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Chapter 12

The Analysis of Turkish Urban Planning Process Regarding Sustainable Urban Development

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Additional information is available at the end of the chapter

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Abstract

Sustainable urban planning is the recent phenomenon arising with the sustainability concept. Urban areas are the main bodies where sustainable policies can be applied and sustainability criteria have to be tested in. Urban life is equal to the social system in the contemporary world. Urban sustainable development becomes crucial and this condition can be obtained with urban planning. In this respect, sustainable urban planning becomes a crucial factor to maintain sustainability. Main problem is how to adapt existing planning procedures and processes into sustainable-based urban planning. In this chapter, it is analyzed how Turkish existing urban planning process can be adapted to sustainable urban planning without a radical paradigm shift in the Turkish planning system.

Keywords: participation, rational comprehensive planning model, sustainability indicators, sustainable urban planning, urban planning process in Turkey, governance, urban plans

1. Introduction

The main aim of this chapter is to define how Turkish planning process, as a rational comprehensive top-down one, adopts to the necessities of sustainable urban planning. It is obvious that most of the academic research focus on the necessity of changing the structure of existing planning systems as a tool for maintaining urban sustainability regarding the land use, built-up environment, and infrastructure. It is the subject of debate that conventional planning approaches become insufficient to ensure urban sustainability. Strategic planning concept, participatory planning, and community-driven planning are all examples and parts of new

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planning approaches adopted to urban planning process to ensure sustainability of urban settlements.

Planning, especially the "urban planning" concept, has a potential of playing a vital role for ensuring sustainability aim for the future of cities, in other words "sustainable urban development". Especially, the planning structure and planning processes are important variables to maintain sustainability of settlements. Urban planning is the most important tool or factor to maintain sustainable urban development. Characteristics and various dimensions of sustainability concept have to be coherent and compatible with the urban planning dynamics and urban planning processes and techniques.

In order to obtain the sustainable urban development, several models on sustainable urban planning have been offered since 1980s. Planning structure and sustainable urban development together have become one of the most important academic and research subjects since the end of the twentieth century. Especially, new planning initiatives address the necessity of changing traditional comprehensive master planning. In 2001, Naess [1] discussed that as rational comprehensive planning is goal oriented, it is appropriate for sustainable planning, but there are also some shortcomings. There are debates that advocacy and collaborative types of planning can best fit to overcome those shortcomings [2].

Rational comprehensive planning approach is the one which is used most frequently in the world. However, it is criticized that rational comprehensive planning method cannot answer the necessities of sustainable urban development. It is stated that existing urban planning system based on aiming at development goals and prepared by an authority cannot be able to maintain appropriate land use built-up environment and infrastructure in a contemporary world within a changing era [3].

The main aim of this chapter is not to criticize various planning approaches with regard to sustainable urban planning but to criticize how rational comprehensive approach can be adopted to the sustainable planning with reference to the Turkish spatial planning system.

The Turkish planning system is selected to refer the subject because, first of all, the difference between developed and developing countries has to be identified. İf it is a fact that the urbanization concept is simply related to the ratio of population living in urban areas, than it can be easily accepted that developed nations (Japan, North America, and Europe) had almost completed their urbanization as over 80–90% of their population living in urban areas and the increase in the population rates is becoming slower and slower. However, they confront with the mass number of refugees as well as gentrification seems another important urban problem area in front of developed countries. On the other hand, urbanization is still an important factor in developing countries like Turkey. Despite the decreased rates, rural–urban migration is still continuing and urban areas are expanding and developing rapidly against natural environment.

For these reasons, urban planning becomes more important tool to guarantee sustainable urbanization in developing or less developed countries as Turkey is among one of these countries. Turkey is a country, living traditionalism, modernism, and postmodernism at the same time. Turkey's urban planning process is a conventional comprehensive master planning

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approach, and it is a subject of debate that whether this planning process can be able to ensure sustainable urban development or not because at every passing moment urban built-up environment and natural environment are deteriorating and even ordinary people in the street suffering from these unfavorable conditions.

Especially, Turkish urban plans are mostly executed on design desks, now on computers, and unfortunately, these plans have no chance to be applied because spatial decisions concluded always become the subject of the related Courts as there are a lot of discrepancies about these plans. Most of the planning decisions in these urban plans have a way on courts instead of application.

Depending on this type of frame of reference, after the priorities of the urban planning with regard to sustainability characters are explained, criticism of the Turkish planning system is given and how can this planning system can be adapted to the sustainable urban planning is discussed.

2. Sustainability concept and sustainable urban development

The history of sustainability concept dates back to 1970s. Sustainability concept arose when environmental degradation and economic bottlenecks were increased and developed countries started suffering from these conditions. Therefore, it becomes a necessity being aware of the common future of the humankind. The concept of "Sustainable Development" gained importance after the Work of the World Commission on Environment and Development known as the Brundtland Commission in 1987. The final product is known as the Brundtland Report. This is also the first milestone that sustainability concept starts to reflect itself on urban planning. Sustainable development is a continuing and balanced development model. As cities are the basic elements of contemporary civilization, it can easily be claimed that sustainability concept is an urban-based concept. Sustainable urban areas are the key factors for the success of sustainability approach. This situation is emphasized and gained more importance after the Earth Summit or the UN Conference on Environment and Development in Rio in 1992 and Habitat II Conference held in Istanbul in 1996. After the Habitat II Conference, sustainable development became a necessary strategy that countries have to adopt as a requisite.

"Local Agenda 21 accepted in Rio Conference has a special importance that it could be accepted as the primary mechanism for the application of sustainable development at the local level. This shows that urban areas have become the focus of sustainable development policies starting from the 1990s" [2].

Substantially, the sustainability concept can be adapted to all components, sectors, and institutions of any society. Sustainable city, sustainable economy, sustainable mining, sustainable education, and sustainable environment are some of the examples of this statement. However, sustainable development has a framework that contains five stages as political and supervisory (related to decision making, participatory processes, use of resources, etc.),

physical (spatial relations, land use, etc.), environmental (eco systems, artificial urban systems, land, air, water, etc.), economic (production, consumption, employment, etc.), and social (equity, security, life quality, etc.) stages [4].

Sustainable development and sustainable society are urban-based concepts. Though there is a concept of rural sustainability in the literature, it is not wrong to assimilate the sustainable development concept within urban sustainable development as the basic determinants of the civilization are the urban concept and urban life. In addition, urban areas are against the nature and natural ecology as built-up environment of cities invades natural land in a very fast manner. Even you built up a cabin in the woods, you can give damage to the microenvironment and ecology on the area you built up your cabin. The concept of city and urban systems is naturally against the ecological sustainability concept. That is why the urban areas have become the key factors of the sustainable development. Not only the environmental and ecological concerns are the focus of the problems, but also economic and social problems arise from urban systems and mechanisms become the source of global anxiety of future. Especially, as cities of developing world are overgrowing, environmental, social, and economic problems are not remaining as local problems but they are seen as global problems and tried to be solved. In this respect, sustainable urban development takes place at the heart of the sustainability concept. Sustainability of urban areas becomes the key factor in sustainability debates.

Definitely, planning is the main director of urban development and urbanization. Planning not only deals with the physical development of the cities but also affects the social, economic, and cultural future. For this reason, a sustainable urban planning model is very essential for the sustainable urban development and a sustainable society.

3. Factors come into prominence with sustainable urban planning

A new debate arises as how the existing planning processes and methodology fulfill the achievement of obtaining sustainable urban development target or is there a need for new planning paradigm shift with regard to increasing sustainability discussions.

Our discussion is based strategic thinking, inclusive decision-making, governance, participation, monitoring, and sustainability indicators. Especially, these factors are interrelated and interwoven.

Strategic thinking widely depends on and takes its roots from the Urban Strategic Planning Process. This is the planning process offered by UN in the series of publications on "Inclusive and Sustainable Urban Planning: A Guide for Municipalities" [5]. Especially, "strategic planning" is a very wide concept and it represents the adoption of management type of private sector business planning to public planning concept such as urban planning. Indeed, it is not the consequence of only sustainability debates but it is mainly related to the privatization, globalization, and deregulation efforts within the socioeconomic systems. This planning approach is an inclusive, strategic, and action oriented [5].

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UN offers the following four phases of urban strategic planning [5]:

a. Urban situation analysis consists of stakeholder analysis, urban situation profiling, urban situation appraisal, investment capacity assessment, and consolidated urban diagnosis.

b. Sustainable urban development planning consists of urban consultations, drafting the strategic urban development plan (SUDP), and approval and adoption of SUDP.

c. Sustainable action planning consists of drafting action plans, local resource mobilization, and public–private partnerships.

d. Implementation and management of projects consisting of project design, management and coordination, and monitoring and accounting reporting.

According to these phases, strategic planning is different from rational comprehensive planning process as it is a bottom-up approach and depends on project making.

Also, it is a dynamic process so that the participation concept is crucial. The urban strategic planning process is based on participatory decision-making approach that all stakeholders involve the plan-making process at any stage. Participation is a wide concept and becomes a crucial factor for sustainable character of an urban plan. Especially, participation contains both citizen participation and participation of several institutions in the planning process. It can be formed as a passive participation of citizens as contribution to questionnaires and surveys, semiactive participation held in meetings, or active participation in which people come together in planning workshops.

In UN's publication on ``Inclusive and Sustainable Urban Planning: A Guide for Municipalities,'' participation is defined as follows [5]:

- Information (one-way communication in which citizens are informed).
- Consultation (two-way communication in which stakeholders have an opportunity to have suggestions and concerns for the suggestions of other people).
- Consensus building (stakeholders interact to understand each other and arrive at negotiated positions).
- Decision making (expression of full commitment).
- Risk sharing (to take risks all together).
- Partnership (to be at equal status and have a common goal).
- Self-management (stakeholders take the responsibility from beginning to the end).

Participation in the planning process is closely related to the concept of governance. Sustainable development requires well-shaped governance. Furthermore, sustainability itself is defined as a fundamental principle of good urban governance [5]. The sustainability concept emphasize on cities as actors to take balance on the environmental, social, and economic needs of present and future needs. To relate this fact with governance, it means that all individuals and public and private institutions come together to plan, organize, and arrange all the common works of an urban area.

Governance is a broader concept than administration or government. If governance is the structure, then it is easily claimed that elitist planning decisions come from the authority beyond will not be the case for sustainable urban planning. A participatory democratic decision-making process is seen as the requirement of the sustainable planning that governance is the key in the process.

Another important subject is the inclusive decision-making strategy. This is defined as a strategy where norms of good governance are put into practice [5]. Inclusiveness is related with participatory decision-making processes, equal opportunities, safeness, information clarity, equal access to urban services, and consideration of urban poor and marginal groups.

Another determinant and essential factor of sustainable planning is the monitoring process after plan making. Though it is not included in the plan-making process, it has a very crucial meaning for the proper implementation of the plans. When sustainability is considered, monitoring stage is used to test whether primarily defined sustainable goals are accomplished or not.

These goals are highly related with sustainability indicators. Another factor for the sustainable urban planning is the integration of sustainability indicators into the planning process. Rosales and Yazar insisted on the importance and necessity of these indicators in planning. Rosales [6] defines them as ex-ante tools in urban planning. These indicators are classified as environmental, economic, and social. These indicators were first discussed in first Aalborg Conference in 1994 [7] and emphasized that they ought to take place within urban planning in the second Aalborg Conference in 2004 [8].

4. A brief history of Turkish spatial planning system

In this part, the focus is on the basic characteristics and application of a rational comprehensive planning method instead of a detailed history of urban planning and legal aspects of spatial planning in Turkey as it has a very changing structure.

History of the Turkish spatial planning system dates back to the second half of the nineteenth century of the Ottoman period. These efforts are known as spatial arrangements rather than an official urban planning. This situation is also true for the 1920s and 1930s; the first years of the new Turkish Republic. Urban spatial planning was first institutionalized after the acceptance of the first Development and Zoning Law in 1956 numbered as 6785. This date was important as urbanization in Turkey was really accelerated after 1950 hand in hand with industrialization efforts.

As masses of people from rural areas started to migrate to big cities, such as Ankara and İstanbul, new urban planning arrangements and efforts on spatial planning were started with the first Development and Zoning Law accepted in 1956. This law gave way to a rational comprehensive planning approach for the Turkish spatial planning system. Also regarding the whole planning concept; "planned era" was started in 1960 at the country level with the establishment of State Planning Organization. (Note: It was transformed into Ministry of

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Development in 2012.) The starting point of the planned development is the Main Law accepted in 1961. After this period, the Five Year Development Plans were started to be prepared for national and regional progress. First plan was accepted in 1962. It was a development plan for the period of 1963–1967. These Five Year Development Plans were organized to be implemented by yearly programs. Though there were no strict decisions on urbanization in successive Five Year Development Plans, there were decisions about urbanization issues and urban planning related to the conjuncture of the period they were applied.

Return to the first Development and Zoning Law accepted in 1956, the planning authority was chosen as municipalities. The law numbered 6785 was not able to prevent pseudourbanization as it was only about the physical planning dimension [9]. This law was replaced by the law numbered 1605 in 1972. The main difference was the fact that authority was given to central authority instead of municipalities. With rapid urbanization, this law and planning efforts became insufficient and the law numbered 3194 was accepted in 1985 instead of the existing one. This law is the current operative law with some changes until it has been accepted.

This law clearly defines and suggests a rational comprehensive urban planning aspect. After accepted, it was criticized as how to engage participation and how macrodecisions are taken, and how policies will be defined and applied to urban areas and urban space [9].

Several directives and bylaws were accepted until 1990s in order to organize and adapt spatial planning to the conjuncture changes and fast-changing characteristics of the society and cities. A new paradigm shift for whole social and economic issues becomes the focal point of academic and political debates. Globalization and effects of information technologies are the main determinants of the new paradigm shift. In addition, the deterioration of the environment and steadily decreasing natural resources are the other important milestones in this paradigm shift. Regarding this part, the last regulation about making spatial plans that was accepted in June 2014 called "Regulation on Making Spatial Plans" is insisted on. The coming part is largely based on the main principles and processes of the Turkish spatial planning system depending on the related ``Regulation on Making Spatial Plans."

5. Turkish current spatial planning process

The Turkish urban planning system is a rational comprehensive one with a strict hierarchy of various kinds of plans varying from strategy plans to urban design stage. Though urban design is appreciated at the Project level, provisions concerning urban design are added to the legislation. Especially, the implementation of the urban decisions is shown at the scale of Implementation Plan level.

"Regulation on Making Spatial Plans" accepted in 2014 clearly defines the hierarchical system of the Turkish planning system [10]. This hierarchy shows the comprehensive character of the planning system as the hierarchy of the plans is one of the most important characteristic of the rational comprehensive urban planning.

Regarding general planning hierarchy, various plan types can be listed as follows:

– Country Plans

– Regional Plans

– Spatial Strategy Plans

– Environmental Order Plans

– Master Development Plans

– Implementation Plans

Especially, Country Plans and Regional Plans are socioeconomic in character while the spatial strategy plan is in between socioeconomic character and high physical plan level. Environmental Order Plans can be included into high physical plan level. Master Development Plan level and Implementation Plan levels are characterized by the local physical plan levels.

The plan-making process represents the comprehensive rational planning process that is divided into the four main groups, these are listed in a hierarchical manner as follows:

a. Spatial Strategy Planning

b. Environmental Order Plans

c. Master Development Plans

d. Implementation Plans

Basic characteristics of the spatial planning system can be itemized as follows:

– All plans have to obey the decisions of the current upper plans and all of them have to direct the lower plan hierarchies.

– Regarding land use and built-up environment, development authorities and the all stakeholders in the society and citizens have to obey the decisions of Spatial Strategic Plans, Environmental Order Plans, and Master Plans.

– All other plans have to maintain inputs for these plans.

– Local governments have to obey the decisions of Environmental Order Plans while preparing the Master Development Plans and Implementation Plans.

The main characteristics of these plans have to be identified to understand the convenience of the system for sustainable urban planning and sustainable urban development.

5.1. Spatial strategic plans

These plans are appreciated as the level which integrates the national development policies and regional development strategies with the spatial level. In other words, this plan level stays between the socioeconomic level and the physical plan level. It helps to transform the decisions of national and regional plans into spatial planning of the localities.

It has the following several characteristics:

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– Relates the National Development Policies and Regional Development Policies with the spatial level.

– Defines the spatial strategies related to the urban growth, transportation system, and social and technical infrastructure.

– Relates the spatial strategies with sectoral strategies.

– Especially prepared by using schematic and thematic graphic language on 1/250,000 or 1/500,000 or upper scales.

– Prepared for the regions or localities that are appreciated as this plan is necessary.

Planning principles for Spatial Strategic Planning are as follows:

– Conservation of historical and cultural values;

– Minimizing the threats and risks of disasters;

– Maintain sustainable use of resources;

– Distributing infrastructure, service, and production facilities suitable for development policies along urban and rural areas ;

– Maintain public utilization and efficiency in resource use, productivity, and transparency;

– Maintain multidisciplinary mode of planning with contribution of institutions that affect or can be affected from planning such as Development Agencies, Non-Governmental Organizations (NGO's), Chambers, Local Governments, Universities, Private Sector Represents;

– Maintain spatial harmony;

– Making of necessary spatial arrangements to establish innovative, flexible, and competitive economic structure;

– Adaptation capability to the changing conditions.

Elements of the Spatial Strategic Plan are as follows:

– Sectoral and thematic decision sheets/maps on settlement systems, transportation, water, risky situations, infrastructure, economy, and specialized regions.

– Sectoral or thematic sheets/maps of several regions if it is prepared for a region.

– Spatial strategy report including vision and priorities, principles, strategies, sectoral decisions, provisions of the plan, and main headings of the action plan.

Application and monitoring of the Strategic Spatial Planning is maintained by the activity reports of the relevant institutions. These are evaluated in accordance with these institutions and revised if necessary.

As it is the one of the most important stages of all plan levels, also quite a few information and data are collected. These data are with regard to dangerous areas, all types of ecosystems, water

resources, site areas, settlement systems, national parks, demographic data, sectoral data, sectoral plans, national development plans, transportation networks, housing strategies, etc.

5.2. Environmental Order Plans

These plans are implemented at least on the province level or especially at statistical regional units that appreciated as the high-level spatial plan performed at the scale of 1/100,000 or 1/50,000.

Planning principles and essentials can be listed as follows:

– It has to be coherent with spatial strategic plans;

– Regional dynamics and potentials have to be evaluated;

– Sectoral investment decisions that can affect spatial decisions of the related public institutions have to be evaluated;

– Appropriate ecological and economic decisions have to be decided together to the sustainable development;

– Conservation and improvement of the natural structure and the landscape such as historical and cultural assets, forests, agricultural lands, and water resources;

– Maintain unity of land use to preserve continuity of ecological balance and ecosystems;

– Generate routes of transportation network;

– Determine preventing strategies and policies for the environmental problems and generate land use decisions;

– Take precautions for the destructive effects of disasters.

Within the process of preparing Environmental Order Plans, these types of analyses have to be fulfilled:

– All types of borders (administrative, planning etc.);

– Administrative and regional structure;

– Physical and natural structure;

– Site areas and other conservation areas, and sensitive areas that have to be preserved;

– Economic structure;

– Sectoral developments and employment;

– Demographic and social structure;

– Urban and rural settlements and land use;

– Infrastructural systems;

– Open spaces and green areas;

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– Transportation systems;

– Risky areas;

– Military areas and security zones;

– Public projects and investment decisions regarding the planning area;

– Hydrological and hydrogeological areas;

– Environmental areas and affected areas.

Environmental Order Plans are prepared at the scales of 1/100,000 or 1/50,000. On the other hand, the sensitivity of the 1/25,000 scale is expected. All necessary information and documents are gathered by experts and land works. Geographic information systems and remote sensing methods have to be applied in the planning process and a database is generally structured after the work.

If the Environmental Order Plan is not satisfied with the needs or the vision, aims, targets, strategies, and policies are not satisfied with the upper decisions, then a revision of the whole plan has to be made. The revision becomes necessary at the following special circumstances:

– When the population needs are not satisfied,

– When new regional investment opportunities arise which change the basic strategies and policies of the plan,

– When the new land use demand is occurred that has a potential effect on regional issues,

– When there are changes at regional dynamics through new developments.

According to these factors, a plan change can be made, which cannot damage the integrity of the plan decisions and plan continuum.

5.3. Land Development Plans

This plan is considered as the special spatial plan that allows the application of Spatial Strategic Plan decisions and Environmental Order Plan decisions at the settlement level. These urban plans include constituted alternative solutions for settlement patterns and their growth trends. Land use decisions are the main part of Development Plans. In addition, there are decisions on conservation, limitation, organization, and application.

Land Development Plans are divided into two parts as Master Development Plans and Implementation Plans. All types of Land Development Plans are prepared and approved by the related municipalities.

These plans have to obey the decisions of upper scale plans. In a plan-making process, geological and geotechnical land etudes have to be completed, field surveys, threshold analysis, and other compulsory analysis have to be accomplished, and opinions of the public institutions have to be taken into consideration.

There are several principles that dominate the preparation and application of Land Development Plans in general. These can be listed as follows [11]:

a. Obey the state of law: Plan has to depend on legal basis.

b. Principle of clarity: Urban planning decisions and plan have to be known by every stakeholder in the public. This can be maintained by participation of different institutions and citizens in the planning process.

c. Principle of universality: Especially, Master Development Plans and upper scale plans show the general and common decisions, and they do not deal with details.

d. Hierarchy principle: There is a hierarchical relation between different plans. The main aim is coordination between plans. Upper scale plans have to direct lower scale plans. Their decisions have to be coherent.

e. Public welfare: One of the important aims of making Land Development Plans is maintaining public welfare. Primarily, urban spatial plans are prepared for public welfare.

f. Obligatory characteristics: Plan decisions have to be obeyed by every stakeholder in the society. Also, coherence of various level decisions is important.

g. Flexibility: Urban plans have not to be changed without very important reasons. On the other hand, due to dynamic social structure, and rapidly increasing population, these plans have to be changed within a given time period. So, flexibility covers revision plans or additional plans.

h. Long range characteristics: Land Development Plans are long range plans. New regulation defines the period as 20 years.

i. Being scientific: Scientific data and information have to be collected and evaluated in the planning process. All analyses that have to be carried out are related to this principle.

j. Participation principle: That means individuals taking the decisions about the physical and built-up environment and collaboration in the planning process. According to the Regulation of Making Spatial Plans, participation tools include surveys, opinion research, meetings, workshops, information services, etc. It becomes important to take decisions about all stakeholders.

5.3.1. Master Development Plans

Master Development Plan is prepared at the scale of 1/5000. Plan determines the alternative growth and development structure of the following:

– All kinds of administrative, planning boundaries;

– Area restrictions for special conditions;

– Housing areas and housing development areas;

– Administrative centers;

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– Trade and work centers;

– Industrial areas and warehouses;

– Tourism areas;

– Site areas;

– Conservation and resource areas;

– Energy transmission lines;

– Open and green spaces;

– Social reinforcement areas, such as, education, health, and culture;

– Technical infrastructure such as roads, auto parks, different transportation modes, water infrastructure, waste treatment, and garbage areas.

While preparing Master Development Plans, the data listed below are analyzed and land work studies are conducted:

– Administrative boundaries;

– Geological, geomorphological, and hydrogeological structure;

– Characteristics of different settlement areas and spatial growth tendencies;

– Renovation and transformation zoning;

– Climate;

– Vegetation;

– Soil structure and agricultural use of the land;

– Flora and fauna (ecological searches) ;

– Site areas, national parks, natural parks, wildlife conservation area, and protected water basins;

– Forests, pasture lands, and highlands;

– Cultural and touristic conservation and development regions;

– Industrial areas and organized industrial sites,

– Landscape elements;

– Demography;

– Social and economic structure;

– Transportation systems;

– Environmental problems;

– Logistic center areas;

– Sectoral structure (agriculture, industry, services, transportation, energy, mining, and construction) ;

– Solid waste and recycling facilities;

– Waste water discharge areas and facilities;

– Mining areas;

– Military zones;

– Risky areas and risk plan if exist;

– Decisions of environmental order plans.

The Master Development Plan process consists of the following six steps:

i. Determination of the planning area;

ii. Gathering planning data:

– Opinions of public institutions;

– Field studies:

a. Building characteristics (storey heights, use, type, etc.);

b. Survey study (housing, working places, industry, administrative units, social utilities, etc.);

iii. Analysis and synthesis: After field surveys and evaluation of various opinions, some sorts of analyses have to be completed. These data are superposed and then synthesis maps are produced. Hence, it is able to determine appropriate land for settlement growth. Analyses are executed on land use, slope, natural factors, geology, physical data on buildings, population density, structure analysis, land ownership pattern, land values, transportation networks, transportation zones, and upper scale plan decisions. Synthesis studies are conducted on natural threshold, and appropriate zones for settlement.

iv. Clarify plan decisions: Different plan alternatives are produced after the analysis part and evaluation of the socioeconomic structure. These alternatives are evaluated and planning decisions are made.

v. Plan drawing and report preparation: Once the best alternative has been chosen, the plan is nearly completed. Urban Master Development Plan is a unity with its drawings and plan report.

vi. Evaluation and approval of the plans by Municipality Councils.

5.3.2. Implementation Plans

This stage of the spatial planning system represents the application of all planning decisions on the urban space. It is prepared at the lot and parcel level with the scale of 1/1000. That is

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why it is called as "Implementation Plan." It can be performed at once as well as stage by stage. It is the plan level, which urban standards have applied at the lots level. Building conditions are the main point of Implementation Plans. Especially, it is the best plan type at planning level to take decisions at third dimension apart from the urban design stage.

Some important principles of Implementation Plans are as follow:

– Defining building conditions, such as, lot coverage ratio, floor area ratio, floor area index, building heights, setback distances, etc.;

– It is important to develop design principles for maintaining accessibility of handicapped, elder ones, and children to all social infrastructure and urban uses;

– It is essential to develop pedestrian and bicycle networks and bicycle parks;

– Natural and historical site areas are given importance within the plan.

As similar to upper planning scales, some set of data have to be gathered while preparing the Implementation Plan. In light of these data, the following analysis and research have to be performed:

– Analysis of the decisions of Master Development Plan,

– Boundaries of the planning area,

– Existing building density,

– Location of building lots and characteristics,

– Construction and setback distances,

– Existing population density and population distribution,

– Social infrastructure facilities,

– Technical infrastructure facilities,

– Land ownership pattern,

– Site areas and officially registered assets,

– Accessibility to services,

– Geological etude works,

– Topography and thresholds,

– Water resources,

– Transportation networks and nodes,

– Open space building relations,

– Assembly areas,

– Auto parks and capacities,

– Pedestrian and bicycle networks,

– Service areas and locational choice characteristics,

– Lands of urban design project areas,

– Logistics areas.

Implementation Plans contain notations of the following areas or functions:

– All types of boundaries including administrative, planning and restriction zones, and risky area zones;

– Housing areas;

– Social and cultural areas;

– Trade areas;

– Industrial areas;

– Recreational and green areas;

– Cemeteries;

– Special areas like military zones.

Adjustment tools utilized within plan-making process are zoning, surveillance of building lots, and norms and standards. Zoning consists of functional, density, and height zoning. Division of building lots is needed for the implementation of architecture of buildings on building parcels. Standards are used for the comfort, livability, and sustainable living of urban residents.

Implementation plans are implemented on urban space with programs. These programs are especially prepared for the five-year period. It has to be executed successively. Continuity is the essential principle in this process. Municipalities have to prepare programs within a time period of three months after the completion of the plan.

6. Criticism of the Turkish planning process with regard to sustainability necessities

Besides the structural shortcomings of the Turkish planning system, emphasis is on the critics of the Turkish planning process and planning hierarchy with respect to sustainability criteria. Even in the Habitat-III National Report of Turkey, it is claimed that sustainable urban planning in Turkey takes its reference from the physical dimension. The report claimed that there are shortcomings in proper handling of social, cultural, economic, and ecologic dimensions of planning [12]. Also, there is no evidence on how relations between economy–ecology and society are shaped within the planning process. On the other hand, the main bottleneck of the Turkish planning system is defined as follows [13]:

- Lack of a spatial planning system integrated with national development planning,

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- Lack of a cooperative planning vision and strategy,
- Partial implementations in planning and various conflicts between decisions of different public authorities,
- Numerous authorities for the same spatial scale,
- Lack of coordination between institutions.

With reference to the Turkish planning process explained in the former part, there are some shortcomings of the planning process related to sustainability essentials.

First, there is a one-way flow of decision-making takes place in the system of Turkish urban planning. An elitist type of planning is dominant. Spatial decisions of all scales are taken at bureaucratic levels and they are dictated to citizens by the plan itself. In this elitist type of planning, planner's role is taken only at technical level. This causes a problem to the rant-oriented decision making of municipalities as they are the approval mechanism of the Master and Implementation Plans. That is, especially, not the problem of planning process but it is entirely an ethical problem. These types of actions commonly bring out many legal problems.

The Turkish urban planning process also suffers from the absence of feedback mechanism. Feedback is executed as preparing ``revision plans'' and ``local plan changes.'' This situation really leads to the waste of resources because all plans need an important amount of effort. The lack of feedback and elitist type of decision making leads to legal problems that are always tried to be solved at administrative courts. Every case in the courts makes plans impermanent and ineffective and leads to waste of resources.

Another important problem is the lack of a monitoring process in the Turkish urban planning system. As it is the case of the lack of feedback, the lack of a monitoring process is also tried to be covered by revision plans and local plan changes. The lack of a monitoring process is an obstacle on the control of the Master and Implementation Plans. For this reason, it is compulsory to prepare a Master and Implementation Plan for all of the settlements, most of the settlements in Turkey are perceived as a nonplanned locality. Decisions of original plans cannot find a chance to be applied till the deadline of the plans but are always changed by the revision plan or plan changes. There are definite development programs for the implementation of the urban plans but this mechanism is not organized as a monitoring process. However, these programs do not get a chance to be implemented as the construction activities are totally in the hand of speculator contractors.

The sustainability concept is emphasized in the last Regulation of Plan Making Process, as it was described in former parts. On the other hand, there is no evidence that how sustainable urban development can be achieved. Especially, sustainability indicators are not included into planning process, even no such indicators exist in the Turkish planning process. A lot of necessary or unnecessary data are collected throughout the planning process but neither of them are used for evaluating the sustainability indicators. The data collected at higher levels cannot be used at lower scales. With the collected data, it will be easy for evaluating sustainability indicators if they exist within the plan process.

One of the most important bottlenecks of the Turkish planning process is the lack of participation even though the "participation" concept takes place in the Turkish planning system. On the other hand, this does not fulfill the conditions that sustainable type of planning requires. In Turkey, the participation of citizens to planning is achieved by two ways. One is participation in questionnaires and surveys before the plan-making process and the second one is related to gathering information from the prepared plan itself. After completion of Master and Implementation plans, these plans are exhibited on municipality boards. This is for gathering information of the landowners about their parcels. Citizens can make their objections to the plan within a month time. Usually, nobody has information that plans are exhibited on the Municipal Boards unless they see or heard about by chance. These two situations about participation have no relation with participatory democratic planning. As a result, citizens are given no right to have opinions about the plan throughout the plan-making process. Even, they did not know the existence of such a planning process. This condition is also valid for other public institutions. The court cases of the plan conflict between the Public Treasury Office as owner of public lands and Municipalities as making and approving urban plans, which are the best examples for this situation.

Though there is an obligation to take decisions about all institutions in the planning process, this is not a guarantee that the participation of institutions to the planning process is treated in a proper way. These decisions are taken from only relevant institutions on relevant lands, not for the whole plan.

All these findings clearly indicate that the Turkish current planning system is not emphasizing governance though this concept is given much importance in the stage of Strategic Spatial Plans. As the hierarchy of the plan scales is lowered, government-dictated decisions become dominant instead of governance principles.

7. Conclusion and recommendations

There are increasing debates on the subject whether the rational comprehensive method of urban planning can be able to ensure sustainable urban development or not, and whether this type of planning approach has the requisites of the sustainable urban planning. The rational comprehensive planning model is a pure top-down hierarchical approach using deductive point of view. The rational comprehensive type of planning is dominant in many countries, as it is the case in Turkey. This situation in Turkey depends on the law accepted in 1985. However, there were many efforts to change the planning system, it continued as a dominant planning approach with minor changes and adjustments in passing periods.

The sustainability concept and sustainable urban development require many new intentions for the planning or the plan-making process. Governance, participation especially in participatory democratic planning, use of indicators, existence of efficient feedback mechanism, and monitoring process are some novelties for the sustainable-based urban planning.

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Regarding the existing planning approach and the sustainable urban planning concept, the most important question is how to adapt the sustainability concept to the rational comprehensive planning process without a paradigm shift in the Turkish spatial planning system.

As mentioned earlier, the Turkish planning system is a rational comprehensive process having substantial efforts to maintain sustainability. With regard to deficiencies of the planning process, several measures or precautions can be taken within the existing plan-making process in order to adapt sustainable planning requisites.

This can be held without a total system change, but with some serious and radical adjustments in the process. National and regional decisions can be made from the upper scale decisions but these decisions have to be transformed and adapted to the levels of Master Development Plans and Implementation Plans. Most problems about urban sustainability arise at these lower scales.

First keyword for the change is the participation. Citizen participation in the process has to be achieved in an active way. Meetings and open workshops will be the main instruments. People who own land in the planning area can be informed completely by this way and as this situation is legalized decisions will be taken at consensus and there will be no need for court cases. Planners have to persuade these people in a peaceful manner and this is possible when face-to-face active participation takes place in the planning process. The situation does not affect the role of urban planner as a decision maker, but adds a new mission and a new role for planners as a persuader and intermediator. Though the planning process can take a bit longer, implementation will be guaranteed. There will also be several feedback on decision and all these feedback lead to healthy decision making.

The second important factor is the monitoring process. Monitoring can be completed easily with the help of participation. Here, participation is related to the acts of several public institutions and landowners that control and direct the land development programs.

Monitoring processes are mostly used for the control of the sustainability indicators that have to be included into the planning process.

The sustainability indicators can be added to the process at different plan levels such as at the Environmental Order Plan level, Master Development Plan level, and at the Implementation Plan level. These indicators can be related to the following sustainability criteria:

At Environmental Order Plan Level (scale of 1/50,000)

- Conservation of natural and cultural heritage,
- Improvement of transportation,
- Resource saving (reuse of technologies and recycling),
- Conservation of agricultural areas,
- Qualify services,
- Satisfying all actors,

- Strengthening local economy,
- Generating employment opportunities for the local economy,
- Maintain infrastructure standards,
- Fresh water supply,
- Waste disposal.

At Master Development Plan and Implementation Plan levels (scale of 1/5000 and 1/1000)

- Mass transit opportunities,
- Less noise pollution,
- Protection of cultural and natural assets,
- Reusing,
- Public spaces,
- Contaminant minimization,
- Sanitation facilities,
- Open areas,
- Improvement of living conditions,
- Energy and water saving,
- Accessibility,
- Establishment of effective infrastructure,
- Livable environments and neighborhoods,
- Qualification and adequacy of services
- Interaction with nearby settlements
- Energy saving
- Adaption of local design styles

With several interventions to the Turkish planning process, it has a potential to adapt sustainable type of urban planning. These interventions are related to the variables of citizen participation, monitoring, and sustainability indicators as these are the most common and important determinants of sustainable urban planning. Sustainable urban planning is not a new paradigm. It is a broader phenomenon that all types of planning approaches and planning processes have to adapt.

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