ISSUES OF SUSTAINABLE DEVELOPMENT IN LOCAL AND GLOBAL CONTEXT: THE CASE OF MUĞLA

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ABSTRACT

ISSUES OF SUSTAINABLE DEVELOPMENT
IN LOCAL AND GLOBAL CONTEXT:
THE CASE OF MUĞLA

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The sustainable development concept has entered the urban planning agenda of Turkey mainly after Habitat II Conference held in Istanbul in 1996. Turkey is trying to adopt the experiences of developed countries to improve the planning system including the sustainable development criteria. In this study, planning experience of Muğla is selected as a case study to criticize and evaluate on the changing planning process of cities in Turkey in terms of sustainable development criteria, which requires new approaches that are integrative and participative between local and global context.

In the case of Muğla, the urban form has shaped according to the development areas declared in the plans as additional districts to the traditional city since 1930s; that is, the result was not sustainable in the long run because of some environmental, socio-economic and political values. In the thesis, the problems of the case related to planning experience through sustainable development objectives are stated and solutions are proposed for a sustainable city.

Keywords: sustainability, global agenda of sustainability, sustainable development objectives, Muğla development plans

ÖZ

YEREL VE KÜRESEL BAĞLAMDA
SÜRDÜRÜLEBİLİR GELİŞMENİN SORUNLARI:
MUĞLA ÖRNEĞİ

Doğru, Evrim
Yüksek Lisans, Şehir ve Bölge Planlama, Şehir Planlama
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Sürdürülebilir gelişme kavramının Türkiye'deki kent planlama kapsamına girmesi özellikle 1996 yılında İstanbul'da HABITAT II Konferansı'nın düzenlenmesinden sonra gerçekleşmiştir. Türkiye, sürdürülebilir gelişme ölçütlerini içeren bir planlama sistemi geliştirme yolunda, gelişmiş ülke deneyimlerine uyum sağlamaya çalışmaktadır. Bu çalışmada, Muğla planlama deneyimi, Türk kentlerindeki değişen planlama sürecini -ki bu süreç, yerel ve küresel bağlamda bütüncül ve katılımcı yeni yaklaşımlara ihtiyaç duyar- sürdürülebilir gelişme ölçütleri aracılığıyla eleştirmek ve ölçmek için çalışma alanı olarak seçilmiştir.

Muğla kent formu, 1930lardan itibaren imar planlarında belirtilen gelişme alanları ile geleneksel kent yapısına eklenmelerle şekillenmiştir; dolayısıyla bazı çevresel, sosyo-ekonomik ve politik değerler bakımından uzun vadede sonuç sürdürülebilir değildir. Bu tez çalışması, sürdürülebilir gelişme ölçütleri aracılığıyla, Muğla planlama deneyimindeki sorunları ortaya koymakta ve sürdürülebilir bir kent için çözümler önermektedir.

Anahtar Kelimeler: sürdürülebilirlik, küresel bağlamda sürdürülebilirlik, sürdürülebilir gelişme kriterleri, Muğla imar planları

To My Parents …

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INTRODUCTION

1.1. Preamble

"We are sawing through the branch that is holding us, and if we carry on as before, it may break and bring us crashing down with it." (Prentice, T 1990; cited in Blowers 1993, p. 1) "**Cities must not only be places where survival is ensured but also must be places worth living in."** (Knight and Gappert 1989, p. 299)

Sustainable planning is an urgent issue that humanity is facing in the twenty-first century. Planning, environment and common future are the main concerns that are commonly interested in by the whole world at the beginning of the third millennium. Planet and human life had transformations because of the growths in global economy. Growing world population and threats on environment resulted in some institutional perspectives in order to solve the problems in the world. This attempt made the sustainable development to be on the agenda in global scales. In the process of development of cities, we see the concept of sustainable planning in many countries as their future targets to be provided. Moreover, the transformations that the globe is facing can be sustained through strategic planning. World has come to those circumstances through an evolution of the planning agenda which is a dynamic discipline.

In 1960s planning was considered as a very important instrument of long term structural change. Being in a welfare state and through regulatory state interventions, planning was carried for a more balanced growth, a more equal distribution of welfare, a more democratic society. In this period the mode of production was on Fordism. The characteristics of Fordist mode of production are "mass production of consumer goods, standardization, vertical integration of the production process, technical and spatial division of labor on the level of the individual firm, an institutional capital-labor relationship based on collective bargaining, rise of mass

consumption as a new ideology, large manufacturing plants, state intervention and regulation". The reflection of that production on built-up environment and spatial form was in large scales. Large manufacturing plants were placed far away from housing, recreation and commercial spaces and long-distance transportation networks. As a result of such changes, **long term, comprehensive plans for cities and regions** were created through zoning and other physical planning arrangements. (Albrechts 1991, p. 130, 132)

Comprehensive planning brings together all planning functions (housing, land use, transportation, physical environment, energy, community facilities, etc.), the entire geographical and political jurisdiction with a broad scope. These plans ("master plan", "general plan", "comprehensive plan") include a long-range time perspective which is usually 15-20 years or so. (Cooper 1998 p. 3, 5)

During the 1960s and early 1970s, the traditional policies – incentive-based policies, welfare policies in the social arena and land-use zoning in physical planning – were implemented. However, as a result of the gap between the goals and the actual functioning of the society, the economic crisis of the 1970s created great changes in economic, political and spatial environment. Fordist mode of production came to an end, and it created a transition period towards a new mode. The new mode of production was more geographically open and market-based mode of production founded on a growing and all-encompassing flexibility. As a result of this industrial restructuring, planning and planning profession were influenced by the changes. In the 1980s, the state became more ideologically conservative and more subservient to the needs and demands of capital. Planning was often considered to be an irritating hindrance to individual freedom and to the functioning of the free market economy in the late 1970s and the 1980s. Moreover, planners became managers of the city. **Strategic planning** became a current issue instead of long term comprehensive planning design of alternative structural solutions to the economic, social and spatial issues. Strategic planning considers action oriented approaches; negotiating with all groups in the society: private and public domain, firms, banks, universities, etc.; participation/horizontal and vertical integration of planning actions; action oriented strategies linked with practice. (Albrechts 1991, p. 123-126) Moreover, strategic

planning is an instrument that directs the change based on both the participatory analysis of a situation and its possible evolution, and on drawing up of an investment strategy for the scarce resources available at critical points. (Borja and Castells 1997, p. 154)

Another major change as a result of the 1970s crisis on planning is sustainable development. The literature on sustainable development dates back at least until early 1970s and the work of Meadows et al. (1974) on the limits to growth, the **1972 United Nations Stockholm Conference**, and the **1980 World Conservation Strategy**. (Stimson, Western and Mullins; R.Simpson 1998, p. 471) Environmental protection programs have been instituted to reduce pollution beginning in the early 1970s. (Miller and Roo 1999, p. vii) In the late 1980s, the concern over the environment grew eventually emerging as a global political priority in response to increased information and understanding of the impacts of human activities on the environment. This was especially a growing awareness of new forms and intensities of pollution, from radiation pollution, to acid rain, ozone layer depletion and global warming. (Haughton and Hunter 1994, p. 4)

After mid-1980s such newly emerging trends "deindustrialization, disinvestment, environmental decay, increasing in-formalization of certain economic activities, unemployment, and segregation" became current. Shift towards locality by infrastructural provision, labor relations, environmental controls and even tax policies had success on **attracting some of the free floating capital**, and brought about **bottom-up strategies** reinforcing indigenous potentials and encouragement of intra-local linkages. These potentials comprised infrastructure, the educational qualification level of the workforce, demographic characteristics, culture, quality of life, natural resources, advisory services, image of the city, industrial patterns and tradition. Furthermore, as a result of the shift from managerial type of work to entrepreneurialism, there became some changes: "competition within the international division of labor", "improving the competitive position with respect to the spatial division of labor", "competition for the acquisition of key control and command functions in high finance, government, or information gathering and processing", "competition for a share of the redistribution of surplus". **Competition**

between cities both nationally and internationally and "selling of the city" became important issues. In such a competitive environment planners became deal-makers rather than regulators, and the trend from modernism toward post-modernism in design, cultural form and life-style is connected to the rise of urban entrepreneurialism. (Albrechts 1991, p. 126-129)

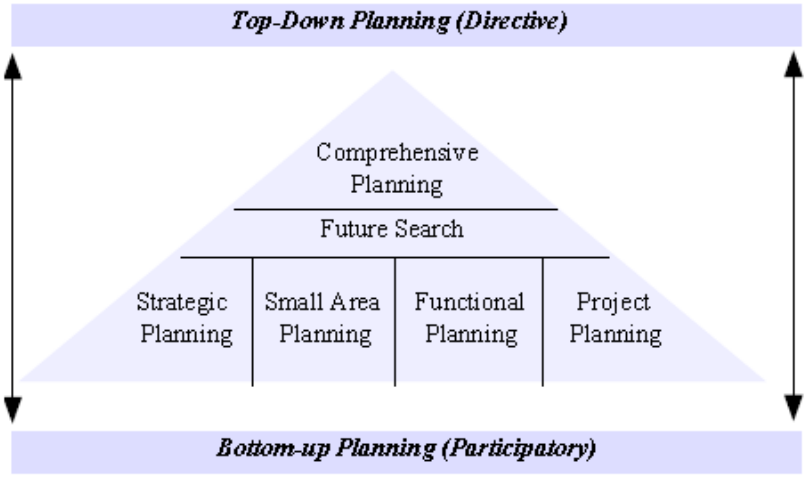

Figure 1. 1. Different Types of Planning
(Source: Cooper 1998 p. 4)

In 1987 the World Commission on Environment and Development (WCED), produced *Our Common Future*, also known as the *Brundtland Report*. (Haughton and Hunter 1994, p. 4-5) Since the publication of the **Brundtland Report**, sustainable development has achieved widespread popularity. The report defined sustainable development as **"development that meets the needs of the present without compromising the ability of future generations to meet their own needs."** (World Commission 1987, p. 47) There are three concepts within this statement: **development, needs,** and **future generations.** (Blowers 1993) Based on an ethical imperative of equity within and between generations, this definition implies sustaining the natural life-support systems on the planet, while extending to all the opportunities to improve quality of life. (Hediger, 2000; cited in Dublin Institute of Technology 2006, p. 4) Furthermore, Brundtland Report included a chapter on the particular problems facing cities which emphasized on the complementary nature of urban and regional strategies and the importance of developing secondary urban centers. (Haughton and Hunter 1994, p. 4-5)

During the late 1980s and early 1990s the issue of sustainable development gained further momentum. It became the concern of a host of conferences and meetings which resulted in the 1992 United Nations Conference on Environment and Development (**Rio Conference**). As a result of that conference, **Agenda 21** was produced. (Stimson, Western and Mullins; R.Simpson 1998, p. 471) Although this meeting has been criticized by some for failing to come up problems confronting the world, it resulted in a wide-ranging program to tackle global problems – Agenda 21 – providing the centerpiece for international cooperation and coordination. (Quarrie 1992, as cited in Haughton and Hunter 1994, p. 7)

This international program was to be accompanied by national and local responses, with local authorities being asked to enter into a dialogue with their citizens, local organizations and businesses aiming to adopt a Local Agenda 21. Some important urban and regional concerns were stressed within Agenda 21. Moreover, governments were advised to delegate decision-making to the lowest level of public authority consistent with effective action and a local approach and, community participation in environmental programs at all stages was highlighted. Comprehensive approaches to urban planning were advocated which recognized the individual needs of cities and were based on ecologically sound urban design practices. In Manchester in 1993 and 1994, with the follow-up meetings of Rio Conference, sustainable cities were the central concern. (Haughton and Hunter 1994, p. 7)

In **1990s,** due to the new period of rapid organizational and technological changes – technological innovations in telecommunications and infrastructure, free flow of capital, raising productivity, increasing number and variety of jobs and firms – banking, real estate, business services – the state gradually moved from being a "welfare state" to **entrepreneurial state.** The traditional industry-based economic development approach has been replaced by a service-based economic **restructuring** approach. Public sector money was used as a stimulus for private sector investments. There was the need for a new institutional/regulatory framework; therefore, **proactive planning** became a current issue. As a result of the partnership between public and private, **collaborative planning** with "lobbying – negotiation", "market

oriented approaches", and "action-oriented planning" was put on the planning agenda. **Urban governance** which includes search for the ways of reducing public expenditures, less bureaucratic and more collaborative ways; **new urban lifestyles;** large scale revitalization and rehabilitation projects in city centers; **large urban projects** such as comprehensive plans/projects rather than strategies were the main changes in the agenda. Main issues of the agenda were privatization of public space, increasing unemployment and unequal distribution of wealth, environmentally sustainability. (Albrechts 1991, p. 126-129) Moreover, the concept of sustainable development evolved as a means of tackling the changes in environmental quality, economic development and social structure in order to meet the needs of both present and future generations. (Dublin Institute of Technology 2006, p. 16)

As a result of the evolution of planning agenda, we face the criticism of comprehensive planning. Parallel to the problems that cities face, "sustainable development" has become a top concept in planning and it is used as a target in planning. In the way to meet human needs, man has improved and developed himself and his environment. Awareness about sustainable planning, life, cities, development in this man-made environment has got importance since 1987 by Brundtland Report. It was the first time to use the concept of "sustainable development"; and so on it is being used in many fields. According to Newman (1999; cited in Pinderhughes 2004, p. 13), for a sustainable urban development, planners and policymakers must explicitly support planning and policy designed to reduce a city's use of natural resources and production of wastes. Moreover, they should improve the livability so that it can better fit within the capacities of local, regional, and global ecosystems.

Turkey had a parallel growth process with other nations in the world from the point of spatial distribution of economic activities and industry in the years of 1980s which was based on export model. The growth of industry moved from large poles, traditional region centers – İstanbul, İzmir, Adana and Ankara – towards surrounding provinces in 1960s when industrialization process had some acceleration. There became increase in the density of industrial areas in the hinterland of traditional region centers – Kocaeli, Sakarya, Tekirdağ, Manisa and Mersin. There were industrial stagnation and regression in the provinces that had dense public industrial

investment – Zonguldak and Kırıkkale. Moreover, new/local industrial nodes based on local resources and are specialized in specific sectors in different provinces in different regions in Anatolia were born – Denizli, Gaziantep, Çorum and Kahramanmaraş. However, Muğla and Antalya have specialized in tourism with the booming tourism activities. In addition, they joined to the development zones of tourism in Aegean and Mediterranean Regions as tourism based provinces – Antalya, Muğla, Aydın and Mersin. (DPT, 2003, p. 15–17)

In Turkey the process of urbanization did not follow the same direction with developed countries since Turkey had a very rapid urbanization process. Moreover, development laws could not respond to this rapid urbanization. Therefore, some urban problems occurred and the legacy could not create healthy cities. The phenomenon of squatter housing is one of the problems that Turkey faced as a social, economic and urban problem in growing cities. Another problem is the misuse of resources. Moreover, migration to big cities has created damaged, uncontrolled and problematic cities as a result of the push effect of rural areas.

Furthermore, Turkey is facing with the problem of disasters such as earthquake because of not having any efficient attempt for disaster management. All these problems tell us the concept of sustainability is an urgent issue also in Turkey. Through these main changes in the dynamics of spatial growth in Turkey, we see the sustainable development has entered the concept of planning in Turkey mainly with Habitat II held in Istanbul in 1996. Targeting sustainable development and approaching the problem strategically, big changes and transformations should be made in development policies, resources management, understanding the significance of locality, and preparing short-term implementation projects in order to reach long-term targets.

1.2. Aim of the Study

The main task of this thesis is to prepare a basis for new planning policies and visions to achieve sustainability and to evaluate the "sustainability" concept in the case of Muğla within the theoretical framework of sustainability exploring plans that may have contributed to the sustainable development of planning experience of Muğla by producing strategies for the future of Muğla. As including a current topic – sustainability – and an original hypothesis the study aims to help both citizens and administrative units, guide other sustainability projects in other cities in Turkey, and be a document that will attract scholarly community. Shortly, the study aims to analyze issues of sustainable development of a local case study – Muğla – through the help of objectives related to the global agenda. This is a study which is analyzing, observing and producing ideas. The study called "Issues of sustainable development in local and global context: The Case of Muğla" was handled within three steps:

- Examining sustainability concept and the examples of cities which have planning experience in sustainable development in the word; and constructing a framework of sustainable development objectives for further analysis of the Muğla case.
- Examining the planning process of Muğla and evaluating the development plans of Muğla in terms of sustainability criteria.
- Producing principles for the future of Muğla in the way to integrate local and global agenda of sustainable development.

For this purpose, this thesis puts forth this main research question: "Changing concept of sustainability in environmental and planning studies which requires new processes that are integrative and participative between local and global context." The case of Muğla is used to evaluate the planning process of cities in Turkey through the critical evaluation of planning process in Turkey via Muğla planning experience. In the way to move towards sustainable development debate, the study assesses whether this concept has started to shape planning approaches; using a case study – Muğla – which represents a strategic region in immediate need of a planning approach that incorporates policies of sustainable development.

1.3. The Content and Method of the Thesis and Selection of the Case Study

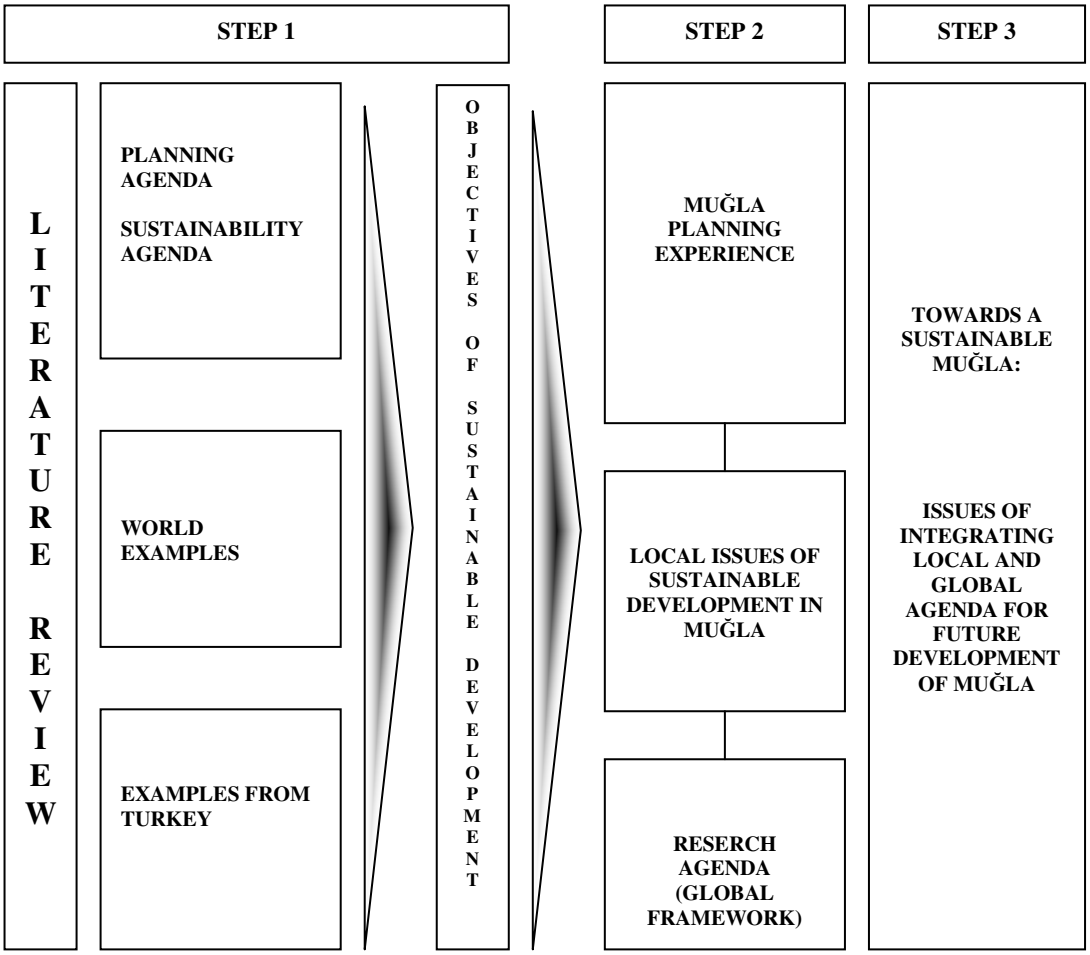

Figure 1. 2. The Design of the Study

The design of this study is shown above. The diagram illustrates the relationship of the principal bodies of data sources and analysis. In the first step, a focused body of knowledge describing the sustainability criteria is created, and from this point of knowledge, research question is developed towards the case study (Step 1). In the next step analysis of the case through the sustainability criteria is performed (Step 2). To complete the research study, a framework is described towards integrating local and global agenda for planning a sustainable city of Muğla (Step 3).

1.4. Hypothesis of the Study

The case of Muğla has some problems and failures in reaching a sustainable development, and planning instruments; Muğla is to some extent sustainable; and implementations towards a sustainable Muğla are inadequate to some extent. Analysis shows that Muğla is not completely economically and ecologically sustainable city; and cultural sustainability is developed in Muğla through years. Depending on this argument, the hypothesis of this study is that sustainable development objectives in local levels need to be re-assessed by the global agenda with the integration of local and global values in order to maintain sustainable development. This necessitates information and education management principles, community strengthening, maintaining quality of life, and more strategic planning approaches.

1.5. Scope of the Study

Being a crucial topic – sustainability and planning –there are cases to be examined in Turkey as a developing country. Muğla is a unique case for studying such a topic. There are two main reasons that make us to focus on Muğla. **Firstly**, being an active tourism area, Muğla has a dual structure that is made up of the *center* which will be examined in details in this study and its *environs*. These two structures show different characteristics. The center differs from its environs as providing central services such as governorship, head offices of public institutions in provincial base. In addition, its environs serve tourist activities (Bodrum, Datça, Fethiye etc.) and industrial activities (Yatağan etc.). After 1980s with the change on planning trends and urban area, there become competitions between cities. In Muğla we see that there has become a competition between its districts. As being a tourism area, the districts of Muğla have developed rapidly and they have become physically larger areas than the center. These two areas have different sustainable planning histories and perspectives. Moreover, growth in tourism in provincial level will probably create big transformations also in the future of its administrative center.

Secondly, Muğla is a typical example among Turkish cities which had a long planning history which started at the Early Republican Era. Therefore, the case of planning experience of Muğla is selected as a case study to criticize and evaluate on

the changing planning process of cities in Turkey in terms of sustainable development criteria. There is the duality which is traditional-modern area in Muğla city center. Till the Republican Period, Muğla has developed, conserved and sustained its traditional city structure to some extent. After the foundation of the Republican, there became another area developing in the surrounding of the traditional area, modern area. This area was different from the traditional area from physical and social structure. These two areas show different sustainability behaviors. As a shaped city through development and conservation plans, there have been efforts since 1930s in Muğla. Shortly, having a dual structure in its region (city center-environs), and having an experience in planning with its dual structure in its center (traditional-modern), studying Muğla city center will have great contribution in the topic of planning sustainable cities.

This thesis consists of five chapters. The first chapter covers the introduction to the concept of sustainable development and planning. The second chapter comprises on the literature review in the way of creating theoretical framework for "sustainable development criteria". Sustainable development concept has been analyzed through reviewing the literature in three main groups – books, main reports, case studies – in order to understand the roots, origins and cases of sustainability. Then a theoretical framework of sustainability has been created in this chapter. Furthermore, in order to understand the history, planning periods, and implementation of plans, some survey on Muğla has been performed in the third chapter. The characteristics of Muğla were introduced, and planning activities in Muğla were analyzed. The fourth chapter describes the issues of sustainable development in Muğla from a critical and analyzing way of thinking and through the sustainability criteria. The last chapter puts forward the problems and interventions influencing the concept of sustainability in Muğla after 1980s with possible new strategies in the way of planning Muğla through sustainability.

CHAPTER II

THE CHANGING CONCEPT OF SUSTAINABILITY IN ENVIRONMENTAL AND PLANNING STUDIES

2.1. Evolution of the Concept

"Sustainable" implies forever, perpetuity, constant rebirth and renewal, an inexhaustible system whereas "development" implies change, growth, expansion, production and movement. "Sustainability and development" when used together connotes balancing economic and social forces against the environmental imperatives of resource conservation and renewal for the world of tomorrow. Moreover, both words mention time, evolutionary processes and constructive adaptation. (Porter 2000, p. 1)

Sustainability which is not an anti-growth concept and brings a new dimension to growth has emerged over the past 20 years. Sustainability tries and integrates the environment into all aspects of life and all aspects of government, and it is an expression of a deep cultural shift that places environment very high on the agenda. It is not an anti-growth concept but it is also not able to be used to justify any growth. Moreover, it requires new processes that are integrative and participative. (Newman, p. 11)

The concept of sustainability has emerged from a global political process that has tried to bring together, simultaneously, the most powerful needs of our time (Newman, P. and Kenworthy, J. 1999, p. 4):

- the need for economic development to overcome poverty
- the need for environmental protection of air, water, soil, and biodiversity, upon which we all ultimately depend on

- the need for social justice and cultural diversity to enable local communities to express their values in solving these issues.

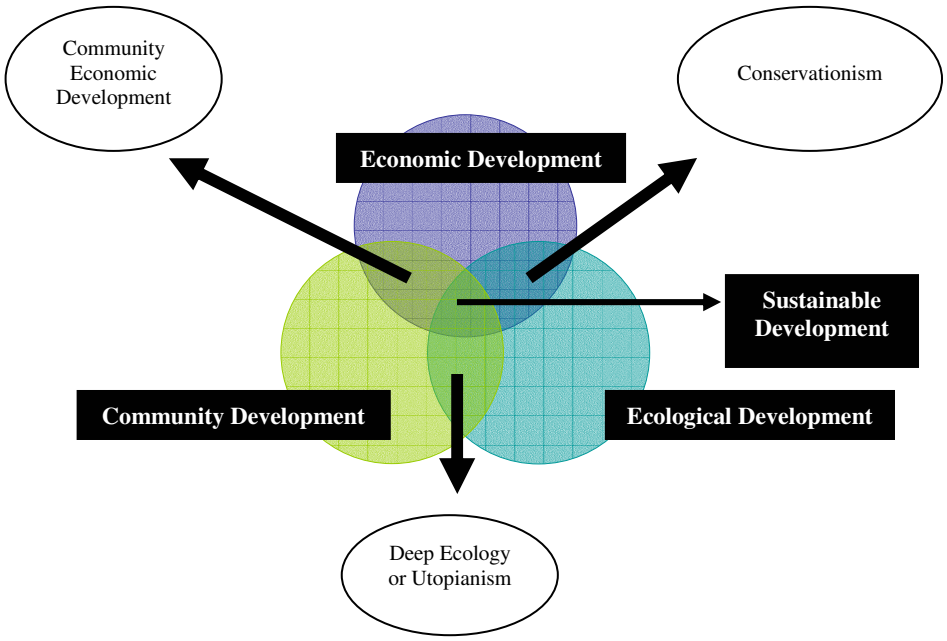

Figure 2. 1. Sustainable Development
Three Distinct Development Processes (underway at the local level-economic development, community development, and ecological development.)
(Source: Newman, P. and Kenworthy, J. 1999, p. 4)

There are many definitions of sustainable development. (**Appendix A**) Barbara Ward and Rene Dubos (1972, cited in Human Settlements Development and Policy, p. 97) accepted that unless all human needs are met and extreme poverty is eliminated, it is impossible to live within the capacity of natural resources that our planet has. In 1987 Brundtland Report points that **"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."** This definition includes the concepts of environmental awareness, inter-generational equity, and social-justice, as well as environmental awareness.

Moreover, it means that a global perspective is necessary and that cross-boundary impacts should be considered. (Williams, Burton, and Jenks 2000, p. 3) Pointing out the concerns of meeting the needs of today and future generations, the definition mentions the idea of justice within social, economic and environmental costs and

benefits. Moreover, World Conservation Union (IUCN), United Nations of Environment Programme (UNEP) and World Wildlife Found (WWF) (1991) defined sustainable development as “improving the life quality without exceeding the carrying capacities of supportive ecosystems.” (Human Settlements Development and Policy 1996, p. 97-98)

According to Elkin et al. (1991; cited in Williams, Burton and Jenks 2000, p. 3) sustainable urban development must aim to produce a city that is “user-friendly” and “resourceful" in terms of both its form and energy-efficiency and also its function, as place for living. Breheny (1992; cited in Williams, Burton and Jenks 2000, p. 3-4) states that sustainable urban development necessitates not only the achievement of urban development aspirations with concerning inter- and intra-generational equity, but also the conservation of the stock of natural resources beyond its regenerative capacity. According to Smith et al. (1998; cited in Williams, K., Burton, E. and Jenks, M. 2000, p. 4) a sustainable built environment should include such principles: living off environmental “interest” rather than “capital”; not breaching critical environmental thresholds; developing a sense of equity and social justice; and forming inclusive procedures for decision making. Haughton and Hunter (1994; cited in Coplák and Rakśányi 2003, p. 10) mention that in a sustainable city people and business continuously endeavor to improve their natural, built and cultural environments at neighborhood and regional levels, while working in ways which always support the goal of global sustainable development.

The sustainability definition of Jacobs (1991, cited in Human Settlements Development and Policy 1996, p. 97) which mentions about the unification of environment and economy is “Environment should be conserved with the logic of conserving also its ability to carry out various functions: at least at the levels of being protected from future disasters and of providing equal environment consumption possibility.” Meadows et al. (1992, cited in Human Settlements Development and Policy 1996, p. 98) describe the sustainable development as “A sustainable society is the society that can survive for generations, can foresee the future, and is so clever not to destroy the flexible and material or social support systems.” The concern of Etkin (1992, cited in Human Settlements Development and Policy 1996, p. 98)

defines “the stress on ecological sustainability takes aim at city problems”. Moreover, Hardoy, Mitlin and Satterthwaite (1992, cited in Human Settlements Development and Policy, p. 98) mention that “ecological sustainable is taken as a focus”. However, Rezende (1993, cited in Human Settlements Development and Policy 1996, p. 99) declares that “social sustainability also necessitates the political sustainability which includes public participation and nonexistence of centralist democracy, etc.” Ecological views mean minimizing the use of un-recyclable resources, sustainable use of recyclable resources whereas human-centered definitions and meeting such needs include civil rights, local and national democracy, reaching sufficient and salaried employment and being able to elect, having shelter, health and basic infrastructural services, and necessary sources for such developmental aims. (Human Settlements Development and Policy 1996, p. 99)

A sustainable city pays attention to the geophysical and cultural local limits, mobilizes invisible economic and social structures and seeks synergy and symbiosis with the bioregion. For a sustainable city, life-cycle approaches and strategic long-term efforts are essential in order to reduce environmental damage. Moreover, sustainable urban environmental planning needs a comprehensive interdisciplinary assessment of urban assets, a natural resource information system and an identification and analysis of the policy distortions and bottlenecks. (Mega 2005, p. 40)

Sustainability may symbolize a continuous improvement and invention of new opportunities. Moreover, sustainability requires innovations to maximize and optimize investments in capital, labor, skills and chance. (Mega 2005, p. 27) (**Figure 2. 2**)

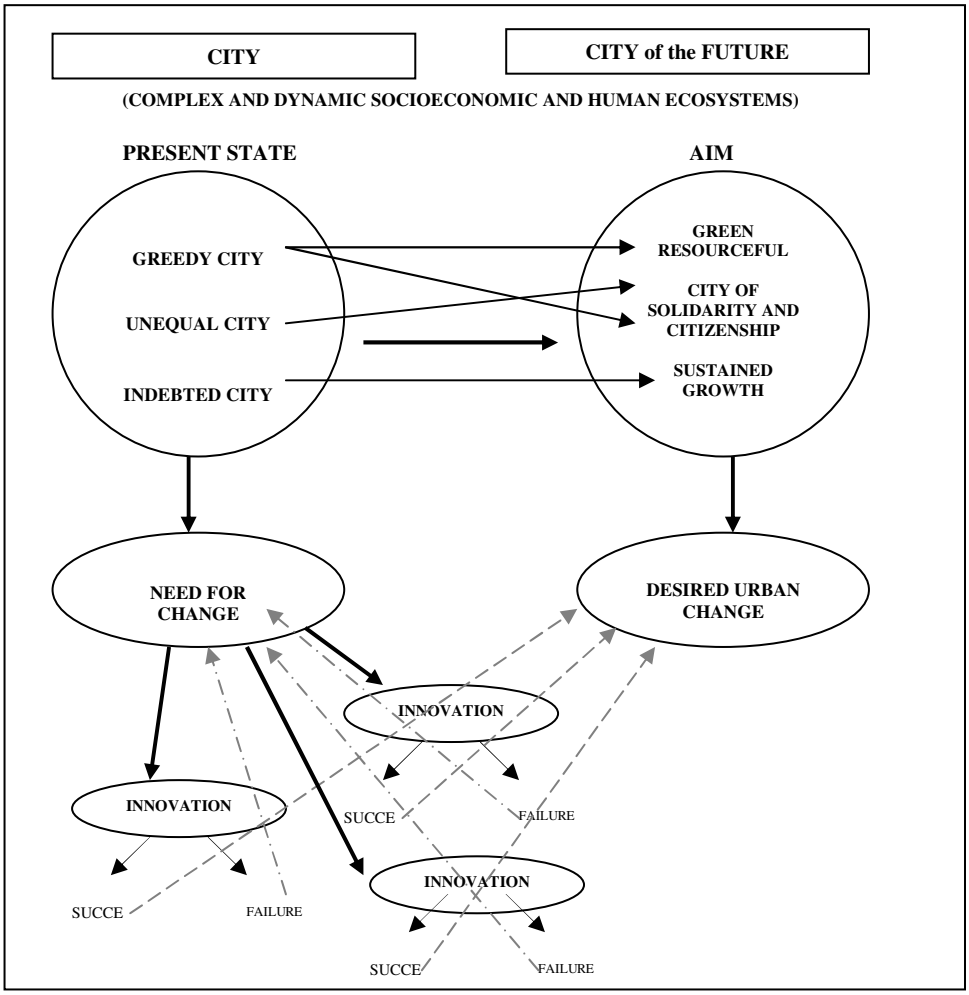

Figure 2. 2. The Progress towards the Sustainable City
(Source: Mega 2005, p. 27)

In urban development, environmental sustainability has been considered to have two general dimensions (Quality of Life in Cities Conference 1998, p. 474):

- resources, including amenity as inputs; and
- wastes as outputs.

In this context, sustainability might be defined as (Quality of Life in Cities Conference 1998, p. 474):

- not depleting renewable resources below replacement and/or establishing parameters for the realistic use of renewable resources;

- maintaining ecosystem integrity by not depleting non-renewable resources at rates that are economically and socially unsustainable;
- improvements, or where already adequate, maintaining economic well-being, cultural identity, social equity and social cohesion.

An established theoretical framework for analyzing the performance of a city as a complex dynamic organism in the context of sustainable development is the "urban metabolism metaphor" (**Figure 2. 3**), central to which is a focus on "quality of life". As an analogue model, the urban metabolism approach enhances our understanding of the functionality of a city, its evolution, growth and performance, and it provides a conceptual basis for deriving quality of life measures. (Quality of Life in Cities Conference 1998, p. 473-474)

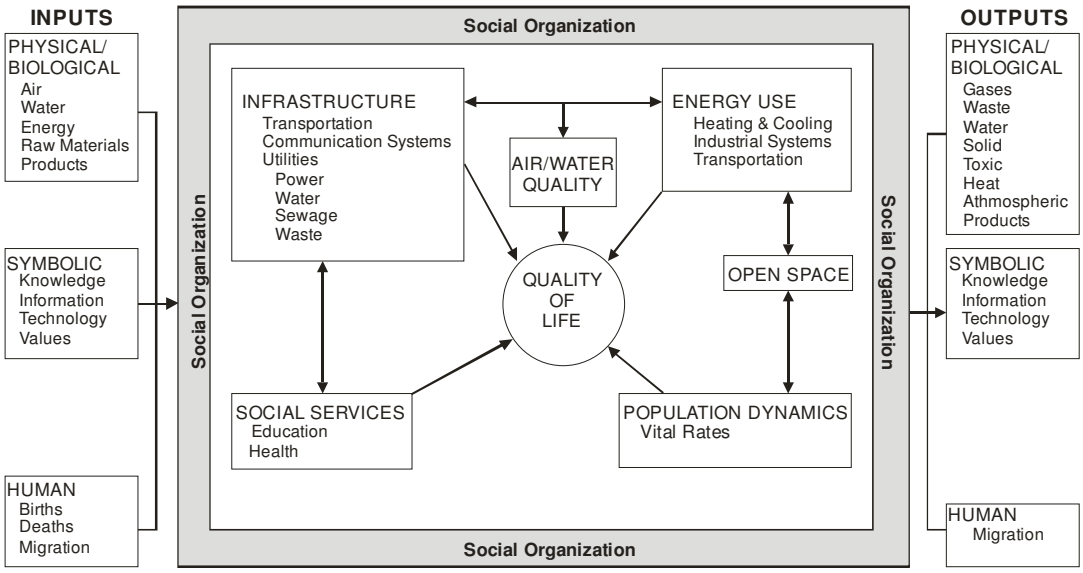

Figure 2. 3. The Urban Metabolism Metaphor
(Source: Quality of Life in Cities Conference 1998, p. 474)

Sustainability, viability and livability were taken as three broad "constructs" of quality of life (**Figure 2. 4**) in order to measure quality of life by incorporating a whole range of "dimensions" for which "measures" and "performance indicators" could be developed. (Quality of Life in Cities Conference 1998, p. 475)

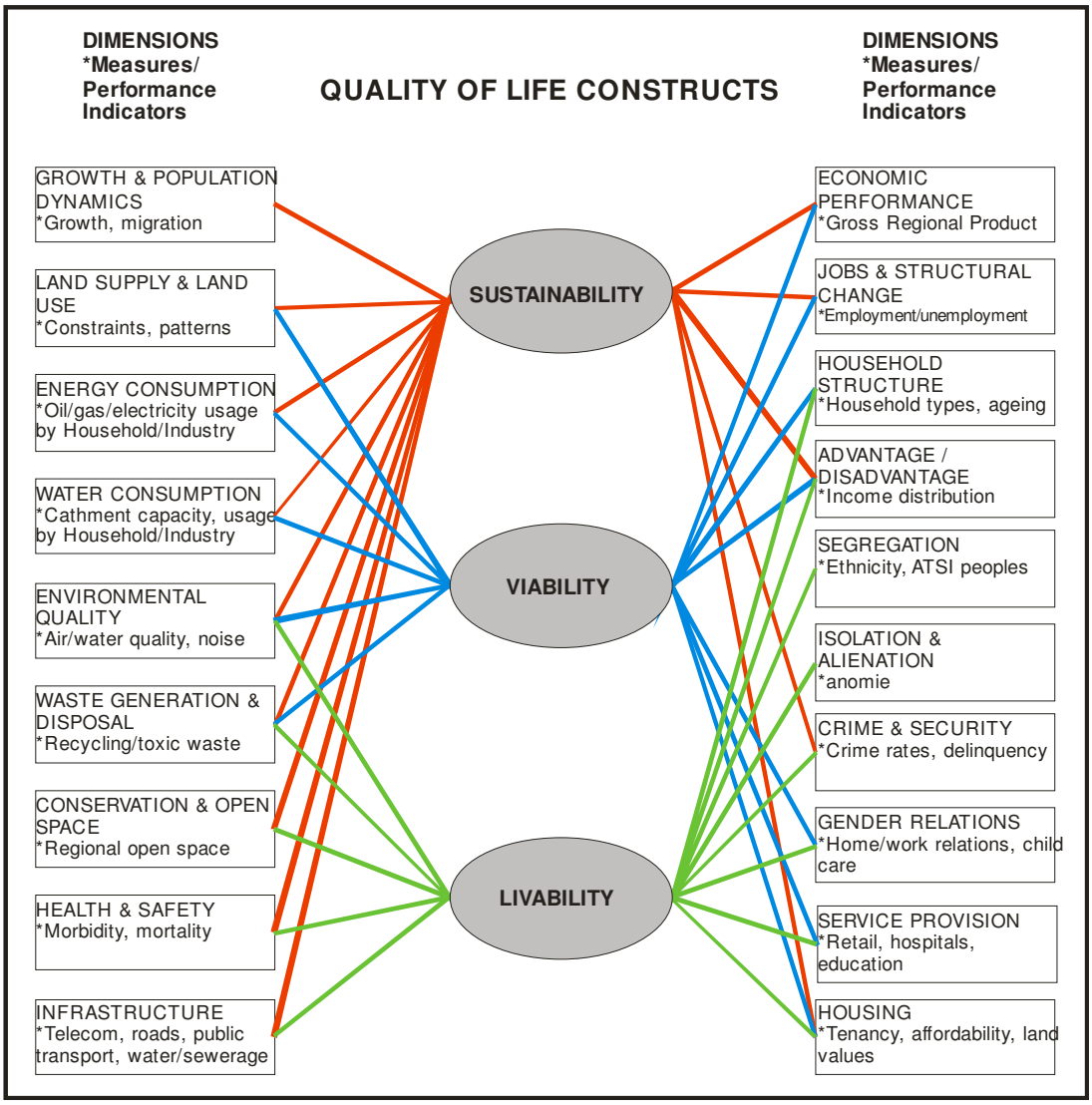

Figure 2. 4. Quality of Life Constructs
(Source: Quality of Life in Cities Conference 1998, p. 475)

Thus, the three constructs and the dimensions of quality of life which they represent might be summarized as follows (Quality of Life in Cities Conference 1998, p. 475):

- "Economic viability", incorporating dimensions that measure economic growth, productivity, industry and employment diversity, and labor force participation;
- "Social livability", incorporating a consideration of equity issues that relate to household structure, income distribution, expenditure patterns, housing affordability, access opportunity to services, segregation and alienation, economic status, crime, safety and security, leisure and recreation; and

- "Environmental sustainability", incorporating dimensions measuring resource consumption, energy use, environmental quality and protection, and the evaluation of ecologically significant habitats.

According to List (2003; cited in Dublin Institute of Technology 2006, p. 12) an assumption inherent in most scenario planning has been that "we" have a shared present, which arises from "our" shared past. From this present, the futures and visions outlined in the various scenarios branch out.

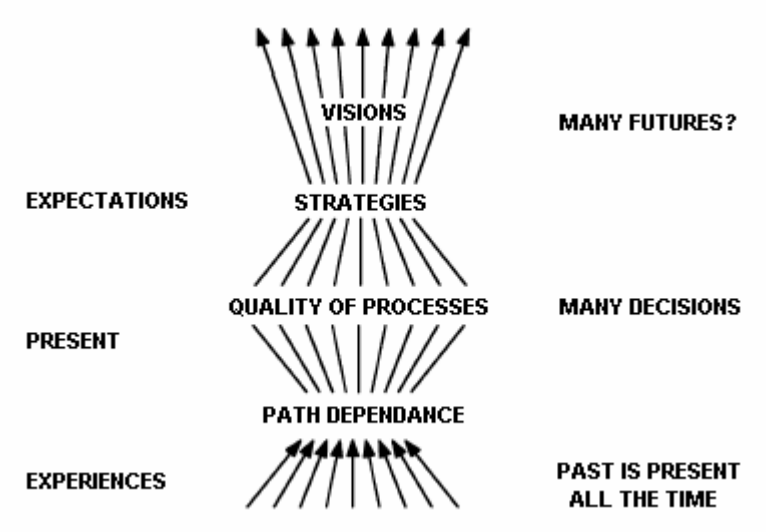

Figure 2. 5. Decision-Making and Many Futures
(Source: Kaivo-oja *et al*, 2004; cited in Dublin Institute of Technology 2006, p. 12)

2.2. From Urban Planning Point of View what is Sustainable Development?

2.2.1. Institutional Framework of Sustainable Development

Institutional perspectives (**Appendix B**) developed abroad contributed to the planning agenda in order to solve the problems in all levels including implementation stage. The first major international political meeting was Stockholm Conference in 1972 having the word "environment" in its title. Therefore, the sustainable development concept has been evolved through institutional perspectives till today.

2.2.1.1. Declaration of the United Nations Conference on the Human Environment (Stockholm, 1972)

The United Nations Conference on the Human Environment, met at Stockholm in 1972, considered the need for a common outlook and for common principles to inspire and guide the peoples of the world in the preservation and enhancement of the human environment.

The Conference called upon governments and peoples to exert common efforts for the preservation and improvement of the human environment, for the benefit of all the people and for their posterity.

1972 Stockholm Conference that is accepted as the origin of sustainable development included many topics: planning and management of human settlements, determination and management of environmental pollution, disability of controlling global pollution by nations, the development relationships between industrialized and industrializing countries, importance of environmental issues. In 1972 Stockholm Environment Conference General Secretary mentioned "development which includes environment", and its concept was deepened in 1974 with Declaration of Cocoyos and helping public for education and organizational facilities in order to enable each economic system utilize their original resources. (Keleş and Hamamcı 1993; cited in Altunbaş 2002, p. 2) 1972 Human and Environment Conference is an important step that shows that environmental issues are also related to politics and ideology. (Keleş 1992; cited in Altunbaş, p. 2) Accordingly, although facing many criticisms since having an approach of tackling with problems by technological solutions, the

conference prepared many progress in the way to achieve national and regional organizations. (Altunbaş 2002, p. 2)

The conference provided the basis for the foundation of United Nations Environment Programme (UNEP). Today there are many organizations that deal with environmental issues: United Nations Development Programme (UNDP), Food and Agriculture Organization (FAO), North Atlantic Treaty Organization (NATO), Organization for Economic Co-operation and Development (OECD), European Council, Word Trade Organization (WTO), International Monetary Fund (IMF), and World Bank. In 1972 European Community (EC) prepared a sequential four action plans and legislation in order to create minimum standardization for pollution. European Environment Action Programme was put in practice in more than one country at the same time. (T.Ç.V 2001; cited in Altunbaş 2002, p. 2)

2.2.1.2. HABITAT I Conference (Vancouver, 1976)

In the way to sustainable development, the HABITAT Conference that relates human settlements with environment was held in 1976 in Vancouver (Canada). The convention functioned in putting the settlement problems into the agenda in the world. Moreover, it was observed that such decisions could not have their validity today: approaching problems from the point of basic need; hoping solutions from government or with the leading of government; the optimistic decision that growing new division of labor will lessen the struggle between North and South. (Tekeli 1996; cited in Altunbaş 2002, p. 2-3) Therefore, in 1996 United Nations (UN) would arrange HABITAT II Conference in İstanbul in order to create an action plan includes composing a sustainable city system in the world and providing everybody with equal settlement. In 1980 World Conservation Union (WCU) published a strategy programme that aimed to achieve sustainable development. The programme aiming at removing inequalities and reaching a more dynamic and higher-qualified world economy put forwards a new strategy that aims to improve economic welfare and remove poverty. (Karbuz; cited in Altunbaş 2002, p. 3)

2.2.1.3. Brundtland Report "Our Common Future" (1987)

The Brundtland Report (Our Common Future) made by the World Commission on Environment and Development in 1987 is one of the seminal environmental documents of the 20th century. According to the Brundtland Report, one of its goals was: "to help define shared perceptions of long-term environmental issues and the appropriate efforts needed to deal successfully with the problems of protecting and enhancing the environment, a long-term agenda for action during the coming decades, and aspirational goals of the world community." (Brundtland 1987, p. ix) Furthermore the report approached the environmental and development issues: ecosystems, energy, population, industry etc.

The report focused on "the crises in Third World cities" instead of focusing on "the contamination and consumption behaviors in the cities of developed countries". According to the report, there are seven preconditions about sustainable development (Human Settlements Development and Policy 1996, p. 98-99):

- A political system that provides effective contribution to decision-making.
- An economic system that can produce surplus and technical information which is based on a confidential foundation.
- A production system that respects the liability of conserving the ecological side of development.
- A technological system that always looks for new solutions.
- An international system that support the sustainable commerce and finance models.
- An administrative system that is flexible and can correct itself.
- A social system that provide solutions in front of tensions because of inharmonious developments.

The main concern in the report was the lack of harmony environment with development and sacrificing environment for the sake of development. Sustaining development was linked with admitting the decision that environment was the resource and limit of economic development. (Fisunoğlu 1989; cited in Altunbaş

2002, p. 3) The approach of sustainable development that claimed stopping economic growth was not necessary defends that underdevelopment and poverty could not be solved without a new growth period with great participation and utilization of developing countries. Pointing out the new roles of nations, the report declared that trade; finance and assistance activities should be revised, and claimed that any country could develop by abstracting itself from other countries. In addition, it was indicated that the leader role of World Bank was important for sustainable development. (Altunbaş 2002, p. 3)

2.2.1.4. Rio Summit – Agenda 21 (Rio de Janeiro, 1992)

Sustainable development was the focus of the United Nations Conference on Environment and Development (UNCED), held in Rio de Janeiro (Brazil) in June 1992. Two issues prevailed (Hens and Nath 2003, p. 11):

- Link between environment and development,
- Practical interpretation of the rather theoretical concept of sustainable development, seeking to balance the modalities of environmental protection with social and economic concerns.

With Rio Conference, it was declared that world was facing such circumstances that worldwide activities of nations had to be shaped in a more continuous way because of environmental problems. (Altunbaş 2002, p. 4) With the participation of 117 Government Presidents form 179 countries, the conference pointed at being committed to the principles of Stockholm Conference, aiming at founding relationships between many levels – nations, societies, people – in the way to reach these principles, agreeing with an environment-development system in order to conserve the world and common benefit of people. (Keleş; cited in Altunbaş 2002, p. 4) The most significant change from Stockholm to Rio was that for pollution and consumption of un-recyclable resources, Stockholm was based on developing a problem-based approach; but Rio focused on developing an integrated approach which is based on natural resources and appropriates the improvement of sustainable economic growth and human resources. (Fisunoğlu 1997; cited in Altunbaş 2002, p. 4)

The Rio Conference generated these outputs (Johnson, 1992; cited in Hens and Nath 2003, p. 11-12):

- "The Rio Declaration on Environment and Development" which is a list of 27 principles on which sustainable development policies are to be based. Most of these are still valid, notably the precautionary principle, the equity principles, and the principle of subsidiary.
- "Agenda 21" which provides a remarkably sharp analysis of both the symptoms and the underlying causes of global un-sustainability as well as authoritative ideas on how to put sustainable development into practice.
- Some of the most urgent issues discussed in Agenda 21 are those on the three "conventions" that are related to Rio:
    - The Framework Convention on Climate Change, which addresses the issue of global warming.
    - The Convention on Biological Diversity, which urges action to be taken to prevent huge and continuing loss of biodiversity and forests.
    - The Convention to Combat Desertification (in those countries experiencing serious drought and/or desertification, particularly in Africa), which resulted from discussions at Rio but was concluded in March 1994.

The action plan on environment and development in Rio Conference – the Agenda 21 – had the place of city problems in developing countries. In other words, Agenda 21 identified unsustainable patterns of production and consumption, particularly in industrialized countries, as a major cause of environmental deterioration (Mega 2005, p. 42). The seventh chapter of Agenda 21, "Encouragement of Sustainable Human Settlements" was related to improving the environmental, social and economic conditions at homes and works through participation in decision making and partnership. This chapter targeted especially poor, disabled and weak groups, for example, women and children. (Habitat II Kent Zirvesi 1996, p. 100)

Local Agenda 21 precipitated extensive action for sustainable development at the level of the municipality; therefore, the agenda involved community-based conceptualization and implementation of sustainable development. (Selman, 1998; cited in Dublin Institute of Technology 2006, p. 5) Moreover, the agenda encouraged a more proactive role and requires stakeholders to explore wider implications of their lifestyles while promoting collective responsibility for actions (Mehta, 1996; cited in Dublin Institute of Technology 2006, p. 5).

Since 1970s and especially after the Rio Summit, cities have been aiming to gain environmental credentials and having new visions with reference to urban ecology. Moreover, cities strive to adopt proactive policies leading to the conception of new systems of production and consumption. (Mega 2005, p. 44) Local Agendas 21 illustrate the concept "think globally, act locally". European cities (from Lahti, Finland, to Lavrion, Greece) are among the first cities to adopt local plans 21, many of them providing international models of excellence. All Swedish local authorities adopted local agendas and plans 21 that include comprehensive actions on resource and waste management, transport, consumption patterns and environmental education. Stockholm developed a comprehensive eco-cycle balancing strategy, which uses waste as an input for productive activities. (Mega 2005, p. 44-45)

2.2.1.5. HABITAT II Conference (Istanbul, 1996)

On the road from Rio (1992) to HABITAT II (1996), the first conference on European Sustainable Cities and Towns was in Aalborg in May 1994. "Charter of European Cities and Towns: Towards Sustainability" was signed by eighty municipal and two hundred individual signatories at the end of the conference. Moreover, it was the starting point for the European Campaign of Sustainable Cities and Towns which constitutes the most massive movement of cities in Europe and was an important pillar in the pantheon of world networks and movements (ICLEI 1995; cited in Mega 2005, p. 24-25). The second conference was in Lisbon in 1996 which urged cities to move from charter to action. (ICLEI 1997; cited in Mega 2005, p. 25) Moreover, in 2000 Hanover Conference included the Mayors Convention declaring local sustainability as their highest political priority (ICLEI 2001; cited in Mega 2005, p. 25)

The challenges had increased dramatically since Vancouver till HABITAT II. The world population had been grown daily by more than 250.000 people. The efforts to date had not been sufficient to ensure a general minimum subsistence. The percentage of people living in cities was growing at the same time. Production of goods, turnover of energy and materials and transport services were concentrated in the cities. It was undisputed that the cities were bearing not only responsibility for their local environmental situation, but also increasingly for the global ecological problems. The consequences of an economic and prosperity growth – for example the growing consumption of free land for settlement purposes and the increasing demand for mobility – found their spatial expression in the cities. The cities were the places where the problems of resource-consuming and environment polluting ways of life and economic forms which threaten the natural resources and ecosystems worldwide could be felt most clearly and most insistently. The chances of a global policy for sustainable development were thus decided in the cities. (Human Settlements Development and Policy 1996, p. 1)

Therefore, Habitat II United Nations Conference on Human Settlements World Assembly of Cities and Local Authorities Final Declaration was held in Istanbul in 1996 twenty years after the first World Conference in 1976 in Vancouver, Canada (Habitat I). The UN General Assembly has defined “Adequate Shelter for All” and “Sustainable Human Settlements Development in an Urbanizing World” as the themes for Habitat II. The focal points of the conference were the cities and the urbanization process to be observed worldwide. (Human Settlements Development and Policy 1996, p. 1)

Habitat II aimed to draw attention to the fact that the urbanization process caused problems, but at the same time offered opportunities to durably improve the living and environmental conditions of the people. (Human Settlements Development and Policy 1996, p. 1)

HABITAT II offered governments and cities the opportunity to join visions and actions on all dimensions of urban sustainability. (**Figure 2. 6**) The HABITAT II Agenda focused on such principles: equality, eradication of poverty, sustainable development, livability and diversity, family, civic engagement and government

responsibility, partnership, solidarity and international co-operation and co-ordination, and mentioned commitments to adequate shelter for all, sustainable human settlements, financing and progress evaluation. (Mega 2005, p. 18)

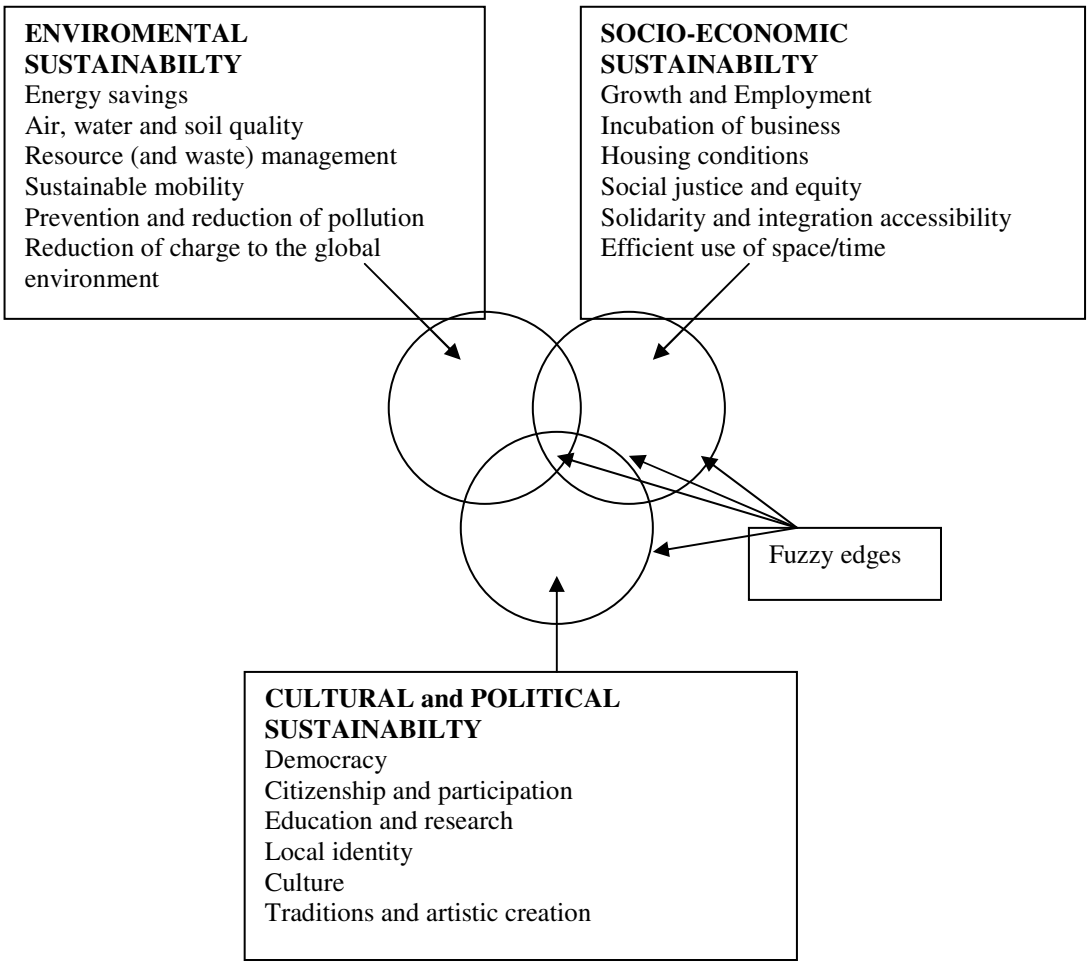

Figure 2. 6. The Dimensions of Urban Sustainability
(Source: Mega 2005, p.19)

2.2.1.6. The World Summit on Sustainable Development (Johannesburg, 2002)

The World Summit on Sustainable Development (WSSD) was held in Johannesburg in 2002. (Hens and Nath 2003, p. 8) Ten years after Rio Summit, Johannesburg Conference aimed at creating more effective strategies for sustainable development for the implementation of the decisions took in 1992 Conference. The group formed with the coordination of Turkish Ministry of Foreign Affairs, Turkish Ministry of the Environment and representatives from UNDP joined the preparation process for RIO+10. Turkey designated such topics as government, business and industry,

lessening poverty, knowledge and telecommunication, conserving biological diversity and climate change. (TÜBİTAK 2002; cited in Altunbaş 2002, p.4-5)

In Johannesburg Conference such topics were discussed: struggle with poverty and its global action, consuming natural resources, relations with poverty and environment. (UN-DESA 2003; Altunbaş 2002, p. 5) Moreover, Johannesburg Plan set out a range of actions that countries should take to influence consumption patterns. (Mega 2005, p. 42-43)

In ten years time from Rio to Johannesburg – Local Agendas 21 to Local Action 21 means from Agenda to Action – from plan to practice. In other words, Local Action 21 has become simultaneously a motto for accelerated implementation of sustainable development, a mandate given by the Summit to local authorities worldwide to engage in the implementation of local agendas and action plans and a movement of cities, towns and countries and their associations towards sustainability. (Mega 2005, p. 18-19)

The process of evolution that seems to have taken place between the 1972, 1992 and 2002 environmental summits is depicted in **Figure 2. 7**. The figure builds on the three dimensions of sustainable development to illustrate how the documents emerging from each successive conference have dealt with energy issues. The figure suggests that a rather neat evolution of the agenda has happened with the Stockholm summit of 1972 dealing with energy issues principally as a source of environmental stress, the 1992 Rio summit added a clear economic focus to its treatment of the subject, while the 2002 Johannesburg Conference built upon the existing environmental and economic focus and added the element of energy as a requisite for basic human needs to the equation for the first time. (Susskind 1994, Chayes and Chayes 1995; cited in Najam and Cutler 2003, p. 133-134)

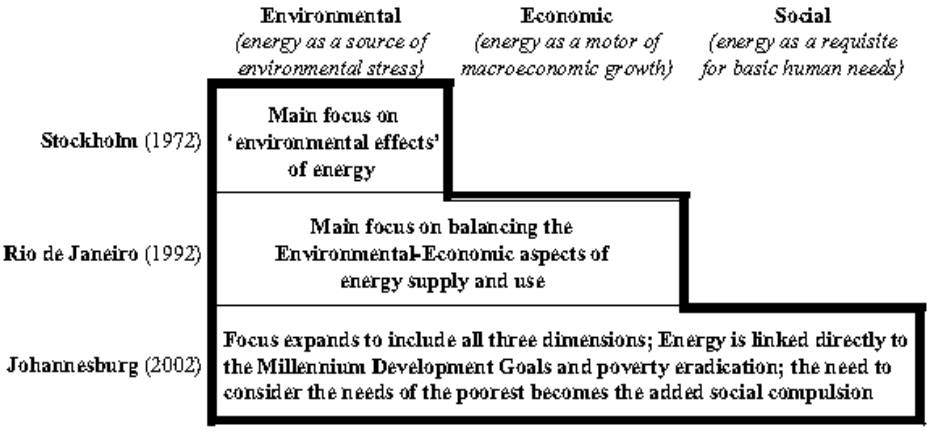

Figure 2. 7. Energy and Sustainable Development: an Evolving Agenda

2.2.1.7. World Urban Forum (Vancouver, 2006)

(Canadian Institute of Planners Official Web Site 2000)

World Urban Forum (WUF) is a platform for:

- Networking with government, non-government and industry
- Professional learning opportunities
- Motivating and educating public and private interests about sustainable development
- Influencing policy makers domestically and internationally

Program Theme of World Urban Forum:

- Current Working Theme:
  - Building Cities to Match the Dreams of the Citizens
- Sub-themes:
  - The Ideal City
  - The Secure City
  - The Capable City
  - The Learning City
  - The Livable City
  - The Youth Friendly City
  - The Planning City (CIP)
- Collectively: Mosaic for urban sustainability

Guiding Principles of World Urban Forum:

- Guiding principles for WUF 2006:
  - Public and private partnership
  - Social / cultural inclusion and interaction
  - Horizontal public administration
  - Commitment to a continuing action plan
- Using communication technologies to achieve maximum community participation

2.2.2. Examples of Sustainable Planning

2.2.2.1. World Examples

2.2.2.1.1. Toronto Strategic Plan

Toronto (Canada) City Council has approved a strategic plan (Toronto Official Web Site 2006) which supports the underlying principles and strategies for achieving sustainability. The strategic plan incorporates many fundamental elements of sustainability including good governance, civic participation, equity, and social, environmental and economic vitality. The plan contains four critical vision statements:

- **Toronto is a caring and friendly city**: They have opportunities to sustain and enrich their lives and reach their highest potential. Their diversity is valued and celebrated and their communities are a source of pride. They are actively involved in the social, cultural and political life of the city.
- **Toronto is a clean, green and sustainable city:** They integrate environmental stewardship into their daily activities. They maintain and improve the health of the environment for present and future generations.
- **Toronto is a dynamic city:** As the nation's leading economic engine, they in the city are a centre of innovation and growth with a strong international presence. Their dynamic city is well positioned to succeed in the world economy.

- **Toronto invests in quality of life:** They in the city invest in quality of life – socially, economically, culturally and environmentally – to make Toronto a desirable place to live, prosper and visit.

The environmental plan (Clean, Green and Healthy a Plan for an Environmentally Sustainable, Toronto, February in 2000) sets the direction in many key areas and builds on the environmental protection and enhancement efforts being carried out by the City, other agencies and hundreds of individuals and organizations from all sectors in Toronto. The task force (1998-2006, provided City Council) has four key areas to work in to help move the city towards sustainability:

- Sustainable transportation
- Sustainable energy
- Green economic development; and
- Education and awareness

Through the sustainability goal of "The city of Toronto's environment, community and economy should be healthy and vibrant and should meet the needs of today without compromising the ability of future generations to meet their needs", these environmental principles are created:

- **Protect**
    - Conserving environmental capital and living off the interest.
    - Protecting what is healthy: self-sustaining fish and wildlife populations, habitats and biodiversity; parks, trails and greenways; clean air and water; historic buildings and districts; and food-lands.
- **Prevent**
    - Anticipating and preventing pollution of air, land and water.
    - Taking a precautionary approach (where there are concerns about serious harm to human or environmental health, the lack of full scientific certainty shall not be used as a reason to postpone cost-effective, preventive measures).

- **Reduce**
    - Reducing Toronto's "ecological footprint" and striving for greater self-sufficiency by: conserving energy, water and resources; reducing waste; using local materials, foods and products; and using materials in continuous cycles.
- **Restore**
    - Regenerating and naturalize degraded habitats and linked green spaces.
    - Remediating contaminated soils, groundwater and sediments.
    - Restoring hydrological cycles, watersheds and river systems.

How to do these environmental principles is described in the following principles:

- **Integrate**
    - Integrating environmental factors, along with social and economic ones, into government, business and personal decision-making.
    - Involving all stakeholders (citizens, agencies, businesses, special interests and associations) in open, accessible decision-making processes.
    - Accommodating different interests of the diverse population (i.e., cultures, age groups and special needs).
    - Creating partnerships for action.
    - Considering interconnectedness among air, land, water and living organisms, including humans.
- **Take Responsibility**
    - Promoting accountability for actions as individuals, businesses and organizations (e.g., the polluter and user pay principles).
    - Applying green economics (i.e., seek win-win-win solutions that benefit the environment, the community and the economy).
    - Considering the needs and quality of life of future generations.

- **Motivate**
    - Providing information and sustainability education to encourage the transition from a consumer to a conserver society.
    - Developing aware, engaged, and committed citizenry.
    - Monitoring results, evaluating progress, and adjusting policies and programs as needed.
    - Celebrating and showcasing accomplishments.

2.2.2.1.2. Santa Monica Sustainable City Plan

The Santa Monica (USA) sustainable city plan is founded on nine guiding principles that provide the basis from which effective and sustainable decisions can be made. These guiding principles have been revised and updated from the versions initially adopted in 1994. The plan has also been expanded to include eight goal areas (Santa Monica Sustainable City Plan 2003, p. 2-3):

- Resource conservation
- Environmental and public health
- Transportation
- Economic development
- Open space and land use
- Housing
- Community education and civic participation
- Human dignity

Within each goal area there are specific goals which comprise the core of the community vision and represent what Santa Monica must achieve in order to become a sustainable city. For each goal, specific indicators have been developed to measure progress toward meeting the goals. Indicators are tools that help to determine the condition of a system, or the impact of a program, policy or action. A goal/indicator matrix has been included to demonstrate the linkage between these areas. Specific targets have been created for many of the indicators. The targets represent aggressive yet achievable milestones for the community. Unless otherwise noted, the targets are

for the year 2010 using 2000 as a baseline. Santa Monica Sustainable City Plan has nine guiding principles (Santa Monica Sustainable City Plan 2003, p. 3-6):

- The concept of sustainability guides city policy
- Protection, preservation, and restoration of the natural environment is a high priority of the city
- Environmental quality, economic health and social equity are mutually dependent
- All decisions have implications to the long-term sustainability of Santa Monica
- Community awareness, responsibility, participation and education are key elements of a sustainable community
- Santa Monica recognizes its linkage with the regional, national, and global community
- Those sustainability issues most important to the community will be addressed first, and the most cost-effective programs and policies will be selected
- The city is committed to procurement decisions which minimize negative environmental and social impacts
- Cross-sector partnerships are necessary to achieve sustainable goals

2.2.2.1.3. Knox Sustainable City Plan

The Knox 2001-2010 sustainable city plan (Knox City Council Official Web Site 2001) has the vision "that the city of Knox will be a leading example of a sustainable city by conserving, enhancing and managing the natural and built environment through innovation, co-operation and education for present and future generations." A sustainable Knox (USA) is characterized by:

- A community that considers economic, social and environmental implications in all decision making processes,
- A community that considers the long-term implications of decisions on future generations for at least 50 years,

- A community that recognizes each sector (council, residents, business and industry, government and other agencies) as having a significant role to play in achieving sustainability and continuous improvement,
- A community that is educated and involved in sustainability issues,
- A community that works towards 'no net loss' of natural resources,
- A community committed to achieving sustainability and continuous improvement at a political and practical level,
- A community that works in partnership and co-operation, and
- A community that embraces sustainable development.

The plan has seven key themes:

- Protection and enhancement of natural habitat, flora and fauna
- Water conservation and quality
- Education, marketing and leading by example
- Waste minimization and recycling
- Sustainable planning and development (including cultural heritage)
- Integrated transport planning
- Energy efficiency, greenhouse gas emissions and air quality

2.2.2.1.4. Minnesota Sustainable Design Guide

The design strategies for the Minnesota (USA) sustainable design guide (University of Minnesota 2001) fall into eight environmental topics: planning for conservation, sustainable sites, water efficiency, energy and atmosphere, indoor environmental quality, materials, waste, and innovation. Many of the sustainable design strategies relate to more than one environmental topic. Subsequently, links are provided between topics. Some of the greatest design and ecological benefits occur when strategies combine with others to address and integrate multiple concerns such as the relationship between environmental impacts, human experience, economics, and design aesthetics.

Planning for Conservation:

In view of environmental concerns, sustainable design embodies these goals:

- Planning buildings efficiently to avoid unnecessary resource use.
- Reusing existing buildings, systems and materials.
- Making spaces, systems and furnishings adaptable to future changes.

These sustainable design goals listed are translated into the following strategies:

- Reduced space needs
- Building reuse
- Adaptability

Sustainable Sites:

In view of environmental concerns, sustainable design embodies these goals:

- Reducing sprawl due to new development.
- Maintaining and/or restore the biodiversity of natural systems.
- Responding to microclimate and natural energy flows.
- Restoring, maintain, and/or enhance the natural character of the site.
- Reducing energy use for transportation.

These sustainable design goals listed are translated into the following strategies:

- Erosion control and sedimentation control
- Site selection
- Urban redevelopment
- Brownfield redevelopment
- Alternative transportation
- Reducing site disturbance
- Storm-water management
- Landscape and exterior design to reduce heat islands

- Light pollution control

Water Efficiency:

In view of environmental concerns, sustainable design embodies these goals:

- Preserving site watersheds and groundwater aquifers.
- Conserving and reuse storm-water.
- Maintaining appropriate level of water quality on the site and in the building(s).
- Reducing potable water consumption.
- Reducing off-site treatment of wastewater.

These sustainable design goals listed are translated into the following strategies:

- Water efficient landscaping
- Innovative wastewater technologies
- Water use reduction

Energy and Atmosphere:

In view of environmental concerns, sustainable design embodies these goals:

- Reducing total energy consumption of buildings.
- Reducing air pollution, global warming, and ozone depletion impacts of energy sources.
- Slowing depletion of fossil fuel reserves.

These sustainable design goals listed are translated into the following strategies:

- Fundamental building systems commissioning
- Minimum energy performance
- Choloro-fluro-carbons (CFC) reduction in Heating-Ventilation-Air Conditioning and Refrigeration (HVAC and R) equipment

- Optimizing energy performance
- Renewable energy
- Additional commissioning
- Ozone depletion
- Measurement and verification
- Green power
- Reducing mechanical equipment
- Efficient equipment and appliances

Indoor Environmental Quality:

In view of environmental concerns, sustainable design embodies these goals:

- Providing an environment for occupants that are physiologically and psychologically healthy.
- Minimizing production and transmission of air pollution.
- Providing the full range of supportive sensory conditions (olfactory, thermal, vibro-acoustic, tactual, and visual) for occupants.
- Providing needed operational control of systems to occupants.
- Producing environments that enhance human comfort, well-being, performance, and productivity.

These sustainable design goals listed are translated into the following strategies:

- Minimum Indoor-Air-Quality (IAQ) performance
- Environmental tobacco smoke (ETS) control
- Carbon dioxide (CO_2) monitoring
- Increasing ventilation effectiveness
- Moisturing control to prevent microbial contamination
- Construction IAQ management plan
- Low-emitting materials
- Indoor chemical and pollutant source control
- Controllability of systems

- Thermal comfort
- Daylight and views
- Effective lighting
- Appropriate building acoustical and vibration conditions

Materials:

In view of environmental concerns, sustainable design embodies these goals:

- Minimizing consumption and depletion of material resources.
- Minimizing the life-cycle impact of materials on the environment.
- Minimizing the impact of materials on indoor environmental quality.

These sustainable design goals listed are translated into the following strategies:

- Reduced material use
- Disassembly
- Resource reuse
- Recycled content
- Local/regional materials
- Rapidly renewable materials
- Certified wood
- Durable materials
- Reusable, recyclable or biodegradable materials
- Materials with low life cycle impact

Waste:

In view of environmental concerns, sustainable design embodies these goals:

- Minimizing use of resources.
- Minimizing waste generated from construction, renovation and demolition of buildings.
- Minimizing waste generated during building occupancy.

- Encouraging better management of waste.

These sustainable design goals listed are translated into the following strategies:

- Construction waste management
- Packaging waste management
- Storage and collection of recyclables
- Hazardous waste reduction and disposal

2.2.2.2. Examples from Turkey

2.2.2.2.1. National Level

Urbanization dynamics in Turkey had in five distinct periods in terms of urbanization trends and the policies: Pre-urbanization Period (1923-1950), Rapid Urbanization Period (1950-1960), Planned Period (1960-1980), Liberal Period (1980-1990), and Integration with European Union Period (1990-2006). Environmental issues have also developed through these periods.

In **Pre-urbanization Period (1923-1950)** urbanization was in low rates. In the development process of Turkey, 1930s had an important role. In these years national or planned industrialization in economy was initiated, universities were restructured; "community centers", "village institutes", and "Institution on Language and History" were established. In other words 1930s were the years for the efforts on developments and cultural improvements. (Kepenek 2002, p. 29) Republican period started to institutionalize the urban planning in Turkey in 1930s; therefore, many new laws were introduced in the field of urban planning and management. In 1933 with the "Law of Building and Roads" a new period started in Turkey planning agenda. Moreover, with the foundation of "Bank of Provinces" an important progress was maintained. That is, 1933-1945 period differs from following planning periods in Turkey. In this period plans were prepared in five different types of levels: quarter planning, rural planning, urban planning in existing cities, planning new cities, regional planning. After 2nd World War, 1945 a rapid urbanization process started. (Tekeli 1980, p. 63-64, 72, 85)

The second period is **Rapid Urbanization Period (1950-1960)**. After 1950s, rapidly increasing population in big cities brought many problems. Moreover, administrative structures could not cope up with the urbanization problems in front of this high urbanization. There were piecemeal interventions of central government to solve urgent problems. (Türker 1998, p. 160) From the point of environmental issues, Turkey entered a new period after 2nd World War. Parallel to the world, Turkey had an important demographical change. While birth rates were constant, dead rates did rapidly decrease. Moreover, with the mechanization of agricultural devices there occurred huge movements from rural to urban areas. Therefore, Turkey was facing a rapid urbanization process. In order to meet the demands of this transformation period, Turkey had to have a rapid industrialization. (Tekeli et al. 2002, p. 16)

The third period is **Planned Period (1960-1980)**. In front of rapid urbanization and industrialization process, Turkey saw the respond of this problem in planned development in 1960s. This transformation brought about some environmental problems, such as widespread erosion started. Unsystematically and unplanned growth of cities resulted in loss of lands, inefficiency in infrastructure systems. Growing cities faced the problems in management of used-water and solid-waste. Furthermore, industrial areas created serious air and water pollution problems. Therefore, air pollution problem was also essential in this period since heating was provided by bad quality of coal. After United Nations Environment Conference in 1972, the need for establishing national policies came to on the scene of Turkey. (Tekeli et al. 2002, p.16-17) In 1978 Environmental Counsellorship of Prime Ministry was founded as first public environmental organization. (Altunbaş 2002, p.7)

In 1970s and 1980s in development implementations in urban and rural areas can be summarized in five processes. Firstly, through rapid urbanization and with the necessity of housing problems, squatter housing problems became important in large cities. Secondly, unregistered housing areas were legalized through legislative instruments. Thirdly, storey of buildings in urban areas was risen up and density of these areas was increased with destroy-built operations through legislative instruments. Fourthly, urban sprawl was developed in rural areas with new

developments in outer sides of urban areas; by development plans this new type of development was called satellite city, new city, etc. Lastly this new development factor affected outer sides of municipality and neighboring boundaries of large cities. (Bilsel 1980, p. 130-132)

The fourth period is **Liberal Period (1980-1990)** through the dominancy of 3194 Development Law. 1985-1995 was the era of new arrangements within the privatization trends. (Türker 1998, p. 161) In 1982 Constitution Law declared that "Everybody has the right of living in a healthy and balanced environment. Developing environment, protecting health of environment and preventing environmental pollution are duties of the state and any citizens". This was an important progress. (Tekeli et al. 2002, p. 18) By making this law in 1982, the concept of environmental protection was placed in Turkish laws for the first time. (Budak 2000; cited in Altunbaş 2002, p. 7) However, the law did not clearly use the term of "sustainable development" since the legally protected area of environment was not defined as constitutional terms. (Egeli 1996; cited in Altunbaş 2002, p. 7)

In 1983 Environment Act was introduced. Moreover, the issue of environment was put into the agenda of the Turkish National Assembly (TNA) in 1988. Through the goal of "protecting the environmental values of the nation and taking necessary measures and creating an environmental policy for removing the existing environmental problems", it was decided to form an Assembly Research Commission, and a report was produced through three-year-study which meant that law-makers were aware of environmental conditions. (Tekeli et al. 2002, p. 18)

The last period is the **Integration with European Union Period (1990-2006)**. The effects of European Union have entered in institutions of Turkey and legal framework has been changing in this period. (Günay 2002, p. 167) In 1991, Ministry of Environment was founded in Turkey. In addition, Turkey developed some organizational and legal issues while joining Rio Conference (1992), and public was becoming conscious about environmental issues. After Rio, organizational and legal development in Turkey was not as before; for example, the promise of "developing National Environment Strategy and Action Plan" that was taken through Agenda 21

was finished in 1998. Moreover, there are some preventive measures for environmental issues: using qualified coal and natural gas for heating in large cities decreased the air pollution, development in infrastructural systems brought some improvement especially in Haliç, İzmit, İzmir; consciousness about environmental issues increased. (Tekeli et al. 2002, p. 18)

The sustainable development concept has entered the urban planning agenda of Turkey mainly after Habitat II Conference held in Istanbul in 1996. Turkey is trying to adopt the experiences of developed countries to improve the planning system including the sustainable development criteria. Environmental Law in 2006 with the changes in the 1983 law declared its aim as "protecting the environment that is the common being of all livings through the principles of sustainable environment and sustainable development". (Environmental Law in 2006) The law did clearly use the term sustainable environment and sustainable development according to Brundtland Report. The law declared that "sustainable environment is the process of rehabilitation, protection and development that meets the needs of the present without compromising the ability of future generations to meet their own needs in every fields, social, economic, physical etc."; and "sustainable development is the development that guarantees that present and future generations live in a healthy environment and that is based on the balance among physical, economic and social goals".

2.2.2.2.2. Local Level

Local Agenda 21 in Turkey:

The implementation of Local Agenda 21 in Turkey has three phases (Turkey Local Agenda 21 Official Web Site 2004):

- **Promotion and Development of Local Agenda 21s in Turkey**

IULA-EMME – International Union of Local Authorities, Section for the Eastern Mediterranean and Middle East Region (currently UCLG-MEWA – United Cities and Local Governments, Middle East and West Asia), launched in 1997 a project entitled "Promotion and Development of Local Agenda 21s in Turkey", encompassing a number of pilot cities of varying sizes from all over the country to conduct their respective Local Agenda 21 processes. Main aim was to mobilize local government and local stakeholders to seek control of the future of their settlements for sustainable development and improved service delivery. "Promotion and Development of Local Agenda 21s in Turkey" had two aims:

  - Maintaining the presentation of the Local Agenda 21, its effects and results on governance at all levels.
  - Creating the mechanisms that will develop the planning process through the participation of different sectors in local community in pilot cities and make these mechanisms reality.

- **Implementation of Local Agenda 21s in Turkey**

Building upon the achievements of the first phase, the continuation project entitled "Implementing Local Agenda 21s in Turkey" started in January 2000, following the termination of the first phase project at the end of 1999. During the second phase, two Decrees dated 19 March 1998 and 7 November 2000 respectively, were issued by the Ministry of Interior to support the LA-21 processes. Thus, more effective state-stakeholders collaboration was facilitated. Second phase of the project was finished in the middle of the year 2003 with the support of IULA-EMME and UNDP. "Implementing Local Agenda 21s in Turkey" had five aims:

- Increasing the number of participatory platforms to Local Agenda 21 and create participatory processes in new project partner cities.

- Preparing action plans in new project partner cities, and implementing action plans in existing partner cities.

- Organizing campaigns both for informing citizens and for international presentation.

- Maintaining the sustainable support for the Local Agenda 21 for a long period.

- Functioning the Local Agenda 21 in the process of re-structuring after Marmara Earthquake.

- **Localization of the Goals of Millennium Declaration and World Summit on Sustainable Development (WSSD) Implementation Plan through Local Agenda 21 Governance Network of Turkey**

The third phase of Local Agenda 21 in Turkey has this aim:

- Starting a Local Agenda 21 Small-Scale Donations Programme in order to make the institutionalization of LA-21 processes and mechanisms in local and national levels and in order to encourage and embody the Goals of Millennium Declaration and WSSD Implementation Plan in local level through utilizing from the campaigns and capacity development attempts.

Partnership to the LA-21 Program is open to all local authorities in Turkey, except village administrations, as they require a different setup. New applications to join the Program were discussed and decided by the National LA-21 Program Steering Committee. The partnership structure, discussed and revised by the National LA-21 Program Steering Committee in its meeting held on 19 November 2004, encompasses the following 61 local authorities as “partners”:

Metropolitan Municipalities: İstanbul (supporting partner and the term presidency of IULA-EMME), Adana, Adapazarı, Antalya, Bursa, Diyarbakır, Eskişehir, İzmir, İzmit, Mersin and Samsun.

Special Provincial Administrations: Edirne, Elazığ, Kastamonu and Nevşehir.

Municipalities (Province Centers): Afyon, Antakya, Aydın, Bingöl, Bitlis, Burdur, Çanakkale, Denizli, Hakkari, Kars, Kütahya, Malatya, Manisa, Mardin, Sinop, Trabzon, Van, Yalova and Zonguldak.

Municipalities (District): Doğubeyazıt (Ağrı), Çankaya and Keçiören (Ankara), Kuşadası (Aydın), Nilüfer, Osmangazi, İznik and Orhangazi (Bursa), Biga (Çanakkale), İskilip (Çorum), Bakırköy, Beşiktaş, Beyoğlu, Şişli and Zeytinburnu (İstanbul), Foça, Karaburun and Ödemiş (İzmir), Talas (Kayseri), Babaeski (Kırklareli), Kızıltepe (Mardin), Gölcük (Kocaeli), Tarsus (Mersin), Dalyan (Muğla), Ürgüp and Mustafapaşa (Nevşehir), Harran/Yaylak (Şanlıurfa).

Figure 2. 8. Turkey Local Agenda 21 Governance Network
(Source: Turkey Local Agenda 21 Official Web Site 2004)

2.2.3. The Role of Planning for Sustainable Urban Development and Main Objectives of Sustainable Development

Being a system of instruments and methods for development, planning constitutes development processes in the way of local and regional sustainability. These planning processes take place in a real, legal, social and economic environment. The development is ensured through multi-dimensional arrangements among citizens, politicians, policymakers and other professionals. Participation and implementation has great deal in development. Therefore, "urban development" differs from "urban planning". (Coplák and Rakśányi 2003, p. 21)

Since sustainability emphasizes a set of different issues, fields and disciplines; different specialists in transportation, land use, housing, community development, and environmental protection should handle the issues of sustainable development providing the coordination of economic, environmental, and social goals within planning. (Wheele 1996; cite in Coplák and Rakśányi 2003, p. 21)

Carlos Verdaguer (2002; cited in Coplák and Rakśányi 2003, p. 21) puts forth some rules for planning process for sustainable urban development. (**Table 2. 1**) Such kind of an urban planning must consider:

- Facilitating the local understanding of the global context
- Meeting objectives agreed by all the social partners
- Transforming the objectives to feasible and definite programs and projects
- Submitting the results to a continuous follow-up and feedback processes based on indicators, correcting the course whenever necessary
- Building on an integral analysis (economic, social, urban, environmental, cultural, aesthetic etc.) of urban and territorial reality based on an in-depth knowledge of sectoral areas as well as on the participation of every social stakeholder. One essential reference concept for this analysis is the carrying capacity of territory.

Table 2. 1. Main Objectives of Sustainable Development

Sectors	Main Objectives
Urban Structure	• Integration of urban quarters into the city and the surrounding region • City organized as network of urban quarters • Self-sufficient urban quarters • Attractive urban design with human scale • Sufficient and attractive public space for everyday life
	• Concentration of urban development at suitable sites for public transport • Balance of concentration and decentralization • Limited land consumption (Compact city) • Qualified density in ecological, economic and social context
	• Balance of uses in quarters, city and region and location of all necessary facilities at suitable sites • Best accessibility to all facilities for all inhabitants
Transport	• Urban structures designed for environmental compatible modes (pedestrians, cyclists, passengers of public transport and necessary car traffic) • Priority for the weaker participants of transport • "City of short distances" (need for travel as low as possible) • Minimum pollution effects and maximize safety of traffic
Energy	• Efficient use of energy (low energy buildings, solar architecture, equipment) • Extended use of renewable energies
Water, Sewage Treatment, Waste	• Closed cycles (water, materials etc.) • Reduction, re-use and recycling of waste
Social and Cultural Issues	• Livable city of healthy, safety and well-being • Alternative sustainable lifestyles • Cultural identity and social diversity • Involvement and participation of inhabitants in urban development • Consciousness of sustainability, solidarity and humility • City as the place of information exchange, beauty, complexity and respect for the cultural heritage
Economy	• Strong and diversified local economy using local resources • Application of information technologies in management of transport, energy, water consumption, etc. • City connected with global telecommunication networks
Landscape, Nature and Urban Climate	• Balance of built-up area and nature • Integration of green and surfaces of water within the city • Different solutions for different climates • Bioclimatic and hygienic comfort (influencing outdoor and indoor temperature and humidity, air quality, noise)

(Source: Coplák. and Rakśányi 2003, p. 25-26)

Sustainable Urban Development Objectives can be summarized in three main groups: environmental values (built environment, natural environment, and cultural environment), socio-economic values and political values. (**Appendices C, D** and **E**)

2.2.3.1. Environmental Values

2.2.3.1.1. Built Environment

a. Urban Structure in a Livable city

- **City Design Strategies:** These strategies provide nested hierarchy of central places (city, districts and neighborhoods) with an effective infrastructure expressed in community greenways and the clustering of activities which will increase pedestrian enjoyment and accessibility. These are the critical city design strategies (Kazimee 2002, p. 3-4):

    - The city center and its historic character should be reanimated to facilitate an ideal, centralized geographic position as a dynamic central focus for the city.
    - Pedestrian and public transit systems, clearly defined greenways and transport systems throughout the city should be essential in design priorities.
    - "First reduce, then reuse and recycle" system should be essential in resource management.

- **Enhancing a Sense of Community:** All site characteristics and qualities (natural, cultural, historical, etc.) should be conserved. A cohesive urban village quality with convenient access to neighborhood amenities and services should be developed for a healthy, safe and sustainable community. Moreover, convenient pedestrian accessibility to activities (neighborhood schools, greenways, wetlands and wildlife habitat, parks, views, etc.), indoor and outdoor activity centers, and services (shared governance, daycare, shopping, recycling, etc.) should be emphasized. (Kazimee 2002, p. 4)

- **Providing for Pedestrian Priority Connections**: Bike and walkways between residential developments and neighborhood amenities and services are critical to enhancing a more personal/pedestrian sense of community since such connections are far more energy-and cost-efficient than auto dependent access. (Kazimee 2002, p. 4)

- **Moderating Density and Cluster:** Design for effective land use and density (moderate densities of at least 12-16 dwelling units per acre) not only provide safety and focused area but also reduce in infrastructure costs. A cohesive cluster is constituted from 25-35 dwellings with similar cultural character and life styles, shared social amenities and open spaces; therefore, clustered townhouses achieve quality, efficiency and affordable housing. Moreover, orienting dwelling units to the South can enhance comfort and save energy. (Kazimee 2002, p. 4-5)

- **Thinking Small and Smart:** Size is generally proportional to costs; therefore, small and efficient homes are far more affordable. Moreover, minimizing front setbacks and minimizing the impact of parking provide for outdoor porches, gardens, etc. to enhance human scale, social activities, surveillance and safety and enhance neighborhood. (Kazimee 2002, p. 5-6)

b. Sustainable Urban Infrastructure

It is possible to define urban infrastructure as the principal component that initiates the urban development. (Türker 1998, p. 10) Moreover, the concept of urban infrastructure covers a variety of very different services (World Bank 1994: 2; cited in Türker 1998, p. 7):

- Public Utilities: power, telecommunications, piped water supply, sanitation and sewerage, solid waste collection and disposal, and piped gas.
- Public Works: roads and major dam ad canal works for irrigation and drainage
- Other Transport Sectors: urban and interurban railways, urban transport, ports and waterways, and airports.

Efficient, equal and accountable urban service provision is essential in order to maintain sustainable development.

Urban Transportation Planning and Management:

There are many problems that are draining the potential of the transport sector such as congestion of the networks, lack of effective linkage and harmonized operability among transport modes and systems, harmful effects of traffic on the environment and public health and the heavy toll of road accidents. (Mega 2005, p. 238) A sustainable transportation planning should meet these following criteria (Center for Sustainable Transportation 1997; cited in Pinderhughes 2004, p. 144-145):

- It allows the basic access needs for individuals and societies to be met safely and in a manner consistent with human and ecosystem health.
- It is affordable, operates efficiently, offers choice of transport mode, and supports a vibrant economy.
- It is capable of delivering required capacity and performance and is compatible with the desired lifestyle of the population it serves.
- It limits emissions and waste within the planet's ability to absorb them, uses inexhaustible energy (renewable energy) sources, minimizes consumption of non-renewable resources, reuses and recycles its components, and minimizes the use of land and the production of noise.
- It is clean and affordable for the vast majority of users; it does not pollute air, land, or water beyond the planet's ability to absorb and cleanse; this is especially the case with regard to CO_2 emissions.
- It makes use of land in a way that has little or no impact on the integrity of ecosystems.
- It uses energy sources that are essentially renewable or inexhaustible.
- It uses other resources that are renewable or inexhaustible and achieved in part through the reuse of items and the recycling of materials used in vehicles and infrastructure.
- It produces no more emissions and waste than can be accommodated by the planet's restorative ability.

- It meets basic human needs for health, comfort, and convenience.
- It allows for and supports development at a human scale and provides for a reasonable choice of transport modes, housing, community, and living styles.
- It produces no more noise than is acceptable by communities, is safe for people and their property, and provides cost-effective service and capacity.
- It is financially affordable in each generation and supports economic activities.

There are many ideas for maintaining urban transportation planning and management (TÜBİTAK-TTGV 2002, p. 127-136):

- **Preventing Air Pollution**
  - **Developing Alternative Energy Resources for Vehicles:** Using alternative fuels other than petrol and diesel fuel will provide the decrease in the amount of emissions (or will vanish completely). There are alternative fuels that are being used today or can be used in near future: liquid petroleum gas, natural gas, electricity, hydrogen, bio-fuels.
  - **Improving the Existing Fuels:**
    - Emission limits and making strict controls should be declared.
    - Appropriate fuels for these limits in refineries should be produced.
    - A system of "refinery-distribution-marketing-selling" in order to maintain the guarantee of the quality of the fuels should be created.
    - The usage of composed natural gas (CNG) should be encouraged.
  - **Developing Vehicle Technologies:**
    - There should be obligations of production, controls and certification that are appropriate to the international technical legislation of European Union.

        - There should be technological innovations in vehicles that consume less fuel, provide fuel-efficiency and aero-dynamic design and made up of light equipments.
        - There should be obligation on usage of catalytic converter through legislation in order to maintain emission limits.
    - **Enhancing Vehicle Usage:**
        - More than 20-year-old vehicles that consume too much fuel should be banned from the traffic; moreover, it should be encouraged not to use old vehicles through vehicle tax systems according to the age of vehicles.
        - Preventions for fuel-efficiency should be taken, such as traffic-flow arrangement, speed limits, full capacity working vehicles, preventing extreme loading.
        - Controls of vehicles should be made efficiently in order to decrease emissions.
- **Decreasing Noise Pollution:**
    - Technological improvements in motors that create a great deal of noise should be maintained in order to control the noise pollution.
    - There should be preventions in road planning and building in order to decrease noise pollution.
- **Decreasing Other Type of Pollutions:**
    - Through the planning preventions, the amount of land or land-divisions for basic facilities and services of transportation should be decreased, especially through the prevention of the surrounding agricultural areas from being destroyed.
- **Transportation Planning and Management Issues:**
    - **Transportation Planning:** Transportation planning aims to maintain the transportation services that economic, social and cultural facilities necessitate in minimum costs in the country through covering all external factors.

- **The Importance of Public Transportation:** In transportation planning, public transport is provided in arterial roads that have high demands. Public transportation consumes less energy since their energy efficiency is higher; therefore, it decreases the air pollution. In transportation planning such provisions should be considered: 21st century transportation, especially in 500-700 km distances, will be provided by speedy-railways; and planning studies will pay attention to the combination of different modes with the service of railways and if possible sea or inner-water ways.
- **Management and Finance for Applicability (Feasibility):**
  - Organizational structure should be in the base of coordination in order to implement transportation planning. In addition, finance should be provided for the investments of the planning.
  - Besides national interactions, regional and global ones should be paid attention in transportation planning.
  - Legislation should be arranged through the solutions obtained as a result of planning studies.

- **Management of Urban Transportation Demands:**
  - In order to contribute to the solutions of traffic problems, there should be:
    - Increase in provision of public transportation that will supply the demand of urban transportation.
    - Directing and restructuring the demands through such methods: pedestrian areas, bike-paths, traffic-calming arrangements.
    - Generalization of efficient arrangements, controls and pricing systems through technological instruments, besides physical limitations.
  - Instead of developing urban infrastructure for motorway-vehicles, control and management of this demand should be supported.

- Such arrangements will both contribute solutions of traffic problems and help to the conservation of environment: decrease in the speed of motor-vehicles in city centers, traffic calming, car pooling or van pooling, car sharing.
- Transportation planning should be considered with urban planning, so that unnecessary development and problems could be prevented.

- **Economic Feasibility:**
  - Decisions on transportation investments should be taken with the finance and financiers that are needed for the investments.
  - Existing transportation systems and their restructuring processes or social and economic outputs and employment capacities of new systems should be well assessed.
  - It should be maintained that all users should pay for transportation equally through the mechanisms that reflect all social, economic and environmental cost.
- **Innovation in Research and Technology:**
  - Encouragements in such fields should be provided for sustainable transportation: alternative technologies, informatics and communication technologies, transportation logistics and organizations, urban and land planning, economic instruments and marketing methods.
  - Research and Development programmes that focus on sustainable transportation criteria, strategies, precautions and instruments should be encouraged; pilot projects and action programmes should be implemented.
- **Public Participation and Education:**
  - The process of taking decisions on transportation should be in an open and participatory manner. Citizens should be informed about alternative transportation modes and cost of the projects.
  - Decisions on transportation should be taken with the consideration of health, environment, energy, finance, and city planning. Especially in high cost and long term infrastructure

investments absolutely need cost-effect and environment-effect assessments and life-cycle analysis.

- Education and social consciousness should be provided for a sustainable transportation.

2.2.3.1.2. Natural Environment

a. Sustainable Urban Soil, Water and Air Management

Sustainable Urban Water Management

Maintaining fresh water is a vital which is obtained from scarce natural resources. There are many cities in the world that face water shortages. (Mega 2005, p. 64) A sustainable urban water management approach is designed to make adequate supplies of water of good quality which is maintained for the entire human population. In addition it manages to preserve hydrological, biological, and chemical functions of ecosystems. (Okun 1992, Biswas 2000; cited in Pinderhughes 2004, p. 31)

Moreover, without a sustainable urban water management, water shortages will influence all activities in houses, agricultural areas, industrial areas and ecosystem negatively. (Pinderhughes 2004, p. 31-46) Therefore such main principles should be followed:

- Infrastructure changes
- Reducing inefficiency and overuse of water in households
- Recapture and reuse water
    - Gray water systems and rainwater catchment systems
- Ecological wastewater treatment strategies
- Recognizing the true cost of water

Water conservation is a fundamental need for human health. Such principles help water conservation:

- **Preventing Water Pollution:** Water pollution results in such circumstances: various forms of health damage for man and animal, accumulation of substances in soil, disordering of and damage to aquatic

biotic communities, deterioration of drinking water quality. Moreover, the amount of pollution is related to the concentrations of harmful substances and nutritive substances in water. There are many precautions in order to prevent water pollution (Van der Waals, 1996; cited in De Roo and Miller 2000, p. 59):

- Preventing the dilution of harmful and nutritive substances in soil
- Preventing the dumping of waste water
- Preventing the use of contaminated silt
- Preventing the use of salt on streets
- Preventing the use of herbicides in public greenery

- **Developing Water Impoundment Areas and Enhance Wetlands throughout the Site:** Retaining all water on the site as long as possible enhance human and natural habitat (biodiversity) by allowing water to percolate into the ground, water landscaping, reduce downstream flooding, and increase water quality and bio-diversity. Therefore, this can enhance the unique qualities of each site and provide for recreation and education. (Kazimee 2002, p. 9)

- **Using Water Conservation Appliances:** Using water conservation fixtures and appliances in the home can save up water use (low flush toilets, low flow faucets, water and energy efficient appliances, etc.) Avoiding automatic water wasters such as automatic, above ground sprinklers and using drip irrigation systems are many times more efficient than spray sprinklers. Harvesting the rain and gray water from the house and other structures also can save water. Providing artificial wetlands which is economic for brow/black water treatment in applies to both large and small-scale developments, and is far more economic than traditional engineered water treatment facilities. (Kazimee 2002, p. 9)

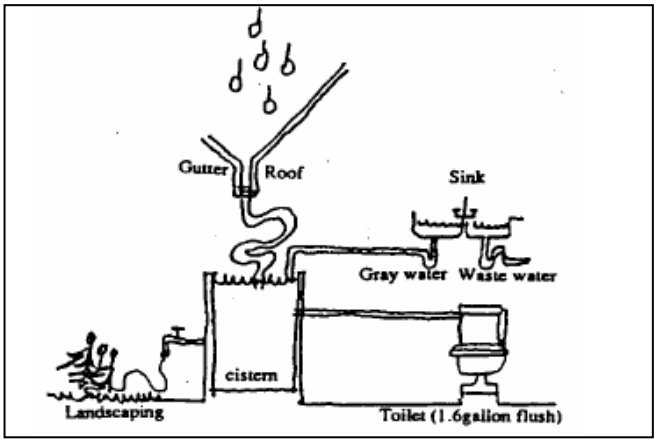

Figure 2. 9. Using Water Conservation Fixtures and Gray Water Systems
(Source: Kazimee 2002, p. 9)

Sustainable Urban Soil Management

There are many threats on land which is essential ingredient in any urban growth such as the increasing demand for land and pressure on wild land. Moreover, forests are damaged in order to create agricultural or urban areas. Another threat is on the high stress and damage on coastal regions because of their attractiveness by large populations. What is more, biological diversity is threatened because of threats on land. (Mega 2005, p. 63)

Land is also essential for urban agriculture having critical socioeconomic and environmental functions. Therefore, providing a non-market access for households, urban agriculture not only increases the household budgets, food security and service of fresh-healthy food but also creates income and employment. (Pinderhughes 2003; cited in Pinderhughes 2004, p. 214-215) Decision-makers and planners should follow efficient, effective and equitable land development strategies that cover environmental issues. (Mega 2005, p. 63)

- **Preventing Soil Pollution:** Soil pollution results in such circumstances: pollution of ground water, pollution of drinking water, health damage (caused by touching soil or breathing in particles), contamination of fruit and vegetables. Moreover, the amount of pollution is related to the concentrations of substances in soil. There are many precautions in order to

prevent soil pollution (Boersema et al., 1984; cited in De Roo and Miller 2000, p. 59):

- Preventing the intensive agricultural and cattle farming methods
- Preventing the dumping of waste water and materials
- Preventing the deposition of air and water pollution
- Preventing the accidents in industry and transport
- Preventing the use of contaminated silt
- Preventing the use of salt on streets
- Preventing the use of herbicides in public greenery

- **Land and Resource Conservation: Critical Resources for a Sustainable Future:**
  - **Practicing the 3 R's – Reduce, Reuse and Recycle**: Provide incentives and facilities to conserve material and monetary resources. Recycling is an important strategy for reducing our consumption. (Kazimee 2002, p. 8)
  - **Designing with Perma-culture for Landscaping Various Open Spaces and Community Areas:** Perma-culture (landscaping which is edible and perennial such as fruit trees, grapevines, berry bushes, etc.) provides beauty, low maintenance, shade and food. (Kazimee 2002, p. 8)
  - **Localizing the Economy:** Encouraging programs for neighborhood and community-wide sharing or exchanges of resources and talents (craft/yard sales, produce/farmer's markets, family gardening etc.) foster community pride, the reuse/recycle of resources, and stop economic leakage to non-community sources. (Kazimee 2002, p. 8)

Sustainable Urban Air Management

Ecosystem, human health and buildings are influenced seriously by air pollution that comes into being from the combination of gases that are emitted into the air. (Mega 2005, p. 65)

- **Preventing Air Pollution:** Air pollution caused by acid substances, greenhouse gasses, and harmful substances in the air. Acid substances result in loss of vitality of forests, increase of the amount of grass on heath lands. Greenhouse gasses result in warming of the earth rising of sea level disappearance of eco systems, shifting of agricultural and drought zones, spreading of infectious diseases. Harmful substances result in various forms of health damage to man and animals, damage to the eyes, loss of plant diversity. Moreover, the amount of pollution is related to the levels of NO_x and SO_2, level of CO_2 ad level of harmful substances. There are many precautions in order to prevent air pollution (Van der Waals 1996, Verroen et al. 1995, Van Wee 1993, Breheny 1992 Freedman 1995; cited in De Roo and Miller 2000, p. 59):

    - Preventing the burning of fossil fuels
    - Preventing the emissions from industries
    - Preventing the motorized transportation
    - Preventing the heating of buildings
    - Preventing the generation of electricity
    - Preventing the emissions of NO_x and SO_2, mainly from burning fossil fuels
    - Preventing the emissions of CO_2, mainly from burning fossil fuels

- **Improving Air Quality:** This is a critical variable for human and environmental health:

    - **Developing Greenways and Greenbelts**: Cities need trees both for human comfort and balancing the carbon to oxygen cycle ($CO_2 \surd O_2$). In other words, green areas not only increase the desirability of residential areas and enhance recreation, livability and sustainability; but also absorb toxins from the air, create oxygen, shade and cool the environment through evaporative transpiration, and add to the ambient humidity of indoor and outdoor spaces. Therefore, they produce visual

and culinary delights to sustainable residential environments. (Kazimee 2002, p. 10)

b. Sustainable Urban Solid Waste Planning and Management

Sound waste management is linked to sound resource management since any paradigm shift concerning waste starts with its consideration as a precious resource. (Mega 2005, p. 68) There are two essential aims for a sustainable urban solid waste planning management: reducing the amount of waste being generated and creating new uses for waste generated. Shortly, an urban solid waste planning management includes the following criteria (Pinderhughes 2004, p. 68-89):

- Creating a sustainable materials economy
- Materials management and resource recognition
    - Pollution prevention/producer responsibility
- Waste disposal taxes and refund deposit strategies
- Subsidies and incentives
- Reprocessing/materials exchange
- Household and small business waste reduction and recycling
- Household waste collection in informal settlements
- Individual recycled material collectors

c. Sustainable Energy Supply and Management

In the way towards sustainable development, new and renewable energy sources and related technologies are required. (Mega 2005, p. 240) Green building and design, and renewable energy should be provided for a sustainable settlement.

- **Green Building and Design:** Energy conservation is a major long-term cost to people and environment. Quality construction, good southern/solar exposure and efficient lighting equipment and appliances are important facts for conserving energy. With the use of green (non-toxic) materials, indoor air quality and human health are greatly improved. Orienting each dwelling unit to sun and site carefully, providing increased windows, sun space/greenhouses and gardens on the south side of dwellings, and

minimizing window orientations to west and east give full advantage of passive solar energy. (Kazimee 2002, p. 6-10)

Green building and design projects focus primarily on such aspects: site planning, construction, conservation of materials and resources, efficiency of a building's operational processes (primarily energy and water usage), disposal and reuse of building materials, indoor environmentally quality, and reduction or elimination of waste and pollution produced. (Pinderhughes 2004, p. 104) Each green building and design structures have such aims (Barton and Bruder 1995; cited in Pinderhughes 2004, p. 104):

- Reducing input of natural resources
- Reducing energy and water consumption
- Reducing air, water, heat and light pollution
- Improving storm water management
- Reducing waste output (solid and liquid)
- Reducing the impact of externalities through the intensive use of green products.

- **Renewable Energy:** In order to maintain a sustainable energy planning, we should integrate renewable energy approaches and technologies into economic and social activities. (Pinderhughes 2004, p. 110) An energy future making intensive use of renewable resources is described with the following characteristics (Pinderhughes et al. 1992, p. 5-7; cited in Pinderhughes 2004, p. 110-112):

  - There would be a variety of energy sources, the relative abundance of which would vary from region to region. Electricity could be provided by various combinations of hydro-electric power, intermittent renewable power sources (wind, solar-thermal electric and photovoltaic power), biomass power, and geothermal power. Fuels could be provided by methanol, ethanol, hydrogen, and methane

(biogas) derived from biomass, supplemented by hydrogen derived electrolytically from intermittent renewable energy sources.

- Emphasis would be given to the efficient use of both renewable and conventional energy supplies in all sectors.
- Biomass, grown using sustainable farming methods and processes, and converted efficiently to electricity and liquid and gaseous fuels using modern technology would be widely used.
- Intermittent renewable energy resources would provide as much as one third of total electricity requirements cost-effectively in most regions, without the need for new electrical storage technologies.
- Natural gas would play a major role in supporting the growth of a renewable energy industry. Natural gas-fires turbines, which have low capital costs and can quickly adjust their electrical output, can provide excellent back-up for intermittent renewable energy sources on electric power grids.
- A renewable energy source-intensive energy future would introduce new choices and competition into energy markets and reduce the likelihood of rapid price fluctuations and supply disruptions. It could also lead eventually to a stabilization of world energy prices as well as new opportunities being created for energy suppliers.
- Most electricity produced from renewable sources would be fed into large electrical grids ad marketed by electric utilities.
- Liquid and gaseous fuels would be marketed much as oil and natural gas are today.

2.2.3.1.3. Cultural Environment

"Heritage and culture define urban identity and make the interactions between the body, mind and soul of a city." (Mega 2005, p. 188)

a. Culture and Heritage

Being the epicenters of cultural energy, each city is a unique civilization. Cultural heritage and activities reflect the signs of transformations that citizens and communities create in their environment. Moreover, cities are changing through

historical, socio-economic and cultural events. Cultural sustainability aims to integrate the cultural policy objectives with socio-economic and environmental requirements. Cultural tourism is an important opportunity to enhance cultural heritage by linking conservation to socio-economic development and by creating harmonious spaces for visitors and inhabitants. Conserving local and cultural identity and traditions and artistic creation help the city to sustain its beauty and complexity. (Mega 2005, p. 189-191)

The architectural quality and the built and cultural heritage of conservation areas attract both foreign and indigenous travelers. Therefore, they bring considerable economic advantages and help to ensure the preservation of the more eminent attractions. (De Roo and Miller 2000, p. 69)

b. Public Spaces and Landmarks

Belonging to everybody, public spaces gather people together for different purposes. Moreover, open spaces create an atmosphere for the flow of energy throughout the city and for the promotion of interactions and synergies. The identity of the public spaces is shaped by its environmental and cultural landscaping. Having public spaces and merit particular attention for sustainability, cultural parks and itineraries contribute cultural tourism. (Mega 2005, p. 195-197)

c. Symbolic and Structural Projects

Symbolic and structural projects have potentials to shape the future of the city. (Mega 2005, p. 200) Such projects need long-term planning, flexibility, forecasting and communication for their success. Moreover, they need a constant and affirmed political determination, capable of withstanding changes in elected representation. (METROPOLIS 1996; cited in Mega 2005, p. 200-201)

d. Urban Renaissance

Urban renaissance desires both investing in urban renewal and healthy socio-economic development and being recreated as poles and magnets of civilization. The city is the only living organism which has the capacity to renew itself. Moreover, harmony is an essential value in cities striving for dynamic balance among

coevolving policy objectives. European capitals invest in urban renaissance projects for transforming the entire fabric and creating new prospects for the future. Copenhagen has been a pioneer city which invests in urban renaissance through the principles of quality and equality and aims at ensuring sustainable development in relation to natural, cultural and human resources. (Mega 2005, p. 203)

2.2.3.2. Socio-Economic Values

2.2.3.2.1. Social Vitality of Cities

a. Solidarity and Social Justice and Equity

Urban distress is an important problem that occurs when the capacity of urban systems to innovate and drive change is over-stretched. Distressed neighborhoods face serious problems such as environmental degradation, physical isolation, obsolete infrastructures and neglect of public spaces. (Mega 2005, p. 178)

Social exclusion results from many different factors such as globalization, economic restructuring, competition between companies, cities, regions and nations, and the restructuring of welfare states. In order to cope with increasing social exclusion and growing financial pressure, there should be created horizontal and vertical integration of decision-making systems and also the optimization of the capacity, contribution and commitment of the public, private and social economy sectors. (Parkinson 1998, cited in Mega 2005, p. 179)

Sustainable wealth necessitates social justice which is the essence of the social structure of a city. In order to reach sustainable society, social exclusion should be prevented. Moreover, in order to perceive the social city, the city of solidarity and citizenship there should be equity. For the future of society public administrations and associations have essential roles. They should assist socio-professional integration of youth that are the most vulnerable part of society and the most acutely affected by economic crisis and unemployment. Moreover, they should propose the sharing of values which make all members of the community stronger. In order to maintain social equality, gender mainstreaming can be perceived as a strategy, integrated in all areas of public and private decision-making (Mega 2005, p. 179-

180) knowing the fact that women are another most obviously decisive social group. (Harvard University 1994; cited in Mega 2005, p. 180)

b. Harmony, Health and Safety in Cities, Education and Research

Harmony aims both to invest in a better environment and to be recreated as places of civilization. Moreover, it means bringing their quality back to the cities. Harmony can be perceived through rethinking of the whole city with its forms, functions, physical and mental health. (Ansay et al. 1989 cited in Mega 2005, p. 181-182)

Public health is crucial for the improvement of the urban environment. (Mega 2005, p.182) Physical, mental and social well-being together constitutes the public health which is highly interconnected with quality of life. A healthy city can be maintained through placing health high on the political agenda and creating a structure and a process to achieve it. (WHO-OECD 1996, cited in Mega 2005, p. 182-183)

Public safety is another major challenge for governments, cities and regions. Public safety is interrelated with quality of life and urban livability, and it is shaped through traffic accidents, delinquency, crime and etc. (Mega 2005, p. 183)

Education and research is also the main essence for development. An educated city can be maintained through providing this service equally and efficiently. Information and education in both formal and non-formal spheres have potentials to increase the citizen awareness and ability to engage in decisions affecting their lives. Key to this strategy is managing information better, expanding access to the decision process, measuring progress towards societal goals more comprehensively, and incorporating accounting measures that educate and enable decision-makers and individuals to make decisions that are more economically, environmentally, and socially sustainable. Moreover building a knowledge of the interdependence among economic prosperity, environmental protection, and social equity will help citizens understand, communicate, and participation in the decisions that affect their lives. (The President's Council on Sustainable Development 1996, p. 57)

c. Green and Gray Parks

Green parks are not only the areas for distressing and recreational activities by meeting natural and man-made environments but also for having the potential to preserve biodiversity; therefore, they serve as lungs for a city. As the amount and accessibility of green areas increase, the living standards in cities also increase. (Mega 2005, p. 219) Moreover, the greenbelt moderates climate extremes, and increases recreational opportunities and bio-diversity. (Kazimee 2002, p. 3)

With their science, technology, industry and business parks grey parks serve as brains of cities. Moreover, sustainable gray parks often provide pubic-private partnerships in order to transform brown-fields into healthy ones equipped with science, technology and business. (Mega 2005, p. 220)

d. Housing

One problem that cities face is the deterioration of housing environment resulting in depressed neighborhoods. However, the cities need sound living cells. Moreover, new needs for landscaping and for energy efficiency shape the urban fabric. Intelligent resource-saving buildings, eco-villages with clustered housing, public places and a common centre and a number of ecological features gain ground. Homeless, that is inextricably linked to the problem of underused urban space, is an increasing worrying urban phenomenon. (Mega 2005, p. 184-186)

e. Periphery

Peripheries are the by-product of the development of agglomeration like drops of oil, without proper extension plans endowing the areas with adequate infrastructure. Moreover, they show the signs of a great uncertainty and tensions. (Touraine, 1997; cited in Mega 2005, p. 186) Therefore, urban functions and services necessary for ensuring prosperity and quality of life should be found within every urban quarter (Neal 2003; cited in Mega 2005, p. 187) since, the cost of doing nothing for the peripheries may be huge and totally incompatible with a sustainable future. (Mega 2005, p. 188)

2.2.3.2.2. Economic Vitality of Cities

a. Urban Economy and Competitiveness

Being the main generators of wealth of the nations, cities enhance their position in the international sphere. (Jacobs 1985; cited in Mega 2005, p. 167) Between the world macro-regulations and the local micro-regulations, cities must create the suitable atmosphere for the flourish of economic prosperity, social cohesion and citizenship. Infrastructural improvements support urban economies. Moreover, education, municipal institutions and enterprises must make progress in a harmony for sustainable economy. Moreover, cities must direct this triangle-formed-system through vision and dynamism. Many factors affect the competitiveness of a city: macroeconomic environment, economic and commercial performance, to trade and investment, flexibility of the labor market, adequacy of physical and digital infrastructure, level of education and training, ability to create and innovate. (Mega 2005, p. 167-168)

Strong and diversified local economy should be maintained using local resources. Moreover, city should be connected with global telecommunication networks. Application of information technologies in management of transport, energy, water consumption, etc. is also essential in economic development.

b. Employment

There has been a change in the world employment since 1980: a dramatic decrease of the share of agriculture and heavy industry in favor of services. The rate of women's employment increased. Children work less as income rises; however, their levels are still very high. Moreover, new flexible, high-performance work practices get ground both in terms of job design and delegation of responsibility. (Mega 2005, p. 173-174)

Unemployment shows the share of the labor force that is without work, but available for and actively seeking employment. Growth in youth and long-term unemployment has been one of the most troubling developments. Moreover, in developed countries, urban areas have the two thirds of the unemployed population. Unemployed citizens and degraded environments represent untapped socio-economic opportunities and drain the potential of cities for development. (Mega 2005, p. 174-175)

OECD studies show that whenever environmental protection measures have been implemented, there has been a positive impact on employment. Through providing environmental programmes many jobs have been created in different fields (domains of prevention, counseling and services, de-pollution industry, research and development linked to the environment, construction industry and resource and management). Therefore, the search for sustainability focuses on environmentally friendly processes, products and services and this is expected to increase the positive impact on employment. Local Agendas 21 has also provided a source of employment for many governments. (Mega 2005, p. 176-177)

2.2.3.3. Political Values

a. Democracy, Governance and Citizenship

Urban democracy is a key element of the existence of cities and of their capacity for sustainability. Moreover governance is the science and art of co-governing societies with the participation of societal actors and it is based on the evolving dynamics and preferences of society. Globalization and sustainability necessitates public awareness and citizen involvement. Citizenship means participation in all aspects of urban activities by acting as partners rather than protestors. (Mega 2005, p. 207-210)

b. Compact, Mixed and Diverse Cities

Compactness and density are critical indicators for sustainability. Compact settlements gather higher population concentration; therefore, production and consumption are concentrated for efficient use of resources; that is energy consumption, resource use and waste are at lower levels than diffuse cities. Moreover, compact settlements have the potential to provide transportation in shorter distances. As a result, unlike the diffuse city, compact city is considered to be most conducive to sustainability. (Mega 2005, p. 216-217) However, the compact city might not respond to lifestyle preferences resulting in many contentious areas. (Breheny 1992; cited in Mega 2005, p. 217) Some experts argue that a sustainable urban settlement in a regional scale can be maintained by creating relatively small settlements-clusters-compact settlements with linear or rectangular form. (Owens 1986; cited in Mega 2005, p. 217)

Urban and social intermixture, that is the little cities everywhere in the city, is desired for the future of cities. In such a mixed land use and diversity there exists not only that cultural and racial factors but also harmony and anarchy. (Mega 2005, p. 217-218) There are many new towns and cities that have incorporated functional mix in their core planning principles, for example, Columbia, Maryland – 1960 master plan. The plan aimed at creating 100.000 populations in thirty years by building village by village that each has multi-functional facilities – housing, social, cultural, recreational, etc. Moreover, the plan had success through integrating the business into residential activities and establishing clean industries and services. (EFILWC 1997g; cited in Mega 2005, p. 218-219)

Being an important element of a sustainable development environment, mixed use development both reduce the need of travel and improve personal, safety and urban vitality because the adaptability of older buildings facilities mixed use which in turn enables people to live, work and socialize within the same area. (De Roo and Miller 2000, p. 67)

c. Sustainable Regeneration

Regeneration, revitalization, etc. are the efforts to create attractive, vital and strong urban fabrics. Public involvement is essential in such projects. Sustainable regeneration aims to provide the lifeless places with new energy. Revitalization contributes to the physical, social and economic structure of the city through highlighting the economic diversification, the social heterogeneity and cultural diversity of the city. (Mega 2005, p. 222)

Conservation areas can act as a catalyst for urban regeneration efforts. Conservation areas often provide the basis for cultural, economic and environmental initiatives, and they are favored areas for private sector investment. Furthermore, public and private sector initiatives are integrated in the production of conservation strategies and plans that allow for greater participation in the regeneration process. (De Roo and Miller 2000, p. 69)

d. Regional Policy and Strategic Planning

Social and economic cohesion can be maintained by regional development through pointing complexities, disparities and inequalities. In addition, regional policy emphasizes on a balanced dynamic development in regional scale. (EC 1995a; cited in Mega 2005, p. 225) Sustainable development requires planning and policy initiatives in order to eliminate complexities, disparities and inequalities and to cope with rapid degradation of natural resources and ecosystem. (Mbeki 2002; cited in Pinderhughes 2004, p. 220)

Prosperous nations need to reduce inefficient and wasteful use of natural resources, change unsustainable patterns of production and consumption, and assist nations that need additional resources to fight poverty and strengthen their capacity to deliver essential infrastructure services (water, waste, energy, transportation, food, adequate housing, health care, and education). (Pinderhughes 2004, p. 221) Strategic planning is an essential tool in the way to attain the goals of regional policy. Sustainable planning creates objectives and actions in order to implement the policies towards the visions for long term development. Moreover, sustainable planning needs a comprehensive research programme and an extensive consultation processes. (Mega 2005, p. 226-228)

e. Institutional Architecture and Civic Alliances

Institutional frameworks for policy articulation and design, fiscal federalism, co-ordination and regulation play a critical role in promoting efficient sustainable development policies at all territorial levels of governments, local-regional-national. Sustainable development needs good governance with functioning both governmental and non-governmental institutions in an efficient and balanced manner. This enables the reallocation of tasks and resources and the development of more flexible, transparent, accountable and visible institutional structures. (Mega 2005, p. 230-231)

Partnerships create more knowledgeable communities and enable citizens contribute to the development of their settlement with the light of their shared interests. Moreover, successful partnerships need a set of special features: clear vision and

structure, a strategic and tactic approach, a critical mass, assertive leadership and social justice, continued evaluation and assessment. (Mega 2005, p. 234)

Public participation can be facilitated with the help of a wide range of techniques: printed material (brochures and newsletters), personal contact, open houses and information days, public meetings, community liaison groups, presentation to groups, workshops, displays, media, and surveys. (De Roo and Miller 2000, p. 184-186)

CHAPTER III

PLANNING PROCESS OF MUĞLA: A CASE STUDY

In the context of this section, historical background, urban/physical development of Muğla, urban population and demographic structure are studied. After that planning experience of Muğla is analyzed. Shortly, this chapter is developed with the characteristics and planning experience of Muğla in the direction of knowledge, tables and maps obtained mainly from the research study of the last development plan of Muğla approved in 2004 for further criticism of the next chapter.

3.1. General Characteristics of Muğla

3.1.1. Historical Background

Table 3. 1. Historical Background of Muğla

It is estimated that the city of Muğla was founded in the era of Hittites.
Mitannis-Meds
BC. VI. century Persians
BC. IV. century Macedonians-Parts (Armenians)
AD. I-II. century Romans (Part)
AD. 395 Byzantines-Sousanis
AD. 639 Muslim Arabs (Sheikhs-Mervyns)
AD. 1069 Seljuk-the Crusaders
AD. 1280 Menteşeoğulları
AD. 1390 Ottomans
AD. 1402 Menteşeoğulları
AD. 1425 Ottomans

The history of Muğla goes back to the years of B.C. 2500s. There had been a continuous site occupation. Today this continuousness can be observed in the center and its surroundings. For example, there is the ruin of the castle from ancient times which is in the archeological site today.

In B.C. 1200s "Aka" and other local groups escaping from the force of "Doll" that came from Thrace to Greece settled in western sea sides of Anatolia. "Doll" and "Aka" together founded many colonies in B.C. 8th century. King of Persian, 2nd Kiros, who destroyed Lydia Community in B.C. 546, captured cities of Karia and Ionia. After many victories, Alexander the Great III also got success in Muğla Region after B.C 331. The owners of Muğla were changed in B.C. 323 after the dead of Alexander the Great III. Muğla region was captured respectively by "Selokid" in B.C. 253, and by "Rhodes Kingdom" in B.C. 188, by "Rome" in B.C. 168. In 395, Muğla was dependent upon "Kibiraioton Thema". (Muğla Development Plan 2004, p. 26)

After 1261 with the leading of "Menteşe Ruling", Turks settled in Muğla region. In 1390 Muğla region was joined to Ottoman Empire by Yıldırım Bayezid. In 1402 winning Ankara War, Timur gave former lands back to Anatolian Ruling Groups; therefore, the dependency of Muğla shifted to Menteşe Ruling again for a short time. In 1451 Muğla definitely joined to Ottoman Empire by II. Mehmet. At the beginning, Muğla was the unit of Anatolian Province with the center of Kütahya; however, it became the unit of Aydın Province in 1836. In this period the name of "Muğla" was not used for city or districts, but the name of "Menteşe" for Sanjak. In 1867 with the law of Provinces, Menteşe Sanjak became the unit of Aydın Province. Being a sanjak of Aydın Province in 1903, after the foundation of Republic, the name of Menteşe changed into "Muğla". (Muğla Development Plan 2004, p.26) Moreover, the ancient names of Muğla were "Mobella, Mobolia, Moğola" according to the different sources. (Muğla Governorship Official Web Site)

In Anatolia many of the cities are settled at the rough threshold between the mountainous and the agricultural area in smoothness terrain. This location prevents

the society whose economy is based on agriculture from transforming the agricultural areas into residential area. Moreover, it provides many advantages such as view to the settlement, adequate sunlight, and natural drainage. Muğla is a case that has all these characteristics at the end of the 19th century. The castle that is situated on a rectangular plan on the Hisar (Asar) Mountain in the north and has still its ruins is the origin of the settlement of Muğla. In 13th and 14th centuries settlement spread outside the castle and south foot of the Hisar Mountain. (Aktüre 1993, p. 74)

In time the settlement has taken on a shape, local immigrants; settled, immigrant; have carried the characteristics of many cultural environs and were open to the effects of them: Seljuks, Byzantines, Menteşe; Christian and Muslim; Anatolian, the Mediterranean, and outer world. Such characteristics were the traditions that have reflected the physical environs of Muğla in short, long, different time periods and in narrow or wide geographical areas by having historical transformations and by losing some of its characteristics. Before the 19th century some changes occurred also in the patterns that grow and change in the traditional areas and in examples of traditional structures: transformations that are unique to each structure, different reflections of the developments in social and economic patterns to physical environment. (Akçura 1993, p. 246, 252) Present Site is the synthesis area of cultural and social lives of Turks and Greeks which can be analyzed from different resources that Greeks lived in Saburhane in the east and Turks in the west. The settlement of Muğla that had a closed economy and enough economic conditions for itself, have had transformations and shaped its urban form through time. (Muğla Conservation Plan 2001)

3.1.2. Urban Physical Development of Muğla

The main factors affected existing physical characteristics of Muğla city center are:

- Location and characteristics of the settlement
- Surrounding settlements and relations
- Geographical and physical characteristics such as landscape and distribution of agricultural lands
- Transportation relations
- Urban Land-use

3.1.2.1. Location and Characteristics of the Settlement

City is located in Aegean Region and in the south-west of Turkey. (**Figure 3. 1.** Map of Muğla Province) Almost all provinces of Muğla have the potential of tourism activities. Province center has the necessities of the administrative services of a tourism region. Muğla has settled on the foot of Karadağ, Asar and Yılanlı Mountains through years. Its economy is based on administrative and urban services and agriculture. The settlement has the spatial structure respectful to the size of the population of 43.845 in 2000 which is growing south, east and west by additional parts. However, sometimes there occurs leaping type of growing around the settlement. Municipality has the area of 9.960 hectares area with 14 quarters in the settlement.

Figure 3. 1. Map of Muğla Province
(Source: Muğla Governorship Official Web Site)

Muğla has not been an industrial city because of having tourism activities and a closed economy. With its decreasing agricultural activities and agricultural income, and increasing number of civil servants today, Muğla is a city whose rent prices and movement of small-scale retailers are developing. As a result of such changes, Muğla is looking for the ways to grow the trade that depends on tourism. Moreover, Muğla

has the identity of "city of culture–tourism and education" with the help of its location, economic and social structure. There are a lot of officially registered buildings and historical khans, squares, mosques and Arasta in city center, Karabağlar Yaylası. Moreover, 9000-year-old-fossil resources belong to Trolian Period founded in the Village of Özlüce in 1993. The forest areas of Yaraş, Yılanlı, Göktepe; revival of sericulture in Yeşilyurt, and quick access to the natural beauty of Gökova Bay contribute to the characteristics of Muğla. Other viewpoints are Kızıldağ Recreational Forest Area situated at the entrance of the city, Muğla City Forest which is 13 km. from city center, two tracking points of Mountain Asar and Değirmendere, Special Environmental Protection Areas in province base, Site Areas (**Table. 3. 2**) and monuments.

Table 3. 2. Site Areas of Muğla Centre County

Urban Site Areas

1. Muğla-City Center
2. Karabağlar Yaylası

Natural Site Areas:

1. Özlüce Köyü
2. Karabağlar Yaylası

Archeological Site Areas:

1. Mabolla Antique City (1st Degree Archeological Site)
2. Sarnıç (1st and 3rd Degree Archeological Site)
3. Yeniköy (Central) (1st and 3rd Degree Archeological Site)

Figure 3. 2. View from the Urban Site Area

Figure 3. 3. View from Arasta

Figure 3. 4. Ruins in Asar Mountain
(Source: Muğla Çevre Durum Raporu 2004, p. 183)

Figure 3. 5. Waterfall of Değirmendere
(Source: Muğla Çevre Durum Raporu 2004, p. 183)

MUĞLA

PANORAMIC VIEW OF MUĞLA CITY

Figure 3. 6. Panoramic View of Muğla City

MUĞLA

PANORAMIC VIEW OF THE DEVELOPMENT AROUND MUĞLA UNIVERSITY

Figure 3. 7. Panoramic View of the Development around Muğla University

3.1.2.2. Geographical and Physical Characteristics of Muğla

Analyzing the general structure, physical growth of the settlement is limited to natural and topographical thresholds. Muğla has settled on the foot of Asar. Moreover, it is observed that the settlement located between Kızıldağ and Karadağ tries to grow up physically. That is, the settlement is fringing from the traditional part towards southern part which is also surrounded with the agricultural and natural site area in the south. (**Figure 3. 8.** Topography Map) Moreover, in the province center of Muğla and its environs, there are orchards, maquis, land covered with heath and un-agricultural areas. Around the settled area there are also 1st, 2nd, 3rd, 4th, 5th, 6th, 7th and 8th degrees of agricultural lands. According to the existing land use in Muğla city center, apart from the settled areas, some agricultural facilities are performed: agriculture with/ without water, forestry, land covered with heath, pasture lands, yards.

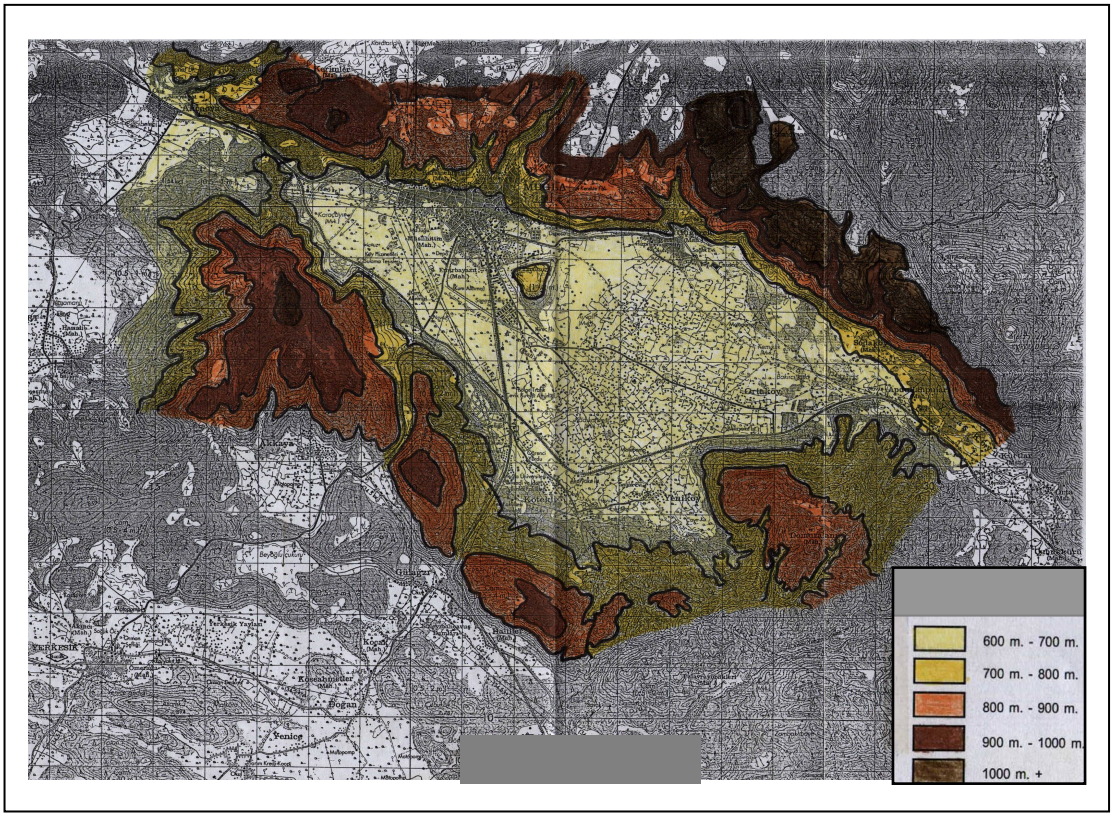

Figure 3. 8. Topography Map
(Source: Research Study of Muğla Development Plan approved in 2004 obtained from Uray A.Ş)

The settlement is at the 1st degree earthquake zone. Moreover, Hisardağı and Kızıldağ are old mountains and sometimes there occurs snaps off, dents or slides. (Muğla Çevre Durum Raporu 2004, p. 286)

3.1.2.3. Development of the Urban Form and Surrounding Settlements

In Republican period through the first development plan approved in 1936, urban form of the Muğla settlement had some changes. A new node was created by spreading towards Muğla Plain in the south. Moreover, Karabağlar Region with its distinctive traditional structure was serving a great deal of area for citizens. (Tekeli 1993, p. 166-174) After 1950s building activities in the south increased. (Akçura 1993, p. 261-262) Till 1950s city reached the population of 15.000. (Muğla Development Plan for Conservation, 2001) The second development plan approved in 1961 has the role of making the newly developing residential areas fit into the existing frame. The city grew and gained a new structure. These changes had some urban reflections. For example, people moved from old city to newly developing neighborhoods, and they got modern habits and values. (Osmay 1993, p. 229-231)

The third development plan approved in 1982 proposed to develop the eastern useless areas because the topographical thresholds limited the growth of the city. (Osmay 1993, p. 229) Therefore, developing direction of plan was towards Düğerek Village in the eastern part of the city. Through the trend of cooperative type of building in this period, some cooperative areas were proposed. Small type of industrial area was surrounded with residential area in order to prevent the growth of industrial area in this region. (Muğla Development Plan 2004, p. 113) Furthermore with the foundation of university in 1992, growth in Muğla has gained a new dimension. Therefore, new types of facilities have been added in order to respond the increasing needs, such as socio-cultural facilities and new transportation modes.

There are four scatter settled areas around the center which are Düğerek, Karabağlar, Ortaköy, and Kötekli-Yeniköy. Düğerek and Karabağlar lie in the eastern part. Düğerek which carries rural characteristics became the quarter of Muğla in 1973. Karabağlar with its scattered summer houses lays in the northern part of Düğerek. Ortaköy, Kötekli and Yeniköy lie in the southern and south-eastern part in the

neighboring boundary of the city. Kötekli has been changing socially and spatially because of the reflections of the foundation of Muğla University. Kötekli and Yeniköy are developing through the implementation of a development plan with the scale of 1/1000. Ortaköy is also a rural type of settlement which is developing in low densities. Akçaova which is also in neighboring boundary is a rural type of settlement with potentials of industry because of being located in the road to Yatağan, Aydın and İzmir. Neighborhoods and villages in environs of Muğla are connected to the macro-form of Muğla through some facilities such as education, commerce, bazaar, and transportation relations.

Muğla has a stable population in some degree. There have not occurred big changes and transformations in economic and spatial structure of Muğla. Main parts of the city were formed in different times by implementations through plans by additional parts to traditional city. (**Figure 3. 9.** Urban Structure of Muğla) In addition, trends and investment demands are concentrated in the city and near environs.

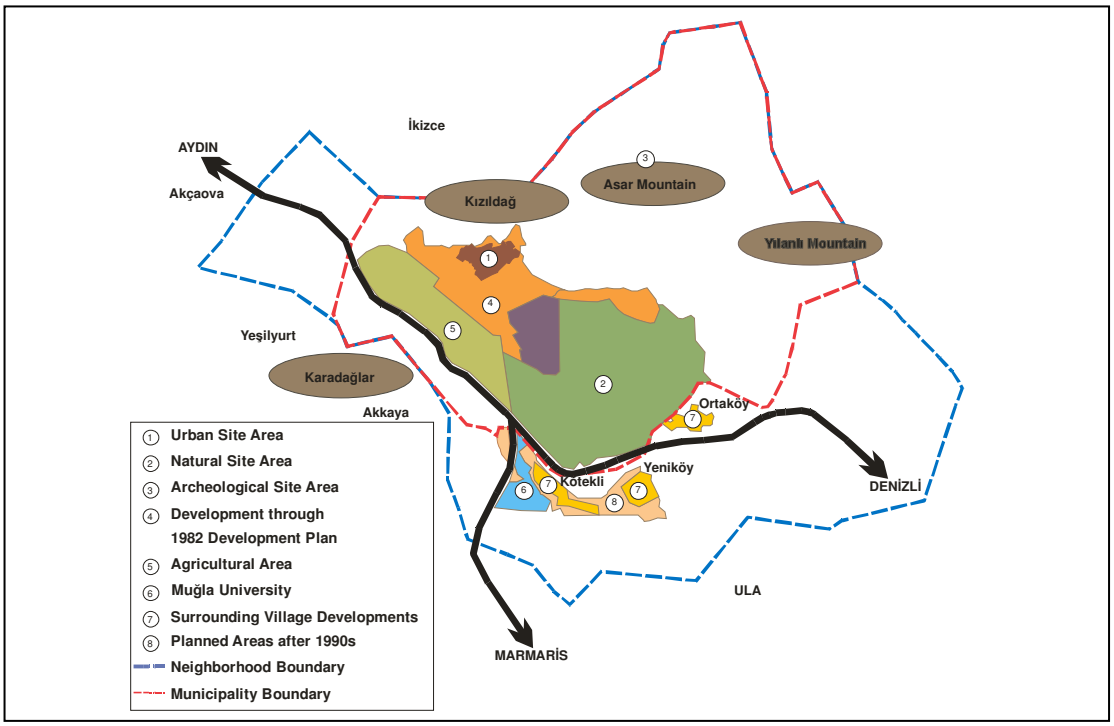

Figure 3. 9. Urban Structure of Muğla

There are some important changes in near past such as the foundation of university, increase in transportation means, growth in tourism in provincial scale, the potential

of being a eco-tourism city, development of mass housing areas. Muğla is growing and developing by carrying the traditional and modern urban phenomenon together. Therefore, Muğla may have big transformations in the future. In order to respond the needs of transformations in the way of sustainable Muğla, to prevent the oil-spot type of developments, to control and shape alternative developments in its environs, to support the planning through its local values, and to maintain a healthy environment, strong economy Muğla needs the vision of sustainable city for the future.

3.1.2.4. Transportation Relations

The east-west connection that is provided by the road of Aydın-Marmaris and Avenue of İsmet Çatak separates the traditional from modern Muğla. In the northern part there is the traditional area of whose eastern and western parts were demolished and transformed to some extent. The traditional center is also located in the northern part. Center spreads towards southern parts, meets with the focal point transportation (**Figure 3. 10**) which gathers five roads in a square and then reaches bazaar and other trade activities in the western part.

Figure 3. 10. Central Square of Focal Point Transportation

External transportation is maintained by the roads of Aydın-Marmaris and Denizli. Muğla is a transition area for tourism transportation; however, this does not create so much dynamism or income for the economy. The transportation between the center and surrounding provinces and sub-provinces is provided with small buses between the center and the settlements around or buses through highway.

Before 2000s Muğla had more limited transportation relations than today. İzmir and Denizli Roads were providing weak relations to Muğla. Air transport was provided only by İzmir. After İzmir-Aydın-Denizli Road was built, accessibility of the city increased. Therefore, this will affect the economy and demographic structure of the area positively in the future. However, in Muğla there is no railway transportation. The provinces, Aydın and Denizli, which are neighboring Muğla, have rail transportation.

With the foundation of Muğla University in 1992, growth in Muğla has gained a new dimension. Transportation improved; for example, the city met with "dolmuş" and private public buses. With growing capacity of university, increase in convenience of transportation, growth in tourism in provincial scale, development of mass housing areas, social and economic structure is changing in Muğla and there will be transformations in the future since transportation is very important for a developing region. For example, there is a railway project which connects the university region to the center.

3.1.2.5. Urban Land Use

There are fourteen quarters in the settlement. Eight quarters in Site area and two quarters in surrounding of the center – Düğerek and Karabağlar – have low densities. Other four quarters – Emirbeyazıt, Karamehmet, Muslihittin and Orhaniye – in the center have more densities. Shortly, the city grew toward eastern and southern parts shaping its land use with moderate densities. (**Figure 3. 11.** Map of Land Use in 1987 and **Figure 3. 12.** Map of Existing Urban Land Use) In all quarters there is a great accessibility to administrative, educational units and other facilities. Moreover, green areas and facilities around houses are sufficient and harmonious.

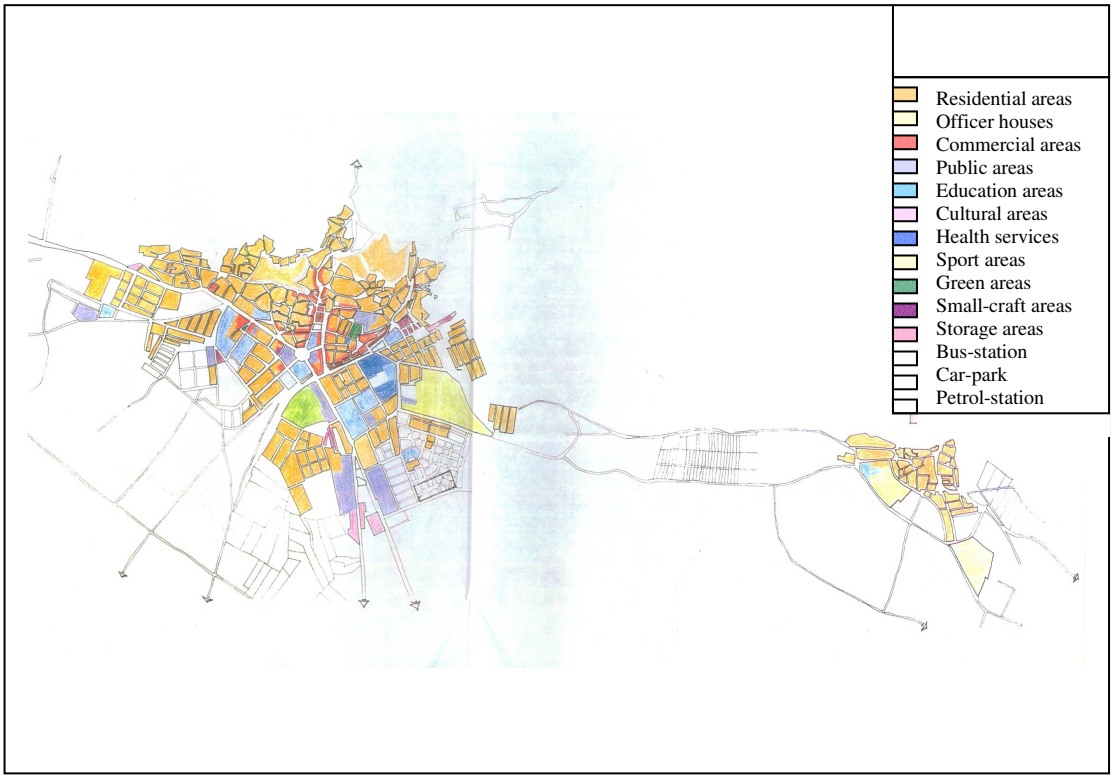

Figure 3. 11. Map of Land Use in 1987
(Source: Muğla Municipality)

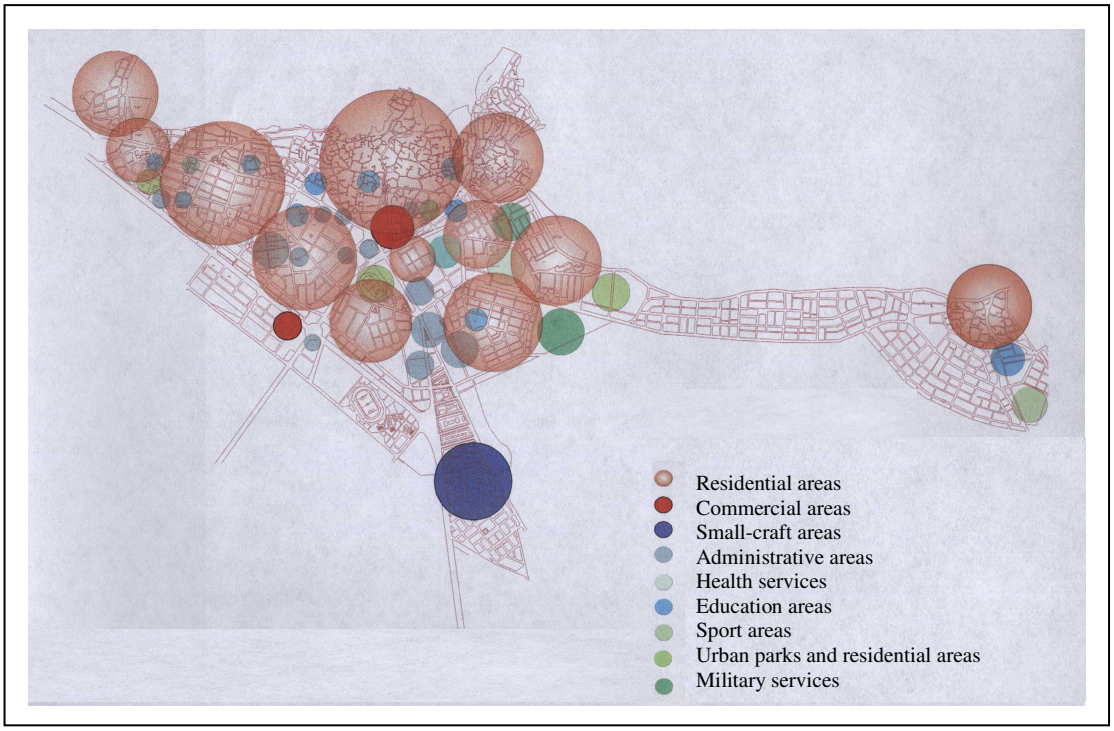

Figure 3. 12. Map of Existing Land Use
(Source: Research Study of Muğla Development Plan approved in 2004 obtained from Uray A.Ş)

There is a great amount of green areas in the settlement. In residential areas, parks, tea gardens, kinder-gardens, sport areas are the types of green areas used in the city. Although there is the scarcity of green areas in low density but compact residential areas, the use of private green/open areas inside residential areas with backyards increase the rate of green areas in the city.

Muğla is a case of maintaining use-conserve balance in both historical heritage; and urban green areas and open areas through the consciousness of such a conserving attitudes or urban culture rooted in social structure of the city. Performing such a manner in areas planned and will planned is crucial for the sustainability of natural and social life in the city. There are totally 108.000 m² green areas in existing planned areas with 2,46 m² per person. Karabağlar also has a distinctive characteristic of Muğla by serving a great amount of green areas for citizens. There are also agricultural areas in the macro-form of the city. Moreover, there is approximately 1.720 hectares forest in the province center.

City center, both the traditional and the modern one, provides facilities for the city and surrounding settlements. With the foundation of university new types of facilities have been added in order to respond to the increasing needs. Muğla city center is like a consumption center instead of being a production center. Newly developed shopping centers located around Kötekli and intercity bus depots do not annihilate the role of city center but there is a tendency on the movement of some of the trade facilities towards southern parts.

In the **Table 3. 3.** the average prices for lands according to the quarters are pointed out. The highest price of land in city center of Muğla is 120 YTL /m² in Emirbeyazıt Quarter, the lowest price is 12 YTL / m² in Orta Quarter and 2,50 YTL / m² in Yaraş Village, and the average price of land is 65 YTL / m². (**Figure 3. 13** Map of Land Prices by Quarters)

Table 3. 3. Average Land Prices by Quarters

Quarters	Avarage Land Prices (TL/m^2)
Balıbey Quarter	54.000.000
Camikebir Quarter	47.500.000
Düğerek Quarter	31.000.000
Emirbeyazıt Quarter	120.000.000
Hacı Rüstem Quarter	11.200.000
Karamehmet Quarter	32.000.000
Karşıyaka Quarter	26.000.000
Keramettin Quarter	20.000.000
Kötekli Quarter	19.000.000
Muslihittin Quarter	83.000.000
Müştakbey Quarter	45.000.000
Orhaniye Quarter	95.000.000
Orta Quarter	12.000.000
Şeyh Quarter	117.000.000
Akçaova	1.650.000
Ortaköy	10.000.000
Yeniköy	14.000.000
Yaraşköyü	2.500.000
Average	64.908.333

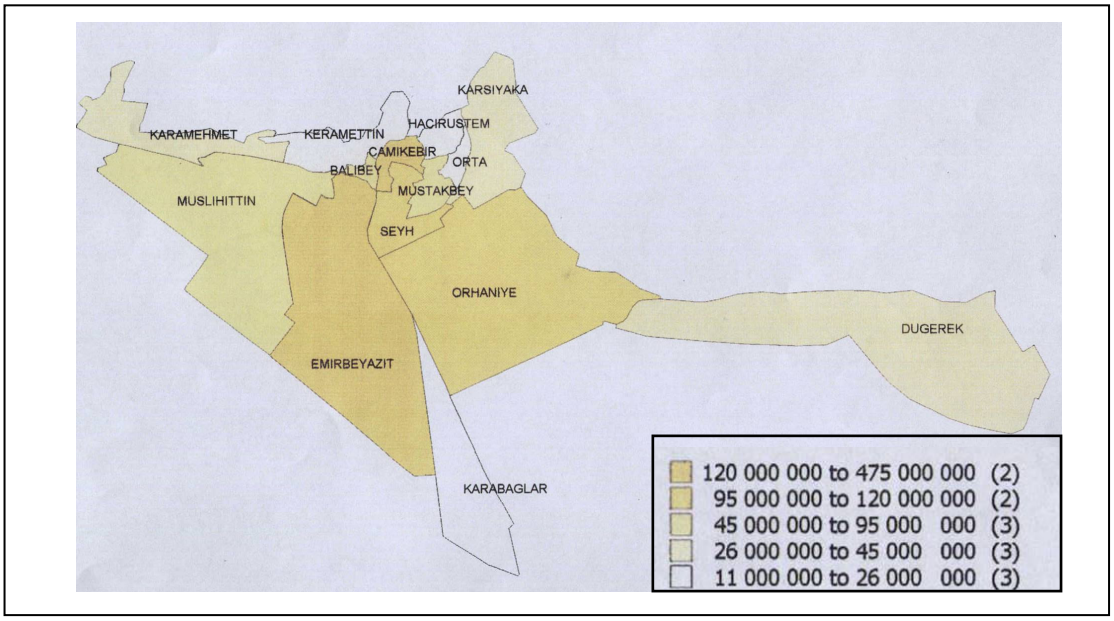

Figure 3. 13. Map of Land Prices by Quarters

(Source: Research Study of Muğla Development Plan approved in 2004 obtained from Uray A.Ş)

3.1.3. Urban Population and Demographic Characteristics of Muğla

In context of this section, demographic change of the city is studied. The settlement of Muğla Province Center with related administrative units, population change by years, numerical, index and logarithmic increase of the population are given below.

Table 3. 4. Numerical Population Change in Muğla Province Center with Related Administrative Units

Population Increase (Numerical)							
Settlement	**1970**	**1975**	**1980**	**1985**	**1990**	**1997**	**2000**
Muğla Province Center (Urban)	18.624	24.178	27.392	31.279	35.605	40.586	43.845
Muğla Province Center (Rural)	35.769	32.520	33.076	34.580	35.550	38.918	39.666
Muğla Province Center (Total)	54.393	56.698	60.468	65.859	71.155	79.504	83.511
Muğla Province	368.776	400.796	438.145	486.290	562.809	640.011	715.328
Turkey	35.605.176	40.347.719	44.736.957	50.664.458	56.473.035	62.865.574	67.803.927

Table 3. 5. Index Population Change in Muğla Province Center Related Administrative Units

Population Increase (Index)							
Settlement	**1970**	**1975**	**1980**	**1985**	**1990**	**1997**	**2000**
Muğla Province Center (Urban)	100	130	147	168	191	218	235
Muğla Province Center (Rural)	100	91	92	97	99	109	111
Muğla Province Center (Total)	100	104	111	121	131	146	153
Muğla Province	100	109	119	132	153	174	194
Turkey	**100**	**113**	**126**	**142**	**159**	**177**	**190**

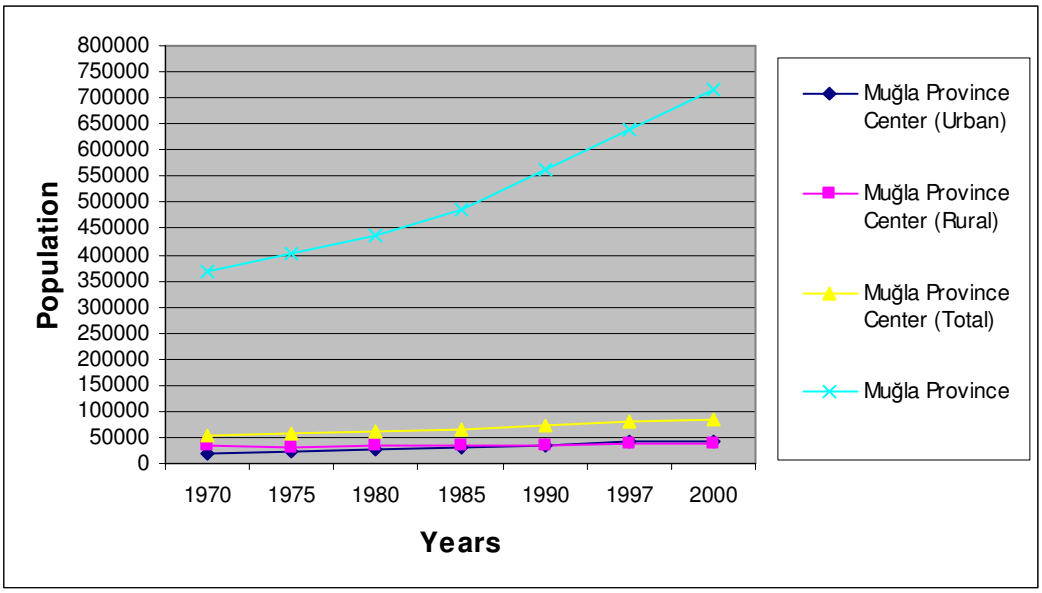

Figure 3. 14. Numerical Population Change in Muğla Province Center with Related Administrative Units

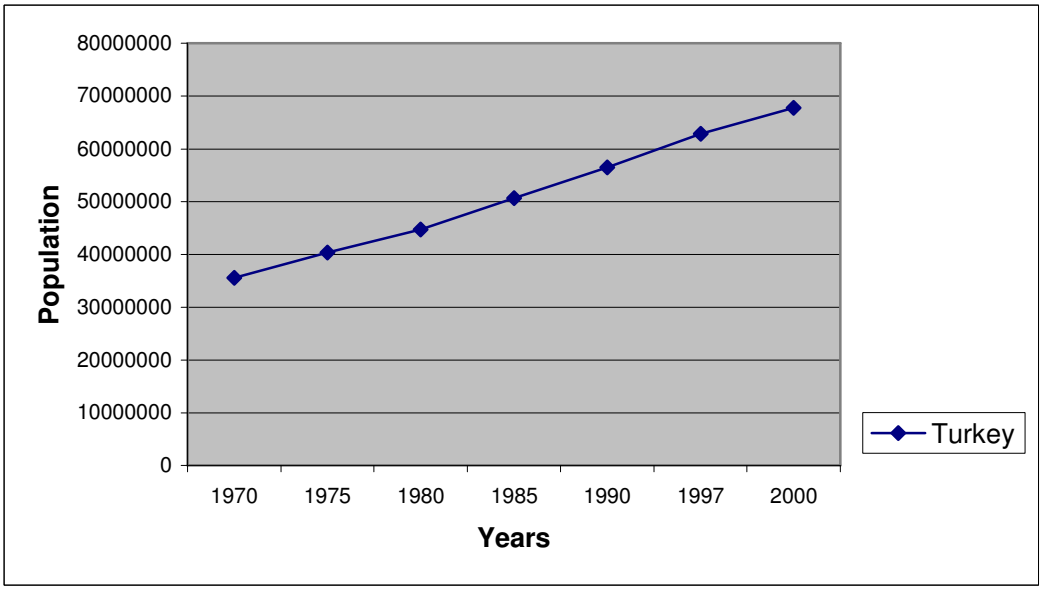

Figure 3. 15. Numerical Population Change in Turkey

Table 3. 6. Logarithmic Annual Population Change in Muğla Province Center with Related Administrative Units

Annual Population Increase (Logarithmic)							
Settlement	**1970-1975**	**1975-1980**	**1980-1985**	**1985-1990**	**1990-1997**	**1997-2000**	**ORT. 1970-2000**
Muğla Province Center (Urban)	0,0535	0,0252	0,0268	0,0262	0,0188	0,0261	0,0294
Muğla Province Center (Rural)	-0,0188	0,0033	0,0089	0,0055	0,013	0,0064	0,0031
Muğla Province Center (Total)	0,0083	0,0129	0,0172	0,0155	0,016	0,0165	0,0144
Muğla Province	0,0167	0,0179	0,0211	0,0296	0,0185	0,0378	0,0236
Turkey	**0,0253**	**0,0208**	**0,0251**	**0,0219**	**0,0154**	**0,0255**	**0,0223**

Table 3. 7. Urban and Rural Population Change in Muğla Province Center

1970		1975		1980		1985		1990		1997		2000	
Urban	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**
18.624	35.769	24.178	32.520	27.392	33.076	31.279	34.580	35.605	35.550	40.586	38.918	43.845	39.666

Table 3. 8. Population, Area and Density of the Quarters of Muğla Province Center in 2000

Quarters	**Population (Person)**	**Area (Hectare)**	**Gross Population Density (Person/Hectare)**
Balıbey Quarter	413	2,5	165,2
Camikebir Quarter	1.166	6,6	176,7
Düğerek Quarter	3.476	125,2	27,8
Emirbeyazıt Quarter	14.203	121	117,4
Hacı Rüstem Quarter	635	6,4	99,2
Karabağlar Quarter	3.834	40,68	94,2
Karamehmet Quarter	871	27,5	31,7
Karşıyaka Quarter	3.448	32,5	106,1
Keramettin Quarter	1.929	20	96,5
Muslihittin Quarter	12.056	97,5	123,7
Müştakbey Quarter	1.293	7,6	170,1
Orhaniye Quarter	11.317	127	89,1
Orta Quarter	1.018	3,75	271,5
Şeyh Quarter	1.785	16,6	107,5
Total	**57.444**	**634,83**	**-**

Analyzing the 30-year-population change, it can be seen that provincial population increase is less than the one in Turkey. This is because of fertility level in province and the natural population increase only based on born-date rates are too low; moreover, migration balance has developed causing no increase in rural population of Muğla. Urban population in Muğla province has increased more than the national

one. Furthermore, logarithmically the increase of urban population in Muğla province center is more than the one in Turkey.

The province population increase is higher than the natural increase according to 2000 population census. Having a stable population structure, the population movements in Muğla province center are based on educational, military purposes, agricultural working seasonally or moving from villages. In Muğla people moved from their villages for looking for a job or creating their own jobs. People moved especially from the villages which do not have agricultural lands such as Göktepe, Esentepe, Dokuzçam, Şenyayla, Kuzluk, Günlüce, Fadıl and Yemişendere. Moreover, people from internal areas (Marmaris, Fethiye and Yatağan) also migrated to city center for the same aims. People migrated from external areas because of appointment as being civil servants. In addition, migration abroad is at low levels. Generally no mass migration occurs in the city.

Muğla is composed of fourteen quarters which have grown by attaching to the city since 1930. (**Figure 3. 16** and **Figure 3. 17**) The population pattern with respect to these quarters is given in the table below.

Table 3. 9. Population Pattern of Quarters in Muğla City Center in 2000

Quarters	Population	Area	Number of Families in the House	Size of Household	Average Size of Family
Balıbey Quarter	413	2,5	1	3,1	3,1
Camikebir Quarter	1.166	6,6	1	3,8	3,8
Düğerek Quarter	3.476	125,2	1	3,8	3,8
Emirbeyazıt Quarter	14.203	121	1	3,8	3,8
Hacı Rüstem Quarter	635	6,4	1	3,9	3,9
Karabağlar Quarter	3.834	40,68	1	3,3	3,3
Karamehmet Quarter	871	27,5	1	3,7	3,7
Karşıyaka Quarter	3.448	32,5	1	3,9	3,9
Keramettin Quarter	1.929	20	1	3,7	3,7
Muslihittin Quarter	12.056	97,5	1	3,6	3,6
Müştakbey Quarter	1.293	7,6	1	3,3	3,3
Orhaniye Quarter	11.317	127	1	3,7	3,7
Orta Quarter	1.018	3,75	1	3,65	3,65
Şeyh Quarter	1.785	16,6	1	3,76	3,76
Total	**57.444**	**634,83**	**-**	**-**	**-**

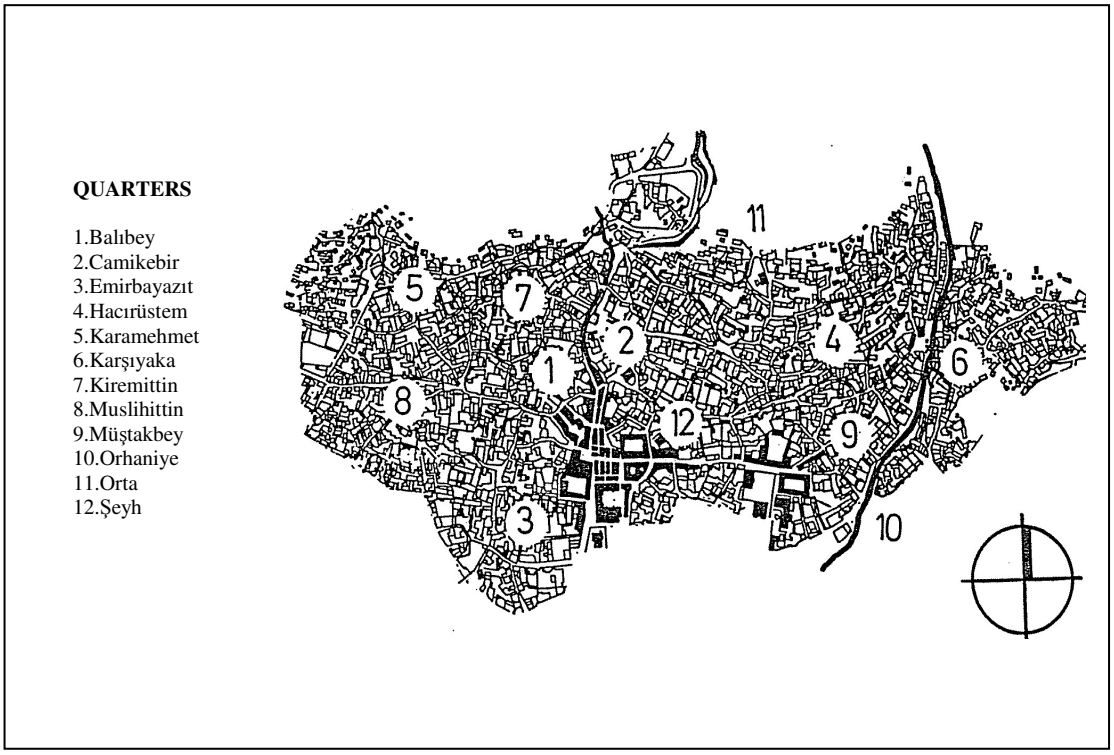

Figure 3. 16. Map of Location and the Quarters of Muğla till 1930s
(Report of Muğla Development Plan, cited in Aktüre 1993, p. 77)

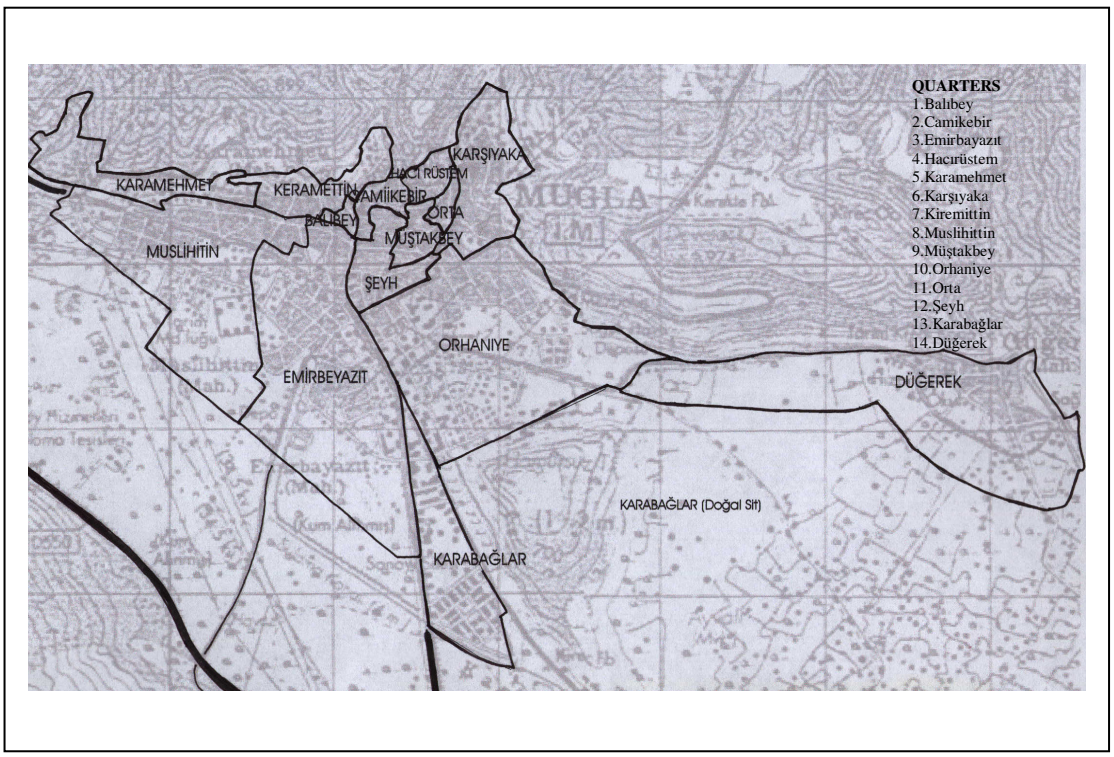

Figure 3. 17. Map of Existing Location and the Quarters of Muğla
(Source: Research Study of Muğla Development Plan approved in 2004 obtained from Uray A.Ş)

3.1.4. Social and Economic Characteristics of Muğla

3.1.4.1. Social Structure

At the beginning of Republican Period, city which was surrounded by yards wrapped a new appearance with Republican Square and the buildings surrounding this square. These new type of development movements were reflecting the social structure and values of Turkey in Republican Period. In Republican Period immigrants from Bulgaria, Yugoslavia and Greece settled in Saburhane Quarter.

In 1950s the administrative center which was in Müştakbey Quarter, where municipality and courthouse placed, shifted towards Republican Square. However, there were a few shops outside of the trade center in Kocahan and Arasta. Parallel to the spatial structure of pre-industrial cities, prominent people were living around the old administrative center in Şeyh Quarter while small-scale retailers and traders were living in Müştakbey, Camikebir and Balıbey Quarters.

Till 1950s city was spread towards the hill shades of Asar Mountain. After 1950s population of Muğla created new residential areas in city center with the help of developing technologies, earning new lifestyles, production and working systems. After 1950 there were three main factors affected the spatial change in Muğla.

- Transition period in Politics with the structure of multi-parties, increase in the population working in non-agricultural works, increase in urbanization were important economic changes in this period. Parallel to these changes, Ministry of Labor and Social Security Institutions were founded, and after 1950s on letting workers bought credits for cooperative housing which resulted in the encouragement of cooperative formations. “Bank of Turkish Estate Credit” supported the people with founding cooperatives for building houses. Moreover, laws also supported such cooperative attempts. With the direction of such events, some cooperative type of houses was built.
- Bank of Provinces prepared a development plan for Muğla in 1961 and in 1960s the implementation of the plan started. Therefore, the land in south part of the road Aydın-Marmaris Road started to be divided into parcels. In

planned period, the implementations of parceling and selling these parcels increased by some attempts such as leaving the yards because of drying problems as a result of binding the water resources to city water network.

- In newly developing areas, firstly it was allowed to build single-storey houses. After 1960s, it was allowed to build multi-storey houses; therefore, individual land-owners sold their lands in the payment for storey property. Reinforcing with law of storey property, this concept provided middle class to pay the increasing price for land in the urban area by sharing, and this accelerated the relocation factor from north to west in Muğla, and apartment housing started in Emirbeyazıt Quarter.

Migration factor is less in the population of Muğla; however, some villagers, who did not have enough land from forestry villages, migrated to the city in order to look for a job. These people settled in Keramettin, Camikebir, Hacı Rüstem, Orta Mahalle, Balıbey and Karşıyaka Quarters. Moving from these quarters to old prestigious quarters (Şeyh and Müştakbey), middle class of this period left their quarters for migrants. Low income families were living in Keramettin and Karamehmet Quarters located on rugged area in northern part of the city. Müslihittin Quarter between old pattern and newly developing houses in the plateau was the residence for small-landowners and workers. Emirbeyazıt Quarter and Orhaniye Quarter developed after 1970s in the southern and south-eastern parts of the city. Emirbeyazıt Quarter became the prestigious quarter with the residents of big traders, landowners, high-income groups. In Orhaniye Quarter there were people living with lower income than Emirbeyazıt.

The traditional urban pattern of Muğla has not been destroyed but conserved because of the less population increase between 1950 and 1985, less increase in urban population, not mass migration of living people in the city who left the traditional housing area or who did not have completely different social structure of immigrants.

Developing of new quarters is not based on the collapse of old pattern or building apartment blocks on this old pattern; however, it is based on the development of new

lands for residents, the immediate implementations in old pattern accordance to the new development plan, the clear attitude of "conservation" of municipality especially after 1970s. Therefore, this resulted in a sustainable old quarter without collapsing.

3.1.4.2. Economic Structure

It can be seen from the **Table 3. 10** that Muğla has a great proportion as a trade and service center as being the center of province and the market area for surrounding villages, apart from public services. Moreover, agricultural activities are still effective in Muğla.

Table 3. 10. Distribution of Employees by Branch of Economic Activity

Activity	Working People	Percentage (%)
Agriculture, Stock Raising	324	2,3
Small type of Crafts	1553	11,2
Construction	847	6,1
Transportation	654	4,7
Commerce	2289	16,5
Administrative and Social Services	8247	59,3
Total	**13914**	**100,0**

Administrative, educational and social services have great proportion in Muğla economy. (**Table 3. 11**) Moreover, the large effects of trade, there is the accumulation of special services such as dentistry, attorney-ship. (**Figure 3. 18.** Diagram of the Analysis of Business and Trade Areas)

Table 3. 11. Distribution of Employees by sub-group of Administrative and Social Services

Administrative and Social Services	
Characteristic	**Number Working People**
Administrative Services	4.030
Education	1.634
Health	790
Religious Services	141
Other Social Services	1.652
Total	**8.247**

Figure 3. 18. Diagram of the Analysis of Business and Trade Areas
(Source: Research Study of Muğla Development Plan approved in 2004 obtained from Uray A.Ş)

There are not any industrial activities in Muğla province center except for little development of small industrial establishment while the province serves such industrial activities: energy production with three thermic stations of Yatağan, Yeniköy and Kemerköy, mining, food, drinking and tobacco, textile and leather, forestry, paper industry, machinery-metal metallic products and agricultural device production. However, there is not an organized industrial zone in Muğla. Parallel to the last development plan, an organized industrial zone is being founded in Akçaova Region.

3.2. Planning Experience of Muğla

Analyzing the periods of planning activities contribute to the thesis of "Planning the Sustainable Cities: The Case Study on Muğla". According to different resources plans that have been prepared till now are:

3.2.1. Regional Projects

Aydın-Muğla-Denizli 1/100.000 Environmental Plan Prepared in 2006(Research Study on Aydın-Muğla-Denizli Environmental Plan obtained from Kutluay Planlama 2006):

The aim of the Environmental Plan of Aydın-Muğla-Denizli planning zone is to maintain determinations about existing structure, to create a data-system and data-base, to reveal the potentials and problems with the help of these determinations and data-base, and at the end to produce a vision and perspective for planning zone; through achieving economic, social and urban sustainability. In other words, it is aimed to direct socio-economic and spatial relations of the zone with other regions in the country, to improve the living standards and increase the contributions of the planning zone to national economy by developing the existing level of productivity, and to create a system which has tidy and livable spaces. There are some important issues in order to maintain sustainable and balanced development in planning zone:

- Preparing the most appropriate and economic land use planning without damaging the ecological balance,
- Management of natural resources (especially, agricultural lands), and protecting natural and cultural environment; in this context preventing erosion, analyzing and controlling water-air-land-noise pollution, improvement of pasture, determining forest areas, producing and carrying out recycle projects, controlling urban and industrial developments and planned growth.

Through the planning process implementation and controlling mechanisms and actors should be determined. In this context, another aim of this plan is to create plans in different scales and programs as complementary of these plans.

The aims of Environmental Plan of Aydın-Muğla-Denizli planning zone can be summarized as follows:

- Evaluating the urban and rural developments in order to provide sustainable development,
- Evaluating the progress in agriculture, industry, service sectors and related sub-sectors,
- Maintaining the use-conserve balance, and
- Becoming a basis for the plans in smaller scales in planning zone.

The most important principle is to deal with the sectoral concerns (infrastructure, transportation, residence, natural and cultural environment, squatter house, industry etc.) in integral work, and to produce detailed "Development Policies and Strategies". Socio-cultural structure should also be considered while making development decisions.

Furthermore, conserving forests, rivers, water levels, agricultural lands and flora and fauna, and determining future land use and density should be evaluated within the plan. Moreover, the integrity should be maintained among using, conserving and developing natural resources through sustainability criteria. Integration with existing plans and the geographical region of the planning zone is also an important aim in order to protect the validity of the plan.

The scope is to stipulate the development strategies and their reflections on space for Aydın-Muğla-Denizli planning zone with targeting the year 2025 by gathering and evaluating the factors mentioned.

With this frame, planning process has three stages to follow. First one is the preparation of "research report"; second stage is the preparation of "two alternative plans"; and the last one is preparation of the "definite plan". The whole planning process was finished at the end of the year 2006; but the plan has not been approved yet by Ministry of Environment and Forestry.

3.2.2. Urban Projects

3.2.2.1. Development (Master) Plans

3.2.2.1.1. The First Development Plan Approved in 1936

Till 1930 development of the city was not depended on a plan and buildings were built by skilled workmen in the city. The current projects of the period were only the building governmental buildings out of the city of Muğla. As observed from the changes in the physical environment, **the first development plan** approved in 1936 (Figure 3. 19) was a turning point in Muğla. The plan was prepared by Ministry of Public Works-City Science committee at the scale of 1/1000. (Tekeli 1993, p. 166-168)

The fundamental change in the Republican Period was the spreading towards Muğla Plain in the south. This southern development was firstly made building by building. The new node of the city was Republican Square that had the Monument of Atatürk at the center. Around this square there were Governor House, Community Center and such buildings. Little changes were made in the roads of historical urban pattern in the north of the city. New residential areas were proposed in the network of the roads that cut each other straightly in the south of the city. Since the population was not increasing steadily, the implementation of the plan in early times was just for building new roads and making public investments. (Tekeli 1993, p. 168-174)

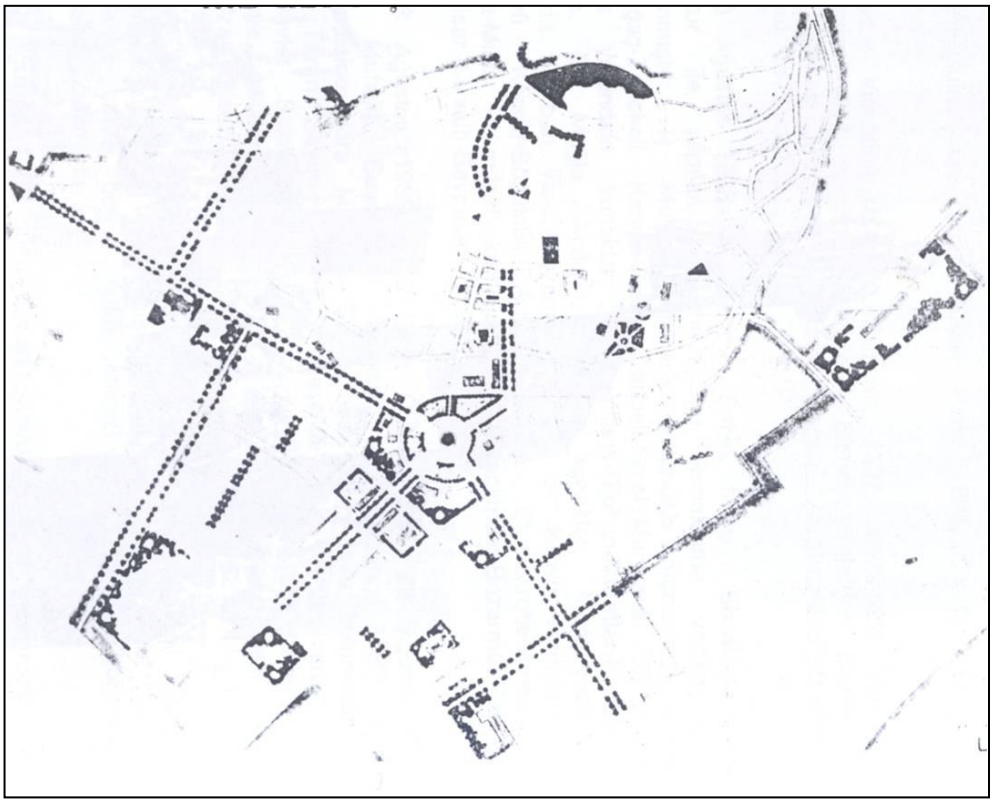

Figure 3. 19. The First Development Plan of Muğla Approved in 1936
(Source: Muğla Development Plan Approved in 1936, cited in Tekeli 1993, p. 171)

Apart from the planned region of Republican Period, Karabağlar was the complementary area of the city center of Muğla in two dimensions: space and time. This is a characteristic spatial to Muğla that was gained by moving another space according to the seasons. In the first 25 years of the Republican Period, Muğla had lived a close economy on a large scale because of the changing foreign economic relations and insufficient infrastructure that is needed to connect Muğla to the market in the national economy. In this closed life, Muğla had little changes, and the traditional characteristic of Karabağlar and city center relation has been protected. (Tekeli 1993, p. 166-174)

Shortly, in the first plan, it was aimed to arrange and improve the south of the city, and design the important buildings around this area. The development of the city was planned towards the south of the highway roads with well-arranged roads and geometrically planned buildings. In the old pattern of the city, existing road systems were widened and surroundings of the monuments were arranged. This was a planning approach which appropriated the change without rejecting the physical

values of the city. It was observed that surroundings of some of the historical buildings belonged to the years before 19th century were cleaned and arranged again. 19th century buildings were conserved and gained new functions. (Akçura 1993, p. 259)

3.2.2.1.2. The Second Development Plan Approved in 1961

Social and economic changes from the years of foundation of Republic till 1950s affected the pattern and buildings of the city; however, these changes did not create large improvements and destructions. Change was in the functions and state of the buildings in social life. After 1950s the building activities in the south increased. Especially young people from old patterns shifted towards the newly developing areas, old people did not leave their settlements, and new families migrated to the city. After that time, older parts of the city became problematic areas because of their transportation, infrastructure, and public services were not as good as the new parts of the city. However, buildings were continued to be used by their owners and carried their functions, and still had their residential, commercial and administrative characteristics. (Akçura 1993, p. 261-262)

Till 1950s city reached the population of 15.000. Economic policies of the period were effective, and from that time spaces were started to be produced with the frame of another approach. Republican Square and Republican buildings around this square were the signs of this new approach. **The second development plan of Muğla** approved in 1961 was the dragging event of such changes. Then some characteristics of city life in Muğla started to be lost one by one. Parallel to these changes people started to leave Karabağlar Region which had been used as summer houses for almost six months in former periods. Through the economic transformation, sericulture and textile working started to lose their values. In 1960s through the new development plan there occurred a large transformation in the center area. Kocahan, one of the important buildings in the center, and many other important buildings were vanished with the decision of the plan. According to Erman Şahin who was a former Mayor of Muğla Municipality, such decisions that destroyed many buildings in 1970s were implemented with the agreement of the citizens. (Muğla Conservation Plan 2001)

The city of Muğla, apart from its traditional settlement area, was framed with the transportation axis built between 1939 and 1943 and the administrative buildings around these systems. 1961 Development Plan has the role of making the newly developing residential areas fit into this frame. Since there were not many industrial activities, urban activity in Muğla developed by means of exterior effects and the growth of transportation, trade and tourism. Growth of the city, new structure of the city, people moving from old city to newly developing neighborhoods, people getting modern habits and values were all the urban reflections of the changes in national scale. In other words, local and extra-local relations of Muğla developed between the years of 1950-1987, and became a unit with the national market; and as a result, city population and spatial structure changed and varied. Not being a setting for excessive social and economic transformations probably has shaped the city of Muğla as a good example especially in planning and controlling. (Osmay 1993, p. 229-231)

3.2.2.1.3. The Third Development Plan Approved in 1982

The third development plan of Muğla prepared by Bank of Provinces and approved in 1982. (**Figure 3. 20**) The aim of the plan was to remove the difficulties in implementing the second development plan approved in 1961 and to prevent the development on the plain area which was productive land in the southern part of residential areas. Topographical thresholds limited the growth of the city; therefore, these areas were proposed as squatter preventing zones, and the eastern useless areas were proposed for new developments. (Osmay 1993, p. 229) Moreover, the plan aimed at such objectives (Muğla Development Plan 2004, p. 113):

- Creating flexibilities keeping the traditional settlement alive without destroying it,
- Preparing a transportation diagram in developing area with the reference of property pattern,
- Preventing the spread of settlement towards fertile lands by optimizing the densities of regions,
- Limiting the development in existing residential area as it is possible,
- Arranging the urban facilities functionally and in a realistic way, and
- Maintaining the relation with new beltway.

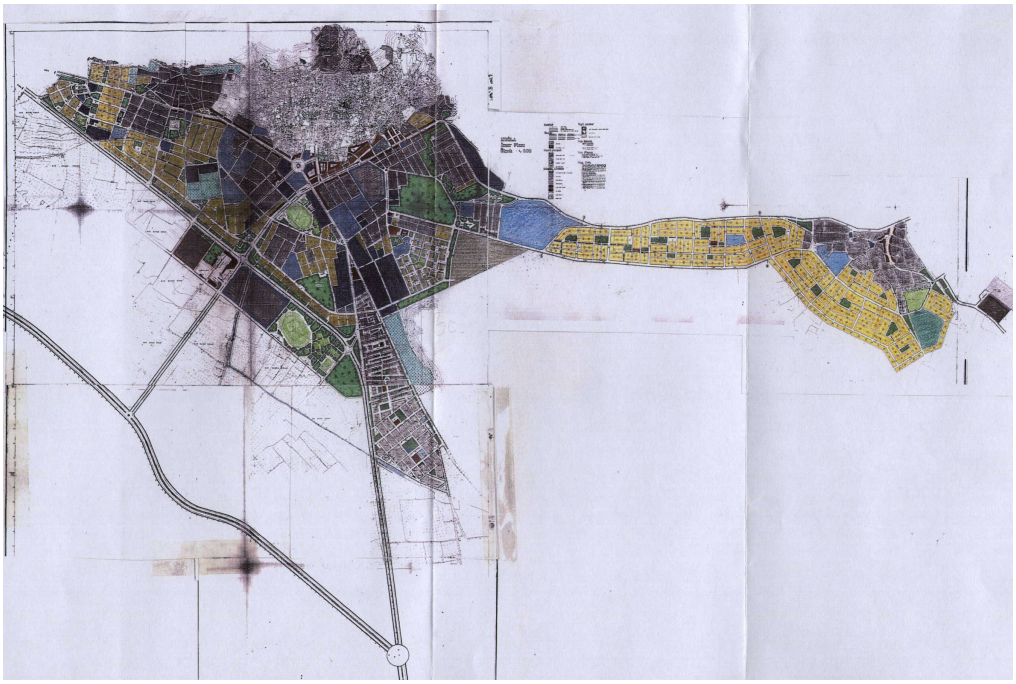

Figure 3. 20. The Third Development Plan of Muğla Approved in 1982
(Source: Muğla Municipality)

With the population of 41.000 and with the area of 1.063 hectares, 1982 plan targeted the year 1995 and the population of 83.000. In the plan there were decisions on the lands other than Urban and Natural Site Areas, and the plan proposed to prepare conservation plans for Site Areas. (Muğla Development Plan 2004, p. 113)

Residential areas were limited with the Aydın-Muğla Highway. Highway passing was shifted to the southern hill-shades where the plain area ended; therefore, Aydın-Muğla Highway transformed into an internal road. This road was connected with the traditional area. In order to prevent constructions around this road because of the attractiveness of newly developing areas, some other functions proposed especially at the junction points of roads: bus station, recreational facilities, and sport areas. Through the thinking of there will be constructions in the plain area in spite of these preventive decisions, specific parcel size and construction standards for this region were determined for the ones who wanted to build in his land. (Muğla Development Plan 2004, p. 113)

Topographical thresholds limited the development of the city towards western parts. In this region there are preventive zones for squatter housing. Therefore, developing

direction of plan was towards eastern parts, Düğerek Village. Urban facilities such as zoo, botanic gardens, and education areas were proposed on property of municipality or government between the settled and development area; (Muğla Development Plan 2004, p. 113) moreover, this decision has not been implemented.

Through the trend of cooperative type of building in this period, some cooperative areas were proposed. Small type of industrial area was surrounded with residential areas in order to prevent the growth of industrial area in this region. New development of small type of industry was proposed in Marmaris-Karabağlar Road with the connection of city center. Existing small type of industrial area was proposed to be transformed into mixed uses of trade, residential areas with reaching the bazaar area. (Muğla Development Plan 2004, p. 113)

Shortly, the plan considered the strategy of conserving existing settlement and creating harmonious residential and trade areas with the settled area. Moreover, the implementations till now have been performed with the reference of this main strategy. (Muğla Development Plan 2004, p. 113) Only some of the plan decisions have not been implemented. Today Muğla urban form is reflecting the implementations of this plan.

3.2.2.1.4. The Fourth Development Plan Approved in 2004

Existing plans considered the settlements which extend around Muğla Plain through partial approaches. Existing plans have been able to orient the development of the city till now; however, they are not enough for future developments. In addition, they carry some indefiniteness about future development pressures on settlements although there are discriminating approaches of citizens. Therefore, the main objective of **the fourth development plan** approved in 2004 (**Figure 3. 21**) is to sustain and carry on the structure of Muğla that has conserved its identity, natural values, and livable urban pattern till now. Efforts of this plan are to prevent the oil-spot type of development that almost all cities face, to strengthen the surrounding settlements and to gather the separated and grouped settlements in the band of Kızıldağ foots. Since natural and artificial thresholds limit the existing development of city center, it is not possible for the city to grow its surroundings. Therefore, in

this development plan, the alternative areas in the surrounding settlements are aimed to be developed. In Akçaova, Kötekli-Yeniköy, Ortaköy and Düğerek, with the planned settlements, it is aimed to supply the necessary areas within 25-50 years through the fourth development plan of Muğla.

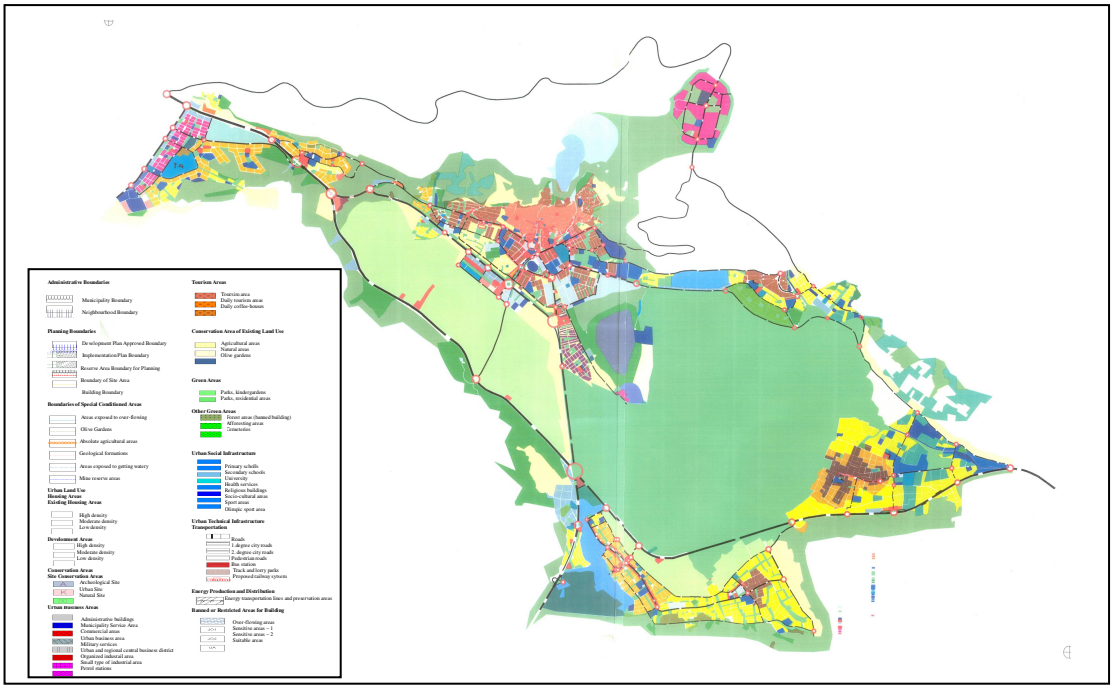

Figure 3. 21. The Fourth Development Plan of Muğla Approved in 2004
(Source: Muğla Municipality)

According to the plan, after taking hill-shades of İkizce into the boundary of municipality, designing a connection between Düğerek, Düzein Organized Industrial Zone and İkizce has become necessary to build. Moreover, developing Akçaova I. Stage Housing Development for responding to the increasing needs of housing is aimed to perform in the first stage. This housing area will also respond to the needs after the development of Akçaova Industrial Area which will be shifted from the existing small type of industrial area away Akçaova. In Akçaova also some facilities in urban scales will be designed, such as urban recreational and vocational areas, fairs and entertainments. Existing industrial area will be transformed into housing and urban facilities. The continuity of Muğla and Kötekli-Yeniköy is aimed to be performed with the help of this transformation and the plans which will design the eastern and western parts of Uğur Mumcu Revenue in Karabağlar Conservation Area emphasizing “ecologic tourism and university facilities”. Moreover, Kötekli-Yeniköy

development plans with the scale of 1/1000 will also respond to some of the future needs. Ortaköy settlement will generally be developed at low density. Moreover, the eastern entrance of the city will be projected with an Olympic sport area. Furthermore, the back parts of Düğerek Quarter will be developed by additional housing area through the approach which is respectful to agricultural and natural resources.

As declared in the plan, it is estimated that there will be a five-time-increase in existing population from Akçaova till Yaraş, and from Asar Mountain till Kötekli-Yeniköy which is 60.000 in 25 years. This means that approximately 180.000-200.000 people will settle in the municipality and neighboring boundaries of Muğla. It is projected that 80.000 people will settle in Muğla center including Düğerek Quarter. Moreover, 41.000 people will settle in Kötekli-Yeniköy according to the development plan for implementation prepared by Bank of Provinces.

Table 3. 12. Proposed Populations by Quarters according to the Last Development Plan Approved in 2004

	Population (Person)
City Center	80.000
Akçaova Housing Development Area	10.000
Akçaova Industrial Area	15.000
Düğerek I. Region	5.000
Düğerek II. Region	3.000
Ortaköy	15.000
Karabağlar	2.000
Back-parts of Yücelen Region	7.500
Rehabilitation of Small Type of Industrial Area	15.000
Kötekli-Yeniköy	41.000
Other	6.500
Total	200.000

3.2.2.2. Conservation Plans

3.2.2.2.1. The First Conservation Plan Approved in 1979

In 1970s there were attempts to define site and conservation areas at national base. Through such attempts existing Site was defined in Muğla. In following years, **the first conservation plan of Muğla** approved in 1979 included the Site and preserved all architectural heritage declared in 1975. In the plan different zones, new building and restoration conditions were defined, and transportation system was arranged. Municipality was given the responsibility of restoration of officially proprietary buildings, approval of the projects for new buildings and controlling the implementation process. (Akçura 1993, p. 262) However, the plan could not prevent big transformations in urban area. Karabağlar had many important transformations, and gardens around the city were damaged by these transformations. People especially young started to live in the apartments in plain area of the city, and Site was for old people; however, Muğla did not have rapid developments in its economy and demography. (Muğla Conservation Plan 2001)

3.2.2.2.2. The Second Conservation Plan Approved in 1982

The aim of **the second conservation plan of Muğla** was to make the Site healthy and conserve it. However, it was aimed to keep the settlement alive as the main principle of conservation. Planning decisions were made within the framework of the dilemma of protecting and keeping alive. Although these two aims sometimes conflicted with each other, it was tried to minimize the conflicts were with the decisions made. It was also aimed to revitalize the old city center, to provide urban services in limited scales and protect both local architecture and existing urban pattern. It can be said that the second conservation plan had the way of supplying residential areas for the increasing population. With the third development plan which had important changes even in the Site, new housing areas were opened in the western, southern and eastern part of the Site. The development plan and the conservation plan went into effect at the same time. (Muğla Conservation Plan 2001)

In general terms, the second conservation plan did not include the necessary principles and decisions for conservation and did not have enough analysis and

evaluation. Moreover, the conservation plan did examine the values of the historical urban pattern neither in the scale of building nor in the scale of pattern. It is clear that this conservation plan was insufficient to protect the Site because of such decisions: proposing a road on an officially proprietary mosque, ignoring many structures that are the main elements of the urban traditional pattern, opening almost all cul-de-sac streets which carried the characteristics of the urban traditional pattern. It is also clear that it is not possible to protect settlements only by registration decisions at the scale of structures since structural elements have their values both with individual values and traditional patterns that grasp them. The second conservation plan only covered officially proprietary buildings and buildings that would be included to officially proprietary list, and it created proposals only for these buildings. In this conservation plan transportation system that existed in the southern part was put towards the northern part. Therefore, Arasta and its environs which was the resistant zone of urban pattern were damaged. (Muğla Conservation Plan 2001)

3.2.2.2.3. The Third Conservation Plan Approved in 2001

The aim of **the third conservation plan of Muğla** is to prevent the vanishing of physical pattern both in the structural base and area base. Strategies in the way of conservation also aim to improve the living standards of the people living there. It is also aimed to provide the conditions for a contemporary life in order to make the young people to feel the responsibility of their living area. Furthermore, it is aimed to create solutions for problems in physical environment, socio-economic conditions and technical infrastructure. Shortly, the plan aims to provide economic revitalization, to revitalize the city center, to create new pedestrian roads, focal points and to solve problems in transportation. With the frame of these aims, such strategies have been developed:

- Organizing the image that is created by adding some individual parts to the traditional forms,
- Encouraging economic revitalization in order to have the conservative mind:
    - Making improvements in tourism which can make the advertisement of the local area both inside the country and outside the country,
    - Revitalizing the traditional handicrafts,

- Improving the pension-tourist home type of housing, and
- Organizing a festival which will be traditionalized.

Plan decisions are shaped according to such items:

- Four zone of Site and transition zones
- Cadastral-plots which have special properties to their spaces in this zones
- Properties (size, location, density of use-function) of parcels in structures.

Analyzing the urban pattern in Muğla, we see that well protected areas till now are Greek Center in the east and Turkish Center in the west. There is a transition zone which was destroyed so much between these areas and the Republican buildings in the south. In the southern part of these areas, there are some areas with traditional pattern still have their values with small transformations. (Muğla Conservation Plan 2001)

3.2.2.2.4. Conservation Plan of Karabağlar Yaylası Approved in 2003

Karabağlar is the summer place far from 3,5 km from the city center. Conservation attempts for Karabağlar started in 1977 with the declaration of Karabağlar Yaylası as Site Area. Second attempt was for the decisions on "building conditions" in 1979. In order to conserve the natural and cultural structure of Karabağlar there was the need for special planning decisions. Therefore, Environmental Plan with the scale of 1/25.000 was prepared for Karabağlar. However, it was not approved because of the scale was not sufficient for conservation aims. Thirdly, with the request of Muğla Municipality, Monuments Council visited Karabağlar for the analysis and evaluation of natural and cultural values in 1985. Fourthly, the association named "Beautify of Muğla and Karabağlar and Developing Tourism" was founded in 1984. (Koca 2004, p. 2, 11, 12)

Today Karabağlar is used not used as a summer house as it was in the past. Industrial area founded between the city and Karabağlar will affect the grand water and air of Karabağlar. In fact trees called "Karaağaç" which are special to Karabağlar died. (Aladağ 1991, p. 19) Furthermore, **conservation plan of Karabağlar Yaylası** was

approved in 2003. The plan created four sub-regions according to the property pattern and building characteristics. Moreover, building decisions were created through natural, cultural and physical characteristics of the area.

3.2.2.2.5. Urban Design and Special Conservation Project for Arasta Region-Revenue Office Fronts-Saburhane Square Prepared in 2006

Project area includes three regions: Arasta traditional trade center, open bazaar region (the region from the junction of roads İsmet İnönü Caddesi and Şehit İsmet Çatak to Saburhane Quarter), and Saburhane region. These three regions have different types of characteristics in the way of being touristy focal points, and they have problems related to their characteristics.

Project, which has not been approved yet by Council of Protection of Cultural and Natural Properties, aims to find solutions for urban problems, to create decisions for designing the regions, and to point out strategies for the implementation of these decisions. In the preliminary project decisions on main transportation-traffic-pedestrian, determination of project focal points and urban design projects of public spaces were prepared for the whole project area in 1/500 scale. Preliminary projects were prepared for the focal areas in 1/200 scale.

3.2.3. Restoration Projects: Implementation

From foots of Asar towards Sekibaşı, Konakaltı and Saburhane, Muğla has spread with the Republican period. Muğla is a cultural heritage of Turkey with its Archeological, Urban and Natural Site areas. Since 1979, when the foundations of conservation were established, Muğla Municipality has been working as a pioneer actor in the discipline of culture and conservation. There have been prepared conservation plans for these Site Areas. Recently many restoration projects have been performed in Muğla Urban Site area. Turkish and Greek types of houses reflect the old city pattern. It is observed that some khans and houses have been restored recently and now they are being used. The restoration project of “Konakaltı Khan” which is now used as a cultural center is a fundamental step for repair and renovation by the municipality. Furthermore, Şerefliler Evi that was restored by Muğla Municipality as a museum, Özbekler Evi, Yağcılar Khan and Yarım Khan were restored by private enterprises, and they are being used for socio-cultural and

commercial activities. At the same time, “Arasta Project” that was prepared with the leadership of Muğla Municipality and with the participation of General Directorship of Local Administrations, Muğla Governorship and Private Administration of Muğla Province is an essential biggest conservation project of Muğla. Besides with the announcement of Muğla Municipality to various banks and large holding companies, it was attempted to make these institutions to buy traditional houses of Muğla in order to restore and use them. (Ege Life 2003, p. 66-68)

However, there are some historical khans that could not able to be conserved and kept alive till today (Kocahan, Halilibrahim Khan, Gölcüklü Khan, Kömür Çuval Khan, Cezayirli Khan, Demirli Khan, Apostal Khan and Boyacı Khan). Arasta which was the traditional center of trade was focused on craft such as harness making, saddle making, shoe making, smithery, etc. in the past. Arasta was very active center, unfortunately some of its characteristics were lost in the past. Muğla is growing and developing day by day, and traditional and modern urban phenomena live together in Muğla. (Gıda Sanayi Official Web Page 2006, p. 1-3)

Figure 3. 22. View from Arasta after some Restorations

Figure 3. 23. View from Restoration of Courthouse
(Note: Muğla Municipality has finished the restoration of the courthouse, and now the Municipality is using the building)

CHAPTER IV

EVALUATION OF MUĞLA DEVELOPMENT PLANS IN TERMS OF SUSTAINABILITY CRITERIA

4.1. A Critical Analysis of Muğla Planning Experience in terms of Urban Sustainable Development Objectives

Through the introduction of the characteristics and planning experience of Muğla in previous chapter, the criticism of the case and the planning experience is performed in this chapter with the help of three-dimensional (environmental, socio-economic and political values) urban sustainable development objectives which were defined in the second chapter.

4.1.1. Environmental Values

4.1.1.1. Built Environment

4.1.1.1.1. Urban Structure in a Livable City

- **City Design Strategies:** The city of Muğla and its historic character provide a livable environment in general terms facilitating an ideal, centralized geographic position as a dynamic central focus for the city through the implementation of development and conservation plans. Moreover pedestrian and public transit systems are being designed with greenways. However, all levels of design strategies should be implemented accordance to the plans by more emphasizing on “first reduce, then reuse and recycle”.

- **Enhancing a Sense of Community:** Most of the cultural and historical characteristics and qualities of Muğla are conserved till now through planning experience. There is one city center in Muğla which gathers all public and private services in an accessible manner. Each quarter in the city has its necessary facilities; however, they are dependent on the city center to some extent. People come from environs to the city center in order to get

social, cultural interactions and also education and health services. Transportation from surrounding neighborhoods and villages is maintained in a convenient manner. In the city center, it is not necessary to use a transportation mode, and people can benefit from the services in a sustainable way, by walking. Moreover, the attempts in order to increase the use of bicycles by the municipality facilitate the transportation manner in the center. However, after the foundation of university which is located separately from the center, new modes of transportation have been needed. Therefore, Muğla has met with public-buses in order to utilize this educational service. The last development plan also supports the connection of the university and the center by proposing a railway project.

- **Providing for Pedestrian Priority Connections**: Walking is the main transportation mode in the city center in order to benefit from the services. Bike ways and walkways between residential developments and neighborhood amenities and services also contribute to the sustainable development in some quarters of Muğla. The urban design projects in the city also support the transportation-traffic-pedestrian relations with regards to their original characteristics and problems. This manner of planning and implementation approach should be sustained and expanded.

- **Moderating Density and Cluster:** Land is limited because of topographical thresholds in the center, and this negatively results in high land and building prices. Therefore, the householders rent their houses at higher prices especially when the customers are students thinking that it will be convenient for the students to pay for high rents since more than one student share the price. Municipality has exceeded its boundaries with having the quarters of Yeniköy, Ortaköy, Kötekli and Akçaova into its neighboring boundary.

Moreover, the last development plan proposes a network of settlement clusters with developing these quarters. There are potential settlement areas in surroundings. Developing the surrounding settlements accordance to the

last development plan will sustain the density at low levels, natural values will be protected; therefore, a network of compact settlements will be maintained for a sustainable city. This will sustain the balance of different parts in the city.

- **Thinking Small and Smart:** Muğla urban structure has the character of low-density with no more than four-storey buildings. Most of traditional houses have their gardens and open spaces in themselves. Newly developed areas also have moderate densities. Planning experience of Muğla always supported the small type of buildings with low densities both in the city center and surroundings.

4.1.1.1.2. Sustainable Urban Infrastructure

Urban Transportation Planning and Management:

There is one focal city center in Muğla which provides all public and private services in an accessible manner. The transportation mainly allows the basic access needs of health, comfort and convenience for individuals with walking, bicycle paths and public buses.

However, transportation modes in Muğla do not use inexhaustible energy (renewable energy) sources, do not minimize consumption of non-renewable resources, do not reuse and recycle their components; therefore, they create some air which is an unsustainable manner. Car dependency is too much in Muğla. This also creates some air pollution, noise and parking problems. Railway projects should be implemented which is also proposed by the last development plan and Karabağlar conservation plan. Shortly, plans should support the transportation principles designed for clean, healthy, affordable, safe, comfortable, and convenient transportation.

4.1.1.2. Natural Environment

4.1.1.2.1. Sustainable Urban Soil, Water and Air Management

a. Urban Water Management

Drinking water is maintained from Bahçeyaka 18 km far from the settlement (%85) and some other resources (%15). There are approximately 12500 - 13000 water-

subscribers. There are 11 purification systems for waste water (Marmaris, Bodrum, Fethiye, Köyceğiz, Dalaman, and Ortaca) in the province of Muğla, but not in province center. (Muğla İl Çevre Durum Raporu 2004, p. 225)

There are problems because of the absence of sewage system and the use of cesspools and the absence of purification system for used water. However, there are attempts for recapture and reuse water. There is a disposing project for liquid wastes (cesspool wastes) which started to be implemented by the coordination of Muğla Municipality and Biotechnology A.Ş. (Muğla Üniversitesi Çevre Sorunları Araştırma ve Uygulama Merkezi –MÜÇEMER 2006)

b. Sustainable Urban Soil Management:

There are not enough attempts directly related to sustainable soil management. Areas exposed to getting watery are defined in the last plan for making precautions for soil. Moreover there are some indirect implementations for protecting soil. The use of parks and sport areas private green/open areas inside residential areas with backyards, the use-conserve balance in both historical heritage and urban green/open areas through the consciousness, Karabağlar Region with its distinctive characteristic, and forest which is approximately 1.720 hectares in the province center all contribute to soil management and urban agriculture.

c. Sustainable Urban Air Management:

The most contaminated regions in Muğla Province are Muğla city center and its incorporated towns and villages, Yatağan, Ula and also the incorporated towns and villages around these settlements. In order to provide a non-deteriorated air condition for a clean life standard, Local Environment Council declares their decision for informing citizens about how to consume fuel. (Muğla İl Çevre Durum Raporu 2004, p. 77) Moreover, there becomes air pollution especially in winter times. Therefore, plans should create principles in order to prevent air pollution, and improve air quality by developing greenways and greenbelts.

4.1.1.2.2. Sustainable Urban Solid Waste Planning and Management

As the population of urban areas increases, the amount of waste also increases. Muğla Municipality is undertaking certain projects with the slogan of "house without waste, city without waste" to ensure recycling and disposing of the wastes at their origins. The municipality is launching this project within the framework of Recycling Project (YEKAP). Solid wastes are collected in an area in Dirgeme Region and they are sorted and collected through YEKAP that is supported by voluntary housewives. (Muğla İl Çevre Durum Raporu 2004, p. 264)

YEKAP started in 1999 and it has three main items (Muğla Municipality):

- Sorting recyclable solid wastes and maintain economic utilities through put them into production process again.
- Sending un-solid housing wastes into cesspools or composting in suitable areas such as in gardens.
- Taking cesspool wastes into bio-stabilization process and using purified water in receiving environments or utilizing them as manure.

At the beginning of the project a Recycling Center (YEKAM) was founded and the collection of wastes from houses and shops by a different vehicle. After that YEKAP started to adapt citizens into the project through education. For this aim, students from primary and high schools started to be educated. Moreover, a voluntary environment group was created by students, and "recycling competition" among schools was organized. Furthermore, after the meeting apartment managers and doorkeepers, 500 voluntary housewives in each quarter were selected. YEKAP and City Council Environment Commission cooperate. Through the project, 20 recycling boxes were put in different places in the city. Environment Control Officers also were educated in order to make controls in the city. Two YEKAP parks were created with the income that was obtained from the recycling process of collected through the project. (Muğla Municipality) Furthermore, electronic recycling container was founded by the cooperation of Muğla Municipality and a recycling company called Exitcom in 2005. (Muğla Municipality Official Web Site)

4.1.1.2.3. Sustainable Energy Supply and Management

Energy need is provided by the national energy system in Muğla. Energy is produced by Yatağan, Yeniköy and Kemerköy thermic centrals which are connected to national energy system in provincial level. In Muğla, Most of the energy is consumed by house dwellings (25,7 %) and by commercial buildings. Since industry has not developed so much, its consumption share is too little. (Muğla Development Plan Research Study 2004, p. 111)

These power plants, which were built without getting any of the necessary permits and not accordance to the official plans, unfortunately, use low-calorie local lignite which includes high sulphur, ash, and uranium. They were banned from use in the city of Muğla because they are polluting. However, the three power plants can burn as much coal as the city of Muğla can consume throughout a year. Furthermore, Aydın Administrative Court experts proved that these plants endangered the flora and the fauna in the region and the ecosystem could not tolerate the pollution. In September 11, 1996 the Council of Ministers violated the law by deciding to ignore the court decision dated June 20, 1996 which orders the three coal-fired plants to be shut down. (Keskin and Mert 2002, p. 1)

However, there are no energy projects about green building and design or renewable energy in Muğla centre. There are only some scientific studies in Muğla University about solar energy and some limited projects which are theoretical and not towards action/implementation. (Muğla Üniversitesi Çevre Sorunları Araştırma ve Uygulama Merkezi –MÜÇEMER 2006)

4.1.1.3. Cultural Environment

Cultural identity and heritage of Muğla is the result of hundreds years of work. We can see the signs of former living in today's urban and rural areas of Muğla. There are approximately 300 officially registered buildings and historical khans, squares, mosques and Arasta in city center, Karabağlar Yaylası and Muğla plateau. Moreover, 9000-year-old-fossil resources belong to Trolian Period found in the Village of Özlüce in 1993, Site Areas, and monuments are other important cultural values.

Muğla has the identity of "city of **culture–tourism** and education" with the help of its location, economic and social structure. Since its counties are touristy areas, this creates limited reflections on Muğla centre in summer times with the visits of national and international tourists. This contribution can be increased to higher levels. Karabağlar, Muğla Castle, Değirmendere, Trolian Fossils can be included in the route of tourist tours. Moreover, local craft-working, local agricultural products and local music can bridge the locality of Muğla to global levels.

Conservation plans have been directing cultural identity and **citizen consciousness** of Muğla since 1970s. People have been getting more interested in restoration projects of traditional Muğla houses year by year. Traditional Muğla houses, traditional coffeehouses in Karabağlar Yaylası, shops in Arasta have been conserved till now and they are still being used by citizens. There were unfortunately destructions of cultural values which were supported through plans. However, today we can say that there is the cultural citizen consciousness in Muğla. Muğla Municipality is the most effective factor that has directed the formation of this consciousness through years. Furthermore, as a result of the advertising events and attempts in national levels in recent years, the citizen consciousness is getting stronger and such events directs and accelerates the presentation of cultural and local values of the city to national and global levels.

There are **public spaces and landmarks** in Arasta region that gather people for commercial or other social interactions. Clock-tower, Kurşunlu Mosque and its environs, bazaar area, local coffeehouses in Arasta and in Saburhane Quarter, local coffeehouses in Karabağlar (Keyfoturağı, Süpüroğlu), monuments and the square of Atatürk are important public spaces for Muğla citizens. Citizens can easily access these traditional and modern areas for social or economic purposes.

There are **symbolic and structural projects** in Muğla, for example, Urban Design and Special Conservation Project for Arasta Region-Revenue Office Fronts-Saburhane Square. This project aims to find solutions for these urban problems, to create decisions for designing the regions, and to point out strategies for the implementation of these decisions.

Restoration projects and symbolic and structural projects contribute to the **urban renaissance** of Muğla through investing in urban renewal and healthy socio-economic development. However, more projects should be produced for increasing the living standards and tourism activities in order to maintain a sustainable Muğla.

4.1.2. Socio-Economic Values

4.1.2.1. Social Vitality of Cities

Muğla is qualified with a great deal of educational, social and cultural facilities for different age groups: courses (hand-crafting, theatre, folkdance, painting, music), subsidies for poor people and students, and cultural activities. The vitality of Muğla can be observed form very frequent daily-weekly-yearly concerts, theatres, cinemas, exhibitions, carnivals in existing university cultural and conventional center, in Konakaltı Cultural Center and newly developing saloon in Düğerek Road. Facilities are performed almost everyday in many different places in Muğla, restored buildings such Kültürevi, Hacıkadıevi etc. University and non-governmental organizations support such activities in the city. Furthermore, Urban Design and Special Conservation Project for Arasta Region-Revenue Office Fronts-Saburhane Square also support the restoration projects which will increase such facilities. Moreover, the cultural carnival is performed every year by Muğla Municipality with the support of Institutions of Art-lowers. Greece Documentary Festival and Verbal History Workshops are other social and cultural activities contribute to the vitality of the city. What is more, many non-governmental organizations and sub-organizations in Muğla have been gathered in a platform called MUTOP (Muğla Sivil Toplum Platformu) by Muğla Governorship in 2006 which will create a synergy in the society and strength the institutional structure of Muğla. (Muğla Municipality)

Being a safe city Muğla provides a livable area for its citizens. Moreover, Muğla is a case of maintaining use-conserve balance in both historical heritage and also urban green areas and open areas through the consciousness of such a conserving attitudes or urban culture rooted in social structure of the city. Performing such a manner in the areas planned and will be planned is crucial for the sustainability of natural and social life in the city.

Moreover it is observed from the following table that education and health sectors are developed in Muğla Province whereas the production industry is at low levels.

Table 4. 1. Socio-Economic Development Levels of Muğla Province – 2003

	Level of Development among 81 provinces	**Sectoral Development Index**
Education	6	1,26443
Health	10	1,02883
Production Industry	**50**	-0,47737

(Source: Dinçer, Özaslan and Kavasoğlu 2003, p. 118, 123, 129)

4.1.2.2. Economic Vitality of Cities

Urban Economy has a closed and limited character and economy is based on service sector in Muğla Centre. Being a livable city, people prefer settling in Muğla after their retirements. However, working is a problem for graduate people because there are not so many job opportunities. Therefore, students have to leave Muğla after their education and have to migrate to look for jobs.

According to the study of State Planning Organization in 2003, Muğla Province is 13th socio-economically developed province among 81 provinces in Turkey. Another study of Central State Planning Organization in 2004 shows that Muğla Centre County is the 68th socio-economically developed county among 872 counties in Turkey.

Table 4. 2. Socio-Economic Development Levels Provinces in Turkey – 2003

Level of Development among 81 provinces	**Provinces**	**Group of Development**	**Index of Development**
1	İstanbul	1	4,80772
2	Ankara	1	3,31483
3	İzmir	1	2,52410
4	Kocaeli	1	1,94329
5	Bursa	1	1,67890
6	Eskişehir	2	1,10368
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13	**Muğla**	**2**	**0,71238**
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81	Muş	5	-1,43956

(Source: Dinçer, Özaslan and Kavasoğlu 2003, p. 55)

Table 4. 3. Socio-Economic Development Levels of Centre Counties in Turkey – 2004

Level of Development among 872 counties	Provinces with Central County	Group of Development	Index of Development
	İstanbul-Metropolitan Municipality		
	Ankara-Metropolitan Municipality		
	İzmir-Metropolitan Municipality		
1	Bursa-Metropolitan Municipality	1	7,95333
2	Adana-Metropolitan Municipality	1	5,71564
6	Antalya Central County	1	3,99069
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----------	----------	----------	----------
68	**Muğla Central County**	**2**	**1,41047**
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81	Muş Central County	4	-0,59441

(Source: Dinçer and Özaslan 2004, p. 131) (Note: Presuming that İstanbul, Ankara and İzmir Metropolitan Municipalities as developed centres, they are excluded from the research)

We can also see that most of the counties in Muğla (Ula, Yatağan, Köyceğiz, Kavaklıdere) are in the 2nd group of socio-economic development list, and some of the counties (Marmaris and Bodrum) are more developed than the Centre County.

Table 4. 4. Socio-Economic Development Levels of Counties of Muğla – 2004

County	Level of Development among 872 counties	Group of Development	Index of Development
Marmaris	22	2	2,51737
Bodrum	27	2	2,42137
Centre	**68**	**2**	**1,41047**
Datça	80	2	1,26732
Ortaca	104	2	1,07099
Dalaman	113	2	1,03833
Fethiye	128	2	0,91185
Milas	165	2	0,63003
Ula	212	3	0,37142
Yatağan	229	3	0,29571
Köyceğiz	264	3	0,17722
Kavaklıdere	374	3	-0,10034

(Source: Dinçer and Özaslan 2004, p. 121) (Note: Presuming that İstanbul, Ankara and İzmir Metropolitan Municipalities as developed centres, they are excluded from the research)

Table 4. 5. Socio-Economic Indicators of Muğla Centre and Bursa Metropolitan Municipality – 2004

	Muğla Centre County		Bursa Metropolitan Municipality	
	Indicator	**Level among 872 counties**	**Indicator**	**Level among 872 counties**
Population	83.511	152	1.301.285	2
Urbanization Rate %	52,5	270	91,81	10
Population Increase Rate %	16,01	240	36,66	61
Population Density	50	418	1143	4
Population dependence Rate %	43,56	826	45,02	801
Average Household Size	3,38	841	3,83	736
Employee in the Agriculture Sector	51,24	727	10,41	870
Employee in the Industry Sector	6,98	255	38,80	5
Employee in the Service Sector	41,78	103	50,79	62
Unemployment Rate %	5,00	455	12,48	74
Literate Rate	92,72	54	93,06	41
Baby-Dead Rate %	29,00	714	36,58	507
General Budget Income per Person thousand TL	254.127	50	436.056	24
Tax Income Ratio in National Level %	0,11134	63	2,37737	1
Agricultural Production Rate in National Level %	0,14094	223	0,45795	30

(Source: Dinçer and Özaslan 2004, p. 154, 191) (Note: Presuming that İstanbul, Ankara and İzmir Metropolitan Municipalities as developed centres, they are excluded from the research)

When we compare the socio-economic indicators of Muğla Centre County with the indicators of Bursa Metropolitan Municipality which is the 1st socio-economically developed county, we can see financial side of Muğla is very weak. This is because Bursa is an industrial city and Muğla is a tourism and education city. It is also observed that Bursa is a city with very high density city while Muğla is with a low density. Furthermore, urbanization is slow in Muğla.

Development plans do not consider the economical dimensions of settlements in Turkey. Parallel to this fact, Muğla has not been supported economically by development plans; however, the last development plan in Muğla tries to create work places in the surroundings of the settlement.

4.1.3. Political Values

Political Vitality of Cities

In Muğla governance and Local Agenda 21 projects have not started yet. Municipality and citizens are sensitive and interested in urban projects and there is the citizen consciousness about some of the urban characteristics, such as culture. There is also regeneration, revitalization projects with the support of Muğla Municipality that will create attractive, vital and strong urban fabrics. Municipality should also give efforts on making public involvement in such projects.

Muğla has a compact urban structure because of its topographical structure and stable economic development. This characteristic supports the sustainability since compactness and density are critical indicators for sustainability and energy consumption, resource use and waste are at lower levels than diffuse cities. Moreover, there are alternative developments of surrounding settlements of Muğla, Yeniköy-Kötekli-Ortaköy. This also supports sustainability since urban and social intermixture (little cities everywhere in the city) is desired for the future of cities.

The approach of the last development plan supports such a networking settlement. The plan also differentiates from the former plans with a strategic attempt through "dynamic participatory behavior". Moreover, Muğla Municipality performed a meeting in order to create the citizen participation by representing the plan.

4. 2. A Comparative Chart Showing the Evaluation of Main Planning Periods of Muğla

The analysis in the previous chapter proved that Muğla's existing form has shaped according to the according to the development areas declared in various plans of the city as additional parts to the traditional city which is also developed as a conservation area in other plans. Muğla planning experience had re-production of the same type of physical plans. The stability and continuity of this approach helped not to have too much deterioration of traditional urban pattern in conservation areas of Muğla. However, this is not the expected attitude from planners to behave in accordance with the trends only. Furthermore, Urban – Archeological – Natural Site areas have been conserved through "conservation plans" which are not functionally

integrated to the development strategies. Being the official center of an important tourism region, growing and improving as a “university city”, having topographical and functional thresholds, Muğla needs more dynamic and flexible planning objectives designed according to the sustainability criteria.

The concept of sustainable development has become a top concept in planning parallel to the problems of cities since 1980s, and the development plans (approved in 1936 and 1961) which were prepared for Muğla before 1980s had introductory attempts for the planning experience of Muğla; therefore, the development plans approved in 1981 and 2004 are criticized through a comparison method with the help of urban sustainable development objectives.

The reflections of changing Turkish planning system can be observed from the evaluation of the last two development plans of Muğla approved in 1982 and 2004, through the checklist of urban sustainable development objectives shown in the comparative chart in **Appendices F, G** and **H**. The evaluation of the implementation of the last plan approved in 2004 is too early to evaluate; therefore, the decisions stated in this plan is evaluated in this chart. Through this comparative study, we can see to what degree the development plans could contribute to urban sustainable developments and whether the sustainable development debate has started to shape planning approaches. According to the chart, we see that both plans consider the environmental concerns related to the built and cultural environment. Parallel to their main concern, both development plans are neglecting social and economic dimensions of planning as being physical-spatial plans. As a result, we face some issues related to the natural environment, economic and political values. From spatial planning point of view, the last plan has some basic concerns for a sustainable settlement. For example, creating clusters of compact self-sufficient settlements is one of the main objectives of sustainability. However, this kind of physical plan decisions does not (but should) deal with social, economic and political issues and planning instruments, because the Turkish planning and legislative system does not provide these instruments dealing with social and economic problems of cities. Through this comparative evaluation towards sustainable urban development, the issues can be observed for the future development of the planning system to reach

sustainable development determined in global context. Managements in many areas should be provided through planning and legislative actions: sustainable urban infrastructure management, sustainable urban transportation management, sustainable urban water management, sustainable urban soil management, sustainable urban air management, urban solid waste management, sustainable energy supply and management. In order to cope with such a huge work which needs multi-dimensional approaches, planning system should be supported with "information and education management". In both formal and non-formal spheres, information and education provide increase in citizen awareness and ability to engage in decisions affecting their lives. Gathering information in a continuous process from various fields, assessing this information, expanding access to the decision process, incorporating the accounting measures that educate and enable decision-makers and individuals to make decisions that are more economically, environmentally, and socially sustainable are all essential policies which will contribute to the planning system. Such an approach will also help to manage the integration of local and global issues of sustainable development.

Plans created a more livable city maintaining human scale urban design such as providing low density with no more than four-storey buildings, conserving traditional areas and spaces, providing pedestrian-like circulation areas and newly developed bicycle paths, providing convenient access from residential areas to commercial, social and educational activities. However, today, one of the main issues of Muğla is being a very "dull" city with little attraction in its existing public spaces. Therefore, planning system should provide principles towards economic and social vitality of cities.

Moreover, one of the main concerns of the last plan is to support limited land consumption leading to a compact city with balancing concentration and decentralization by developing the surrounding potential settlements that will sustain low density which will protect natural values of the city; and therefore, it will maintain a network of compact settlements for a sustainable urban environment. Furthermore through a participatory behavior, focusing on regeneration and revitalization projects will contribute to the sustainability of the settlement.

CHAPTER V

CONCLUSION

ISSUES OF INTEGRATING URBAN SUSTAINABLE DEVELOPMENT CRITERIA IN LOCAL AND GLOBAL AGENDA FOR FUTURE DEVELOPMENT OF MUĞLA

The sustainable development concept has entered the planning agenda of Turkey mainly after Habitat II Conference held in Istanbul in 1996. Being a developing country, Turkey is trying to adopt the experiences of developed countries to improve the planning system including the sustainable development criteria. In this study, examining the planning experience of Muğla as a case study, the planning system of Turkey and its changing aspects are criticized in terms of sustainable development criteria.

Sustainable planning is an urgent issue that humanity is facing in the twenty-first century. Planning agenda, which is a dynamic discipline, has evolved through years. As a result of this evolution, we face with the criticism of comprehensive planning. This evolution occurred in Turkey especially, after 1980s. Institutional perspectives developed abroad contributed to the planning agenda in order to solve the problems in all levels including implementation stage.

In global agenda, sustainable urban development concept appeared in Stockholm Conference held in 1972 in the context of a common outlook and principles to inspire and guide the peoples of the world in the preservation and enhancement of the human environment. Habitat I Conference held in Vancouver in 1976 functioned in putting the settlement problems into the agenda in the world. The Brundtland Report "Our Common Future" held in 1987 defined sustainable development as a "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." This report focused on "the crises in Third World cities" instead of focusing on "the contamination and consumption

behaviors in the cities of developed countries". Rio Conference held in Rio de Janeiro in 1992 declared that world is facing such circumstances that worldwide activities of nations have to be shaped in a more continuous way because of environmental problems. The essential product of Rio Conference, Agenda 21 identified unsustainable patterns of production and consumption, particularly in industrialized countries, as a major cause of environmental deterioration; and Local Agendas 21 illustrated the concept "think globally, act locally". Habitat II Conference held in İstanbul in 1996 aimed to draw attention to the fact that the urbanization process causes problems, but at the same time offered opportunities to improve the living and environmental conditions of the people. The conference offered governments and cities the opportunity to join visions and actions on all dimensions of urban sustainability. Johannesburg Summit in 2002 aimed to create more effective strategies for sustainable development for the implementation of the decisions took in 1992 Conference; and set out a range of actions that countries should take to influence consumption patterns. World Urban Forum held in Vancouver in 2006 was a platform for "networking with government, non-government and industry"; "professional learning opportunities"; "motivating and educating public and private interests about sustainable development"; and "influencing policy makers domestically and internationally".

Parallel to the problems that cities are facing since 1980s, "sustainable development" has become a top concept in planning and it is used as a target in planning leading the concept that a shared future arises from our shared past. Moreover, the "urban metabolism metaphor" enhances our understanding of the functionality of a city, its evolution, growth and performance, and it provides a conceptual basis for deriving "quality of life measures". In the recent global agenda, sustainability, viability and livability were taken as three broad constructs of quality of life. Furthermore, in the world examples it is observed that they shaped the plans in the way to reach sustainable development through strategic approaches, participation, equity, and environmental – social – economic vitality.

Turkey had a parallel growth process with other nations in the world from the point of spatial distribution of economic activities and industry after 1980s. However, the

process of urbanization did not follow the same direction with developed countries; Turkey had a very rapid urbanization process creating illegal development issues due to lack of new development laws which could respond to this rapid urbanization. Therefore, some new urban problems occurred and the legacy could not create healthy cities. Turkish planning system also had many problems since having only principles and legislative framework in physical dimension. In other words, Turkey has been trying to shape cities through development and conservation plans neglecting socio-economic and political dimensions of planning. In this respect, Muğla is a typical example among Turkish cities which had a long planning history which started at the Early Republican Era. Therefore, the case of planning experience of Muğla is selected as a case study to criticize and evaluate on the changing planning process of cities in Turkey in terms of sustainable development criteria. The main reason to use this methodology is that, Muğla urban form is shaped through development and conservation plans, conserved environmental values to some extent, and had a stable growth physically and economically. However, some improvements in its planning approach are urgently needed in order to integrate its local agenda to the global context.

Urbanization dynamics in Turkey had in five distinct periods in terms of urbanization trends and the policies: Pre-urbanization Period (1923-1950), Rapid Urbanization Period (1950-1960), Planned Period (1960-1980), Liberal period (1980-1990), and Integration with European Union Period (1990-2006). (Türker 1998, p. 159-161; Günay 2002, p. 167) In Pre-urbanization Period (1923-1950) urbanization was in low rates. In the development process of Turkey, 1930s had an important role since there were the efforts on developments and cultural improvements in these years. (Kepenek 2002, p. 29) Republican period started to institutionalize the urban planning in Turkey in 1930s; therefore, many new laws were introduced in the field of urban planning and management. In 1933 with "Law of Building and Roads" a new period started in Turkey planning agenda. After 2nd World War, 1945 a rapid urbanization process started. Moreover, with the foundation of "Bank of Provinces" an important progress was maintained. (Tekeli 1980, p. 72-73) Developments in urban management initially took place to create reflections of Republican city in Muğla and conservation policies achieved. The first development plan of Muğla

approved in 1936 started to create a Republican square and buildings with a geometrically designed road system.

The second period is Rapid Urbanization Period (1950-1960). After 1950s, rapidly increasing population in big cities brought many problems. Moreover, administrative structures could not cope up with the urbanization problems in front of this high urbanization. There were piecemeal interventions of central government to solve urgent problems. (Türker 1998, p. 160) In this period Muğla was continued to be shaped according to the first plan with small growths and without rapid urbanization.

The third period is Planned Period (1960-1980). After 1960s, planned period started as a new strategy of Turkish Republic. Due to the very high rates of population increase in cities, illegal developments as a solution for housing needs, lack of infrastructure, and therefore, health problems had started. This transformation brought about some environmental problems; for example, widespread erosion, inefficiency in infrastructure systems through an unsystematically and unplanned growth of cities, management problems of used-water and solid-waste, air-water pollution problems. After 1972 United Nations Environment Conference, the need for establishing national policies entered planning agenda of Turkey. (Tekeli et al. 2002, p.16-17) In 1978 Environmental Counsellorship of Prime Ministry was founded as first public environmental organization. (Altunbaş 2002, p.7) In order to meet the demands of this transformation period, Muğla also suffered from the lack of infrastructure without having a rapid industrialization. Moreover, Muğla failed achieving its planning process in this period through the second plan approved in 1961; for example, many traditional values were destroyed and lost in traditional center and in Karabağlar Yaylası.

The next period, Liberal Period (1980-1990) was experienced through the dominancy of 3194 Development Law. 1985-1995 was the era of new arrangements within the privatization trends. (Türker 1998, p. 161) With 1982 Constitution Law, the concept of environmental protection took place in Turkish laws as the first time. Moreover, Environment Act was introduced in 1983. (Tekeli et al. 2002, p. 18) In this period a new development plan for Muğla was prepared in 1982 which has shaped

approximately today's Muğla by conserving cultural, agricultural areas, protecting Natural Site Area, and creating compactness with little sprawls.

The last period is Integration with European Union Period (1990-2006). European Union has reflected the institutions of Turkey; therefore, Turkish legal framework has been changing. (Günay 2002, p. 167) Turkey developed some organizational and legal issues while joining Rio Conference held in 1992, and public opinion became conscious about environmental issues. For example the promise of "developing National Environment Strategy and Action Plan" that was taken through Agenda 21 was finished in 1998. (Tekeli et al. 2002, p. 18) Environmental Law of 2006, by the changes in the law of 1983, declared its aim as "protecting the environment that is the common being of all livings through the principles of sustainable environment and sustainable development". The law did clearly use the term "sustainable environment" and "sustainable development" according to Brundtland Report prepared in 1987. The last development plan of Muğla was approved in 2004 dealing with some sustainable development concerns. Moreover in regional levels, an environmental plan is being prepared for Aydın-Muğla-Denizli region which will deal with sustainable development of the region.

Muğla had 43.845 populations in the year of 2000 and there were not big changes and transformations in its economic and spatial structure because of the stable population in some extent. Within the harmony of its growth, city had the extended towards south, east and west. However, this extension sometimes created leaps in surroundings. City form was shaped according to the development areas declared in plans as additional parts to the traditional city; however, Muğla planning experience had re-production type of plans produced in different periods. When we examine these development and conservative plans, we see that they are far from having a sound vision. They had short term aims without a vision or strategies, and no implementation instrument was included. Today we see that, trends and investment demands are concentrated in the city and its environs, in basin area that has a geographical integration especially around main transportation lines. Development trends such as rapid growth in tourism, foundation of the university, development of mass housing areas in short and long terms will affect internal and external dynamics

of the city. Strategically, thought of these trends will make great contributes to the future development of the city. The low rate of population increase and socio-economic stability of Muğla may help not to have too much deterioration of existing urban conservation areas. However, this is not the expected attitude from planners to behave in accordance with the trends only. Being the administrative center of an attractive tourism region, a new cultural identity as a university city, having topographical and functional thresholds make sustainability criteria as a core issue leading socio-economic development and spatial growth strategies to be designed towards a sustainable development of Muğla.

Therefore, the hypothesis of this thesis was that sustainable development objectives in local levels need to be re-assessed by the global agenda with the integration of local and global values in order to maintain sustainable development. This necessitates information and education management principles, community strengthening, maintaining quality of life, and more strategic planning approaches. To test this hypothesis, the research study has been developed on a basic assumption that reaching sustainable development is dependent upon sustainable urban development objectives that can be summarized in three main groups as the product of global experience: environmental values (built environment, natural environment, and cultural environment), socio-economic values and political values.

Within this framework, many different aspects of sustainability from different written sources (books, reports, etc.) brought together in the form of a checklist and this was analyzed in order to create a theoretical framework of sustainability as a synthesis of this literature survey. In this context, past planning experiences and spatial analysis of Muğla is evaluated in terms of sustainable development objectives. Moreover, the signs of sustainability were searched in the development plans of Muğla. Furthermore, this checklist of urban sustainable development objectives can be a model for any other settlement. This is a very extensive framework to analyze the plan, which gathers all the values of an urban settlement in qualitative and quantitative dimensions, in organized and non-organized areas, in countable and non-countable dimensions, in every level of the society (building, street, quarter, local, regional, national and global).

The evaluation was performed focusing on the main research question of changing concept of sustainability in environmental and planning studies which requires new processes that are integrative and participative between local and global context. In order to analyze urban sustainable development objectives on the case of Muğla; as a conclusion, we see that there are some improvements (waste management, etc.) and some problems (insufficient urban water management, lack of energy supply and management, etc.) in the case of Muğla which especially come from Turkish planning and legislative systems and its reflections on local planning experience of Muğla.

There are mainly three improvements towards sustainable development in Muğla. First one is in cultural values of Muğla. Cultural identity and heritage of Muğla is the result of hundreds years of work. Muğla has the identity of "culture–led tourism" with the help of its location, economic and social structure. Conservation plans has been directing Muğla's cultural identity and citizen consciousness since 1970s. Muğla municipality is the most effective factor that has directed the formation of this consciousness through years. Secondly there are attempts for sustainable waste management. The municipality is launching this project within the framework of recycling project (YEKAP) that started in 1999. Thirdly sectoral development in education and health Muğla province is a developed one as being the 6th province in education and 10th province in health sector among 81 provinces in Turkey.

However, there are mainly ten problems in the way to reach sustainable development in Muğla:

- Transportation modes in Muğla do not use renewable energy sources, do not minimize consumption of non-renewable resources, do not reuse and recycle their components; therefore, they create some air pollution which is an unsustainable manner. Moreover, high car dependency also creates air pollution, noise and parking problems.
- There are problems in urban water management because of the absence of sewage system and the use of cesspools and the absence of purification

system for used water. However, there are attempts for recapture and reuse water.

- Urban air management is a problematic since Muğla city center with its surroundings is the most contaminated regions in provincial level, especially in winter times.
- There are problems in energy supply and management since there are no energy projects about green building and design or renewable energy in Muğla centre. There are some scientific studies in Muğla University about solar energy; however, these are limited projects which are theoretical and far from action/implementation.
- Urban economy has a closed and limited character in Muğla centre.
- From political view governance and Local Agenda 21 projects have not started yet in Muğla. However, municipality and citizens are sensitive and interested in urban projects and there is the citizen consciousness about some of the urban characteristics, such as culture.
- Urban planning experience in Turkey is in the context of physical implementations. In the case of Muğla, the urban form has shaped according to the development areas declared in development plans by additional districts to the traditional city, that is, the result was not exactly sustainable in the long run because of environmental, socio-economical and political aspects.
- One of the basic characteristics of Muğla development plans is that they are re-production type of plans; therefore, none of these plans had been the basis of comprehensive research results and imaginative decisions by citizen participation.
- The development and conservative plans have short term objectives without a vision for the future of the city. Moreover no strategies and implementation instruments are leading the planning process. Only the last plan approved in 2004 stated some objectives for a sustainable settlement. However, it is also a physical development plan that does not mainly deal with social, economic and political problems and planning instruments.
- Present trends and investments are concentrated in the city and its environs within the basin area that has a geographical integration especially around

main transportation corridors. Development trends such as rapid growth in tourism, foundation of university, development of mass housing areas in short and long terms affect internal and external dynamics of the city.

In summary, Muğla has some problems and failures in reaching a sustainable development and planning process. Implementations towards a sustainable Muğla are inadequate to some extent; however, urban development plans to limited extent could contribute to the sustainability of the city, at least in some districts. The last development plan is the first plan which is using the "sustainability" concept. It proposes constructive items for sustainable development. Depending on this argument and supporting the hypothesis of this study, sustainable development objectives in local levels need to be re-assessed by the global agenda with the integration of local and global values in order to maintain sustainable development. This necessitates information and education management principles, community strengthening, maintaining quality of life, and more strategic planning approaches.

As a result, "strengthening communities" is needed in order to maintain urban sustainable development. The knowledge and involvement of citizens and on a decision-making process creates a better future. Moreover, this process embraces and encourages differing perspectives of those affected by local planning policy. Steps towards a more sustainable future include such policies:

- Developing local strategic planning integrated to global agenda.
- Improving urban design principles.
- Decreasing sprawl towards compact city.
- Creating strong, diversified local economies while increasing jobs and other economic opportunities.
- Maintaining the quality of life constructs in the planning agenda (using urban spaces, organizing public events, etc.) which is essential for the sustainability, viability and livability of settlements. That is urban spaces, landmarks, open spaces should have meaning with their aesthetical characteristics and also they should be valued with the events that will contribute to the quality of life.

- Supporting planning and policy which are designed to reach sustainable development in local, regional, and global levels by planners and policymakers.
- Making the efficient work and well organized coordination of each sector (transportation, education, etc.) in the city.
- Supporting multi-dimensional planning approaches which should be supported with "information and education management" in both formal and non-formal spheres in order to provide increase in citizen awareness and ability to engage in decisions affecting their lives.

As a conclusion, sustainable development is an urgent phenomenon both in the world and in Turkish cities. In the way to reach sustainable development, the planning process should facilitate the local understanding of the global context, and feasible programs and projects should be designed. With the integral work of a multi-dimensional teams of specialists, the coordination of economic, environmental, and social goals should be maintained by accompanying with the water-air-soil management, energy management, transportation management, waste management, socio-economic and spatial development plans that will direct more livable and sustainable cities.

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APPENDIX A

Table A. Definitions of Sustainable Development

Source	Definition
Brundtland Report 1987	"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."
Elkin et al. 1991	Sustainable urban development must aim to produce a city that is "user-friendly" and "resourceful" in terms of both its form and energy-efficiency and also its function, as place for living.
Jacobs 1991	"Environment should be conserved with the logic of conserving also its ability to carry out various functions: at least at the levels of being protected from future disasters and of providing equal environment consumption possibility."
Breheny 1992	Sustainable urban development necessitates not only the achievement of urban development aspirations with concerning inter-and intra-generational equity, but also the conservation of the stock of natural resources beyond its regenerative capacity"
Meadows et al. 1992	"A sustainable society is the society that can survive for generations, can foresee the future, and is so clever not to destroy the flexible and material or social support systems."
Etkin 1992	"The stress on ecological sustainability takes aim at city problems"
Hardoy, Mitlin and Satterthwaite 1992	"Ecological sustainable is taken as a focus"
Rezende 1993	Social sustainability also necessitates the political sustainability (public participation and nonexistence of centralist democracy, etc.).
Haughton and Hunter 1994	A sustainable city people and business continuously endeavor to improve their natural, built and cultural environments at neighborhood and regional levels, while working in ways which always support the goal of global sustainable development.
Smith et al. 1998	A sustainable built environment should include such principles: living off environmental "interest" rather than "capital"; not breaching critical environmental thresholds; developing a sense of equity and social justice; and forming inclusive procedures for decision making.
Porter 2000	"Sustainability and development" when used together connotes balancing economic and social forces against the environmental imperatives of resource conservation and renewal for the world of tomorrow.
Mega 2005	A sustainable city pays attention to the geophysical and cultural local limits, mobilizes invisible economic and social structures and seeks synergy and symbiosis with the bioregion. For a sustainable city, life-cycle approaches and strategic long-term efforts are essential in order to reduce environmental damage. Moreover, sustainable urban environmental planning needs a comprehensive interdisciplinary assessment of urban assets, a natural resource information system and an identification and analysis of the policy distortions and bottlenecks.

APPENDIX B

Table B. Summary of Institutional Framework of Sustainability

Year	Place	Conference	Contribution
1972	Stockholm	Declaration of the United Nations Conference on the Human Environment	It considers the need for a common outlook and for common principles to inspire and guide the peoples of the world in the preservation and enhancement of the human environment.
			It is origin of sustainable development
			It includes many topics: planning and management of human settlements, determination and management of environmental pollution, disability of controlling global pollution by nations, the development relationships between industrialized and industrializing countries, importance of environmental issues.
1976	Vancouver (Canada)	Habitat I of United Nations	The convention functioned in putting the settlement problems into the agenda in the world.
			It was observed that such decisions could not have their validity today: approaching problems from the point of basic need; hoping solutions from government or with the leading of government; the optimistic decision that growing new division of labor will lessen the struggle between North and South.
1977		UN Commission for Human Settlements and UN Centre for Human Settlements	
1987		The Brundtland Report (Our Common Future) of World Commission on Environment and Development	"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."
			There are three concepts within this statement: development, needs; and future generations.
			The report approaches the environmental and development issues (population and human resources, food security, species and ecosystems, energy, industry, and 'the urban challenge' of humans in their built environment).
			This report focuses on "the crises in Third World cities" instead of focusing on "the contamination and consumption behaviors in the cities of developed countries".
1992	Rio de Janeiro (Brazil)	Rio Conference - Agenda 21	Agenda 21 identified unsustainable patterns of production and consumption, particularly in industrialized countries, as a major cause of environmental deterioration
			With Rio Conference it was declared that world is facing such circumstances that worldwide activities of nations have to be shaped in a more continuous way because of environmental problems.
			Local Agenda 21 has precipitated extensive action for sustainable development at the level of the municipality; therefore the agenda involves community-based conceptualization and implementation of sustainable development
			The agenda encourages a more proactive role and requires stakeholders to explore wider implications of their lifestyles while promoting collective responsibility for actions
			Local Agendas 21 illustrate the concept "think globally, act locally".

1994	Aalborg	Conference on European Sustainable Cities and Towns - I	The Conference is the starting point for the European Campaign of Sustainable Cities and Towns which constitutes the most massive movement of cities in Europe and is an important pillar in the pantheon of world networks and movements
1996	Lisbon	Conference on European Sustainable Cities and Towns - II	The Conference urged cities to move from charter to action
1996	İstanbul	HABITAT II - Nations Conference on Human Settlements World Assembly of Cities and Local Authorities Final Declaration	United Nations (UN) would arrange HABITAT II Conference in İstanbul in order to create an action plan includes composing a sustainable city system in the world and providing everybody with equal settlement.
			The UN General Assembly has defined "Adequate Shelter for All" and "Sustainable Human Settlements Development in an Urbanizing World" as the themes for Habitat II
			Habitat II aims to draw attention to the fact that the urbanization process causes problems, but at the same time offers opportunities to durably improve the living and environmental conditions of the people.
			HABITAT II offered governments and cities the opportunity to join visions and actions on all dimensions of urban sustainability
			Agenda focused on such principles: equality, eradication of poverty, sustainable development, livability and diversity, family, civic engagement and government responsibility, partnership, solidarity and international co-operation and co-ordination, and mentioned commitments to adequate shelter for all, sustainable human settlements, financing and progress evaluation.
2000	Hanover	Conference on European Sustainable Cities and Towns - III	The Conference declared local sustainability as their highest political priority
2002	Johannesburg	The World Summit on Sustainable Development	Johannesburg Conference aimed at creating more effective strategies for sustainable development for the implementation of the decisions took in 1992 Conference.
			In Johannesburg Conference such topics were discussed: struggle with poverty and its global action, consuming natural resources, relations with poverty and environment.
			Johannesburg Plan set out a range of actions that countries should take to influence consumption patterns.
2002	Nairobi, Kenya	World Urban Forum	
2004	Barcelona, Spain	World Urban Forum	
2006	Vancouver, Canada	World Urban Forum	World Urban Forum (WUF) is a platform for: • Networking with government, non-government and industry • Professional learning opportunities • Motivating and educating public and private interests about sustainable development • Influencing policy makers domestically and internationally

APPENDIX C

Table C. The Checklist of Urban Sustainable Development Objectives-I

Objective Groups			Sustainable Urban Development Objectives		Case Study
Environmental Values	Built Environment	Urban Structure in a Livable city	City design strategies	The city center and its historic character should be reanimated to facilitate an ideal, centralized geographic position as a dynamic central focus for the city.	
				Pedestrian and public transit systems, clearly defined greenways and transport systems throughout the city should be essential in design priorities.	
				"First reduce, then reuse and recycle" system should be essential in resource management.	
			Enhance a sense of community	All site characteristics and qualities (natural, cultural, historical, etc.) should be conserved. A cohesive urban village quality with convenient access to neighborhood amenities and services should be developed for a healthy, safe and sustainable community. Emphasize convenient pedestrian accessibility to activities Neighborhood schools; Greenways, wetlands and wildlife habitat, parks, views, etc; and Activity centers (indoor and outdoor) and services (shared governance, daycare, shopping, recycling, etc.).	
			Provide for pedestrian priority connections	(Between residential developments and neighborhood amenities and services): Bike and walkways are critical to enhancing a more personal/pedestrian sense of community since such connections are far more energy- and cost-efficient than auto dependent access.	
			Moderate density and Cluster	Design for effective land use and density (moderate densities of at least 12-16 dwelling units per acre) provide safety and focused area and reduces in infrastructure costs. Moreover, clustered townhouses achieve quality, efficiency and affordable housing. Clustered townhouses achieve quality, efficiency and affordable housing. In addition a cohesive cluster is constituted from 25-35 dwellings with similar cultural character and life styles, shared social amenities and open spaces. Moreover, orienting dwelling units to the South can enhance comfort and save energy.	
			Think small and smart	Size is generally proportional to costs therefore small and efficient homes are far more affordable (both initial and long-term operating costs). Moreover, minimizing front setbacks and minimizing the impact of parking provide for outdoor porches, gardens, etc. to enhance human scale, social activities, surveillance and safety and enhance neighborhood.	
		Sustainable Urban Infrastructure	Public Utilities-power, Public Works, and Other Transport Sectors	Providing efficient, equal and accountable urban service provision is essential in sustainable development.	

Environmental Values	**Built Environment**	**Sustainable Urban Infrastructure**	Transportation	It allows the basic access needs for individuals and societies to be met safely and in a manner consistent with human and ecosystem health.	
				It is affordable, operates efficiently, offers choice of transport mode, and supports a vibrant economy.	
				It is capable of delivering required capacity and performance and is compatible with the desired lifestyle of the population it serves.	
				It limits emissions and waste within the planet's ability to absorb them, uses inexhaustible energy (renewable energy) sources, minimizes consumption of non-renewable resources, reuses and recycles its components, and minimizes the use of land and the production of noise.	
				It is clean and affordable for the vast majority of users; it does not pollute air, land, or water beyond the planet's ability to absorb and cleanse; this is especially the case with regard to CO_2 emissions.	
				It makes use of land in a way that has little or no impact on the integrity of ecosystems.	
				It uses energy sources that are essentially renewable or inexhaustible.	
				It uses other resources that are renewable or inexhaustible and achieved in part through the reuse of items and the recycling of materials used in vehicles and infrastructure.	
				It produces no more emissions and waste than can be accommodated by the planet's restorative ability.	
				It meets basic human needs for health, comfort, and convenience.	
				It allows for and supports development at a human scale and provides for a reasonable choice of transport modes, housing, community, and living styles.	
				It produces no more noise than is acceptable by communities, is safe for people and their property, and provides cost-effective service and capacity.	
				It is financially affordable in each generation and supports economic activities.	
				Prevent air pollution (Developing alterative energy resources for vehicles; Improving the existing fuels; Developing vehicle technologies; Enhancing vehicle usage)	
				Decreasing Noise and Other type Pollution	
				Transportation Planning and Management Issues (Transportation planning: The Importance of Public Transportation - Management and Finance for Applicability; Management of Urban Transportation Demands; Economic Feasibility; Innovation in Research and Technology; Public Participation and Education)	

APPENDIX D

Table D. The Checklist of Urban Sustainable Development Objectives-II

Objective Groups			Sustainable Urban Development Objectives		Case Study
Environmental Values	Natural Environment	Sustainable Urban Water Management	Prevent Water Pollution	Preventing the dilution of harmful substances in soil	
				Preventing the dilution of nutritive substances in soil	
				Preventing the dumping of waste water	
				Preventing the use of contaminated silt	
				Preventing the use of salt on streets	
				Preventing the use of herbicides in public greenery	
			Developing water impoundment areas and enhance wetlands throughout the site	Retaining all water on the site as long as possible enhance human and natural habitat (biodiversity) by allowing water to percolate into the ground, water landscaping, reduce downstream flooding, and increase water quality and bio-diversity. Therefore this can enhance the unique qualities of each site and provide for recreation and education.	
			Using water conservation appliances	Using water conservation fixtures and appliances in the home can save up to 30 – 70% of water use (low flush toilets, low flow faucets, water and energy efficient appliances, etc.) Avoiding automatic water wasters such as automatic, above ground sprinklers and using drip irrigation systems are many times more efficient than spray sprinklers. Harvesting the rain and gray water from the house and other structures also can save water. Providing artificial wetlands which are economical for brow/black water treatment in applies to both large and small-scale developments, and is far more economical than traditional engineered water treatment facilities.	
		Sustainable Urban Soil Management	Prevent Soil Pollution	Preventing the intensive agricultural and cattle farming methods	
				Preventing the dumping of waste water and materials	
				Preventing the deposition of air and water pollution	
				Preventing the accidents in industry and transport	
				Preventing the use of contaminated silt	
				Preventing the use of salt on streets	
				Preventing the use of herbicides in public greenery	
			Land & resource conservation	Practice the 3 R's – Reduce, Reuse and Recycle	
				Design with permaculture for landscaping various open spaces and community areas.	
				Localize the economy	
		Sustainable Urban Air Management	Prevent Air Pollution	Preventing the burning of fossil fuels	
				Preventing the emissions from industries	
				Preventing the motorized transportation	
				Preventing the heating of buildings	
				Preventing the generation of electricity	
				Preventing the emissions of NOx and SO2, mainly from burning fossil fuels	
				Preventing the emissions of CO2, mainly from burning fossil fuels	

Environmental Values	**Natural Environment**	**Sustainable Urban Air Management**	Improving Air Quality	Cities need trees both for human comfort and balancing the carbon to oxygen cycle (CO2 √ O2). In other words, green areas not only increase the desirability of residential areas and enhance recreation, livability and sustainability; but also absorb toxins from the air, create oxygen, shade and cool the environment through evaporative transpiration, and add to the ambient humidity of indoor and outdoor spaces. Therefore they produce visual and culinary delights to sustainable residential environments.	
		Urban Solid Waste Management		Creating a sustainable materials economy	
				Materials management and resource recognition	
				Pollution prevention/producer responsibility	
				Waste disposal taxes and refund deposit strategies	
				Subsidies and incentives	
				Reprocessing/materials exchange	
				Household and small business waste reduction and recycling	
				Household waste collection in informal settlements	
				Individual recycled material collectors	
		Sustainable Energy Supply and Management	Green building & design	Reduce input of natural resources	
				Reduce energy and water consumption	
				Reduce air, water, heat and light pollution	
				Improve storm water management	
				Reduce waste output (solid and liquid)	
				Reduce the impact of externalities through the intensive use of green products.	
				Use of green (non-toxic) material	
				Orienting each dwelling unit to sun and site carefully	
				Providing increased windows, sun space/greenhouses and gardens on the south side of dwellings	
				Minimizing window orientations to west and east give full advantage of passive solar energy.	
			Renewable energy	There would be a variety of energy sources, the relative abundance of which would vary from region to region.	
				Emphasis to the efficient use of both renewable and conventional energy supplies in all sectors.	
				Biomass, grown using sustainable farming methods and processes, and converted efficiently to electricity and liquid and gaseous fuels using modern technology, would be widely used.	
				Intermittent renewable energy resources would provide as much as one third of total electricity requirements cost-effectively in most regions, without the need for new electrical storage technologies.	
				Natural gas would play a major role in supporting the growth of a renewable energy industry. Natural gas-fires turbines, which have low capital costs and can quickly adjust their electrical output, can provide excellent back-up for intermittent renewable energy sources on electric power grids.	
				A renewable energy sources-intensive energy future would introduce new choices and competition into energy markets and reduce the likelihood of rapid price fluctuations and supply disruptions. It could also lead eventually to a stabilization of world energy prices as well as new opportunities being created for energy suppliers.	
				Most electricity produced from renewable sources would be fed into large electrical grids ad marketed by electric utilities.	
				Liquid and gaseous fuels would be marketed much as oil and natural gas are today.	

Environmental Values	**Cultural Environment**	Culture and Heritage	Consciousness about cultural heritage and prepare activities and projects for cultural heritage	
			Cultural tourism should be maintained.	
			Cultural citizenship should be maintained.	
		Public spaces and landmarks	Create and conserve public spaces and landmarks.	
		Symbolic and structural projects	Prepare symbolic and structural projects	
		Urban renaissance	Prepare urban renewal projects.	

APPENDIX E

Table E. The Checklist of Urban Sustainable Development Objectives-III

Objective Groups		Sustainable Urban Development Objectives		Case Study
Socio-Economic Values	Economic Vitality of Cities	Urban Economy and Competitiveness	Between the world macro-regulations and the local micro-regulations, cities must create the suitable atmosphere for the flourish of economic prosperity, social cohesion and citizenship. Strong and diversified local economy using local resources.	
			Education, municipal institutions and enterprises must make progress in a harmony for sustainable economy	
		Employment	Unemployment level	
			Employment levels of different groups (Women, young, children, retired and working)	
	Social Vitality of Cities	Solidarity and social justice and equity	Maintain social equality (Public administrations and associations should assist socio-professional integration of youth that are the most vulnerable part of society and the most acutely affected by economic crisis and unemployment Moreover, they should propose the sharing of values which make all members of the community stronger.) (Gender mainstreaming can be perceived as a strategy, integrated in all areas of public and private decision-making knowing the fact that women are another most obviously decisive social group.)	
			Prevent Social exclusion (so there should be created horizontal and vertical integration of decision-making systems and also the optimization of the capacity, contribution and commitment of the public, private and social economy sectors.)	
			Prevent Urban distress (environmental degradation, physical isolation, obsolete infrastructures and neglect of public spaces)	
		Harmony, health and safety in cities, Education and Research	Maintain harmony (the whole city with its forms, functions, physical and mental health should be rethought.)	
			Maintain healthy services (Health should be placed high on the political agenda, and a structure and process should be created to achieve it)	
			Maintain safe city (improve quality of life and urban livability through shaping such events: traffic accidents, delinquency, crime and etc)	
			Maintain education and research services (prove equal and efficient education service)	
		Green and Gray Parks	Increase the amount and accessibility of green areas	
			Increase the amount and accessibility of gray areas	
		Housing	Prevent depressed neighborhoods and provide sound living cells.	
		Periphery	Urban functions and services should be found within every urban quarter.	

Political Values	**Democracy, Governance and citizenship**	Urban democracy should be maintained.	
		Governance should be maintained.	
		Public awareness and citizen involvement should be maintained.	
	Compact, mixed and diverse cities	Create relatively small settlements-clusters-compact settlements with linear or rectangular form.	
		Maintain urban and social intermixture (that is the little cities everywhere in the city)	
	Sustainable regeneration	Prepare Regeneration, revitalization, conservation projects.	
	Regional policy and strategic planning	Maintain regional development for Social and economic cohesion through pointing complexities, disparities and inequalities.	
		Maintain the coordination of planning and policy initiatives in order to eliminate complexities, disparities and inequalities and to cope with rapid degradation of natural resources and ecosystem.	
		Prepare strategic planning for attaining the goals of regional policy	
	Institutional architecture and civic alliances	Governmental and non-governmental institutions should work in an efficient and balanced manner.	
		Partnerships and public participation should be maintained with citizens in order to create more knowledgeable communities.(through such techniques: printed material (brochures and newsletters), personal contact, open houses and information days, public meetings, community liaison groups, presentation to groups, workshops, displays, media, and surveys)	

Key	
■	**No Information Available**
×	**Adverse Impact**
√	**Beneficial Impact**
□	**Uncertainty of prediction**
√ □	**Likely beneficial, but uncertain impact**
× □	**Likely adverse, but uncertain impact**

APPENDIX F

Table F. The Checklist of Urban Sustainable Development Objectives in the Case of Muğla-I

APPENDIX G

Table G. The Checklist of Urban Sustainable Development Objectives in the Case of Muğla-II

APPENDIX H

Table H. The Checklist of Urban Sustainable Development Objectives in the Case of Muğla-III

Table F. The Checklist of Urban Sustainable Development Objectives in the Case of Muğla-I

Objective Groups			Sustainable Urban Development Objectives		Existing Situation	Planning Experience			
						1/5.000		1/5.000	
						Decision	Implementation	Decision	Implementation
						1982		2004	
Environmental Values	Built Environment	Urban Structure in a Livable city	City design strategies	The city center and its historic character should be reanimated to facilitate an ideal, centralized geographic position as a dynamic central focus for the city.	√	√	√	√	□
				Pedestrian & public transit systems, clearly defined greenways and transport systems throughout the city should be essential in design priorities.	√	×	×	×	□
				"First reduce, then reuse and recycle" system should be essential in resource management.	√ □	×	×	×	□
			Enhance a sense of community	All site characteristics and qualities (natural, cultural, historical, etc.) should be conserved. A cohesive urban village quality with convenient access to neighborhood amenities and services should be developed for a healthy, safe and sustainable community. Emphasize convenient pedestrian accessibility to activities Neighborhood schools: Greenways, wetlands and wildlife habitat, parks, views, etc; and Activity centers (indoor and outdoor) and services (shared governance, daycare, shopping, recycling, etc.).	√ □	√	√	√	□
			Provide for pedestrian priority connections	Bike and walkways are critical to enhancing a more personal/pedestrian sense of community since such connections are far more energy-and cost-efficient than auto dependent access.	√ □	×	×	√	□
			Moderate density and Cluster	Design for effective land use and density (moderate densities of at least 12-16 dwelling units per acre) provide safety and focused area and reduces in infrastructure costs. Moreover clustered townhouses achieve quality, efficiency and affordable housing. Clustered townhouses achieve quality, efficiency and affordable housing. In addition a cohesive cluster is constituted from 25-35 dwellings with similar cultural character and life styles, shared social amenities and open spaces. Moreover orienting dwelling units to the South can enhance comfort and save energy.	√	√	√	√	□
			Think small and smart	Size is generally proportional to costs therefore small and efficient homes are far more affordable (both initial and long-term operating costs). Moreover minimizing front setbacks and minimizing the impact of parking provide for outdoor porches, gardens, etc. to enhance human scale, social activities, surveillance and safety and enhance neighborhood.	√ □	√ □	√ □	√ □	□
Environmental Values	Built Environment	Sustainable Urban Infrastructure	Public Utilities-power, Public Works, and Other Transport Sectors	Providing efficient, equal and accountable urban service provision is essential in sustainable development.	√ □	√ □	√ □	√ □	□
			Transportation	It allows the basic access needs for individuals and societies to be met safely and in a manner consistent with human and ecosystem health.	√	√	√	√	□
				It is affordable, operates efficiently, offers choice of transport mode, and supports a vibrant economy.	▨	×	×	×	□
				It is capable of delivering required capacity and performance and is compatible with the desired lifestyle of the population it serves.	▨	×	×	×	□
				It limits emissions and waste within the planet's ability to absorb them, uses inexhaustible energy (renewable energy) sources, minimizes consumption of non-renewable resources, reuses and recycles its components, and minimizes the use of land and the production of noise.	▨	×	×	×	□
				It is clean and affordable for the vast majority of users; it does not pollute air, land, or water beyond the planet's ability to absorb and cleanse; this is especially the case with regard to CO_2 emissions.	▨	×	×	×	□
				It makes use of land in a way that has little or no impact on the integrity of ecosystems.	▨	×	×	×	□
				It uses energy sources that are essentially renewable or inexhaustible.	×	×	×	×	□
				It uses other resources that are renewable or inexhaustible and achieved in part through the reuse of items and the recycling of materials used in vehicles and infrastructure.	×	×	×	×	□
				It produces no more emissions and waste than can be accommodated by the planet's restorative ability.	×	×	×	×	□
				It meets basic human needs for health, comfort, and convenience.	▨	×	×	×	□
				It allows for and supports development at a human scale and provides for a reasonable choice of transport modes, housing, community, and living styles.	√	×	×	×	□
				It produces no more noise than is acceptable by communities, is safe for people and their property, and provides cost-effective service and capacity.	▨	×	×	×	□
				It is financially affordable in each generation and supports economic activities.	√	×	×	×	□
				Prevent air pollution (Developing alterative energy resources for vehicles; Improving the existing fuels; Developing vehicle technologies; Enhancing vehicle usage)	▨	×	×	×	□
				Decreasing Noise and Other type Pollution	▨	×	×	×	□
				Transportation Planning and Management Issues (Transportation planning: The Importance of Public Transportation - Management and Finance for Applicability; Management of Urban Transportation Demands; Economic Feasibility; Innovation in Research and Technology: Public Participation and Education)	×	×	×	×	□

APPENDIX G

Table G. The Checklist of Urban Sustainable Development Objectives in the Case of Mungla-II

Objective Groups	Sustainable Urban Development Objectives	Existing Situation	Planning Experience			
			1/5,000		1/5,000	
			1982	2004	Decision	Implementation
Environmental Values						
Natural Environment						
Sustainable Urban Water Management						
Prevent Water Pollution	Preventing the dilution of harmful substances in soil	■	×	□	×	□
	Preventing the dilution of nutritive substances in soil	■	×	□	×	□
	Preventing the dumping of waste water	■	×	□	×	□
	Preventing the use of contaminated silt	■	×	□	×	□
	Preventing the use of salt on streets	■	×	□	×	□
	Preventing the use of herbicides in public greenery	■	×	□	×	□
Developing water impoundment areas and enhance wetlands throughout the site	Retaining all water on the site as long as possible enhance human and natural habitat (biodiversity) by allowing water to percolate into the ground, water landscaping, reduce downstream flooding, and increase water quality and bio-diversity.	√	×	□	√	□
Using water conservation appliances	Using water conservation fixtures and appliances in the home can save up to 30 – 70% of water use (low flush toilets, low flow faucets, water and energy efficient appliances, etc.) Avoiding automatic water washers such as automatic, above ground sprinkler and using drip irrigation systems are many times more efficient than spray sprinklers. Harvesting the rain and gray water from the home and other structures also can save water. Providing artificial wetlands which are economical for brownfield water treatment in supplies to both large and small-scale developments, and is far more economical than traditional engineered water treatment facilities.	√	×	□	√	□
Sustainable Urban Soil Management						
Prevent Soil Pollution	Preventing the intensive agricultural and cattle farming methods	■	×	□	×	□
	Preventing the dumping of waste water and materials	√	×	□	×	□
	Preventing the deposition of air and water pollution	■	×	□	×	□
	Preventing the accidents in industry and transport	■	×	□	×	□
	Preventing the use of contaminated silt	■	×	□	×	□
	Preventing the use of salt on streets	■	×	□	×	□
	Preventing the use of herbicides in public greenery	√	×	□	×	□
Land & resource conservation	Practice the 3 R's – Reduce, Reuse and Recycle	■	×	□	×	□
	Design with permaculture for landscaping various open spaces and community areas.	■	×	□	×	□
	Localize the economy	■	×	□	×	□
Sustainable Urban Air Management						
Prevent Air Pollution	Preventing the burning of fossil fuels	√	×	□	×	□
	Preventing the emissions from industries	√	×	□	×	□
	Preventing the motorized transportation	■	×	□	×	□
	Preventing the bad effects of heating of buildings	■	×	□	×	□
	Preventing the generation of electricity	■	×	□	×	□
	Preventing the emissions of NO_x and SO_x mainly from burning	■	×	□	×	□
Improving Air quality	Cities need trees both for human comfort and balancing the carbon to oxygen cycle (CO_2 √ O_2). In other words, green areas not only increase the desirability of residential areas and enhance recreation, livability and sustainability; but also absorb toxins from the air, create oxygen, shade and cool the environment through evaporative transpiration, and add to the ambient humidity of indoor and outdoor spaces. Therefore they produce visual and culinary delights to sustainable residential environments.	√	×	□	×	□
Urban Solid Waste Management						
	Creating a sustainable materials economy	■	×	□	×	□
	Materials management and resource recognition	■	×	□	×	□
	Pollution prevention/producer responsibility	■	×	□	×	□
	Waste disposal taxes and refund deposit strategies	■	×	□	×	□
	Subsidies and incentives	■	×	□	×	□
	Reprocessing/materials exchange	■	×	□	×	□
	Household and small business waste reduction and recycling	√	×	□	×	□
	Household waste collection in informal settlements	√	×	□	×	□
	individual recycled material collectors	√	×	□	×	□
	Reduce input of natural resources	■	×	□	×	□
Environmental Values						
Natural Environment						
Sustainable Energy Supply and Management						
Green building & design	Reduce energy and water consumption	■	×	□	×	□
	Reduce air, water, heat and light pollution	■	×	□	×	□
	Improve storm water management	■	×	□	×	□
	Reduce waste output (solid and liquid)	■	×	□	×	□
	Reduce the impact of externalities through the intensive use of green products.	■	×	□	×	□
	Use of green (non-toxic) materials	■	×	□	×	□
	Orienting each dwelling unit to sun and site carefully	×	×	□	×	□
	Providing increased windows, sun spaces/greenhouses and gardens on the south side of dwellings	■	×	□	×	□
	Minimizing window orientations to west and east give full advantage of passive solar energy.	■	×	□	×	□
Renewable energy	There would be a variety of energy sources, the relative abundance of which would vary from region to region.	■	×	□	×	□
	Emphasis would be given to the efficient use of both renewable and conventional energy supplies in all sectors.	■	×	□	×	□
	Biomass, grown using sustainable farming methods and processes, and converted efficiently to electricity and liquid and gaseous fuels using modern technology, would be widely used.	■	×	□	×	□
	Intermittent renewable energy resources would provide as much as one third of total electricity requirements cost-effectively in most regions, without the need for new electrical storage technologies.	■	×	□	×	□
	Natural gas would play a major role in supporting the growth of a renewable energy industry. Natural gas-fires turbines, which have low capital costs and can quickly adjust their electricit output, can provide excellent back-up for intermitten renewable energy sources on electric power grids.	■	×	□	×	□
	A renewable energy sources-intensive energy future would introduce new choices and competition into energy markets and reduce the likelihood of rapid price fluctuations and supply disruptions. It could also lead eventually to a stabilization of world energy prices as well as new opportunities being created for energy suppliers.	■	×	□	×	□
	Most electricity produced from renewable sources would be fed into large electrical grids ed marketed by electric utilities. Liquid and gaseous fuels would be marketed much as oil and natural gas are today.	■	×	□	×	□
Environmental Values						
Cultural Environment						
Culture and Heritage	Consciousness about Cultural heritage and prepare activities and projects for cultural heritage	■	×	□	×	□
	Cultural tourism should be maintained.	■	×	□	×	□
	Cultural citizenship should be maintained.	■	×	□	×	□
Public spaces and landmarks	Create and conserve public spaces and landmarks.	■	×	□	×	□
Symbolic and structural projects	Prepare symbolic and structural projects	■	×	□	×	□
Urban renaissance	Prepare urban renewal projects.	■	×	□	×	□

Table H. The Checklist of Urban Sustainable Development Objectives in the Case of Muğla-III

Objective Groups			Sustainable Urban Development Objectives	Existing Situation	Planning Experience			
					1/5.000		1/5.000	
					Decision	Implementation	Decision	Implementation
					1982		2004	
Socio-Economic Values	Economic Vitality of Cities	Urban Economy and Competitiveness	Between the world macro-regulations and the local micro-regulations, cities must create the suitable atmosphere for the flourish of economic prosperity, social cohesion and citizenship. Strong and diversified local economy using local resources.	× □	×	×	×	□
			Education, municipal institutions and enterprises must make progress in a harmony for sustainable economy	√ □	×	×	×	□
		Employment	Unemployment level should be minimized.	× □	×	×	×	□
			Employment levels of different groups (Women, young, children, retired and working) assessed.	▣	×	×	×	□
	Social Vitality of Cities:	Solidarity and social justice & equity	Maintain social equality (Public administrations and associations should assist socio-professional integration of youth that are the most vulnerable part of society and the most acutely affected by economic crisis and unemployment Moreover they should propose the sharing of values which make all members of the community stronger.) (gender mainstreaming can be perceived as a strategy, integrated in all areas of public and private decision-making knowing the fact that women are another most obviously decisive social group.)	√ □	×	×	×	□
			Prevent Social exclusion (so there should be created horizontal and vertical integration of decision-making systems and also the optimization of the capacity, contribution and commitment of the public, private and social economy sectors.)	√ □	×	×	×	□
			Prevent Urban distress (environmental degradation, physical isolation, obsolete infrastructures and neglect of public spaces)	√ □	×	×	×	□
		Harmony, health and safety in cities, Education & Research	Maintain harmony (the whole city with its forms, functions, physical and mental health should be rethought.)	√ □	×	×	×	□
			Maintain healthy services (Health should be placed high on the political agenda, and a structure and process should be created to achieve it)	√	×	×	×	□
			Maintain safe city (improve quality of life and urban livability through shaping sush events: traffic accidents, delinquency, crime and etc)	√ □	×	×	×	□
			Maintain education and research services (prove equal and efficient education service)	√	×	×	×	□
		Green and Gray Parks	Increase the amount and accessibility of green areas	√	√	√	√	□
			Increase the amount and accessibility of gray areas	▣	×	×	×	□
		Housing	Prevent depressed neighborhoods and provide sound living cells.	√ □	×	×	×	□
		Periphery	Urban functions and services should be found within every urban quarter.	√ □	×	×	×	□
Political Values:		Democracy, Governance and citizenship	Urban democracy should be maintained.	√ □	×	×	×	□
			Governance should be maintained.	√ □	×	×	×	□
			Public awareness and citizen involvement should be maintained.	√ □	×	×	√	□
		Compact, mixed and diverse cities	Create relatively small settlements-clusters-compact settlements with linear or rectangular form.	√	√	√	√	□
			Maitain urban and social intermixture (that is the little cities everywhere in the city)	√	√	√	√	□
		Sustainable regeneration	Prepare Regeneration, revitalization, conservation projects.	√	√	√	√	□
		Regional policy and strategic planning	Maintain regioal development for Social and economic cohesion through pointing complexities, disparities and inequalities.	√	×	×	×	□
			Maintain the coordiation of planning and policy initiatives in order to eliminate complexities, disparities and inequalities and to cope with rapid degradation of natural resources and ecosystem.	▣	×	×	×	□
			Prepare strategic planning for attaining the goals of regional policy	√ □	×	×	×	□
		Institutional architecture and civic alliances	Governmental and non-governmental institutions should work in an efficient and balanced manner.	▣	×	×	×	□
			Partnerships and public participation should be maintained with citizens in order to create more knowledgeable communities.(through such techniques: printed material (brochures and newsletters), personal contact, open houses and information days, public meetings, community liaison groups, presentation to groups, workshops, displays, media, and surveys)	√ □	×	×	√	□