına Geçiş

3.05 Madde: Yerel İmar Planları (Mevzii İmar Planları) İçin Yapılacak Araştırma ve

Değerlendirme Çalışmaları, Plan Kararlarına Geçiş

3.06 Madde: Koruma Amaçlı-Sit-İmar Planları İçin Yapılacak-Ek Araştırma ve Değerlendirme Çalışmaları, Plan Kararlarına Geçiş

3.07 Madde: Ulaşım Planlaması İçin Yapılacak Ek Araştırma ve Değerlendirme Çalışmaları, Plan Kararlarına Geçiş, Türel Dağılım Alternatifleri

3.08 Madde: Araştırma-Değerlendirme Çalışmalarında Genel Hükümler-veri Toplama Sırasında Yapılacak Temaslar

4. Bölüm: Planlama

4.01 Madde: Kent İmar Planı Çeşitleri

4.02 Madde: İmar Planlarının Hazırlanmasında Uyulacak Genel Esaslar

4.03 Madde: Nazım İmar Planı Ölçeği ve İçeriği

4.04 Madde: Nazım İmar Planı Arazi Kullanma Kararları Ana Başlıkları (Lejand)

4.05 Madde: Nazım İmar Planı Plan Notları ve Hükümleri

4.06 Madde: Nazım İmar Planı Plan Raporu

4.07 Madde: Nazım İmar Planının Birden Çok Belediyeyi Kapsayabilmesi

5. Bölüm: Uygulama İmar Planı

5.01 Madde: Hazırlanmasında Uyulacak Genel Esaslar

5.02 Madde: Etaplama

5.03 Madde: Hazırlama Tekniği, Ölçeği ve İçeriği

5.04 Madde: Arazi Kullanma Kararları Ana Başlıkları

5.05 Madde: Plan Notları ve Hükümleri

5.06 Madde: Uygulama İmar Planı Plan Raporu

5.07 Madde: Ek İmar Planı (İmar Planı İlavesi)

5.08 Madde: İmar Planı Revizyonu (İmar Planı Yenilemesi)

5.09 Madde: Yerel İmar Planı (Mevzii İmar Planı)

Bölüm 1 Tanımlar - Kavramlar

Madde. 1.01 - Bu şartname "imar Planı Yapılması ve Değişikliklerine Ait Esaslara Dair Yönetmelik"in 7. Maddesi gereği hazırlanmıştır.

Madde. 1.02 - Bu şartnamede sözü geçen ve açıklanması gerekli görülen temel kavramlar aşağıda tanımlanmıştır.

1. Ülke Fiziksel Planı: Ulusal sınırlar ile tanımlanan ülke bütününde; sosyal ve ekonomik plan kararlarının mekana yansımasını, mekandaki oluşumların kalkınma planlarına aktarılmasını, ülke ölçeğindeki yatırımların dengeli dağılımını, kentleşme ve nüfus dağılımını sağlayan; bölge, çevre düzeni, nazım imar planı ve uygulama imar planı gibi daha alt kademe planlamaları yönlendiren üst düzeyde plandır.

2. Bölge Planı: Seçilen ve sınırları belirlenen, ülke fiziksel ve kalkınma planları ilkeleri doğrultusunda hazırlanan; bölgesel kademelenme, bölgesel alan kullanımı ve alt yapıya ilişkin kararları ve yatırımları zaman ve mekan boyutu ile belirleyerek, ilgili kuruluşların sektörel uygulama plan ve programlarına yansımasını, yatırımların koordinasyon ve yönlendirilmesini sağlayan; çevre düzeni ve nazım imar planlarını yönlendiren plandır.

3. Çevre Düzeni Planı: Konut, sanayi, tarım, turizm gibi farklı alan kullanımı taleplerinin yoğunlaştığı kentsel ve onunla bütünleşen kırsal alanların birlikte oluş-turduğu, seçilen ve sınırları belirlenen "çevresel bütünlüğü olan alanlar"da düzenlenen,

üst düzey plan kararları çerçevesinde ve imar planlarına yol gösterici ve çevreden yaklaşım sağlayıcı nitelikte hazırlanan, getirdiği tüm yerleşme alan kullanımı, koruma ve kısıtlama kararları açısından plancı, uygulayıcı, yatırımcı sektörler ve kişiler için uyulması gereken bir nazım plan olup, ölçeği genellikle 1/50000 ve 1 /25000'dir.

4. İmar Planı: Belirli bir tarihsel oluşumun zaman içinde geliştirdiği, fonksiyonlarda uzmanlaşmış bugünkü yerleşik alanlarda (Meskun) bunların çevresindeki gelişme alanlarının (inkişaf) oluşturduğu, çeşitli alan kullanışları arasında en uygun kentsel gelişme biçimini belirleyen ve uygulamaya yönelik ayrıntıda bir plandır. Bu plan, üst düzeydeki bölge yada çevre düzeni planları ilke kararları uyarınca düzenlenir ve uygulamaya dönük ayrıntı getirir. imar planı, belde halkının sağlığını korumak, sosyal ve kültürel gereksinmelerini, iyi yaşama düzenini ve çalışma koşullarını ve güvenliğini sağlamak amacıyla, oturma, çalışma, dinlenme, ulaşım gibi kentsel fonksiyonlar arasında var olan ve sağlanabilecek olanaklar ölçüsünde en iyi çözüm yollarını bulmak için onaylı halihazır haritalar üzerinde nazım plan ve uygulama planı olarak düzenlenen, getirdiği tüm kentsel yerleşme, alan kullanımı, koruma ve kısıtlama kararları ve uygulama ilkeleri açısından bütün ilgili taraflar için uyulması gereken bir plandır.İmar planı, nazım imar planı ve uygulama imar planı olmak üzere iki aşamalıdır:

a. Nazım imar Planı: Onaylı halihazır haritalar üzerine çizilen, konut, ticaret, sanayi bölgeleri, yeşil alanlar gibi arazi parçalarının genel kullanış biçimlerini, başlıca bölge tiplerini, bölgelerin gelecekteki nüfuslarını, nüfus yoğunluklarını ve gerekirse yapı yoğunluklarını, çeşitli yerleşme alanlarının gelişme yön ve.büyüklükleri ile ilkelerini, ulaşım sistemleri gibi hususları göstermek ve uygulama imar planlarının hazırlanmasına esas olmak için düzenlenen plandır.

Belediye sınırlarını, varsa mücavir alanlarını da kapsayabildiği gibi birden çok belediye ve mücavir alanlarını da içine alan müşterek bir nazım imar planı da imar Kanunu ve Yönetmeliklerinde belirtilen esaslara göre hazırlanabilir. Genellikle ölçekler; 1/50000, 1/25000, 1 /10000,1 /5000 ve 1/2000 olup, en çok kullanılır ölçek 1 /5000'dir.

b. Uygulama İmar Planı: Yeterli ayrıntıyı içeren ve son durumu gösteren onaylı. halihazır haritalar üzerine varsa kadastral durumda işlenmiş olarak nazım plan ilke kararlarına göre çizilen ve çeşitli bölgelerin yapı adalarını, bunların yoğunluk ve yapı

düzenini, parselasyonunu, yollarını ve uygulama için gerekli imar uygulama programlarına esas olacak uygulama etaplarını ve diğer bilgileri ayrıntılarıyla gösteren plandır.

Uygulama imar planları, ölçeğin gerektirdiği ayrıntıda inceleme ve değerlendirmelere dayalı olarak nazım imar planlarının aynen büyütülmüş kopyaları niteliğinde olmayıp, alan koruma ve kullanma kararları ve önlemleriyle gereken farklılıkları getirirler. Ölçeği genellikle 1 /1000'dir.

5. Koruma Amaçlı İmar Planı: Sit içeren yerleşme alanlarında düzenlenen koruma ve geliştirme amaçlı plan olup, Kültür ve Tabiat Varlıklarını Koruma Kanununca tanımlanan taşınmaz eski eser kapsamındaki "anıt", "külliye", "sit", "arkeolojik sit", "ören yeri" ve "tabii sit"ler ile, kent mekanı ve bunu bütünleyen çevresel alanlarda yer alan tarihi arkeolojik yada mimari değeri bulunan eski eser ve sanat yapılarının yada tek tek sanat değeri taşımasalar bile bozulmamışlıkları ve bütünlükleri açısından belirli bir devri karakterize eden yerleşme dokuları ve kent parçalarının topluca oluşturdukları "kentsel sit" alanlarının korunmaları, bu alanlara uygun yeni kentsel fonksiyonlar getirilmesi ile bu çevrelerde yeni yapılar yapılabilmesi için uyulması gereken koşulları yeterli ayrıntıda belirleyen plandır.

6. Ulaşım Planı: Bu günkü karakteristiklere dayanılarak, plan.dönemi içinde olacağı belirlenen ulaşım taleplerine göre; kentsel ve çevresel alanda ulaşım sistemini, ulaşım ağını, standart ve kapasiteleri ile ulaşımın türlere dağılımını, toplu taşınım, hareketli ve duran trafik ve yayalaştırma konularında gereken ayrıntıları ve geometrik düzenlemeleri, kısa ve uzun dönemde sorunlara çözüm önerilerini içeren p1andır.

Ulaşım planı yerleşmenin imar planıyla karşılıklı etkileşim ve onunla bütünleşir biçimde ele alınır. Farklı plan kademelerinde, yerleşmelerin büyüklük ve nitelikleri ile gelişme aşamalarına göre değişik ölçüm ve araştırmalara dayalı olarak farklı amaç ve kapsamda ulaşım planları üretilir.

7. İlave imar Planı: Uygulama aşamasına geçilmiş yürürlükte bir imar planı bulunan, ancak bu planla karar getirilmemiş yakın yada uzak çevredeki alanlarda, değişen koşullar nedeniyle arazi kullanma kararları üretilmesi gerekli görülen hallerde, bu alanlarda düzenlenen ve mevcut planla bütünleşen yada ilişkilendirilen sınırlı ve dar

kapsamlı plandır.

İlave plan için araştırma ve planlama sürecinin tümüyle yenilenmesi gerekmeyip, ancak fiziksel mekanda plan sonrası ortaya çıkan değişikliklerden kaynaklanan ve gelişmeye açılan yeni alanlarda üretilen ek plan kararlarını yönlendiren kısıtlı bir dizi araştırma ve yenilenen toplu değerlendirme ile yetinilir.

8. Revizyon İmar Planı (Yenileme): Kentsel ve çevresel alanlarda; uygulama aşamasına geçilmiş yürürlükte bir imar planı bulunması, ancak bu planın değişen koşullarda uygulamayı yönlendirmede yetersiz kaldığının belirlenmesi Sonucunda, aksayan konularda ve topluca düzeltilmesinin gerekli görüldüğü durumlarda, yürürlükteki planın temel ilke kararları değiştirilmeden bu plan üzerinde uygulamaya dönük ayrıntılarda getirilen gerekli bir dizi düzeltme ve yenileme yapılarak, yürürlükteki planın yenilenmesi (revize edilmesi)dir. Uygulamadaki öncelikler nedeniyle kısa sürede elde edilmesi amaçlanan plan revizyonu için araştırma ve planlama sürecinin tümüyle yenilenmesi gerekmeyip, ancak fiziksel mekanda plan sonrası ortaya çıkan değişikliklerden kaynaklanan ve revizyon gerekçesi olan aksaklık ve sorunların araştırılması ve toplu değerlendirmenin yenilenmesi ile yetinilir.

9. Yerel Plan (Mevzi) İmar Planı: Mevcut imar planı sınırları dışında olup, bu planla bütünleşmeyen bir konumda bulunan alanlar üzerinde hazırlanan Sosyal ve teknik alt yapı ihtiyaçlarını kendi bünyesinde sağlamış olan plandır.

10. İdari Sınırlar: Özel Kanunlarında gösterilen usule göre belirlenmiş olan; il, ilçe, belediye ve köy sınırlarıdır.

11. Mücavir Alan Sının: Bir kentsel yerleşmenin belediye sınırları dışında olmakla birlikte yerleşmenin gelecekteki gelişmesi bakımından gerekli görülen ve imar Kanununun 45. Maddesine göre imar düzenine alınması kabul edilen alan sınırıdır. Mücavir alanların ilgili Belediye sınırına bitişik olması gerekmez, bu alanlar köyleri de kapsayabilir.

12. İmar Sınırı: Belediye sınırları içinde kalan alanlarla, varsa mücavir alanların tümünü içine alan sınırdır.

13. İmar Planı Sının (İskan Sının): İmar sınırı içinde, imar planında belirlenen

koşullarda yapı yapmaya izin verilmiş bölgeleri çevreleyen sınırdır.

14. Kentsel Yerleşik Alan (Meskun Alan): İmar planı yapıldığı sırada yerleşilmiş (iskan edilmiş) bulunan alanlardır.

15. Kentsel Gelişme Alanı (İnkişaf Alanı): İmar planı (iskan) sınırı içinde kalan ve imar planı raporunda belli edilen süre içinde kentin gelişmesine ayrılan alanlardır.

16. Yerleşme Dışı Alanlar (İskan Dışı -Alan): İmar planı sınırı ile imar sınırı arasında kalan yada yerleşik alanlar içinde olup da imar planlarında yerleşme alanı dışı olarak belirlenen alanlardır.

17. Kentsel Gelişmeyi Yönlendiren Eşik ve Sınırlamalar: Kentsel yerleşmelerin gelişmelerini yönlendiren ve bu gelişmenin hangi sınırlara kadar olabileceğini belirleyen bir dizi faktördür. Bunlardan, belirli maliyetler pahasına aşılabilir olan eşiklerle, gelişmeye kesin sınırlama biçiminde olabilen faktörler, fiziksel, sosyoekonomik, yasal ve yönetimsel eşik ve sınırlamalar olarak qruplanırlar.

18. Kentsel Gelişme Stratejileri: Kentsel yerleşmelerin oluşmuş yerleşik alanlarında yenilenme ile çevresel alanlarda dışa doğru yayılma, kentsel gelişmenin farklı aşamalarında ve yerleşmelerin özelliklerine bağlı olarak belirli oranlarda ve birlikte uygulanan gelişme stratejisi olarak tanımlanırlar.

19. Yoğunluğu ve Yapı Düzeni Korunacak Alanlar: Kentsel yerleşmelerin oluşmuş yerleşik alanları içinde, yapısal ve çevresel nitelikleri, kentin alışılagelmiş görsel değerlerine katkıları, kent topografyasına uyumluluğu, doğal ve tarihsel değerlerle ölçülü ilişkileri yönlerinden değiştirilmeden korunması, ancak kötü eklentilerden arındırma ve canlandırmanın yapılabileceği alanlardır.

20. Yoğunluğu ve Yapı Düzeni Düzeltilecek Alanlar: Kentsel yerleşmelerin yerleşik alanları içinde, bugünkü yoğunluk ve yapı düzeninin sağlık ve çevre koşulları ile kentsel altyapı ve donanım açısından yeterli bulunmadığı ve gerekli sağlıklaştırma ve kötü eklentilerden arındırma yoluyla yaşam standartlarının istenilen düzeye çıkarılması amaçlanan, tamamlayıcı yeni hükümler getirilen alanlardır.

21. Yoğunluğu ve Yapı Düzeni Yenilenecek Alanlar: Kentsel yerleşmelerin -yerleşik alanları içinde yoğunluk ve yapı düzeninin sağlık ve çevre koşulları ile kentsel altyapı ve

donanımın yeterliliği açısından düzeltilmesi olanaklı görülmeyen, bugünkü yapıların ve donanımın tümü yada bir bölümü için daha sağlıklı bir kentsel çevre yaratmak amacıyla yıkılıp yenilenme ve yeni düzenleme kararları getirilen alanlardır.

22. Ada: Dört yönü yollarla yada çevresinin bir kısmı park, orman, v.b. genel kullanışlı alanlarla çevrili arazi parçasıdır.

23. Kadastro Adası: Kadastro yapıldığı zaman var olan yollarla ya da çevresinin bir bölümü park, orman gibi genel kullanışlı alanlarla çevrili arazi parçasıdır.

24. İmar Adası: imar planındaki esaslara göre meydana gelen yollarla yada çevresinin bir kısmı park veya orman gibi genel kullanışlı alanlarla çevrili arazi parçasıdır.

25. Yapı Adası: imar planında yapı yapılmak üzere ayrılmış olan imar adasıdır.

26. Kadastro Parsel: Kadastro yapıldığı zaman, kadastro adaları içinde bulunan mülkiyeti tescilli parsellerdir.

27. İmar Parseli (Arsa): imar adaları içerisindeki kadastro parsellerinin İmar Kanunu, imar planı ve yönetmelik esaslarına göre bir imar yoluna çıkışı sağlanarak düzenlenmiş şeklidir.

28. Yapı Yasağı Bölgeleri: Özel kanunlarında ve yerleşme fiziksel planlarında bina yapılamayacağı belirtilen yerlerdir.

29. Yapı Yaklaşma Sınırı: Yapıların, yola, demiryoluna, hava alanına, kıyıya, yüzeysel su kaynaklarına, çevresel değerlere, tarihsel değerler ve sit koruma alanlarına, çevresel etkinliği olan yerleşmeler ile çevre sorunları yaratan yerleşme alanlarına, değişik amaçlı diğer yapı yasağı ve koruma alanlarına ilgili özel kanunlarında ve yerleşme fiziksel planlarında getirilen en çok yaklaşma uzaklığını belirleyen sınırlarıdır.

30. Yapı Düzeni (İmar Nizamı): Kentsel yerleşmelerin yerleşik alan ve gelişme alanlarında kalan yapı adaları üzerinde, yapılacak binaların arsa üzerinde yerleşme biçimlerini ayrık, bitişik, blok v.b. düzen olarak tanımlayan, ön ve yan çekme uzaklıkları ile bina kat adedi ve yüksekliğini belirleyen plan hükümleridir.

31. Bina Yüksekliği: Binaya kot verilen noktadan, bina saçak seviyesine kadar olan yükseklikdir.

32. Kentsel Nüfus: Kırsal alandan farklı nitelikleri ve yaşam biçimleriyle kentsel alanlarda kırsala göre daha yoğun biçimde yerleşerek yaşayan, çalışan ve aralarında belirli toplumsal-ekonomik ilişkiler bulunan insanların tümüdür.

33. Nüfus Artışı - Nüfus Azalması: Bir yörede yaşıyan insan sayısının, doğum ve ölüm oranları arasındaki farklılığın artması ve doğurganlık oranı ile belirginleşen doğal artışlar ve iç göçler nedenleriyle fazlalaşması nüfus artışı, bunun tersi azalması olarak yorumlanır.

Bugünkü Nüfus: İstatistiksel bulgulara dayalı olarak bir kent yada yerleşmede halen yaşayan insan sayısıdır.

Gelecekteki Nüfus (Nüfus Projeksiyonu): Üst plan kararları, Ülkesel-bölgesel veriler, kentsel etki alanı, kentsel etkinlikler ve işlevlerin değişimi ile işgücünün sektörlere dağılımı faktörlerine bağlı olarak, kentsel yerleşmelerin gelecekte plan dönemi sonundaki önceden belir[enen nüfustur.

34. Bina: Kendi başına kullanılabilen üstü örtülü ve insanların içine girebilecekleri ve insanların oturma, çalışma, eğlenme ve dinlenmelerine, hayvanların yada eşyanın - korunmasına yarıyan yapılardır.

35. Konut (ikametgah): Bir ailenin yaşadığı yapısal birimdir. Bir konutta birden fazla sayıda ailenin barındığı durumlarda olabilir. Bir binada birden fazla konut bulunabilir.

36. Aile: Ana, baba ve çocuklar ile bunların arasındaki ilişkiye dayanan toplum çekirdeği, en küçük planlama birimidir. Farklı bölgelerde, farklı yörelerde, kırda ve kentte farklı yaşam biçimi ve gelişmişlik düzeyine göre aile büyüklükleri çok farklı ölçülerde görülebilir.

31. Konutta Nüfus (Hane Halkı): Bir konutta aynı çatı altında birlikte yaşayan, genellikle bir aileyi oluşturan }kişilerdir.

38. Çalışabilir (Etkin - Faal) Nüfus: İstatistik verilere bağlı olarak 15 - 65 yaş grubunda kalan nüfusun tümüdür.

39. Çalışan Nüfus: Çalışabilir nüfus içinde, bir işte çalışanların toplamıdır. Faal nüfustan öğrenciler, ev kadınları, çalışmadan geliri olan rantiyeler ve işsizlerin çıkarılmasıyla bulunabilir.

40. Çalışan Nüfusun Sektörlere Dağılımı: Çalışan nüfusun bugünkü işgücünün yada plan dönemi sonu için hesaplanan işgücü projeksiyonunun üç ana sektöre (Tarım, Endüstri, Hizmetler) ve bunların daha alt sektörlerine dağılımı ve oranlarıdır. Bu oranlar kentin hakim fonksiyonunun zamanla değişimini belirler.

41. Bağımlılık Oranı: Ailede çalışanların tüm aile büyüklüğüne oranıdır. Bağımlılık oranının (ailede çalışanlar yüzdesinin) büyük yada küçük oluşunun planlama açısından, küçük aile, bekar, göçmen, işçi, mevsimlik göç, işgücü ve oturmamış sosyal yapı gibi farklı yorumları vardır.

42. Okul Çağındaki Nüfus Oranı: istatistik verilere dayanılarak belirlenen, yaş grupları açısından 7-14 yaşları arasında olan nüfusun tüm nüfusa oranıdır.

43. Okullaşma Oranı: Zorunlu temel eğitimde (ilkokulda) okuyanlar sayısının tüm okul çağında olan nüfusa oranıdır.

44. Nüfus Yoğunluğu: Birim alanda yaşıyan insan sayısıdır. Ülke ve bölge ölçeğinde birim alan bir kilometrekare, kent ölçeğinde bir hektardır.

45. Kentsel Nüfus Yoğunluğu (Gros Yoğunluk): Kentlerin tüm yerleşme bölgelerinin bir hektar, başına düşen nüfus sayısıdır. 0 kentsel yerleşmede yaşayanlar toplamının tüm yerleşme alanları toplamına oranı ile elde edilir.

46. Yerleşme Brüt Yoğunluğu: Bir hektar "brüt yapı alanı" na düşen nüfus sayısıdır. Brut yapı alanı, imar parsellerinin tamamı ile bunların kendi kullanımları için gerektirdiği yeşil alanlar, kentsel sosyal donanım ve iç yolların alanları toplamıdır.

47. Yerleşme Net Yoğunluğu: Bir hektar "net yapı alanı"na düşen nüfus sayısıdır. Net yapı alanı, belirlenmiş yol sınırları arasında kalan yapı adalarının net alanı, yada böyle bir sınır belirlenmemiş ise mevcut yollar arasında kalan parsellerin alanları toplamıdır.

48. Yapı Yoğunlukları:

a) Taban Alanı Katsayısı (TAKS); Yapının taban alanının parsel alanına oranından elde edilen sayıdır. Taban alanı, yapının parsel içinde plan ve yönetmelik hükümlerine göre düzenlenmiş zeminde kaplayacağı alandır. Işıklıklar eklentiler (müştemilat) bu alana katılmaz.

b) Kat Alanı Katsayısı (KAKS); Yapının bütün katlardaki alanları toplamının parsel alanına oranından elde edilen sayıdır. Katlar alanı, bodrum kat, asma kat, çekme ve çatı kat ve kapalı çıkmalar dahil kullanılabilen bütün katların ışıklıklar çıktıktan sonraki alanları toplamıdır. Açık çıkmalar ve iç yüksekliği 1.80 m'yi aşmayan ve yalnızca tesisatın geçirildiği tesisat galerileri vE katları ile ticari amacı olmayan ve yapının kendi gereksinmesi için otopark olarak kullanılan bölüm ve katlar bu alana katılmazlar. Kullanılabilen katlar deyiminden, konut, işyeri, eğlenme ve dinlenme yerleri gibi oturmaya, çalışmaya, eğlenmeye ve dinlenmeye ayrılmak üzere yapılan bölümler anlaşılır.

c) Yapı Hacim Katsayısı (Y.H.K.S); Bütün yapı hacminin arsa alanına oranıdır ve m^3/m^2 olarak belirlenir. Yapı hacmi, binanın dış ölçülerine göre en alt döşemesinden en üst katın çatısına kadar hesaplanan hacimdir. Bu hacme bodrum katları ve kapalı çıkmalar da eklenir. Yapı hacim katsayısı, endüstri ve depolama alanında işlevi gereği kat yükseklikleri çok değişken yapıların yoğunluğunu belirlemek için kullanılabilir.

49. Toplu konut Yerleşme Alanları: Toplu Konut Kanunu hükümleri uyarınca öncelikleri belirlenen kentsel yerleşmelerde, imar planları ile getirilen toplu uygulamaya yönelik hazırlıklar ile kamulaştırma ve altyapı tesislerinin öncelikle getirildiği, Kanunun belirlediği çerçeve içinde' ayrılmış öncelikli yerleşme ve konut gelişme alanlarıdır.

50. Merkezi iş Alanları (MİA): Kent bütünü, kent yada diğer kentsel yerleşmelerde, konut dışı faaliyetlerin belirli oranların üzerine çıktığı, kentsel hizmetlerin yoğunlaştığı, ticaret ve yönetim fonksiyonlarının topluca bulundukları, genellikle merkez bölgelerde yer alan iş-ticaret ve yönetim alanlarıdır.

Bu alanların büyüklükleri, uygulanacak yapı yoğunlukları ve yenilenme yöntemleri ile bu alanlarda yer alacak fonksiyonlarla birlikte, konut alanı oranları yerleşmenin özelliklerine göre değişken olup, planlar ve yönetmeliklerle bu alanlar için özel hükümler getirilir.

51. Konut Dışı Kentsel Çalışma Alanları: İçerisinde motel ve lokanta da bulunabilen akaryakıt satışı ve bakım istasyonları, resmi ye sosyal tesisler, dumansız - kokusuz atık

ve artık bırakmayan ve çevre sağlığı yönünden tehlike arz etmeyen imalathaneler ile patlayıcı, parlayıcı ve yanıcı maddeler içermeyen depolarını yapılabileceği alanlardır.

52. Sanayi ve Küçük Sanayi Alanları: Kentsel yerleşmelerde, yalnız sanayi yada küçük sanatlar kuruluşlarının, çevre ve sağlık koşulları gözetilerek topluca yer almaları için ayrılan diğer kentsel alan kullanımları ile karışık bulunmaları sakıncalı görülen bölge yada yerleşme alanlarıdır.

Sanayi bölgeleri, belirli bir miktarın üzerinde işçi ve enerji kullanan, ana ve ara mallar ve tüketim malları üreten sanayi tesislerine ayrılan alanlardır. Küçük sanatlar ve imalathaneler bölgesi, işçi ve enerji miktarı daha sınırlı olup, daha çok doğrudan kentliye yönelik hizmet üreten bununla birlikte çevre ve sağlık koşulları açısından ayrılmaları ve gruplaşmaları gerekli görülen iş alanlarıdır.

53. Organize Sanayi Bölgeler: Kentlerin ekonomisinin gelişiminde itici güç olarak kullanılmak üzere kentlerden belirli uzaklıklarda ve bir arada bulunmaları uygun görülen, genellikle küçük ve orta büyüklükteki sanayi kuruluşlarının, ilgili yasal çerçeveye uyularak belirli bir plana göre geliştirilen alt yapı ve hizmet donanımları tamamlanarak belirli standartlarla işletilmek üzere organize edilmiş sanayi bölgeleridir.

54. Yeşil Alanlar: Planlarda toplumun yararlanmasına açık tutulmak amacı y la ayrılan parklar, çocuk bahçeleri, oyun alanlarıyla kent içi ve çevresindeki korular, dinlenme ve gezinti alanlarıdır.

Yapı parselleri içinde kalan özel bahçeler, tarım alanları, meyve bahçeleri ve kamuya açılmamış ticari amaçlı koru ve fidanlıklar, devlet ormanları, mezarlıklar, askeri alanlar, okul ve hastane bahçeleri, spor tesisi alanları, yol ve meydanlardaki güvenlik şerit ve refüjleri yeşil alan hesabına katılmaz.

55. Doğal Karakteri Korunacak Alanlar: Kentsel ve onunla bütünleşen çevresel alanlarda, bugünkü nitelikleri ve değerleri yitirilmeden korunması plan kararlarıyla getirilen makilik, fundalık, kayalık - taşlık ve kumsal alanlardır.

Bu alanlarda izin verilebilecek kullanmanın nitelik ve ölçüsü, bölünme ve yapılanma koşulları plan hükümleri ile belirlenir,

56. Sit Alanları: Kentsel ve çevresel alanlarda, Kültür ve Tabiat Varlıklarını Koruma

Kanunu ve imar Kanununda tanımlanan ve usulüne uygun olarak tesbit ve tescil işlemleri tamamlanan Tarihsel, Arkeolojik, Doğal sitler ile kentsel sit alanlarından yerleşme fiziksel planları ile koruma ve kullanmaya ilişkin özel hükümler getirilen alanlardır. Bu alanlarda koruma - geliştirmeye ilişkin ayrıntıda kararlar sit içeren koruma ağırlıklı imar planları ile getirilir. Uygulanacak koruma stratejisinin kendi içinde derecelendirildiği sit alanları çevrelerinde gerekli görülen durumlarda ayrıca korumaya yönelik kararlar da oluşturulur.

57. Yüzeysel Su Kaynakları Koruma Alanları: İçme ve kullanma suyu sağlanılan kaynaklar, doğal ve yapay göller ve bunları besleyen sular gibi yüzeysel su kaynaklarının ilgili yasal dayanaklara göre belirlenen "mutlak, kısa, orta, uzun mesafeli koruma alanları" içinde kalan yerlerdir. Bu koruma alanlarında alan kullanımı ve yapılaşmaya ilişkin ilkelere yerleşme fiziksel planlamalarında getirilen hükümlerle uyulur.

58. Genel Otoparklar: Toplumun yararlanması için düzenlenen, özel yada tüzel kişi, kurum ve kuruluşlarca sürekli özel otopark olarak kullanılmayan otopark yerleridir. Alan kullanımı kararlarına bağlı olarak planlamalar ve plan notlarında genel otoparkların ölçü ve sayıları belirlenir.

59. Yayalaştırma: Özellikle kentsel merkezlerin aşırı yoğunlaşmış kesimlerinde daha sağlıklı ve düzenli bir kentsel çevre yaratmak, bunun yanısıra hareketli ve duran araç trafiği ile yaya yürüme ve dolaşma mekanlarını ayırmayı amaçlayan ayrıntılı düzenlemelerdir.

60. Geometrik Düzenlemeler: Ulaşım planlaması çıktılarına göre trafik düzenini sağlamak için kent mekanında yollar üzerinde ve bunların yüzeysel ve alt-üst kesişme ve kavşaklarında yapılan ayrıntılı düzenlemelerdir.

61. Türel Dağılım: Ulaşım planlamasında trafik yükünün karşılanmasında araç ve sistemler arasında dağılım ve kompozisyonun belirlenmesidir.

62. Sosyal Yapı: İş bölümü belirecek kadar gelişme gösteren bir topluluk veya toplumda ekonomik ve toplumsal uğraşıların artma ve genişlemesi sonucu olarak, insan ilişkilerinin oluşturduğu çeşitli gruplaşmalar sosyal yapıyı belirler.

Bölüm 2 İmar Planı Düzenlenmesi ve Aşamaları

İmar Planının Nitelikleri ve Amacı

Madde. 2.01 - İmar Planı: Ülke, bölge ve kent verilerine göre;

1. Oturma (iskan)
2. Çalışma,
3. Sosyal ve kültürel ihtiyaçlar (Yönetim, Eğitim, Sağlık, Kültürel v.b.),
4. Dinlenme, eğlence (Rekreasyon),
5. Ulaşım gibi kentsel fonksiyonlar arasında mevcut ve sağlanabilecek olanaklar ölçüsünde en iyi çözümü, koruma ve kullanma dengesini en rasyonel biçimde belirleyerek, belde halkına iyi yaşama düzeni koşulları ve fiziksel çevreyi sağlamak amacıyla hazırlanır. Bu nedenle imar planı hazırlanırken;

a. Devlet planında güdülen hedeflere, ülke fiziksel, bölge ve çevre düzeni planı ana kararlarına uyularak, varsa eski imar planlarıyla ilişkili biçimde tanzim edilecektir.

b. Genel gelişme yönlerinde; eşik ve sınırlamalara uyarak kentin yaşayış ve karakteriyle çelişmeyen, mahalli istekleri olanaklar ölçüsünde değerlendiren ve kentin gelişme potansiyelinden yararlanan kararlar getirecektir.

c. Değişik arazi kullanma alanlarında yönetmeliklerle getirilen standart büyüklüklere uyulurken, bunların biçim ve konumlandırılmalarında birbirleriyle fonksiyon ilişkilerine dikkat edilecek ve gelişebilir esnek plan anlayışı sağlanacaktı r.

d. Ulaşım şebekesinin; beldenin değişik alan kullanımları ile ve çevresiyle olan bağıntılarının gelişebilir, kolay ulaşılır, gelecekte yoğunluk artışıyla doğacak trafik talebini karşılayabilir düzey ve kapasiteyi sağlayacak biçimde olmasına dikkat edilecektir.

e. Hukuki, idari, ekonomik ve teknik yönlerden uygulama kabiliyetinde, uygulamada etaplamaya olanak sağlayan uygulama imar planlarında, yapı adaları içinde, belediyesince hazırlanacak parselasyon planlarına esas olacak imar parselleri düzenlenecektir.

f. Çevre ve beldenin; tabi, kültürel, ekonomik ve estetik varlıklarını ve çevre sağlığını koruyucu, bu değerlere katkı sağlayıcı planlama anlayışına özen gösterilecektir.

İmar Planının Aşamaları

Madde. 2.02 - İmar planlarını düzenleme sürecinde birbirini izleyen şu aşamalar vardır

1. Plan öncesi ön bilgi ve, dokümanların toplanması: Halihazır harita, jeolojik rapor, DSİ rapor ve projeleri, eski eser ve sit bölgeleri, yüksek gerilimli enerji nakil hatları, Devlet Karayolu geçişi, kıyı kenarı, demiryolu, liman, hava alanı, orman sınırı gibi verilerin ilgili kurumlardan elde edilmesi,

2. Amaçların belirlenmesi, hedeflerin saptanması,

3. Bilgi toplama, araştırmalar (Analiz)

4. Bilgileri birleştirme (Sentez), yorum, sonuçların değerlendirilmesi,

5. Plan kararları, planlamaya geçiş, plan alternatifleri, alternatifler arasında karşılaştırma, değerlendirme,

6. Sonuç plan belgesi ve ekleri, plan hükümleri, plan notları,

7. Plan uygulama programları,

Planlama sürecindeki 1. aşama pl3nlama öncesi çalışmaları; 2, 3, 4, 5. aşamaları planlama için yapılması gerekli araştırma ve değerlendirmeyi (ön çalışmalar) kapsar.

Araştırma ve Değerlendirme Çalışmalarının (Ön Çalışmalar) Amacı

Madde. 2.03 - Araştırmaların plan için, planlamaya dönük ve planlama amacına hizmet eden nitelikte, yeterli ve gerekli kapsam ve içerikte olması gereklidir.

Yerleşme fiziksel planlaması için yapılacak araştırma ve değerlendirme çalışmaları (ön çalışmalar), planlaması yapılan yörenin bu günkü durumunu geçmişteki durumu ile karşılaştırarak gelişme potansiyelini, gelişme eğilimlerini, gelişmeyi etkileyen ve yönlendiren eşik ve sınırlamaları ve yerleşmenin imkanlarını belirlemek ve yerleşmenin gelecekte plan dönemi sonunda erişeceği düzeyi gerçeğe olabildiğince yakın biçimde tahmin etmek amacıyla yapılan çalışmalardır.

Araştırma Kapsamının Belirlenmesi

Madde. 2.04 - Yerleşme fiziksel planlamaları için yapılacak araştırmaların konuları ve değerlendirme yöntemi ile tüm ön çalışmaların kapsamı, planlanan yörenin büyüklüğü, yerleşmenin karakteristik özellikleri ve gelişme potansiyeline göre farklılık gösterir.

Bölüm 3 Araştırma-Değerlendirme Çalışmaları

Bu bölümde, yerleşme fiziksel plan kademelerinde yapılacak araştırma ve değerlendirme çalışmaları standart başlıkları ile verilmiş olup, Banka, gerekli gördüğü durumlarda bunların dışında yada bunlara ek olarak yeni araştırma konuları belirleyebileceği gibi bu konulardan bazılarının araştırmasından vazgeçilmesine, yine bunun gibi değerlendirme yöntemlerinde farklılıklar getirilmesine de karar verebilir.

Kentsel yerleşmelerde; yerleşmenin büyük yada yaygın, küçük yada toplu olma niteliğine, planın ilave ve/veya revizyon gibi ele alınış biçimine göre yapılacak araştırma çalışmaları gruplandırılmıştır.

Madde. 3.01 - Plan yapım alanı 500 hektar ve daha fazla veya planlamaya esas olan gelecekteki nüfus projeksiyonu 30.000 ve. daha büyük olan kentsel yerleşmelerde (A, B, C, D Grubu) aşağıda belirlenen araştırma konuları yer alır.

A. Analiz

1. Kentin Ülke ve Bölgesındeki Yeri

Kentin genel tanımı, bölge içinde ve çevresindeki yeri:

Kent, içinde bulunduğu bölgenin yönetimsel ve ekonomik bütünlüğü içindeki yeri ve özelliği ile tanımlanır. Ayrıca, özelliği nedeniyle kent planlaması; çevre düzeni planı ile bir bütün olarak düzenleniyorsa kent, çevresi ile birlikte ele alınarak kentsel ve çevresel alanların bütünlüğü ve ilişkileri incelenir.

Bu kapsamda;

1.1. Bölgenin Yönetimsel Yapısı, idari Bölünüş

1.2. Bölgesel Ekonomik Yapı: Bölge içinde yerleşmelerin nüfus büyüklükleri ve değişmeleri ve kentsel - kırsal nüfus dengesi, büyüme hızı farklılıkları ve nedenleri, bölgeye ve bölge dışına göçler, yerleşmelerin fonksiyonel farklılaşması ve ilişkileri,

yerleşmelerin etki alanları, bölge içi ve dışı ulaşım bağlantıları, özellikle planlanan kentin bölgesi içindeki yeri ve işlevi belirlenir.

1.3. Çevresel Yapı: Kent, yakın çevresindeki kentsel ve kırsal •yerleşmelerle ve çevresindeki kırsal alanlar, çevresel kaynaklar, çevre değerleri ve kentin çevreye etkileri ile çevredeki etkinliği olan sektörel yatırım ve kaynakların kente etkisi belirlenir.

Ekler (Grafik ve Haritalar):

1. Bölgenin idari ve ekonomik yapısının, bölgesel nüfus dağılımının yerleşmelerin etki alanlarının ve kentin bölgesi içindeki yerinin belirlenmesi için yeter sayıda 1/250.000 ve 1 /100.006 ölçekli harita kullanılır.

2. Kentin yakın çevresi ile ulaşım ağı ve uzaklıkları, çevresel bütünlüğü olan mekandaki etkinliği tanımlayan çevre verilen, kırsal ve kentsel yerleşmelerle nüfus büyüklükleri, çevresel değer ve kaynakların gösterildiği 1/25000 yada 1/20000 ölçekli düzenlemeler yapılır.

2. Kentin Mekan Oluşumu:

2.1. Tarihsel Gelişim, Kentin tarihsel gelişme sürecinde, özellik gösteren ve bulunabilen gelişme etapları için, kent içinde bölgeleme, nüfus yapısı, yoğunluğu, merkezler, faaliyetler ve kent bölgeleri arası ilişkiler ve bunlarda zamanla izlenen değişimler, merkezde fonksiyonel farklılaşma, yapısal değişim ve mekansal kaynaklar analiz edilir ve değerlendirilir.

2.2. Tarihsel Çevre, Tescilli tarihsel çevre, tarihsel ve kentsel sit alanlarını içermeyen kentsel yerleşmelerde, tek yapı olarak tescil edilen korunacak anıt değeri olan tarihsel yapılar yanı sıra tescil edilmemişte olsa bozulmamışlıkları ve bütünlükleri açısından korunmaları ve sağlıklaştırılmaları uygun görülen, yerleşik kent alanındaki karakteristik dokular (Kentsel sitler) belirlenir. Sit içeren yerleşme alanlarında idarece gerek görüldüğünde düzenlenecek Koruma Amaçlı İmar Planları için yapılacak ek araştırmalar bu Şartnamenin 3.06. Maddesinde belirtilmiştir.

2.3. Kent Estetiği, Kent İmajı, Kent estetiği ve alışılmış kent imajının sürdürülmesi açısından, kentin karakterini oluşturan merkez-odak, meydan-yapı, ulu ağaç, simge ve öğeler ile kentteki görsel değerlerin tanımlanması yapılır.

Ekler (Grafik ve Haritalar):

Kentin tarihsel gelişimine ilişkin, tarihi harita, gravür, eski imar planları ve yazılı kaynaklar belgelenir, gereğinde bina, sokak ve meydan röleveleri, yapı adalarının sokak cephe resimleri ve fotoğrafları eklenir.

Tarihsel gelişme sürecinde gelişme devreleri, nazım imar planı ölçeğinde korunacak tarihsel çevre ve anıt değeri olan yapılar uygulama imar planı ölçeğinde haritalar kullanılarak gösterilir. Korunacak yapı ve çevrelere ilişkin koşullar ayrıca belirtilir.

3. Fiziksel Yapı-Çevresel Kaynaklar

İmar planı düzenlenen kentsel alan ve yakın çevresindeki alanlarda gelişmeyi yönlendiren doğal eşikler ile doğal kaynaklar ve.değerler analiz edilir.

3.1. Jeomorfolojik ve Topoğrafik Eşikler, Yükselti kuşakları, eğimler, yüzey şekilleri belirlenir.

3.2. İklim, Yağış, rüzgar, hakim rüzgar ve güneşlenme ile mikroklimatik analizler ve yorumlarına dayalı olarak yerleşmeye elverişlilik açısından, biometeorolojik değerlendirme yapılır.

3.3. Bitki Örtüsü, Çevredeki orman varlığı ile sık-seyrek, bozuk, baltalık niteliği ile koru-ağaçlık-makilik-fundalık-sazlık-çalılık, mera gibi tür ve nitelikler belirlenir.

3.4. Jeolojik Durum, Deprem, Akarsular, Taşkın Durumu, Jeolojik etüt ve rapora dayalı olarak deprem durumu ve heyelanlı alanlarla jeolojik sakıncalı ve yasaklı alanlar incelenir. Akarsu!ar- taşkın durumu ve islah projesine dayanılarak önlem alınıncaya kadar yerleşmeye yasaklanacak taşkın alanları belirlenir. Jeolojik raporun tamamı araştırma rapor ekinde verilir.

3.5. Toprak Kabiliyeti, Sulama, Çevresel alanlarda, değerli tarım topraklarının tarım potansiyeli ve sulanabilir tarım alanlarının tanımlandığı eşik ve sınırlamalar, toprak kabiliyeti haritaları ve sulama projeleri verilerine dayanılarak belirlenir.

3.6. İçme ve Kullanma Suyu Sağlanan Kaynaklar, Mutlak, kısa-orta-uzun mesafe ve kademeli koruma kuşakları belirlenir. Bu alanlarda kullanma ve yapılaşmaya getirilen sınırlamalar belirtilir.

3.7. Maden Kaynakları, Ülke ekonomisi açısından yada stratejik önemi nedeniyle çevresinde önemli yasal sınırlamalar uygulanacak maden kaynakları ve rezerv alanları ilgili kuruluşlardan temin edilir.

3.8. Görsel Değerler - Görü Noktaları, Kentsel ve çevresel alanlarda yöresel güzellikler - görsel değerler, görü ve bakı noktaları ayrıntıda belirlenir.

3.9. Çevre Sorunları Yönünden Durum, kentsel ve çevresel alanlarda sağlıklı insan yaşamında uyulması gereken çevre ve sağlık kuralları uyarınca, hava-su-toprak kirlenmesi, ses şiddeti - gürültü düzeyi ve görsel tedirginlik yaratan etkenlerle ilgili sınırlamalar bu kapsamda irdelenir.

Kentsel ve çevresel alanda gelişmeyi yönlendiren doğal eşikler ile çevresel kaynakların ve değerlerin belirlenmesinde farklı ölçeklerde ve yeter sayıda bir dizi harita ve grafik düzenlemesi yapılır.

Ekler:

1. Topografya, eğimler, akarsular ve bitki örtüsünü, görsel değerleri belirten nazım plan Ölçeğinde harita,

2. Jeolojik yapı, sakıncalı alanlar ile taşkın durumunu belirten nazım plan ölçeğinde jeolojik harita,

3. Toprak kabiliyeti ve sulanabilir alanlara ait harita,

4. İklim elemanları grafikleri, rüzgar gülü, mikro klimatik, biometeorolojik bakımdan yerleşmeye elverişli kuşaklar ve kademeleri gösterir harita,

5. Çevre değerleri ve çevre sorunlarını analiz eden nazım plan ölçeğinde harita verilir.

Not: kullanılacak haritalar, çalışmaların özelliğine göre farklı ölçeklerde olabileceği gibi anlaşılır biçimde ilgili haritalar birleştirilip bir haritada da gösterilebilir.

4. Kentsel Nüfus - Demografık Yapı:

Bölgesi içindeki nüfus dengesi ve hareketliliği 1 .2. Fıkrada tanımlanmış olan kentin, bu bölümde kendi nüfus yapısı ve değişimi ayrıntıda incelenir.

4.1. Kentsel Nüfus Değişimi, kentin geçmiş yıllardaki nüfusu, yıllık değişim oranları, artış - eksilme hızı, ortalama yıllık değişimler, önemli sapmalar belirlenir.

4.2. Kente Göç - Kentten Dışa Göç,

4.3. Kentsel Nüfusun Dağılımı, Mahalleler yada planlama analiz üniteleri ölçeğinde nüfusun dağılımı ve değişimi incelenir.

4.4. Nüfusun Yapısı, Doğurganlık oranı ve göçe bağlı olarak nüfus artışının analizi, yaş grupları, okul çağındaki nüfus, çalışan nüfus, çalışabilir nüfus değerleri, yerleşik nüfus, mevsimlik nüfus, Aile Sayısı, Ortalama Aile Büyüklüğü ve Hane Halkı belirlenir.

Ekler:

5. Uygun ölçekte göç haritaları ve yaş grupları piramitleri (kentsel hizmetlerin hesaplanmasına yarayacak biçimde yaş grupları seçilerek) grafiği,

6. Kentsel nüfusun kent mekanında dağılımı, mahalle bölümleri veya plan lama analiz ünitelerinin gösterildiği nazım plan ölçeğinde harita,

7. Nüfus yapısı ile ilgili yeter sayıda istatistiksel gösterme biçimi, grafik tablo ve şema.

5. Sosyal Yapı:

Kentin büyüklüğü, işlevsel özelliği ve gelişme aşamasına göre kentin sosyal yaşam ve özelliklerinin belirlenmesi, kentin tarihsel gelişimi ile ilişkili olarak sosyal gelişmesinin tanımlanması yapılır.

Bu amaçla planlama analiz üniteleri yada mahalleler ölçeğinde örnekleme yoluyla sosyal yapı anketleri düzenlenir.

Bu kapsamda;

Kentte Sosyal Tabakalaşma, Mahallelere göre Meslek Gruplarının Dağılımı, Kentte Okullaşma Oranı ve Ailede ,Bağımlılık Oranı saptanır. Ayrıca özelliği olan büyük kentlerde, kişinin çevreye uyumu problem olan kent parçaları ve mahallelerde, uyumsuzluğun kentsel sosyal donanım y6tersizliği ile ilişkisi ve sosyal yaşama yapılabilecek müdahaleler araştırılır.

Ekler:

Fiziksel planlama için yeterli ölçüde geliştirilen kentsel sosyal yapı analizi sonucunda, kent imar planı için gereken kentin sosyal topografyası ve mahallelere göre meslek gruplarının dağılımının belirtildiği haritalar nazım plan ölçeğinde düzenlenir.

6. Ekonomik Yapı:

Kentsel yerleşme alanlarında bugünkü ekonomik yapı ve mevcut işgücünün ekonomik sektörlere dağılımı ile kentin ekonomik gelişme potansiyelinin belirlenmesi amaçlanır ve değerlendirmede yapılacak sektörel projeksiyonlar için hazırlık geliştirilir.

İş-konut ilişkilerinde, kentte oturup kentte çalışan ve kentte oturup kent dışında çalışanlar ile kent dışından kente çalışmaya gelenler ayrı ayrı değerlendirmeye katılırlar.

Bu kapsamda;

6.1. Çalışanların Ekonomik Faaliyetlere Dağılımı,

6.2. Gelir Düzeyi, Gelirle İlgili Endeksler, Gelir Dağılımı, İşsizlik ve Marjinal Sektör,

6.3. Tarım-Madencilik, Sanayi ve Hizmetler Sektörlerinin ekonomik faaliyet kollarında ayrıntılı inceleme sonucunda Sektörel Gelişme Potansiyeli, Üretim Kapasitesi ve lş Gücü Talebi konularında Sektörel Yapı Analizleri için;

6.3.1. Tarım ve Madencilik Sektöründe, Çevresel alanlarda toprak kullanımı, yoğun tarım, sulu tarım, özel mahsul nitelikleri, ve?imlilik ve işgücü talebi, seracılık, hayvancılık, balıkçılık ve maden çıkarımı alt sektörlerinde kapasite, verimlilik, pazar ilişkisi, işgücü talebi,

6.3.2. Sanayi Sektöründe, kentsel ve çevresel alanlarda toplu yada dağınık yerleşmiş sanayi türleri, niteliksel ve sayısal analizi, hammadde-mamul madde-pazar ilişkileri, üretim teknolojisi, verimlilik, işgücü talebi ve karakteri, iş-konut ilişkileri, altyapı ve enerji kullanma ve atık su sorunu, isatı ve gaz atıkları, sağlık ve çevre koruma standardı, önlem ve uygulamaları.

6.3.3. Hizmetler Sektöründe, kent mekanında yer alan, Ulaştırma-Taşınım Depolama-Liman, hava limanı, deniz, demiryolu ve karayolu taşınımı, ticaret, turizm ve yapı sektörü ile uzmanlaşmış diğer kentsel hizmetlerin karakteristikleri, içsel yada dışsal

ekonomik özellikleri, gelişme potansiyelleri ve işgücü yaratma nitelikleri ayrıntıda belirlenir.

Ekler:

- Kentsel ekonomik yapı analizleri için gerekli istatistik metotlara göre hazırlanmış grafikler,
- İşgücünün sektörlere dağılımı ve gelir dağılımının mahallelere göre belirlenmesi, ayrıca iş-konut ilişkilerinin kent mekanında tanımlandığı kent nazım imar planı ölçeğinde haritalar düzenlenir.

7. Bugünkü Kentsel Alan Kullanımı ve Altyapı:

Kentsel alanda plan yapıldığı sırada mevcut arazi kullanımı ve kentsel altyapı, bugünkü karakteristiklini ile belirlenir.

Öncelikle tüm kentsel alanda mahalleler yada planlama analiz üniteleri bölünmelerine göre kentsel alan kullanımı dağılımı, yapı adalarında büyük boşlukların oranları ve alan kullanmada yapı yoğunlukları incelenir.

Bu kapsamda;

7.1. Konut Yerleşme Alanları, Mahallelere göre konut durumu, bina kaliteleri, yapı ve konut yoğunlukları, binada ortalama konut, konutta ortalama nüfus, kişi başına ortalama konut alanı, yoğunluk ve standardı, bölgesel ortalama kat adetleri, konfor durumları incelenir.

Yoğunluğu ve yapı düzeni açısından karakteristik farklılık ve özellik gösteren konut alanlarında, doku özellikleri, öz değerlerini yitirmiş kentsel doku ve sorunlu alanlar, yoğunlaşmış ve yetersizleşmiş konut alanları, düzensiz konut yerleşme alanları, gecekondular, önleme bölgeleri varsa imar - ıslah bölgeleri, toplu yeni yerleşmeler ve toplu konut yerleşme alanları sınırlarıyla belirlenir.

7.2. Kentsel, Bölgesel Merkez, Merkezi İş Alanı, kent içindeki merkezler, fonksiyonları, yapısal özellikleri, yoğunlukları, mekansal kademelenmesi ve etki alanları, gece ve gündüz nüfusları, yerel ticaret merkezleri, pazarlama, toptan ticaret ve depolamalar, etki alanları ve ilişkileriyle ayrıca belirlenir.

7.3. Sanayi Yerleşme A!anları, kentsel ve çevresel alanda, toplu yada dağınık iş ve sanayi alanlarında, organize sanayi ve küçük sanayi sitelerinde, mekansal dağılım, fonksiyonel, yapısal özellikler, yapı yoğunlukları belirlenir.

7.4. Kentsel Yeşil Alanlar, kentsel ve çevresel alanlarda, park, çocuk bahçesi-oyun alanı-dinlenme ve gezinti alanları, kent korusu, nitelikleri ile "etkin" kentsel yeşil alan tanımına giren açık alanlar, planlama analiz ünitelerinde ve tüm kentte mekansal dağılım, mevcut ölçü ve standartları, potansiyelleri tespit edilir.

7.5. Kentsel Sosyal Donanım, Eğitim, sağlık, sosyal, dini ve kültürel donanımlar, kentsel spor alanları, dinlenme-eğlenme-turizm yerleşme alanları ile yönetimsel yapı alanlarının mekansal dağılımları, etki alanları, kapasite ve yeterlilikleri ve gelişme potansiyelleri incelenir.

Eğitim donanımı, özellikle ilk okulların mahallelere göre mekansal dağılımında yaya ulaşılabilir alan büyüklüğü irdelenir.

7.6. Tarım, Çevredeki tarım toprağının kullanımı incelenir.

7.7. Orman, Kentsel ve çevresel alanlarda orman statüsünde ve örtüsündeki alanlar, milli parklar belirtilir.

7.8. Askeri Alanlar,

7.9. Mezarlıklar.

Ekler:

- En az nazım plan ölçeğinde bir dizi harita kullanılır. Bu kapsamda Kentsel Alan Kullanımı - Arazi Kullanma - paftası ile tüm kullanma-lar bir arada-gösterilir. Kentsel alan kullanımında yapı yoğunlukları ve büyük boşluklar tek bir harita belirtilir.

- Yerleşik konut alanlarından karakteristik doku özellikleri ile yetersiz (sorunlu) yapı adaları, nazım plan veya ada biriminde uygulama planı 61-çeğlnde gösterilir.

- Konut alanlarında; bina durumları, kaliteleri, kat adetleri, kent merkezleri lçın dağılım - kademelenme - etki alanları, sanayi yerleşme alanları dağılımı-mekansa~ özellikleri, kentsel yeşil alanlar ve kentsel sosyal donanımın mekanda dağılımları için yeter sayıda harita ve grafik düzenlenir.

8. Kentsel Ulaşım ve Teknik Altyapı:

Kentsel ve bölgesel ulaşım, deniz-hava-demiryolu ve karayolu ulaşımı, liman, barınak, iskele, istasyon, terminaller, transit geçişler, kentsel toplu taşınım (raylı-raysız sistemler), kent içi ulaşımında kent girişleri, mevcut yol sistemi, kapasitesi, kullanma oranı, günlük yolculuklarda araç türleri, kamu araçları ile taşımada oransal değerler, kentsel ulaşım ağının fiziksel nitelikleri, mevcut trafik yönetimi ve geometrik düzenlemeler, özel oto sahipliği ve değişimi, duran trafik için veriler, genel otoparklar ve yaya yol sistemi, merkez yayalaştırma uygulamaları.

Ulaşım planlaması ile birlikte düzenlenen kent planları için yapılacak ek araştırma konuları bu şartnamenin 3.07. Maddesinde belirtilmiştir.

Kentsel teknik alt yapının varlığı, kapasitesi, yeterliliği, belirleyici özelliği ve gelişme potansiyeli irdelenir.

Bu kapsamda içme ve kullanma suyu kaynak ve depo yerleri, suyun ulaşabildiği en üst kot, kapasitesi, yeterliliği, yeni kaynak varlığı;

Enerji üretimi - yeri, şebeke yeterliliği, genişleme potansiyel, yağmursuyu - pis ve kanalizasyon, akaryakıt boru hattı, tasfiye tesisleri varlığı, sistemi, kapasitesi, düz-eğimli ve çukur yerlerde tanımlanan eşikler;

Yakıt sistemi, üretim ve depolama, genişleme potansiyeli varsa havagazı yada merkezden kent ısıtması sistemi;

Çöp toplama, yok etme, yeniden yararlanma, enerjiye, dönüşme - değerlendirme, kapasitesi, yeterliliği incelenir.

Ekler:

- Kentsel ulaşımda, ulaşım sistemleri, ağı, arzu hatları, günlük akımlar gibi önemli ayrıntılar, yaya ulaşım ve otoparkların dağılımı, yeterli Ölçek ve sayıda haritalar üzerinde belirtilir.

Ulaşımla ilgili gerekli sayım sonuçları, anketler ve bunlara ilişkin haritalar ayrıca eklenir.

- Kentsel teknik alt yapıya ilişkin bilgiler nazım plan ölçeğinde bir harita üzerine

işlenerek topluca gösterilir.

9. Mülkiyet Durumu - Kentsel Arazi Değerleri:

Kent planlamasının uygulanabilirliği açısından önemli olan, kentsel ve çevresel alanda mülkiyet durumu ile arazi değerleri ve değişimi araştırılır,

Bu kapsamda Hazine, Belediye, Özel idare, Vakıflara ait alanlar ile askeri alanlar, orman alanları ve diğer kamu kuruluşlarına ve büyük altyapı tesislerine ait alanlar, ayrıca "Devletin hüküm ve tasarrufu altında" olan alanlar belirlenir.

Kent mekanında, arazi fiyatları ve zamanla değişimi de bu çerçevede araştırılır.

Ekler:

Bu iki araştırmanın sonuçları, nazım plan ölçeğinde düzenlenen haritalar üzerinde birlikte gösterilir.

10. Önceki Plan Kararları - Uygulaması - Etkinliği:

İmar planı yapılan kentsel mekanda, daha önce yapılmış ve onaylanarak kesinleşmiş ve uygulamaya konulmuş değişik kapsam ve ölçekteki fiziksel mekan düzenlemelerinden olan; önceki imar planı alanları-onay sınırları ve tarihleri-kapasite ve uygulamadaki etkinlikleri ile incelenir, değerlendirilirler.

Bu kapsamda;

Planlı uygulamalar çok tekrarlanan plan değişiklik konuları, plan dışı kendiliğinden ya da düzensiz gelişmeler belirlenir.

Ekler:

Varsa önceki planların şernalari ile bugünkü kent kullanımının karşılaştırılması nazım plan ölçeğinde bir harita üzerinde yapılır.

11. Gelişme Eğilimleri - Finansman Analizi;Üst Plan Kararları ve Yasal Çerçeve

Kentsel ve çevresel alanlarda, kentsel gelişme eğilimleri ile yatırımcı sektörlerin alan kullanımına ilişkin yerleşme talepleri, ayrıca üst plan kararları gereği kentsel alan ve yakın çevresinde plan dönemi içinde yer alacak yatırım ve etkinlikler, tüm bunlar yanısıra kentin plan uygulaması için bütçesinden ayrılabilecek ve çeşitli fonlardan

aktarabilecek mali kaynakları topluca incelenip değerlendirilir. Ayrıca kent mekanından gelişmeyi yönlendiren yasal - yönetimsel sınırlamalar ve belirleyiciler de değerlendirmeye katılırlar.

Ekler:

Bölgesel şema veya varsa kent ve yakın çevresi için getirilmiş çevre düzeni plan kararları şeması verilir.

B. Sentez

12. Sentez ve Araştırma Sonuçlarının Değerlendirilmesi

Kent planlaması sürecinin sentez aşamasında, planlama alanında getirilen bir dizi araştırmaların sonuçları birleştirilir, yorumlanır ve plan kararlarını yönlendirecek biçimde bu araştırma sonuçları değerlendirilir.

Bu amaçla önce tüm araştırma sonuçlarının bir arada gösterildiği bir Sentez paftası nazım imar planı ölçeğinde düzenlenir. Sentez, planlama sürecinin gerekli ve vazgeçilmez bir aşaması niteliğindedir.

Sentez paftası kentsel yerleşmenin büyüklüğüne bakılmaksızın imar planlaması yapılan her kent için aynı içerik ve kapsamda düzenlenir. Kentin karakteristik yerleşme özelliklerini belirleyen ve araştırma sonuçlarını topluca ve özetle veren ve Bankaca formu verilen kent karakter tablosu sentezin ekidir.

Geliştirilen sentez ve değerlendirme çalışmaları bütününde, eşik sentezi, gelişme potansiyelinin üst sınırının belirlenmesi ve kentsel nüfus projeksiyonu ile sektörel ve mekansal projeksiyonlar yapılır. Projeksiyonlarda en çok 15 yıl sonrası için bulunan tahmin esas alınır.

12.1. Eşik Sentezi, Kentsel ve çevresel alanlardan oluşan planlama alanında, bugünkü ‘arazi kullanımına ilişkin belirleyici verilerle, doğal kaynaklar, çevresel değerler, kentsel ve çevresel alanlarda gelişmeyi yönlendiren fiziksel, sosyo ekonomik, yasal ve yönetimsel eşik ve sınırlamaların birleştirilerek topluca gösterilmesi için yapılan çalışmadır.

12.2. Gelişme Potansiyelinin Üst Sınırı, Eşik sentezini izleyerek planlama alanında, aşılabilen tüm eşiklerin aşılması, kentsel ve çevresel alanda varolan kaynakların optimum düzeyde kullanılması ile kentin gelecekteki gelişmesi için alanın potansiyel gelişmesinin üst sınırını belirleme çalışmalarıdır.

Bu kapsamda ve ayrıntıda ayrıca, kentin bugünkü yerleşik alanında yapısal değişiklik yapılmaksızın boşlukların dolması ile doyma durumunda açılabilecek yerleşme alanı büyüklüğü ve kentin bugünkü yapısında bugünküne ek olarak alacağı nüfus belirlenir. Projeksiyonlar ve gelişme eğilimleri dikkate alınmaksızın, kentin nereye kadar gelişebileceğini belirleyen bu değerlendirme çalışması, planlama alanındaki yerleşilebilir ve kullanılabilir tüm alanların bir dış sınır içine alınarak tanımlanması niteliğindedir.

Hem büyük -yaygın hem de küçük- toplu yerleşmeler için aynı içerik ve kapsamda yapılan gelişme potansiyeli belirleme çalışması için uygun ölçekte bir kroki düzenlenebilir.

12.3. Projeksiyonlar,

12.3.1.Kentsel Nüfus Projeksiyonları, Planlama alanında, plan dönemi sonunda yerleşecek tüm kentsel nüfusun alt ve üst değerlerine ve dağılımına ilişkin kestirim, belirleme ve kabullerdir. Yapılan nüfus projeksiyonunu izleyerek, kentte ortalama aile büyüklüğü - hane halkı sayısına göre, gelecekteki kentsel konut ihtiyacı hesaplanır.

12.3.2.Sektörel Projeksiyonlar, Yerleşmenin nüfus projeksiyonuna bağlı olarak, işgücü projeksiyonunun ve plan döneminde lşgücünün sektörlere dağılımının, tarım, endüstri, kentsel hizmet sektörleri için, bu sektörlerde belirlenen potansiyel, yatırım projeleri ve gelişme eğilimlerine göre plan dönemi için, sektörel baağımlıkların, her sektörde belirlenen gelişmenin ve buna da bağımlı olarak kentin gelecekteki karakterinin belirlenmesidir.

12.3.3.Mekansal Projeksiyonlar, Kent mekanında, farklı sektörlerde yerleşme için gerekli alan büyüklerinin yönetmelikteki normlara -standartlara ve bu sektörde beklenilen gelişme taleplerine bağlı olarak belirlenmesidir.

Buna göre, kentsel yerleşme alanlarının gelişmesine ve gerekli kentsel altyapı ve

donanım alanlarına ilişkin ilke ve standartlara göre belirlenecek yerleşme alanı büyüklük ve ölçüsünün farklı yoğunluk ve dağınıklık kabullerine göre alt- üst sınırlarıyla bulunmasıdır. Hesap Ianan nüfus projeksiyonu, konut ihtiyacı ve plan dönemi için ortalama brüt (kentsel yoğunluk kabulleri ile yeni kentsel konut gelişme alanları ihtiyacı, benzer biçimde lşgücünün dağılımı ve sektörlerde çalışanlar) yoğunlukları ve alan standartları ile diğer kentsel kullanma alanları büyüklükleri belirlenir.

12.3.4.Kentsel - Ulaşım Talebinin Belirlenmesi, Sektörlerde belirlenen gelişme ve yerleşmenin belirlenen büyüklüklerine göre, yerleşmenin mekanda dağılımına ge~ilmeden önce, planlama alanında plan döneminde ortaya çıkacak kentsel ulaşım talebinin ve ulaşım sistemine ilişkin ilke ve standartların ön belirlemesi yapılır. Kent planlamasının ulaşım planı ile birlikte elde edildiği durumlarda, bu yöntemle yapılacak belirlemeler yerine ulaşım planlaması kapsamında getirilen değerlendirme ve belirlemeler yapılır.

Kentsel nüfus ve işgücü projeksiyonları ile ekonomik sektörlerde beklenilen gelişimin belirlendiği sektörel projeksiyonlar ve kentsel yerleşmenin belirli normlara göre fiziksel büyüklüğünün belirlendiği bu çalışmalar kapsamında, yerleşmenin kent mekanında dağılım biçimi henüz yer almamaktadır.

Mekan düzenlemesinden soyutlanmış olarak gerçekleştirilen bu projeksiyonlarda kullanılan modeller ve istatistik yöntemler, ayrıca projeksiyonlara geçilmeden yapılan varsayım ve ön kabuller açıklanır. Bilr yük ve küçük kentsel yerleşmeler için yapılacak projeksiyonlarda izlenen yöntem aynıdır.

Ekler:

- Nüfus, ilkokul öğrenci sayısı, sektörlere göre toplam çalışanlar, arazi kullanma büyüklüklerinin bugünkü ve gelecekteki ölçütlerini içerir karşılaştırmalı Tablo düzenlenir.

- Gereğinde planlanacak alanın emebileceği - gelişme potansiyeli üst sınırını - nüfus ve teçhizat doyma kapasitesinin belirlendiği uygun ölçekte bir şema verilir.

- Araştırma sonuçlarına göre belirlenen aşılabilir eşiklerle, aşılmaz kesin sınırlamalara göre gruplanan bir dizi “elek - pafta” çalışmalarının birleştlriime ve

değerlendirilmeieniyle oluşan “eşik” ve “sınırlamalar sentezi” anlatım yeterliliği olan ölçekte haritada belirtilir.

- Sentez Haritası; Konut alanları, ticari merkezler, idari alanlar, sanayi, K. Sanatlar, yeşil alanlar, gecekondu önleme bölgeleri gibi başlıca sektörel kullanış alanları, özellik gösteren yapı-doku alanları, yenilenmesi öncelikli olan alanlar, kamu elindeki planlamada kullanılabilir araziler, rekreatif veya turistik potansiyeli olan alanlar, hlyerarşik yol şeması, varsa mevcut imar planı sınırı ve hakim rüzgar yönünün gösterildiği, nazım plan ölçeğinde veya anlatım yeterliliği olan ölçekte harita verilir.

NOT: Yerleşmenin karakterine göre 3 ve 4 bir haritada gösterilebilir.

1. Kent Karakter Tablosu; Bankaca verilen tablonun başlıkları değiştirilmeden doldurulur.

C. Plan Kararları

13. Plan Kararlarına Geçiş - Plan Alternatifleri:

a. Nazım imar Planı Aşamasında, Kentsel mekanda düzenlenen imar planlarında, nazım plan aşamasında; planlamaya geçişte, kent planlamasının genel amacı yanısıra kentin özelliği ve gelişme aşamasına göre belirlenen gelişme hedefleri uyarınca ve gelişmeyi yönlendiren eşik ve sınırlamaların belirlendiği gelişme potansiyeli ve projeksiyonları sonucunda elde edilen altı üst değerlerin tanımladığı çerçevede, geleceğe dönük bir dizi varsayıma dayanılarak plan kararlarının üretilmesine geçilir.

Geleceğe dönük varsayımların sayısı arttırılsa da genelde bu kadar çok değişkenin bir arada olduğu bir fiziksel alan düzenlemesinde sadece bir tek gelişme şeması ve stratejisi bulunmaz. Farklı varsayımlara da dayanılarak kentsel alan ve onu bütünleyen çevresel alanlarda, kaynak kullanımı ile alan koruma ve kullanımı dengesinin değişlminde -ayrıca farklı kentsel alan kullanımlarının yerseçimi ve dağılımında birden çok sayıda olası kentsel gelişme alternatlfi tanımlanır. Kent planlamasının yalnız nazım imar planı aşamasında üretilen bu alternatif kentsel gelişme şemaları ve uygulama stratejileri arasında bilinen yöntemlerle farklı ağırlıkta değerlendirme kriterlerinin topluca devreye girmesi ile karşılaştırma yoluyla değerlendirme yapılır.

Gelişme alternatiflerin kent planlamasının önceden belirlenen amacına uygunlukları,

gelişme hedefleri ile tutarlılıkları, hedeflere ulaşmada yeterlilikleri ve gerçekçilikleri ile değerlendirilirler.

Her kentsel gelişme alternatifi şeması, birlikte getirdiği gelişme politikaları ve uygulama stratejileri ile birlikte değerlendirmeye alınır.

Kentsel gelişme alternatifleri arasında karşılaştırma yoluyla yapılan değerlendirme sonucunda, kentsel ve onu bütünleyen çevresel alanlarda, gelişmenin o aşaması için en uygun bulunan kentsel gelişme biçimi seçilir. Buradan kent imar planı kararlarının nazım plan ölçeğinde üretilmesine, kentsel yerleşme koruma ve kentsel alan kullanımı ile ilgili ilkelerin, politikaların belirlenmesine geçilir.

Hangi alternatif kentsel gelişme şeması ve uygulama stratejisinin ne ağırlıkta, hangi kriterlere göre değerlendirilerek ve hangi yöntemle seçildiği açıklanır.

Kent planlaması için alternatif gelişme stratejilerinin belirlenmesinde,

- Kentsel nüfus projeksiyonlarının alt yada üst değerlerini varsayan farklı nüfus büyüklüklü alternatifleri,
- Eşiklerin aşılma oranlarında farklılık getiren koruma ağırlıklı muhafazakar yada daha kayıtsız - serbest kentsel gelişme alternatifleri,
- Fiziksel mekanda farklı gelişme yönlerine ağırlık veren ve farklı gelişme alanlarında kentsel gelişme öneren alternatifler,
- Farklı yoğunluk kabulleri ile geliştirilen yoğun yada yaygın kentsel gelişme alternatif leri,
- Farklı sektörel yerleşme talepleri arasından Şeçim yaparak, sektörlerin seçilen ağırlık ve kompozisyonları kentin işlevsel yapısında farklılık getiren alternatif gelişmeler, -
- Kent mekanında, dışsal veri niteliğindeki büyük altyapı yatırımlarının farklı yer seçimlerine, yada kentsel ulaşım alt yapısının farklı yönlerde geliştirilmesine dayalı olarak üretilen alternatif kentsel gelişme biçimleri,
- Yada bunların kendi aralarında gruplaşmalarından çok sayıda kentsel gelişme alternatifi tanımlanabilir.

Ancak, üretilen alternatif kentsel gelişme şeması ve stratejilerinin tümünün, tek tek ele alındıklarında, gerçekleşemez öneriler içermemeleri, hepsinin uygulanabilir nitelikte olması gerekir.

Birden çok sayıda kentsel gelişme alternatifi, yalnız büyük ve yaygın kentsel yerleşmelerin planlamaları için ve nazım imar planının elde edilmesi aşamasında üretilir.

Küçük ve toplu kentlerde düzenlenen imar planlarında kentsel gelişmenin yönü - büyüklüğü dağılımı ve yoğunluğunun belirlenmesinde, nazım plan kararlarına ulaşmada, ancak gerek görülen durumlarda seçilen gelişme biçimi ve stratejsininn irdelenmesi, ikinci bir alternatif kentsel gelişme önerisi ile karşılaştırılması yapılır. Genellikle küçük yerleşmeler için sentez ve projeksiyonlardan sonra doğrudan nazım plan ilke kararlarının üretilmesine geçilir.

Ekler:

Alternatif kentsel gelişme şemalarının düzenlenmesinde, şemaların fazla ayrıntıya gerilmeden, önerilen gelişme biçimi ve stratejisinin kolay anlaşılır nitelikte olmaları ve yanyana koyularak karşılaştırma yoluyla değerlendirilebilmeleri için nazım imar planına göre daha küçük ölçekte haritalar üzerine şematik olarak çizilmeleri gerekir.

Alternatif gelişme şemaları üzerinde o stratejide benimsenen varsayım ve kabullerle, uygulama stratejileri yazılı olur.

Dil birliği sağlamak açısından alternatifler arasında, çizim tekniği renk ve detay farklılıkları yapılmaz. Uygun görülerek seçilen strateji de, bir kez diğer alternatiflerle birlikte ve yine aynı teknikte sunulur.

b. Uygulama imar Planı Aşamasında Plan Kararlarına Geçiş, Kent imar planları

için yapılan ön çalışmalar kapsamında yer alan araştırma ve değerlendirmeler sadece, kentsel gelişme stratejisinin belirlendiği ve gelişme ile ilgili genel ilke kararlarının alındığı nazım plan aşamasına yönelik değildir. Araştırma ve değerlendirme sonuçları hem nazım plan hem de uygulama planı ölçeğinde planlamayı yönlendirecek nitelikte olup, uygulamaya dönük yeterli ayrıntıda belirleme yaparlar.

Bu nedenle nazım imar planı ilke kararları doğrultusunda uygulamaya dönük ayrıntılarda çözüm getirecek olan uygulama imar planlarının hazırlanması aşamasında,

planlamaya geçişte, ayrıntıda yeni gelişme alternatifleri ile seçilen stratejinin yeniden irdelenmesine gerek görülmez.

Nazım planın kesinleşmesinden sonra imar uygulama planlarının ya da bir bölümünün, gelişmenin ilerdeki aşamalarına bırakıldığı durumda, onaylı nazım plan ilke kararlarının alınması için araştırma sonuçları ve değerlendirmelerin değişen koşullarda irdelenmeleri ve gereğince güncelleştirilmesi yapılır. Bu durumda uygulama planları yapılmadan önce, yapılacak yeni ek araştırma ya da lrdeleme - güncelleştirmenin gerekliliğini Banka saptar.

Ayrıca, Banka gerekli gördüğü durumlarda, yine nazım plan ve uygulama planı aşamaları arasında, ayrıntıda kentsel doku analizi yapılması, kentsel sit değerlerinin saptanması, kent estetiği ve kentsel imajla ilgili değerlendirmeler, yayalaştırma için ön araştırma, otopark ihtiyacı belirleme, kirlenme, gürültü ve görsel tedirginlik gibi çevre sorunları ile ilgili konularda ya da uygun göreceği ve eksik gördüğü diğer konularda, ölçeğin gerektirdiği ayrıntılarda yeni ek araştırma ve değerlendirmeler yapılmasını isteyebilir.

Madde. 3.02 - Plan yapım alanı 500 hektara kadar veya planlamaya esas olan gelecekteki nüfus projeksiyonu 30.000 kişiden daha küçük olan kentsel yerleşmelerde (E, F grubu) aşağıda belirlenen araştırma konuları yer alır.

1. Kentin Genel Tanımı-Bölgesi İçinde ve Çevresindeki Yeri:

Kent, bulunduğu bölgenin yönetimsel ve ekonomik bütünlüğü içindeki yeri ve özelliği ile tanımlanır.

Ayrıca, kent planlaması çevre düzeni planlaması ile birlikte bir bütün olarak düzenlenmiyor ise kent çevresi ile birlikte ele alınarak kentsel çevresel alanların bütünlüğü ve ilişkileri irdelenir.

Bu kapsamda,

- Kentin, bölgesindeki idari yeri
- Kentin ekonomik yapısı (Sanayi, tarım, madencilik gibi en etken uğraşısı), etkilendiği veya etkilediği alan veya yerleşimler,

- Yakın çevresindeki kırsal kentsel yerleşimler, bu yerleşimlerin nüfusları ve kente olan uzaklıkları,
- Kentin önemli ulaşım akslarına uzaklığı, 1/100.000 veya 1/250.000 ölçekli şemada belirtilir.

2. Kentin Mekan Oluşumu:

Kentin bugünkü formunu etkileyen tarihi değişimler varsa, buna özet bilgileri, tescilli anıtsal yapılar, sit alanlan, ayrıca planlamada dikkate alınması gereken tarihsel çevre, bozulmamışlıkları ve bütünlükleri açısından korunması gerekli alanların belirlenmesini amaçlayan çalışmaya gerektiğinde 3.01 Madde, 2. Bendindeki şekiller eklenir.

3. Fiziksel Yapı -Çevresel Kaynaklar:

Kentin özelliklerini belirten değerler;

İklim, topoğrafik, jeolojik veriler, akarsular, genel bitki örtüsü (Orman, sulu tarım, toplu ağaçlık vb.), kaynaklar, toprak verimliği özeti (Toprak kabiliyeti), sakıncalı alanlar, çevre sorunları ve görsel değerlerdir.

NOT: Jeolojik raporun tamamı ön çalışma raporu sonunda ek olarak verilecek, bu bölümde tavsiyeler vb. planlamaya etkili bilgiler özetle eklecektir..

Eğim, jeolojik bilgileri içerir harita, kolay anlaşılabilir ölçekte olmalıdır.

4. Kentsel Nüfus – Sosyal Yapı:

- Kentin geçmiş yıllafdaki nüfusu yıllık büyüme hızları, ortalama yıllık artış oranı,
- Bu ortalama değerden önemi derecede sapma gösteren artışların nedenleri,
- Etkisi önemli ise göçler,
- Hanede ortalama aile sayısı, aile büyüklüğü, hane halkı büyüklüğü,
- Araştırmanın yapıldığı yıldaki kent nüfusu (numarataj, sayım veya hane adedi x ort. aile büyüklüğü x hanede ürt. aile sayısı hesabından),
- Yerleşmenin yapısına uygun olduğu tartışılan metodlara göre yapılan demografik nüfus projekslyonları,

- Sosyal yaşantı ve özellikler, okuma oranı (okuyan ilkokul öğrenci sayısı/ilkokul çağı nüfus).

Nüfus projeksiyonlarını içerir grafik verilir.

5. Ekonomik Yapı:

imar planı çalışmaları için kentsel yerleşme alanlarında genel çizgileriyle, bugünkü ekonomik yapı ve mevcut işgücünün sektörlere dağılımı Ile kentin ekonomik gelişme potansiyelinin belirlenmesi ve özellikle kentsel, çevresel alanlarda iş-konut ilişkisinin değerlendirilmesi amaçlanır.

Bu kapsamda;

İş gücünün ekonomik sektöriere dağılımı; tarım, sanayi ve hizmetler sektöründe türel, niteliksei ve sayısal analizler yapılır.

6. Bugünkü Kentsel Alan Kullanımı ve Altyapı:

Kentsel alanda plan yapıldığı sırada mevcut arazi kullanımı ve kentsel altyapı bugünkü karakteristikleri ile belirlenir.

Kentsel alan kullanımı-dağılımı ile ayrıntıda yapı adalarında yapı yoğunlukları ve büyük boşluklar gösterilir.

Bu kapsamda aşağıda alt başlıkları ile sıralanan konularda gerçekleştirilen bu araştırmalar için bu şartrıamenin 3.01 Maddesinin 7. Bendinde açıklanan büyük yerleşmelerde yapılan çalışmalar yöntemi değiştirilen mederı, kapsamı yeterince daraltı-larak uygulanır.

6.1. Konut Yerleşme Alanları,

6.2. Kentsel Merkez (Tek merkez olması durumunda etki alanı kademelenme

ve işlevsel farklılaşmanın analizi gereksizdir.)

6.3. Sanayi Alanlan,

6.4. Kentsel Yeşil Alanlar,

6.5. Kentsel Sosyal Donanım (Eğitim, Sağlık, Kültür, Eğlence, Turizm),

6.6. Tarım,

6.7. Orman,

6.8. Askeri Alanlar,

6.9. Mezarlıklar.

7. Kentsel Ulaşım ve Teknik Altyapı:

Küçük kentlerde yapılan araştırmalar kapsamında, kentsel ulaşım ve kentsel teknik alt yapıya ilişkin olarak yapılacak belirlemelerde, sistem çok genel çizgileriyle anlatılır. Ulaşım alt yapısının ve teknik alt yapının sadece varlığı ve niteliği tanımlanır. Ayrıntılı anket ve araştırmalar ile kapasite yeterlilik ve potansiyel irdelemeleri yapılmaz.

Bugünkü kentsel ve çevresel arazi kullanma, kentsel ulaşım ve altyapının belirlenmesinde uygulanacak sunma biçimi ve kapsamı bir önceki maddedeki büyük kentlerde uygulandığı gibidir.

8. Mülkiyet Durumu-Kentsel Arazi Değerleri

9. Öncekli Plan Kararları- Uygulaması - Etkinliği

10. Gelişme Eğilimleri-Finansman Analizi Üst-Plan Kararları ve Yasal Çerçeve:

Küçük kentlerde yapılan araştırma ve belirlemeler büyük kentlerde yapılanlar gibi yöntem ve teknikler uygulanır.

11. Sentez-Plan Kararları - Plan Alternatifleri:

Bu şartnamenirı 3.01 Maddesi 12. ve 13. Bentlerinde belirtildiği gibi yapılır.

Ek İmar Planı (İmar Planı Llavesi) İçin Yapılacak Araştırma ve Değerlendirme Çalışmaları

Madde. 3.03 - Ek planda Amaç, Kapsam, Yöntem:

1. Amaç ve Kapsam:

Yürürlükte bir imar planı bulunan kentsel yerleşmelerin yakın yada, imar planı yapımı sonrasında değişen koşullarda yeni kentsel gelişme alanları açılması uygun bulunduğu durumlarda, mevcut planla bütünleşerek yada ilişkileridirilerek çevresel alanlarda yeni koruma ve kullanma kararları getirmek amacıyla “Ek Plan” (imar planı ilavesi) düzenlenir.

Ek planlar, özellikle yürürlükteki onaylı imar planlarının, uygulama aşamasında kendi plan sınırları içindeki alanda, kararlarında tutarlı, yeterli ve uygulanabilir olarak değerlendirildikleri ve uygulamanın izlenmesi sonucunda ekonomik ömürleri, henüz dolmayan planların tümüyle yenilenmesine gerek görülmediği durumlarda; bununla .; birlikte çevrede plan yapımı sırasında bulunmayan yeni bir dış-veri, bir büyük altyapı yatırımı yada yeni bir potansiyel belirlemesi ve talep yoğunlaşması olduğu belirlendiğinde, bu yönde yada yönlerde ek bir kentsel gelişmenin toplum yararına uygun olduğunun saptanması durumunda düzenlenir.

Ek planlar ile,

1. Yasal ve ekonomik ömrü henüz dolmamış imar planlarının gerekli görülen ekleme-kararları ile geçerlik ve yürürlük sürelerinin uzatılması, uygulamayı bu yolla izleyen planlamanın dinamizminin artırılması,
2. İmar planlarının tüm aşamalarıyla yeniden ele alınarak yeniden yapılmalarına göre çok daha kısa sürede, çevrede belirlenen yeni gelişme potansiyeli ve yönlendirilmesi gerekli görülen yeni yerleşme talebine göre yeni plan göre plan kararlarının getirilmesi sağlanır.

Ek plan gerektiğinde, yürürlükteki planla bütünleşmesi yada bağlantısı bir nazım plan şemasında gösterilmekle birlikte, doğrudan imar uygulama planı ölçeğinde düzenlenir.

Ek planın, yürürlükteki mevcut imar planının bütünleri olduğundan fiziksel mekanda mevcut plan ile ya tam kenarlaşarak bütünleşmesi yada ilişkilendirilmesi gereklidir. Bu amaçla ek plan (imar planı ilavesi) plan sınırları yürürlükteki imar planı sınırlarına bağlanır. Böylece ek planın onaylanmasıyla ortaya planın bütünleşmiş durumu ile yürürlük alanını belirleyen bir tek yenilenmiş imar planı sınırı çıkar. İki plan sınırları arasında boşluk bırakılmayacağı gibi bu sınırlar içinde karar getirilmemiş alanda bırakılmaz.

2. Ek İmar Planı İçin Yapılacak Araştırmalar:

Ek planlar için araştırma ve planlama sürecinin tümüyle yenilenmesi gerekmez. Ancak fiziksel mekanda plan sonrası ortaya çıkan değişikliklerden kaynaklanan ve gelişmeye açılmasına karar verilen yeni alanlarda üretilen ek-plan kararlarını yönlendirecek bir dizi

araştırma raporu ile yetinilir.

1. İlave alanının kent bütünündeki fiziki yeri ve ilavesi önerilen alan ile mevcut kentin ilişki ve bağlantıları, ilave nedenlerinin belirtilmesi.

Uygun ölçekli kroki ile mevcut imar planı sınırı, varsa plan dışı gelişmeler ve ilave alan gösterilir.

2. Mevcut imar planı konusunda özet bilgiler:

Yapıldığı yıl, proje nüfusu, uygulanan alanlar, planın öngördüğü nüfus ve ekonomik verilerin tablosu, gerçekleşmelerin ve yeni planla birlikte düşünülen sosyo-ekonomik, demograflk tahminleri içeren bilgl, tabl olar.

3. a. ilave alanda halen bir kullanış yoksa; meyiller, jeolojik yapı, sakıncalı alanlar, toprak kabiliyeti, bitki örtüsü, kamu mülkiyetindeki araziler, korunacak alanlar, yüksek gerilim hatları gibi arazi kullanmayla ilgili veriler,

b. İlave alanda kullanışlar varsa; yukarıdaki verilere ayrıca bu kullanışlar ve sosyo-ekonomik verilerde eklenecektir.

Meyilleri, kamu mülkiyetindeki arazileri sakıncalı alanları ve eşikleri belirten arazi kullanma- sentez haritası verilecektir.

3. Ek İmar Planlarında Plan Kararlarına Geçiş:

Bu aşamada ek-plan çalışmasının bir özelliği, plan kararlarının doğrudan uygulama planı ölçeğinde üretilmesidir. Bu durumda gelişme alternatifleri üretilmesine gerek yoktur.

Ancak büyük kentlerde ve Bankaca gerekli görülen kapsam ve gelişme aşamasında, birden çok sayıda gelişme doğrultusu ve yönü, farklı yerleşme yoğunluk kabulleri yada değişik ağırlıkta sektörel yer seçimi ve yerleşme taleplerinin bulunduğu durumlarda, kısıtlı sayıda kentsel gelişme alternatifleri nazım plan ölçeğinde ve şema niteliğinde üretilip bunların karşılaştırılmaları yapıldıktan sonra ek plan kararlarının uygulama planı ölçeğinde üretilmesine geçilir.

İmar Planı Revizyonu (İmar Planı Yenilemesi) İçin Yapılacak Araştırma ve Değerlendirme Çalışmaları

Madde. 3.03 - Plan Revizyonunda Amaç, Kapsam, Yöntem:

1. Amaç ve Kapsam:

Kentsel yerleşmelerin yürürlükteki imar planlarının plan yapımı sonrası değişen koşullarda uygulamayı yönlendirmede yetersiz kaldığının idarece de benimsendiği durumlarda, yürürlükteki planın temel ilke kararları değiştirilmeden, bu plan üzerinde uygulamaya dönük ayrıntılarda bir dizi düzeltme ve yenileme yapılması amacıyla, plan revizyonu çalışması (İmar planı yenilemesi) yapılır.

Plan revizyonu, yürürlükteki onaylı imar planlarının uygulama sırasında, kapsamları ve önerdikleri kentsel gelişme ve yerleşme kararlarında tutarlı ve yeterli alan koruma ve kullanmaya ilişkin ilke kararları ile genelde uygulanabilir olarak değerlendirdikleri, bu nedenle ekonomik ömürleri henüz dolmayan planlanın yeniden ele alınarak tüm aşamaları ile yeniden plan yapımına gerek görülmediği durumlarda, onaylı imar planı sınırları içinde sınırlı bir kesimin yada bir kent bölgesinin uygulamada yeni ortaya çıkan sorunlarına çözüm getirilmesi, plan sonrası planda önerilenden farklı alan kullanımına ilişkin taleplerin toplum yararına yönlendirilmesi yada kent merkezi ve yerleşik alanlarda yapılacak toplu uygulamalar için düzen getirilmesi gereken durumlarda kısa sürede, sınırlı mekanda ve uygulama planı ölçeğinde hazırlanır,

Plan revizyonu ile,

c. Yasal ve ekonomik ömürleri henüz dolmamış imar planlarının gerekli görülen dar kapsamlı operasyonel düzeltmeler ile geçerlilik ve yürürlük sürelerinin uzatılması, böylece uygulamayı izleyen planlamanın dinamizminin artırılması

d. İmar planlarının tüm aşamalarıyla ele alınarak yeniden yapılmalarına göre çok daha kısa sürede, plan sınırı içinde gerekli düzeltmelerle gelişmenin yeniden yönlendirilmesi, sağlanır.

Plan revizyonu plan sınırları, daha önce onaylı imar planı sınırları ile belirlenen imar planı bütünü içinde dar kapsamlı bir alanı çevreler. Yeni hükümler getirilen bu kesimde plan revizyonu ile önerilen plan kararlarının kentsel alan bütününde, daha önce çevresinde getirilen onaylı imar planı kararları ile uyumlu ve tutarlı olması gerekir.

2. İmar Planı Revizyonu İçin Yapılacak Araştırmalar:

Uygulamadaki öncelikler nedeniyle kısa sürede elde edilmesi amaçlanan plan revizyonu

Için araştırma ve planlama sürecinin tümüyle yenilenmesi gerekmez. Ancak, fiziksel mekanda plan sonrası ortaya çıkan değişmelerden kaynaklanan ve revizyon gerekçesi olan aksaklık ve sorunların araştırılması ile yetinilir.

Bu kapsamda yeniden yapılacak araştırma çalışmaları, Şartnamenin 3.03 Maddesi 2. Bendindeki kapsamda olmakla birlikte, Banka işin özelliğine göre bazı araştırma konularından vazgeçebileceği gibi ilave araştırmalarda isteyebilir.

3. Plan Kararlarına Geçiş:

Genelde tanımlanan kentsel gelişme hedefleri uyarınca, kent mekanında varlığı belirlenen potansiyel ve gelişmeye etki eden belirleyiciler dikkate alınarak, yenilenen nüfus projeksiyonu dağılımı ve mekansal projeksiyonlara dayalı olarak, plan revizyonu kararlarının doğrudan uygulama planı ölçeğinde üretilmesine geçilir.

Revizyona konu olan alanın sınırlılığı, yürürlükteki onaylı planın genel ilke kararlarının bu aşamada değişmeden sürmekte oluşu ve düzenlemenin doğrudan uygulama planı ölçeğinde yapılması nedenleriyle plan revizyon çalışması için değişik plan alternatiflerinin üretilmelerine ve karşılaştırılmalarına gerek görülmez.

Yerel İmar Planları (Mevzii İmar Planları) İçin Yapılacak Araştırma Ve Değerlendirme Çalışmaları

Madde. 3.05 - Yerel Planlarda (Mevzi İmar Planları) Amaç, Kapsam ve

1. Amaç ve Kapsam:

İmar Planı Yapılması ve Değişikliklerine ait Esaslara Dair Yönetmeliğin 3. Maddesi 5. Fıkrasında açıklandığı gibi; yerel planlar kent çevresindeki alanlarda, belirlenen hedefler uyarınca yönlendirilecek ayrıntılı uygulama imar planlarını kısa sürede elde etmeyi amaçlar.

Yerel planlar, öncelikle uygulamaya geçilerek, çevresel alanlarda; sanayi, turizm, sit koruma, büyük üit yapı projeleri, Toplu Konut yada toplu yerleşim, gecekondu önleme, İmar- islah bölgeleri ve afet bölgeleri gibi kullanışlarda düzenlenirler.

2. Yerel Planlar (Mevzii İmar Planı) İçin Yapılacak Araştırmalar:

Yerel planların yapılmasında varsa çevre düzeni planı ile getirilmiş kararlara uyulur.

Yerel planlar için araştırma sürecinin tümüyle yerine getirilmesi gerekmez, ancak fiziksel mekandaki alanlarda üretilecek kararları yönlendirecek bir dizi araştırma raporu ile yetirilir.

Yerel olarak planlanacak alanın kent bütününe göre fiziki yeri, varsa çevre düzeni planı kullanma kararları ile Yeni Endüstriyel gelişme Alanları, Organize Sanayi Bölgeleri, toplu uygulanacak turizm yerleşme alanları, büyük yeşil alan düzenlemeleri, Milli Parklar, bölge parkları, toplu konut uygulamaları, yeni yerleşme alanları, Liman-Havaalanı-Baraj gibi büyük altyapıların çevrelerinde yapılan düzenlemelerde yine toplum yararına, topluca ve birlikte yürütülecek uygulamalarda:

Planlama alanının bugünkü durumunu, sorunlarını ve potansiyelini belirlemek üzere,

- Fiziksel Yapı, doğal eşikler, çevresel doğal kaynaklar ve çevresel değerlerin plan bölgesinde ayrıntıda irdelenmesi,
- Sosyo - Ekonomik eşiklerden, ulaşılabilirlik ve altyapının dağılımı ve yeterliliği,
- Çevre sorunları açısından analiz,
- Bugünkü çevresel alan kullanımının ayrıntıda analizi,
- Uygulanabilirlik için finansman analizi gibi konularda ve ayrıca konunun gerektirdiği, ilgili sektörlerin de görüşleri alınarak idarenin belirleyeceği araştırmalar yapılır.

Araştırma sonuçlarının sunulmasında, planlama Ölçeğinin gerektirdiği ayrıntıda haritalar kullanılır.

Bu haritalarda ayrıca tüm eşikler belirtilir.

3. Yerel İmar Planlarında Plan Kararlarına Geçiş:

Yerel plan düzenlenen alanın, bugünkü sentez ve değerlendirme sonuçlarıyla varsa çevre düzeni planı ile öncelik verilmede belirlenen "yörede yapılacak uygulamaya ilişkin genel çerçeve" karşılaştırılır ve doğrudan uygulama planı ölçeğinde plan kararlarının üretilmesine, buna bağımlı olarak politikaların, gelişme aşamalarının ve toplu uygulama için izlenecek yöntemin belirlenme aşamasına hızla geçilir.

Kısa sürede elde edilen bir uygulama planı niteliğindeki yerel planlar <mevzii imar

planları) için planlamaya geçişte farklı plan alternatiflerinin üretilmesine gerek yoktur.

Koruma Amaçlı - Sit - İmar Planları İçin Yapılacak - Ek Araştırma ve Değerlendirme Çalışmaları

Madde. 3.06 - Koruma amaçlı imar planlarında bu şartnamenin 3.01 Maddesinde tanımlanan araştırmalara ek olarak aşağıdaki araştırmalar da yapılacaktır.

1. Amaç ve Kapsam:

Kültür ve Tabiat Varlıkları Koruma Kanunu ile tanımlanan; tarihsel, arkeolojik ve doğal sitler ile kent mekanı ve çevresel alanlarda yer alan tarihsel çevreler ve bütünlükleri ve bozulmamışlıkları ile değer taşıyan karakteristik kentsel dokuların oluşturdukları "kentsel sit" alanlarının korunmaları, bu alanlara uygun yeni fonksiyonlar getirilmesi ve bu çevrelerde yeni yapılanmada uyulması gereken koşulların ayrıntıda belirlenmesi amacıyla koruma amaçlı imar planları düzenlenir.

Sit içeren kentsel alanlarda düzenlenen koruma amaçlı imar planları, kentsel yerleşmelerin imar planları kapsamında olup, bütün aşamalarında izlenen araştırma değerlendirme ve planlama yöntemi imar planlarında olduğu gibidir.

Ancak, sit içeren kentsel yerleşmelerin koruma amaçlı, imar planlarının düzenlenmesinde, öncelikle araştırma ve değerlendirme aşamalarına bazı ek çalışrnalar yapılması istenir.

Koruma Amaçlı İmar Planlarında Yapılacak Ek Araştırmalar

Sit içeren kentsel yerleşme alanlarında yapılacak planlamalarda, imar planları için yapılanlara ek olarak ayrıca şu araştırmalar yapılır.

Şartnamenin 3.01 Maddesinde tanımlanan kent planlaması için yapılacak araştırmalara ilişkin anlatım ile,

Tarihsel Çevre: Kentin mekan oluşumunda tarihsel çevrenin tanımlanması için, tek tek tarihsel ve mimarlık değerleri olan yapıların birbirleriyle ve çevrelerindeki bahçeler, duvarlar, sokaklar, meydanlar, çeşmeler ve ağaçlarla birlikte oluşturdukları, bütünlükleri ve bozulmamışlıkları açısından değeri olan karakteristik kentsel dokunun belirlenmesi ve değerlerinin analizi yapılır.

Kentsel dokuyu oluşturan yapılana tek yapı ölçeğinde:

Yapının yapıldığı devir ve üslup belirlenir.

Yapının ya da dokunun bozulma nedenleri, dış etkiler, yapı tekniği, malzeme eskimesi, terk edilme, bakımsızlık ve tahrip durumu tespit edilir.

Korunma durumunun analizi: Yapının orijinal durumu ve şimdiki durumu arasında değişme oranı, müdahaleler, iyi orta kötü korunmuş yapıların belirlenmesi, tesbit ve tescil işlemi tamamlanmış yapının, tarihsel, mimarlık değeri ve konumu nedeniyle anıtsal niteliği yada çevresel değeri ile sınıflanması belirtilir.

(A); Anıtsal niteliği olan yapı,

(Ç), Çevresel değeri olan yapı,

(Ç1), Çevresel (1) değerli yapı - Geleneksel ve.yöresel yapı tekniği ile yapılmış, tüm özelliğini koruyan, içte ve dışta onarım dışında hiç bir müdahale yapılmaması gereken yapı,

(Ç2), Çevresel (2) değerli yapı - Cephe özellikleri aynen korunarak iç mekanda her türlü değişiklik ve yenileme yapılabilen yapı,

(Ç3), Çevresel (3) değerli yapı röleveleriyle belgelenerek yıkılmasında sakınca olmayan yazı olup yerine yeniden yapılanmada yapısal özellik ve çevre koşullarına uyulur.

(Ç4), Çevreye aykırı yapı, oluşmuş karakteristik kentsel dokuya yapısal özellikleri ile uymayan yapıdır.

Kentsel dokuyu bütünieyen dış mekanlarda sokak ve meydan ölçeğinde: Yapılar, avlular ve bahçeleri ile bunları çevreleyen bahçe duvarları, bunların sınırlayarak belirlediği dış mekanlar, sokaklar, meydanlar, yer kaplamaları, çeşme, bahçe kapısı, sundurma, merdiven, ağaç ve diğer güzel görünümlü korunması gereken değerler ile dış mekan özelliklerini ve görünümü karakterize eden değişen cephe çizgisi, cephe dolu-boş oranları, cephe rengi, kaplaması, çıkmalar,saçak, baca, çatı eğimi ve kaplaması gibi mimari ve yöresel özelliklerin belirlenmesidir.

Yerleşme ölçeğinde: Kentsel ve çevresel alanlarda tarihsel çevreler, bozulmamışlıkları ve bütünlükleriyle karakteristik kent dolçuları, kentsel sit alanlarının önceki analizlere

dayanılarak dış sınırlarının belirlenmesi olup bunlar dışında kalan tek yapı yapıca kısıtlı çevrelerde yapı grupları oluşturan anıtsal ve çevresel değeri olanların, kent mekanı ve çevresinde yöreye özellik veren doğal oluşumlar, yapay elemanlar, korular, ağaçlıklar, çayırlar gibi yeşil bütünlerin - peyzaj değerlerinin belirlenmesidir.

Araştırma sonuçlarının çizlli belge olarak sunulmasında uygulama planı ölçeğinde ayrıntılı haritalar yanısıra, ayrıntılı doku özelliklerini ve dış mekanların ayrıntılarını belirleyen teknikte düzenlenmiş, kentsel tasarım ölçeği ve gerektiğinde mimari ölçekte plan, kesit, cephe resimleri, perspektif, röleve, fotoğraflar kullanılır. Gerektiğinde renk kullanılarak anlatım yapılır.

Tek yapı ölçeğindeki araştırmaların sonuçlarının çizili anlatımında, yapılar tek tek nitelikleri, devir ve üslup özellikleri ile anıtsal ve çevresel değer sınıflarına göre. ayrıca iyi korunmuş, onarım gerektiren, harap durumda oluşlarıyla tanımlanırlar. Yapıların ve bunlardan oluşan dokuların orijinal durumda, değişmemiş, az yada çok değişmiş veya bozulmuş durumda oluşları belirtilir.

Dış mekan ile ilgili değerlerin belirlenmesi için ayrı haritalar ve bunlarla birlikte sokak ve meydan cephe resimleri kullanılır.

Yerleşme ölçeğinde belirlemeler ve alan sınırlarının gösterilmesi için nazım plan ölçeği yeterlidir.

3. Koruma Amaçlı İmar Planlarında Sentez ve Ek Değerlendirme:

Bu şartnamenin 3.01 Maddesinde açıklanan kent imar planları için yapılan sentez ve değerlendirme çalışmaları kapsamı dışında koruma amaçlı imar planlarında ayrıca aşağıdaki çalışmalar da geliştirilir.

Sentez, eşik sentezi, potansiyel belirlenmesi ve projeksiyonlara ek olarak, tarihsel çevre sentezi, tarihsel çevrenin bölgelenmesi belirlenir.

Bu kapsamda ve tüm yerleşme ölçeğinde:

1. Bozulmamışlığı ve bütünlüğü açısından korunması gereken kentsel dokunun çok yoğun olduğu alanlar,
2. Kötü eklentilerden arındırma ve sağlıklaştırma getirilmesi gerekli görülen

korunabilecek kentsel dokuların bulunduğu alanlar,

3. Biçimsel bozulmanın yoğun olduğu kentsel dokular, kısıtlı koruma yanısıra çevreye uyumlu yapılaşmaya açılabilecek alanlar,
4. Ayrıca çevresel alanlarda, özel araştırma ve kazı yapılmasını gerektiren alanlar - arkeolojik alan belirlemeleri ile doğal güzellikleri ile - doğal sit olarak tescilli olmasa bile belirtilmeleri gereken yöreler saptanır.

Tarihsel çevre sentezi - bölgelemesi - sentez ile aynı ölçekte haritalar üzerinde gösterilir ve sentez çalışmaları bütününde değerlendirilir.

Belirlenen farklılaşmış bölgelerde yada planlama analiz ünitelerinde tarihsel çevrede doku özelliklerinin ve uygulanması gereken koruma sağlıklılaştırma - yenileme stratejilerinin ayrıntıda yerlerinin belirleneceği ve dış mekanda korunacak ve düzenlenebilecek sokak ve meydanların gösterildiği haritalar değerlendirme çalışmasına eklenir.

4. Koruma Amaçlı İmar Planlarında Plan Kararlarına Geçiş

Tarihsel çevre ve kentsel sit alanları ile ilgili değerlendirme sonuçlarının koruma-zararlı eklentilerden arındırma - düzeltme - sağlıklaştırma - yeni fonksiyon getirme, kısıtlı yenileme gibi koruma ve geliştirmeye ilişkin kentsel stratejilerin belirlenmesi ve bu belirlemeierın plan kararlarını yönlendirmesi dışında, sit içeren koruma amaçlı imar planlarında da planlamaya geçiş bu şartnamenin 3.01 Maddesinde belirtildiği gibidir.

Tarihsel çevreler ve sit içeren alanlarda düzenlenen koruma amaçlı planlar, kent imar planı niteliğinde olabileceği gibi yerel plan, ek plan ve plan revizyonu niteliğinde de hazırlanabilirler.

Bu durumda, bu madde hükümlerinde getirilen koruma amaçlı imar planları için yapılacak ek araştırma ve değerlendirmelerin, söz konusu plan ölçeklerinde de yapılarak araştırma ve değerlendirmelerin kapsamının genişletilmesi gerekir.

Ulaşım Planlaması İçin Yapılacak Ek Araştırma ve Değerlendirme Çalışmaları

Madde. 3.07 - Ulaştırma Planlamasında bu şartnamenin 3.01 Maddesindeki işlere ek olarak yapılacak çalışmaların Amaç, kapsam ve yöntemi:

1. Amaç ve Kapsam:

Kentsel mekanın özellikleri ve alan kullanımının bugünkü karakteristiklerinden çıkılarak; plan dönemi için olacağı belirlenen ulaşım talebine göre, ulaşım sistemini, ulaşım ağını, standart ve kapasiteleri ile, ulaşımın türlere dağılımını, toplu taşınım, hareketli ve duran trafik ve yayalaştırma konularında uygulamada gerekli ayrıntıları ve geometrik düzenlemeleri, kısa ve uzun dönemde sorunlara çözüm önerileri ile trafik yönetimine ilişkin öneriler getirmek amacıyla ulaşım planlaması düzenlenir.

Ulaşım planlamaları yerleşme fiziksel plan kademeleriyle karşılıklı etkileşim durumda ve bunlarla bütünleşmiş olarak birlikte ele alınırlar.

Farklı plan kademelerinde yerleşmelerin büyüklük ve nitelikleri ile gelişme aşamalarına göre, değişik ölçüm ve araştırmalara dayalı olarak farklı amaç ve kapsamda ulaşım planları üretilir.

Hangi kentsel yerleşme yada yerleşmeler bütününün hangi gelişme aşamasında yerleşme fiziksel planlaması ve imar planı yapımı ile birlikte ulaşım planlamasının da yapılması gerektiğine idare karar verir.

2. Ulaşım Planlaması İçin Yapılacak Ek Araştırmalar:

Burada nazım imar planı aşaması da bulunan bir büyük kentin, imar planı çalışmalarıyla birlikte yürütülen kentsel ulaşım planlaması için yapılması gerekli görülen araştırma çalışmaları tanımlanmıştır.

Bu kapsamda,

1. Genel Ulaşım Bilgileri:

1.1. Planlama alanının ve kentin ülke ulaşım sistemi ve bölgesel ulaşım ağı içindeki yeri ve önemi, bağlantıları.

1.2. Ulaşım Sistemi-Ulaşım Ağı: Planlama alanında bugünkü ulaşım sistemi ~ve kentsel ulaşım ağı'nın kademelenmesi, fiziksel ve geometrik standartları,

1.3. Taşıt sayıları: Planlama alanında-kentte, bugün var olan raylı, lastik tekerlekli toplu taşın türleri, sayıları, ara toplu taşın türleri, sayıları, özel oto sayıları ve bu sayıların zamanla artışı, artış oranları,

1.4. İşletme güzergahları - kapasiteleri: Toplu Taşın ve Ara Toplu Taşın Güzergah ve kapasiteleri,

1.5. Ulaşım donanımı - Terminaller: kentin dış bağlantıları, çevresel bağlantılar ile kent içi toplu taşın, ara toplu taşın durakları, istasyon ve iskeleler, katar düzenleme, terminaller, otopark, hangar ve garajlar,

1.6. Ulaşım proje ve yatırım programları: Ulaşımla ilgili kuruluşların programlanmış ve kesinleşmiş yatırım proje ve kararları, (Karayolu-demiryolu-deniz ve havayolu).

2. Yolculuk ve Taşıma Bilgileri:

2.1. Düzenli yolculuklar-Dağılımı: Toplu taşın, ara toplulaşın ve bireysel yolculuklar için ayrı ayrı elde edilecek kentsel-bölgeler arası düzenli yolculuk dağılımları,

2.2. Araç ve yolcu sayısı: Araç türlerine göre perde hattından ve önemli kavşaklardan geçen araç ve toplam yolcu sayıları, kente giren - kentten çıkan ve transit geçenler bulunarak, doruk saat payı ayrıca belirlenir.

2.3. Toplu taşınla yolculuk: Güzergahlara göre günlük toplu taşın yolcu istatistiklerinin derlenmesi-raylı toplu taşın, otobüs, minibüs, dolmuş sayısı belirlenir,

2,4. Düzensiz yolculuklar: Doruk süresinde yer alan düzensiz-iş ve okul dışı amaçlı yolculuklar, durak ve benzeri noktalarda örnekleme ve anketlerle saptanır,

2.5. Kentsel yük taşıması: Kentsel yük taşınması ile ilgili bilgiler, hal, depolama, sanayi kuruluşları ile yapılan anketler, kordon ve perde hattı sayımları ile toplanır,

2.6. Doruk saat yolculuk dağılımı: Kent bölgeleri arasında düzenli yolculuk dağılımı tablosunun diğer yolculuk ve taşımacılık bilgileriyle değerlendirilecek, ve gerektiğinde düzeltme yapılarak, doruk toplam yolculuklar çıkış-yarış tablosuna dönüştürülür. (Toplu taşın-ara toplu taşın ve bireysel ulaşım için).

Kentsel ulaşım planı için yapılan araştırma çalışmalarından, genel ulaşım sistemı bölgesel ulaşım ağı ve kentin dış çevre ile bağlantılarının belirlenmesinde çevre düzeni yada kent bütünü nazım planı ölçeğinde;

Kentsel ulaşımda ulaşım ağı, kent bölgeleri ile kordon ve perde hatlarının belirlenmesi, ayrıca, yolculuk dağılımlarının gösterilmesi için, amaçlanan ayrıntıda kent nazım planı,

özelliği olan merkez bölgelerde uygulama planı ölçeğinde haritalar kullanılır.

Araştırmalarda, bunlar dışında gerekli istatistik gösterme yöntemleri, tablo ve çizimlerden de yararlanılır.

3. Ulaşım Planlamasında Sentez ve Ek Değerlendirme:

Birlikte düzenlendikleri yerleşme fiziksel planlamaları ile sürekli ve karşılıklı etkileşim durumunda sürdürülen ulaşım planlaması çalışmalarının sentez ve değerlendirme aşamasında, gelecekteki plan dönemi sonu için ulaşım bilgilerinin elde edilmesinde, fiziksel yerleşme planlamasının değerlendirme aşamasında geliştirilen projeksiyonlar kullanılır.

Bu kapsamda kentsel ulaşım planlamasında:

a. Gelecekteki ulaşım talebinin belirlenmesi: kent imar planında, bu şartnamenin 3.01. Maddesinde belirlenen değerlendirme çalışmaları kapsamında geliştirilen plan dönemi sonu için nüfus projeksiyonu ve bağımlı olarak işgücü ve okuyan nüfusa ilişkin bilgilerin denenmesi yapılır.

b. Gelecekteki toplam yolculuk dağılımı: Doruk süresinde, kent bölgeleri arasında toplam yolculukların düzenli ve düzensiz yolculuk toplamlarının belirlenmesidir. (Gelecekteki doruk saat, toplam yolculuklar, başlangıç-yarış tablosu).

c. Doruk Saat yolculuk yüklemesi: Doruk saate düşen yolculukların ulaşım koridonlarına yüklenmesi yapılır.

Ulaşım planlaması İçin değerlendirme aşamasında araştırma sonuçlarının sergilendiği ölçeklerde yeter sayıda harita kullanılır.

4. Ulaşım Planlaması Plan Kararlarına Geçiş-Türel Dağılım Alternatifleri:

Plan kararlarına geçiş aşamasında da ulaşım planları, birlikte düzenledikleri yerleşme fiziksel planlamaları ile sürekli etkileşim içinde bulunurlar.

Bu kapsamda;

a. Kentsel ulaşım politikalarının saptanması: Kentsel gelişme hedefleri, belirlenen planlama stratejiieni, kriterleriyle, ilgili kamu kuruluşları ve yerel yönetimlerin plan dönemi için karar ve öngörülen ile gelişme eğilimleri dikkate alınarak uygulanacak

ulaşım politikaları belirlenir.

b. Türel dağılım alternatifleri: Belirlenen ulaşım politikaları ile kesinleşmiş ve olası projelerde dikkate alınarak ulaşımın türel dağılım alternatifleri ve bunları gerçekleştirecek yönetimsel ve mali önlemlerin belirlenmesidir.

c. Alternatiflerin değerlendirilmesi: Bu şartnamenin 3.01 Maddesi 13. bendinde belirtilen kentsel gelişme alternatifleri ile ilgili olarak, karşılaştırma yoluyla ve ağırlıklı değerlendirmeyle türel dağılım alternatifleri, test edilen alternatif, kentsel gelişme stratejileri ile birlikte değerlendirilirler.

Değerlendirme sonunda seçilen alternatif kentsel gelişme şeması ve stratejisine en uygun olan, bu stratejiyi tamamlayan türel dağılım alternatifi seçilir.

Bu çalışmadan sonra, kent planlaması kararları ile birlikte ulaşım planlaması karar ve önerileri belirlenir.

Kentsel ulaşım planlaması birlikte düzenlenen Kent imar planı ile (yada nazım imar planı ile) aşağıda belirlenen aşamalarında karşılıklı etkileşim ve bilgi aktarımı ilişkisi içinde bulunur.

- Araştırma aşamasında: Düzenlenen anket, analiz ve sayımlarda birliktelik ve bilgi aktarımı;
- Sentez ve değerlendirme aşamasında: Ulaşılabilirlik eşiğinin tanımında, ulaşım plarlamasından kent planlamasına; nüfus işgücü ve okullaşmaya ilişkin projeksiyonların aktarımında kent planlamasından ulaşım planlamasına bilgi aktarımı,
- Planlamaya geçişte; Kentsel alternatif gelişme stratejilerinin belirlenmesinde türel dağılım alternatif lenine ilişkin varsayım ve kabullerin aktarılması ve seçilen alternatif kentsel gelişme stratejisinin, seçilen türel dağılımı belirlemesidir.

Araştırma - Değerlendirme Çalışmalarında Genel Hükümler

Madde. 3.08 - Yerinde yapılacak ön çalışmaların veri toplama safhasında bu şartname ekinde verilen “Ana lşler Tablosu”ndan yararlanılabilir. Araştırma ve Planlama

safhalarında; Devlet Planlama Teşkilatı, Devlet istatistik Enstitüsü, Tapu ve Kadastro Genel Müdürlüğü, Milli Savunma Bakanlığı ilgili Daireleri, Ulaştırma Bakanlığı, Bayındırlık ve lskan Bakanlığı ve ilgili Daireleri, Meteoroloji Genel Müdürlüğü, Sağlik ve Sosyal Yardım Bakanlığı, Enerji ve Tabii Kaynaklar Bakanlığı, Sanayi ve Ticaret Bakanlığı, Kültür ve Turizm Bakanlığı gibi ilgili kurum ve kuruluşlarla, Belediyesinin diğer kuruluş ve gerekli hallerde özel kuruluşların, planlanan belde için araştırma konuları üzerinde yapmış oldukları çalışmalar ile sonuçları ve planlama ile ilgili görüşleri alınır.

Madde. 3.09 - Planlanan mahallin özelliğine göre Banka araştırma grubunu değiştirebilir, yeni araştırma konuları tespit edebileceği gibi, ilgili maddelerde belirtilen araştırma konularından bazılarının araştırılmasından vazgeçilmesinede karar verebilir.

Bölüm 4 Planlama

Genel Esaslar

Madde. 4.01 - Kent imar planları "Nazım imar Planı" ve "Uygulama İmar Planı" olarak hazırlanır. imar planları onanma işlemi tamamlanıp kesinleşmeden önce 'Nazım İmar Planı Tasarısı" ve "Uygulama İmar Planı Tasarısı" olarak isimlendirilir.

Madde. 4.02 - Kent İmar Planları, imar kanunu ve ilgili yönetmelikler ile bu şartname esaslarına göre hazırlanır.

Nazım İmar Planı

Madde. 4.03 - Nazım imar Planı, "İmar Planı Yapılması ve Değişikliklerine Ait Esaslara Dair Yönetmelik"te belirtilen standartlara ve lejant için verilen çizim tekniğine uyularak hazırlanır. Onaylı halihazır haritalar üzerine çizilen nazım imar planı, yerleşmenin büyüklüğü ve yaygınlığına ve eldeki onaylı harita olanaklarına göre 1 /2000, 1/5000, 1/10000, 1/25000 yada 1/50000 ölçeklerin biri seçilerek hazırlanır.

Fiziksel mekanın düzenlenmesinin nazım plan aşamasında, çeşitli arazi kullanışları ana hat ve yoğunluklarıyla, uygulama imar planı yapılacak alan sınırı, varsa etapları ve öncelikleri belirtilir. Çizili olarak ifade edilemeyen konularda, nazım plan ilke kararlarına açıklık kazandırmak, uygulama planlarını ve uygulamayı yönlendirmek açısından gereği kadar plan notu ve plan hükmü nazım imar planı paftaları üzerine

yazılır. Plan notları ve hükümleri planla birlikte onaylanır.

Madde. 4.04 - Nazım imar planında, planlanan alanın özelliğine göre aşağıdaki hususlar yönetmelikte verilen lejanta göre çizilerek gösterilir ve şu ana başlıkları kapsar:

1. Sınırlar; devlet, il, ilçe, belediye, mücavir alan, plan onama v,b.,
2. Özel koşullu alan sınırları,
3. konut yerleşme alanları:

a. Yerleşik (meskun) konut alanları,

b. Gelişme (inkişaf) konut alanları,

4. Kentsel çalışma alanları:

- Yönetim merkezleri
- lş merkezler,
- Depolama, sanayi alanları,

- Turizm yerleşme alanları,
- Koruma alanları; sit, tarımsal nitelik, su kaynağı, jeolojik v.b. nedenlerle koruma, enerji nakil hattı, askeri alanlar,
- Açık ve yeşil alanlar; park, diğer yeşil alanlar,
- Kentsel sosyal donatı alanları; eğitim tesisleri, spor, sağlık, kültür v.b.
- Kentsel teknik alt yapı; yollar, otoparklar, demir-deniz-hava yolu, toplu taşınım aksları, enerji üretim ve dağıtım, su, kanalizasyon, çöp tesisleridir.

Madde. 4.05 - Nazım imar planında gerektiğinde yer alan plan notları ve hükümleri:

- Kentsel gelişme alanlarında “uygulama imar planı yapılıp, Belediyesince onanmadan inşaat uygulamasına geçilemeyeceği”ne ilişkin hüküm,
- Planlama alanında, daha önce onaylı imar planı yada yerel planların bu planla çelişmeyen plan kararları ve ters düşmeyen hükümlerinin geçerli olduğunu,

Bu planla yeterli açıklama getirilmeyen konularda; öncelikle üst düzeyde onay¬lı çevre düzeni nazım planı kararlarına ve ilgili yasal düzenlemelerle getirilmiş olan hükümlere

uyulması gerektiğini,

Bu kapsamda, imar, kıyı, orman, toprak-tarım, karayolları-trafik, kültür ve tabiat varlıkları, turizmi teşvik, çevre, sağlık, hıfzısıhha, gayri sıhhi müesseseler, yüzeysel su kaynakları, afetler, deprem, gecekondu, düzensiz gelişmeler toplu konut ve otopark konularında, yürürlükteki kanun, tüzük ve yönetmeliklerle belirlenen hükümlerin hangi durumlarda nazım plan önlem ve kararlarıyla birlikte uygulanacağı, kentsel alanda getirilen bölgeleme alan kullanımı ve yerleşme düzeni ilkeleri ile yerleşme, kullanma, koruma ve yasaklama kararları ve kentsel alt yapı ve donanıma ilişkin uygulamayı yönlendirecek bir dizi önlem ve koşullar açıklanır.

Bu kapsamda, bu maddenin önceki fıkralarında tanımlanan kent bölgeleri ve kentsel koruma ve kullanma alanlarında yerleşmesine izin verilen kullanmanın niteliği fiziksel mekanda bölünme ve yapılanma koşullarına esas olacak yoğunluklar ile gelişmeye getirilen niteliksel, fiziksel ve yapısal sınırlandırılmalar tanımlanır.

Bu çerçevede:

2. Yerleşik ve gelişme alanlarında brüt yoğunluklar, ayrıca gerekli görülüyorsa en küçük bölünme (Minimum parsel büyüklüğü), en çok yapılanma (Maksimum TAKS, KAKS), en çok kat adedi, en çok yapı yaklaşma uzaklıkları,
3. Karakteristik doku özellikleri ve kentsel sit alanlarında uygulanacak strateji uyarınca çevresel, yapısal koruma ve kullanma ilkeleri ile mimari karakteristikleri, kentin genel görünümünün bozulmaması ve kent estetiği açısından, özel önlemler uygulanacak bölge içinde uygulama stratejisi,
4. Yerleşme alanı (iskan) yada yerleşme dışı (iskan dışı) alanlarda kalan tarih¬sel çevre, görsel değerler, çevrenin yeşil örtüsü, doğal ve çevresel değer¬lerin, değerli tarım topraklarının, ormanların korumaları için bu alanlarda uygulanacak koruma stratejisi ile izin verilebilecek yapıların nitelikleri, bölünme ve yapılanma koşullarına getirilen sınırlamalar,
5. Kentsel yerleşmeye elverişli olmayan sakıncalı alanlar, koruma bantları yada koruma kuşakları içinde kalan alanlarda uygulanacak hafriyat (kazı), doldurma, yıkım yada bataklık kurutma, deniz doldurma gibi konularda getirilen

yasaklamalar ve yapı yasaklarının nedenleri ile nitelikleri, sakıncanın ortadan kalkması durumunda yapılabilecek uygulama ve sınırlamalar,

6. Kentsel kullanma alanlarında, kentsel çevre ve sağlık koruma ilkeleri açısından yer almaması gereken yapı ve işletme türleri ile kirletici özelliği olan sanayi bölgelerinde alınması gereken çevresel önlemler,
7. Kıyı kuşağı kullanımı yada turizm amaçlı yerleşmelerde "toplumun yararlanmasına ayrılmayan yapı yapılamaz" notu ve bu amaçla tapu kütüğüne şerh konulmasına ilişkin hükmün hangi durumlarda uygulanacağı,

gereken ayrıntıda açıklanır.

Madde. 4.05 - Nazım imar Planı Plan Raporu: kentsel mekanda, bölgele¬me, alan kullanımı, yerleşme düzeni ve kentsel ait yapıya ilişkin uyulması gereken genel ilke kararları getiren nazım imar planı ile birlikte bir plan raporu hazırlanır.

Plan raporu ile;

Planlamanın amacı, plan dönemi sonunda varılması gereken kentsel gelişme hedefleri, üst plan ilke ve kararları, kentsel mekanda gelişmenin bu aşaması için seçilen kentsel gelişme stratejileri belirlenir.

Madde. 4.06 - İmar Kanununun 9. maddesinde belirtilen esaslara uyulmak suretiyle, birden fazla Belediye için, bu Belediyelerin sınırlarını ve mücavir alanlarını kapsayan nazım imar planı da hazırlanabilir.

Bölüm 5 Uygulama İmar Planı

Madde. 5.01 - Uygulama imar Planı, imar Kanunu ve ilgili yönetmelikler ile bu şartname esaslarına göre hazırlanır.

Madde. 5.02 - Uygulama imar planının tamamı bir aşamada yapılabileceği gibi idarenin uygun görmesiyle etaplar halinde de hazırlanabilir.

Madde. 5.03 - Uygulama imar planı onaylı ve varsa kadastro vaziyetide işlenmiş halihazır haritalara, yönetmelikte verilen lejant tekniğiyle çizilir. Ölçek 1/1000'dlr.

Yönetmelikte belirtilen standartlara uyulur. Oluşturulan yapı adalarında, getirilen yapı koşullarına uyan ve daha sonra düzenlenecek parselasyon planlarına yol gösterir biçimde

imar parselleri işlenir.

Kentsel gelişme stratejisinin belirlendiği, gelişme ile ilgili genel ilke kararlarının, bölgeleme, kentsel alan kullanımı ve yerleşme düzeninin belirlendiği nazım imar planı ilke kararları doğrultusunda, uygulamaya dönük ayrıntı getirmek üzere uygulama imar planlan ile, kent bölgelerinde yapı adaları ölçeğinde ayrıntılı düzenlemeler, yoğunluk ve yapı düzeni karadan getirilir. Uygulama planında gerektiğinde kitle düzeni ve.açık alan düzenlemeleri için "kentsel tasarım" teknikleri de kullanılır, verilen kitleler şematik değilse, ölçülendirilir.

Nazım planı elde edilmeden doğrudan imar uygulama planları hazırlanan küçük ve toplu kentsel yerleşmelerde seçilen kentsel gelişme stratejisi ve bölgeleme, alan kullanımı ve yerleşme biçimine ilişkin ilkeler, uygulama planı ölçeğinde ayrıntılı düzenlemelere getirilir.

Nazım planlar üzerinde gösterilen teknik ve sosyal donatım alanlarının konum ile büyüklükleri, toplam standartların altına düşülmemek koşulu ile uygulama planlarında değiştirilebilir.

Uygulama planlarıyla birlikte önemli yollara ait 1/100 ölçekli yol profillerde ayrı bir pafta halinde hazırlanır.

Uygulama imar planı ile raporu bir bütündür ve beraber onaylanır.

Kent imar planlanın, kentsel yerleşme alanlarında, koruma, kullanma ve ait yapıya ilişkin uygulamaya dönük ayrıntıda karar getiren uygulama imar planı aşamasında da, fiziksel mekan düzenlemede çizili olarak ifade edilemeyen konularda, uygulamayı yönlendirmek amacıyla yeteri kadar plan notu ve plan hükmü yazılı olarak yine planlar üzerinde getirilebilir.

Plan notlan ve plan hükümleri uygulama imar planının diğer önlem ve kararları gibi ilgili oldukları planla birlikte onaylanarak kesinleşir.

Nüfusu 100 bini geçen kentlerde otopark yönetmeliğinin plana ilgili hükümleri yerine getirilir..

Sit alanını da içeren planlarda, sit alanı planlaması için ilgili kuruluşun oluru alınır. Ayıca, turizm, sanayi, küçük sanayi içeren planlarda ilgili kuruluşların da görüşü

alınabilir.

Madde. 5.04 - Uygulama imar planında, planlanan alanın özelliğine göre aşağıdaki hususlar yönetmelikte verilen lejant ve tekniğiyle gösterilir:

Sınırlar: Planlama alanı içine giriyorsa; devlet, il, ilçe, belediye, mücavir alan sınırı, uygulama imar planı onama sınırı, imar planı etapları onama sınırı gibi planlama sınırları,

Özel koşullu alan sınırları,

Konut yerleşme alanları,

- Yerleşik (meskun) konut alanları,
- Gelişme (inkişaf) konut alanları,

Kentsel çalışma alanları,

- Yönetim merkezleri, iş merkezleri, sanayi-depolama v.b.,

Turizm yerleşme alanları,

Koruma alanları,

Sit -koruma alanları, bugünkü arazi kullanımı korunacak alanlar, yapı yasağı veya kısıtlama getirilen alanlar,

a. Açık ve yeşil alanlar,
b. Kentsel sosyal donatı alanları,
c. Kentsel teknik altyapı,
d. Yapı adaları ölçeğinde yapı düzeni ve yoğunluklar belirtilir.

Madde. 5.05 - Uygulama imar planında gerektiğinde yer alan plan notları ve hükümleri:

Bu şartnamenin 4.05. Maddesindeki nazım imar planı aşamasında açıklanan plan not ve hükümleri uygulama imar planı aşamasında da yer alacağı gibi ayrıca;

"Ada içlerinde gösterilen parselasyon bölünmeleri, parselasyon planları ha¬zırlanırken ana ilkelere sadık kalmak koşulu ile gerekli düzenlemeler Belediyesince yapılabilir" notu konularak,

Yol, yaya yolu, meydan, otopark, kentsel yeşil alanlar ve kentsel sosyal donanım alanları kamu eline geçmeden yapı uygulamasına geçilmeyeceğine ilişkin hükmün nerelerde ve hangi durumlarda getirildiği, kentsel altyapı ve donanımın getirilmesi ve aktif yeşil alan oranının arttırılması ile ilgili politikalar,

Yoğunluğu arttırılmak istenmeyen, korunacak çevresel alanlarda, mevcut kadastral yollar dışında yeni yol açılamayacağı hükmü yeni kentsel kullanımlara kara yolundan giriş yada ve kentsel alan kullanım, tür ve yoğunluklarına göre otopark ihtiyacı, kentsel toplu taşınım ile ilgili politikalar,

gereken ayrıntılarıyla açıklanır.

Madde. 5.06 - Uygulama imar Planı Plan Raporu: Nazım imar planı yapılan kentlerde uygulama imar planı raporu, nazım plan raporuna varsa ayrıntıda getirilmiş konular eklenir. Ayrıca planlanan nüfus verilmelidir.

Nazım imar planlarının yapılmasına gerek görülmeyen ve doğrudan imar uygulama planlarının düzenlenmesine geçilen kentsel gelişme aşamalarının başlarındaki küçük ve toplu kentsel yerleşmelerin imar planlarında, planlamanın amacı, kentsel gelişme hedefleri, kentsel gelişme stratejisi, plan kararları doğrultusunda yürütülecek uygulama esasları, gerektiğinde, uygulama etapları, uygulama araçları, önlem ve politikalarını belirleyen bir "plan raporu "imar uygulama planı ile birlikte düzenlenir.

Madde. 5.07 - Uygulama imar planı "Ek Plan" biçiminde ele alınmışsa:

Bu şartnamenin 3.03 Maddesinde belirtilen araştırma ve değerlendirme çalışmaları, mevcut imar planı plan not ve hükümleriyle bir bütün olup mevcut planda getirilmiş plan kararları ek planlar içinde geçerlidir.

Ek plan, uygulama imar planı niteliğinde ve 1,1000 ölçeklidir.

Ek plan ile planlanan alana mevcut imar planı plan kararları dışında veya değişik plan kararları getiriliyorsa, bu koşulların geçerli olduğu alan sınırının ve plan hükümlerinin ek planda belirtilmesi gereklidir.

Plan raporu: Yürürlükteki imar planı ilke kararlarına büyük ölçüde aykırı olmadıkça "ek plan" kapsamında plan raporu ile kentsel gelişme amacı, hedefleri ve seçilen strateji ile ilgili tanımlama ve anlatımlara gerek yoktur.

Ek plan raporunda yalnız, yasal ömrü uzatılan kent planlaması sürecinde bu kez ek plan ile getirilen önlemler ve özellikle yerleşmeye açılan ve etaplarını belirleyen aksiyon programları yer alır. Plan raporu ek plan ile birlikte düzenlenir.

Ek planlar (İmar planı ilavesi) önceki onaylı kent imar planlarıyla bütünleştirilir ve birlikte uygulanırlar.

Madde. 5.08 -Uygulama imar Planı Plan Revizyonu (İmar Planı Yenilemesi)" biçiminde ele alınmışsa: Kentsel yerleşmelerin yürürlükteki imar planlarının, plan yapımı sonrası değişen koşullarda uygulamayı yönlendirmede yetersiz kaldığının belirlendiği durumlarda, yürürlükteki planın temel ilke kararları değiştirilmeden, plan onay sınırlan içinde kısıtlı bir alanda, uygulamaya dönük ayrıntılarda gerekli düzeltme ve toplu yenileme, plan revizyonu ile uygulama planı ölçeğinde getirilir.

Plan revizyonu, karar getirdiği kentsel ajanlarla sınırlı olarak, bu şartnamenin uygulama.imar planı maddelerindeki kapsam ve teknikte hazırlanır.

Plan revizyonu sınırı:

Onaylı imar planı sınırları içinde kalan, revizyon yapılan kısıtlı bir alanda getirilen öncekinden farklı-yeni koruma kullanma kararlarını çevreleyen sınır, revizyondan sonra onaylı imar planı iskan sınırları ve yerleşme-iskan alanı büyüklüğü değişmez. Plan revizyonu getirilen kentsel alan, toplu ve tek parça olabildiği gibi ayrı ayrı kent bölgelerinde de olabilir.

Revizyon kararı getirilen kent bölgelerinde, alan, nüfus, kentsel brüt nüfus yoğunlukları yeniden belirlenir.

Bu alanlarda yer alan kentsel yeşil alan ve sosyal donanımın ölçüsü ve oranlan belirlenir ve daha önceki onaylı plan kararları ile irdelenmesi yapılır.

Plan revizyonu (imar planı yenilenmesi) onaylı plan kararı ile getirilmiş olan yoğunluk değerlerini yönetmelikteki standart değerlerini sağlamadan arttırarak, sınırlı kentsel alandan daha yoğun biçimde yararlanmak amacıyla düzenlenmez.

Toplu yen ileme, kentsel alanda plan sonrası ortaya çıkan sorunların çözümlenmesi, yapının giderek sağlıklaştırılması, bu kapsamda gelişme eğilimlerinin toplum yararına değerlendirilmesi için yapılır.

Plan hükümleri - Plan notlan:

Plan revizyonu ile yeniden karar getirilen kısıtlı kentsel alanlarda, fiziksel mekan düzenlemede çizil i olarak ifadelendirilemeyen konularda, uygulamayı yönlendirmek için yeteri kadar plan notu ve plan hükmü yazılı olarak planlar üzerinde getirilir.

Revizyon yapılan alanlarda, plan notları ve plan hükümleri plan revizyonunun (imar planı yenilemesi) diğer önlem ve kararları gibi, ilgili oldukları planla birlikte onaylanarak kesinleşir.

Bu şartnamenin 5.05 Maddesi kapsamında belirlenen "imar planları" için düzenlenen plan notlarından, plan revizyonu kararı getirilen alanlara ilgili olanlar, bu planlar içinde geçerlidir.

Plan raporu:

Yürürlükteki imar planı ilke kararlarıyla büyük ölçüde aykırı olmadıkça, plan revizyonu kapsamında, yeniden plan raporu ile kentsel gelişme hedefleri ve stratejisi ile ilgili tanımlama ve anlatımlara gerek yoktur.

Plan revizyonu raporunda, yalnız yasal ömrü uzatılan kent planlaması sürecinde, bu kez plan revizyonu ile getirilen önlemler ve plan kararları değişen kent bölgelerinde, yeniden uygulama esasları ve etapların, belirleyen aksiyon programları yer alabilir.

Plan revizyonu (imar planı yenilemesi), önceki onaylı kent planlarıyla, bu planda revizyon ile değişiklik getirilmeyen kent bölgelerinde önceki plan kararlarıyla bütünleşir ve birlikte uygulanır.

Plan revizyonu, planlamanın bu aşamasında yeniden yapılan araştırma ve değerlendirme çalışmaları, plan hükümleri, plan notları ve plan raporu ile bir bütündür.

Plan revizyonu, imar uygulama planı niteliği ile 1/1000 fiziksel ölçekte düzenlenir. Gerektiğinde yapılan kentsel tasarım ölçeğinde ayrıntılı düzenlemeler ve kentsel ulaşımla ilgili geometrik düzenlemeler için ayrıca 1/500,11200 yada 11100 ölçekli düzenlemelerde yapılabilir.

Plan revizyonu için imar uygulama planlarında olduğu gibi son durumu gösterir onaylı halihazır haritalar (varsa kadastral durumda işlenmiş olarak) kullanılır.

Madde. 5.09 - Uygulama imar planı "Yerel İmar Planı" (Mevzii İmar Planı) biçiminde ele alınmışsa: Bu şartnamenin 3.05 Maddesinde belirtilen araştırma ve değerlendirme çalışmaları sonucunda işin büyüklüğüne göre gerekiyorsa nazım plan ve 1,1000 ölçekli uygulama imar planı niteliğinde hazırlanır.

Yerel planlar için onaylı halihazır haritalar kullanılır.

Yerel plan kısıtlı araştırma-değerlendirme çalışmaları, plan hükümleri, plan notları, ve plan raporu ile bir bütündür,

Madde. 5.10 - Koruma Amaçlı "Sit" İmar Planı: Tarihsel, arkeolojik ve doğal sitler ile kent mekanı ve çevresel alanlarda yer alan tarihsel çevrelerle, bütünlükleri ve bozulmamışlıkları ile değer taşıyan karakteristik kentsel dokuların oluşturduğu "kentsel sit" alanlarının korunmaları, bu alanlarda ve bunlarla bütünleşen kentsel çevrede yer alacak yeni yapılanmada uyulması gereken koşullar ayrıntıda "koruma ağırlıklı imar planları" ile getirilir.

Tarihsel çevreler, karakteristik kentsel dokular ve sit içeren alanlarda düzenlenen koruma amaçlı planlar, kent imar planı niteliğinde olup, nazım plan ve uygulama planı aşamalarını içerebilir. Ayrıca gerektiğinde, tarihsel çevre ve sit içeren alanlarda koruma amaçlı planlar, daha dar kapsamda, yerel plan, ek plan ve plan revizyonu niteliğinde de düzenlenebilirler.

Koruma amaçlı-sit-imar planları bu şartnamenin 3.06 Maddesinde belirtilen ek araştırma ve değerlendirmelerle birlikte hazırlanır.

Koruma amaçlı İmar planında, bu şartnamenin 4.04 ve 5.04 Maddelerinde belirlenen, genelde kent imar planları kapsamında bulunan standart başlıklı konular dışında ayrıca şu konularda yer alır.

Sınırlar:

Kentsel alan kullanımı: Nazım plan aşamasında;

Bölgeleme-Alan kullanımı - Yerleşme düzeni,

Kent bölgeleri ve çevresel alanlarda yer alan:

Arkeolojik sit,

Tarihsel sit,

Doğal sit alanları,

Korunan karakteristik kentsel dokular,

Kentsel sitler belirlenir.

Kentsel dokularda:

a. Koruma-Zararlı eklentilerden arındırma

b. Düzeltme - Sağlıklılaştırma - Yeni işlev getirme

c. Kısıtlı yenileme gibi

Kentsel koruma - Geliştirme stratejileri tanımlanır.

Uygulama planı aşamasında;

Derecelendirilmiş sit bölgeleri ile tespit ve tescil edilmiş yapı-yapı gurupları ve diğer kentsel eleman ve çevreler,

Sltlerle ilgili düzenlemeler,

Sit alanlarında, yer almasına izin verilebilen kullanma ve yapılanmaya ilişkin nitelik, ölçü ve sınırlandırmalar,

Kentsel sit ve korunan karakteristik kentsel dokularda “Anıtsal”. ve “Çevresel” değeri saptanan yapılar,

Bunları bütünleyen avlu - bahçe - sokak - meydan - çeşme - ağaç gibi korunan çevreler (cephe çizgileri, cephe oranları, çıkma-saçak-çatı, baca gibi özelliklerinin malzeme renk-tekstür ve ölçüleriyle ayrıntılı düzenlemeler),

Korunan yol ve meydanlar (doğrultu, döşeme kot farklılıkları, sokak kaplaması ve ölçüleri), bu çevrelerde ve bunların bütünleri olan “Koruma alanların”da yer almasına izin verilen yapılarda, korunan yapısal ve çevresel, değerlerle uyumlu kitle ve kat düzeni ile malzeme-renk-tekstür ve dış ölçülerde getirilen işlevlere ilişkin sınırlamaların gösterilmesi,

Uygulama planı ölçeğinde ve gereken yerlerde kentsel tasarım ölçeğinde yapılır.

Plan hükümleri - Plan notları:

Koruma ağırlıklı imar planlarının, kentsel ve çevresel alanlarda getirdiği koruma ve kullanmaya ilişkin kararlarında fiziksel mekan düzenlemede çizili olarak ifadelendirilemeyen konularda uygulamayı yönlendirmek amacıyla, kent imar planlarıyla getirilenlere ek olarak yeteri kadar plan notu ve plan hükmü yazılı olarak planlar üzerinde getirilir.

Sit alanları, bunları bütünleyen sit koruma alanları, korunan kentsel doku ve çevrelerde koruma ve kullanmanın niteliği ve ölçüleri ile ilgili sınırlamalar ile uygulanacak koruma politika ve ilkelerinin ayrıntıda belirlendiği plan notları ve plan hükümleri koruma amaçlı imar planları önlem ve kararları gibi ilgili oldukları planla birlikte onaylanarak kesinleşir.

Plan raporu:

Koruma amaçlı imar planlarında, diğer imar planları ile getirilenlere ek olarak planlamanın amacı, koruma ve geliştirme hedefleri ve seçilen strateji ile uygulama esasları' ve etaplarını belirleyen aksiyon programı, uygulama politika ve araçlarını tanımlayan bir plan raporu düzenlenir.

Plan raporu gerekli görülen ölçek ve sayıda şematik gösterimler içerir.

Koruma amaçlı imar planı, kent imar planlarının içerdiği tüm özellikleri birlikte taşıyan bir imar planı türüdür.

Nazım ve uygulama planı aşamalarıyla, planlama için yapılan tüm araştırma, değerlendirme çalışmalarıyla, plan hükümleri, plan notları, plan raporu, aksiyon programı ile bir bütündür.

Koruma amaçlı imar planları, diğer imar planları gibi nazım plan aşamasında, yerleşmenin büyüklüğü ve yaygınlığına göre 1/2000, 1/5000 yada 1/10.000 harita ölçeklerinde, uygulama planı aşamasında 1/1000 fiziksel ölçekte düzenlenir.

Kentsel tasarım tekniğinde düzenlemeler ile planlamaya üçüncü boyut getiren sokak-meydan cepheleri ve silüetler için 1/500, 1/200 yada 1/100 ölçekli ayrıntılı düzenlemeler yapılır.

Nazım plan ve uygulama planı için, son durumu gösterir, onaylı halihazır haritalar, üzerlerinde kadastral durumda işlenilmiş olarak kullanılır.

Madde. 5.11 - "Ulaşım Planlaması" yapılmasına gerek görüldüğünde:

Kentsel ve çevresel alanda, gelecekte plan dönemi için belirlenen ulaşım talebine göre, ulaşım sistemi ve ulaşım ağı, standart ve kapasiteleri ile ulaşımın türlere dağılımı, toplu taşınım, hareketli ve duran trafik ve yayalaştırma konularında uygulamaya dönük ayrıntılar ve geometrik düzenlemeler, bunun gibi kısa ve uzun dönemde sorunlara çözüm önerileri kentsel ulaşım planlaması ile getirilir.

Ulaşım planlaması, yerleşme fiziksel plan kademeleriyle birlikte, bunlarla karşılıklı etkileşim durumda ve bütünleşmiş olarak ele alınır.

Ulaşım planlaması için bu şartnamenin 3.07 Maddesinde belirtilen araştırma ve değerlendirme çalışmaları yapılır.

Ulaşım planlamasında ana başlıklaryla belirlenen şu konular yer alır:

Ulaşım planı fiziksel ve yönetsel öneri ve kararları yolculuk talepleri-yol kapasiteleri - ulaşım sistemlerinin kapasiteleri arasında sayısal uyum sağlanması;

Ulaşım planının fiziksel önerileri, kent nazım imar planı, ve uygulama imar planına yansıtılır.

Bu kapsamda:

1. Ulaşım ağı önerisi: Ulaşım ağının, yol-otopark-terminal gibi elemanları, geometrik standartları-şerit ve yol genişlikleri, oto-birim cinsinden saatlik kapasiteleri,

Doruk saatte taşınan trafik miktarının belirlenmesi,

Farklı yol kesitlerinde geometrik standartların boyutlandırılması,

2. Toplu taşınım sistemleri önerisi: Toplu taşın sistemlerinde türler, güzergahlar, güzergahlarda taşınacak yolcu sayılarının belirlenmesi,

Toplu taşınımda fiziksel düzenleme gerektiren alanlarda, ayrıntıda planlar ve tip enkesitler,

3. Kısa dönem için çözüm önerileri: kavşaklar ve diğer geometrik düzenlemeler,

Tonlu taşınım özel yolları, Yayalaştırma, otopark çözümleri gibi kısa dönem için çözüm önerileri,

4. Yasal -yönetimsel ve mali önlemler:

Plan notları-Plan hükümleri: kentsel ulaşım planlamasında, uzun ve kısa vadede getirilen çözüm önerileri kapsamında getirilen yasal, yönetim-sel ve mali önlemlerle, bunlar gibi fiziksel mekanda çizili olarak ifalendirilmeyen konularda uygulamayı yönlendirmek için yeteri kadar plan notu hükmü yazılı olarak getirilir.

Yasal-yönetimsel ve mali önlemler, ulaşım planı ile birlikte onaylanarak kesinleşir.

5. Plan raporu: Ulaşım planlaması kapsamında planlama amacı, hedef leri, seçilen strateji ve tünel dağıtım alternatifi getirilen önlem ve kararların programlanması amacıyla, program plan niteliğinde düzenlenen aksiyon programları, kısa ve uzun dönem uygulama politikaları plan raporu ile getirilir.

6. Ulaşım planı, birlikte ele alındığı ve karşılıklı ilişkilerle sürdürüldüğü fiziksel yerleşme düzeni planı (çevre düzeni, kent b0tünü nazım planı yada kent imar planı ile) bir bütündür.

Kendi içinde ise, ulaşım planı, plan kararlarına ulaşmada geliştirilen araştırma ve değerlendirme çalışmaları, türel dağılım alternatifleri, plan notları, plan hükümleri, kısa ve uzun dönem çözüm önerileri ve uygulama politikaları ile bir bütündür.

Ulaşım planı kapsamında, “ulaşım ağı önerisi” ve “toplu taşınım sistemi” için yerleşmenin büyüklüğü ve dağınıklığına göre 1/25000, 1 120000, 1/10000 yada 1/5000 nazım plan ölçeği; ayrıntılı çözümler ve geometrik düzenlemeler için 1/1000,1/500 ölçekli harita ve plankoteler yada 1/200 ve 1,100 plan ve kesitler kullanılır.

Bölüm 6 İmar Plani Çalişmalarinin Çizim ve Takdim Biçimi

Madde. 6.01 - Araştırma ve değerlendirme çalışmaları: Bu çalışmalar; yazılı (rapor) ve çizili (harita, grafik gibi şekil) olmak üzere iki biçimi içerir. Esas olan şekillenin ilgili yazı bölümünde yer almasıdır..

Yazılı kısım A_4 büyüklüğündeki kağıda daktilo ile okunaklı olanak yazılacak, şekil ve haritalar ilgili bölüme gereğinde kolay katlanıp açılabilir biçimde konacaktır. Haritalara ölçek yazılacaktır. Büyük ölçekli haritalar yazılı bölüme giremeyeceğinden bu haritalara ilgili bölümü ve lejantı yazılarak ayrı katlanacaktır.

Araştırma Raporu ciltlenecek, kapağına ve sırtına kentin adı, parantez içinde kentin bağlı olduğu il yazdırılacak, kapağa, araştırmayı yapan müellifin adı ve araştırmanın yapıldığı yıl ilave edilecektir. Rapora giremeyen katlamalı haritalar ve plan raporu gri cilt bezli renkte cilbente raporla birlikte konacak, cilbentin sırtına kentin adı parantez içinde bağlı olduğu il ve "araştırma" kelimesi yazılacak, cilbent kalınlığı rapor, fotoğraf albümü ve katlanmış planları alacak kalınlıktan az veya fazla olmayacaktır. Cilbentin diğer ölçüleri imar planı cilbenti gibidir.

Bankadan alınmış ve yerinde doldurulmuş anket föyleri ayrı bir paket halinde, araştırma çalışmalarıyla birlikte Bankaya teslim edilecektir.

Madde. 6.02 - İmar planı çizim ve takdirn biçimi: Her ölçekteki imar planı tasarıları, Bankadan alınmış halihazır harita astrolon fotokopilerden çekilen ozalit kopyalar üzerine çizilecek ve boyanacaktır. imar planı çalışmaları kesinleştikçe satrolon kopyalara çizilir. Astrolon çizim astrolon mürekkebi ile çok itinalı olarak yapılacak, halihazır haritadaki poligon, nirengi, nokta ve değerleri, plan uygulamada gerekli olduğundan çizim sırasında kalın imar çizgileri altında bırakılmayacaktır. Kesin plan çiziminde, kalın çizgiler bu noktalar üzerinde kesilerek okunmaları sağlanmalıdır. Çizim biçiminde imar Yönetmeliğinde verilen lejanta uyulacaktır.

Onanmak üzere verilecek kesin projeler, astrolon kopyalara çizilmiş imar planından çekilmiş ozalit kopyalar olup, kesin proje ozalitleri üzerinde mürekkeplide olsa herhangi bir yazı, çizgi, düzeltme bulunamaz. Ozalit kopyaların, imar ve halihazır harita çizgilerinin okunur biçimde ve kalitede olması şarttır. Kesin proje ozalitleri katlanmış, imzalanmış olarak cilbent içinde verilecektir.