



Planning of Land-use Along with Environmental Sustainability: A Case Study of the District 22 Tehran, Iran

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Abstract

Currently, developing countries challenge many problems: increase in population rate, migration to cities and urbanization growth rate caused increase in population density of cities. Natural consequences of such process are lack of proper land for settlement and pressure on limited environmental resources. Accordingly, inappropriate and unplanned land-use and changes disregarding environmental capacities caused elimination of environmental balance and challenged urban sustainable development; so that, urban environmental sustainability became the most important concern of urban managers and planners. The current study aims to evaluate existing land-uses by geographical information system and analyzing land-use maps of the district 22, Tehran. Obtained results can show inconsistency of existing land-uses with primary principles of land-use planning and environmental inability and urban infrastructures in response to population needs.

Keywords: Planning, land-use, environment.

Introduction

Clearly, space and land-use need to be accurately planned as a public, vital resource and wealth. Decision making on how to use lands is not easily revisable due to sustainable, long term and expensive effects. As sciences advance and new methods emerge, new tools and technologies are provided for urban planners to increase their authority, to analyze and process effective elements more easily, faster and more accurately and on the other side decrease risks of adopted decisions using these tools and technologies while raising knowledge related to nature of components and increasing data in different areas influencing on urban planning elements. On the other side, growth and expansion of thoughts and efforts related to environmental protection during recent decades throughout the world emphasize that policies and development of plans and executive efforts while disregarding this can be followed by harmful consequences¹. In this regard, it is better to conduct studies before any major investments on development to prevent regression of natural environment; technically speaking, it is better to determine capacity and ability of the nature and according to them specify performance relations within each area or district.

Urban land-use planning is to organize activities of the city along with certain goals and plays an important deterministic role in urban development. A major goal of urban land-use planning is environmental goals which are defined in preventing land degradation, maintaining the links between city and nature and expanding landscapes. This goal can be sought in ecological view of land-use planning where there is a link between

physical planning, environmental planning, and urban economic plan. Ecological planning allows the interaction between physical planning in which structure and performance are important and environmental planning in which protection of environmental resources is emphasized². In this regard, the best approach to follow ecological goals and reach an optimal pattern for land-use planning is an approach which examines effects of a land-use on surroundings and determines their types considering limitations specified for land-uses and provides a list of land-uses which are allowed to be established in a region. Since costs of control and elimination of environmental disadvantages are high, land-use planning can act along with environmental conservation to prevent irreversible effects which may be imposed by land-use inconsistencies on societies. Thus, spatial organization of urban activities and performances need to be both interrelated and logically related to environment. The current study attempts to follow this approach so that land-use planning of this region becomes flexible, becomes consistent with existing conditions, and decreases environmental damages. Traditional land-use method which is inflexible needs to be excluded so that obtained results become realistic. Since the district 22 of Tehran is mainly assigned to deployment of land-uses in large-scale due to its location within metropolitan Tehran and diverse physical properties of lands and life in this district allows maximum use of clean climate and proximity to nature for people due to its particular geographical position, some conditions need to be provided to meet requirements of residents and users considering great population which will use this district in the future. Accordingly, the current study aims to develop plans in order to organize activity, service elements, and population distribution within district 22. This is done by

balancing three elements: human, space and activity. If these three elements mix equivalently and harmoniously in planning, identification of balancing mechanisms and their improvement can accelerate changes within the district.

Study Background: Currently, fast growth of urbanization has increased significance of urban environment quality. Many consider environmental degradation is because of urban unsustainable development³. In theories of urban sustainable development, urban planning has shifted to spatial strategies. This planning (despite physical planning) demands attention to relationship between economic, social, cultural, environmental, political, and administrative dynamic structures within and among urban districts⁴. Plans are tools of different levels in spatial planning system⁵ core of which is spatial distribution of land-use, particularly in urban planning⁶. Significance of land-use planning is that as land-uses are located and properly established in spatial system of the city and suburbs, a part of undesired responses of environment decreases and prevents many environmental problems⁷. Researches on life quality in 215 cities throughout the world show that large cities like Vancouver (Canada), Hanalolo (America), London (Great Britain) are among top 50 cities with ranks 4, 28 and 38; while, Tehran is 178 in this ranking⁸. On the other hand, environment quality index of Tehran has been calculated as 53.3 and 59.5 percent of optimal quality during 2001 and 2009^{9,10}. Comparing the results of this study suggest that over several decades since provision of urban land-use planning projects in Iran, Iran and particularly Tehran have less environmental quality than most cities around the world; while frontier countries such as Canada currently review and modify plans and projects of land-use planning using instructions including environmental regulations of land-use distributions. Therefore, a most important reason of environmental quality deficit in Iranian cities seems to be inadequate and impractical environmental regulations of urban land-use distributions. That is, there is a series of environmental regulations which contribute to improve environmental quality by determining how to use nature (directly) and human-made complexes (indirectly). Using comparative analysis, Salehi¹¹ evaluated urban planning regulations of Tehran as inefficient. Tabibian and Faryadi⁹ developed sustainable planning regulations of Iranian cities by comparative analysis; but he did not emphasized on urban land-use planning projects as the source of considered regulations.

Accordingly, the main question is what environmental regulations of urban land-use distribution need to be used for more sustainable planning of Iranian cities. The goal is to analyze environmental regulations of land-use distribution used in Iran in terms of adequacy and practicality compared to similar regulations in America, Great Britain, and Canada which according to universal studies of large cities have more environmental quality than Tehran. Adequacy means to use all regulations allow access to higher quality environment by determining how to use nature and human-made complexes. Practicality means to use quantitative regulations; that is

regulations which determine accuracy and, if possible, quantitative sizes applicable in considered scale. The current study implies that regulations used for land-use planning of Iranian cities have some shortcomings to direct cities toward sustainability; on the contrary, they have many abilities to complete and more efficiency.

Determining the Status of Environmental Regulations: Initially, plans and projects of spatial planning systems of studied countries were examined to determine the status of environmental regulations of urban land-use distribution in their spatial hierarchy. To do this comparison, projects and plans of spatial planning system of studied countries were classified based on their content and generality of environmental regulations of land-use distribution used for their preparation in three national, regional and local levels. National plans and projects are developed for all over the country or some regions in order to realize and meet general policies of the government. In fact, they provide both general and special policies. National plans and projects also provide the framework for developing plans and projects of lower levels in spatial planning system¹². Regional plans and projects provide strategies for regions of the country or some parts¹³. These offer general important orientations for main fields of urban and regional development¹⁴. The orientations are consistent with national policies and achieve dimensions of sustainability charter including economics, social justice and environment¹⁵.

Local plans and projects are developed within policies provided through higher-level plans and projects at least for a local government (municipality)¹⁵. Local plans and projects develop the policy-making framework to control development¹³. The most important tasks of local plans and projects include mixing national and regional policies; determining general strategies of development; providing recommendations on supervision of development; identifying areas of the city which need interventions by authorities; policy making on urban regions; forming coordinating committees with public institutions; forming planning institutions to develop plans of action¹⁴.

The four countries, America, Britain, Canada and Iran used environmental regulations of urban land-use distribution to develop plans and projects in different levels of spatial planning system. Additionally, generality of used environmental regulations show a hierarchical relationship between national, regional, and local plans and projects of spatial planning system in these four countries. Local plans and projects can be also categorized in sublevels among which there is a hierarchical relationship. Detailed project of American land-use planning, British continuous development project, Canadian and Iranian detailed project are the highest-rank local plans and projects of spatial planning system. According to the goal of current study to extract environmental regulations of urban land-use distributions, it is expected that regulations considered in the first level of local projects (i.e. detailed projects) focus on spatial planning system of studied countries. Because

environmental regulations used for regional plans and projects of spatial planning system focuses on major land-use distribution. These regulations allocate lands to urban development as a major land-use and do not belong to urban land-use distributions. Therefore, considered regulations are expected to be extracted from local plans and projects based on hierarchical relationship between plans and projects of planning system. As scale of local plan and project decreases, however, focus of environmental regulations considered by local plans and projects shifts from planning to urban design. Therefore, the detailed project is evaluated as the first level of local plans of spatial planning system to extract content of considered regulations in studied countries; at the following, their content is introduced in comparison with other local plans and projects. The detailed project of American land-use planning locates activity and residential centers, open urban spaces, transportation system and urban facilities; but projects of small areas plan urban elements by representing more details based on strategies provided through detailed project of land-use planning¹⁵. British continuous development project has two parts; the first involves strategic policies on development including allocation of lands to industrial, commercial, service, residential, and protective development; the second part includes located suggestions for land development in the framework of strategic policies of the first part; whereas, content of planning supplementary strategy and plan of action considers quality of actions for special kind of development, restoration, and renovation^{12,16}. Canadian detailed project determines type of land-use and represents location of major land-use distributions including commercial, industrial and residential. It also provides main routes of transportation and a general image of installations, facilities, and public requirements; but, the special region project is developed in the form of further detailed project for special economic, cultural, historical and natural Canadian regions. The special region project distributes land-uses by imposing more focus on their performance characteristics. It also plans buildings, sidewalks, communicational paths and transportation related facilities by more accuracy. The restoration project is also developed in the form of further detailed project to restore, renovate and improve environmental quality in three types of Canadian regions (highly density and declining regions, low density suburbs, and regions occupied by heavy industries and then abandoned)¹³. Iranian detailed project determines how to use land and zoning residential, industrial, commercial, administrative and agricultural areas; location of urban installations and facilities, urban public requirements, total communicational lines and end line centers, airport and ports; and essential levels to establish public installations and facilities, restoration and renovation regions and their related priorities. On the contrary, the detailed project represents how to use urban lands in different districts, accurate location and area of the land, exact situation of traffic network based on total measures and regulations of detailed project of the city. The detailed project includes restoration, renovation, optimization and repairing projects of areas and preparation project of new developments in cities¹⁷.

Measures of Locating in Urban Land-use Planning: Undoubtedly, it is difficult to determine exact principles of locating different activities in the city due to its nature for urban problems. The main objective in urban land-use planning actions is to provide social and economic welfare for citizens. The measures of locating along this objective include:

Consistency: One of the main goals of urban land-use planning is to locate properly land-uses and separate inconsistent land-uses. For example, land-uses which produce pollutions such as smoke, odor and noise are tried to be established away from residential, cultural and social regions. In contrast, complementary activities are established beside each other. Servicing uses are specified according to adjacency priorities. For example, regulations related to residential, servicing, non-physical (landscapes, leisure like parks), health and medical, educational and commercial land-uses are adjacency prioritized¹⁸.

Welfare: Time and space are important factors in measuring human welfare; for, providing them may facilitate access to urban services as an important objective of urban planning¹⁸.

Efficiency: Urban land pricing pattern is a major factor to determine location of land-uses in the cities. Thus, a land-use is economically a function of land price and its costs which are determined based on cost and benefit analysis¹⁸.

Desirability: Desirability of urban land-use planning means efforts to maintain natural factors in order to create desirable landscapes, how to form routes, buildings and urban area¹⁸.

Health: To impose proper environmental and health regulations to decrease pollution from different land-uses and meet health standards to provide healthy environment are among objectives of locating land-uses¹⁸.

Security Standards: This generally aims to protect city against potential risks including natural risks such as flood, earthquake, hurricanes and volcanoes and unnatural risks such as adjacent industrial and residential regions deviating consistency and other risks which weaken security level of the city¹⁸.

Land-use and Environmental Sustainability: Environmental measures can bring major changes in construct, texture, representation and quality of urban areas. Considering environmental measures in urban planning also improves urbanization knowledge. Environment aims to establish humanistic cities designed and built for life, work, and comfort and finally represent human potentials; basically, such objectives cannot conflict urban planning objectives. Such a city needs to have following characteristics: i. Allows work, life, leisure and receiving essential services; ii. Prevents environmental problems through environmental design, if possible.

In environmental design –as other technical fields- environment acts in two inter-section and section aspects. In terms of inter-section, this is environmental thought that flows in other sections whereby influences on design current. This effectiveness lacks spatial requirements; for example, no space is allocated to environmental land-use when environment views flow in the process of locating urban land-uses and environments is only reflected in land-use distribution pattern¹⁹.

Undoubtedly, imposing environmental views on urban design considerably decreases environmental problems of the cities and accordingly adds to biological quality of urban areas. However, extreme optimism should be avoided; because there are certain boundaries for capabilities of knowledge and environmental engineering as any other technical profession. Not all urban problems can be expected to be solved by solely interference of environmental measures in urban design. In terms of environmental view, the most important step in urban design is to distribute urban land-uses; because many environmental problems can be avoided only through properly locating land-uses, setting consistent land-uses in a certain space and separating opponent land-uses. Therefore, it is critically essential to identify environmental characteristics of each land-use; that is, it should be specified which land-uses influence their surrounding and how and in what extent. Once they are identified, it will not be difficult to set land-uses. Under this condition as noted before- considering environmental measures does not cause a space called as environmental land-use; instead, this is only environmental thought reflected in setting land-uses¹⁹.

Three points need to be noted during distribution of land-uses: i. Determine most appropriate location for land-uses involved in planning (sectional land-uses), ii. How to spatially organize and interrelate land-uses, iii. Environmental effects resulted from establishing land-uses both on the environment and on each other.

Based on this theory, the most appropriate location to establish sectional land-uses can be selected when the most appropriate place to establish a kind of spatial land-use of which minimum pressure is imposed on the environment, land-use itself and other land-uses. On the other hand, major opportunities and challenges of the world are increasingly reflected in the cities and fast growth of urbanization during recent decades and expansion of industrial activities decrease urban infrastructures and on the contrary increase environmental wastes. Those cities which have grown fast are currently challenging various environmental crisis due to degradation of natural environment and metropolitan cities of Iran are clear examples of them²⁰. To achieve sustainability, protect and improve environmental resources such as clean air, forests, earth and genetic diversity it is essential to make critically important changes in policies in order to make sure that developing countries are able to reach minimum levels of consumption while high level of consumption still remains in industrial countries and to make

sure that environment of developing countries is minimally damaged despite the problem of population growing in these countries. This is an important and complicated problem and moral responsibility for future generations makes it necessary to solve the problem²¹. Application of environmental indicators in sustainable development can be summarized as follows: i. Following environmental advancements (monitoring environment and changes over time), ii. Modifying and improving environmental conditions and considering sectional strategies. ii. Modifying and improving environmental conditions and considering economic strategies.

Therefore, environmental indicators are tools to measure environmental performances and sensitize the State toward public thoughts²². In terms of environment, the best place to establish a land-use is where imposes minimum load and pressure on the environment and land-use itself tolerates the least damage or pressure from environmental changes due to its establishment in the considered place. Once a land-use is established in a special place, the most important problem is to identify environmental effects and consequences resulted from land-use establishment.

Spatial Situation of Studied Area: The studied area is the region 1 of the district 22, Tehran, Iran. The district 22 is located within eastern longitudes 51° 5' 100" to 51° 2' 40" and northern latitudes 35° 57' 19" to 35° 32' 16" in the western north of Tehran and downstream basin of Kan River and Vardij. The district is limited northward to central Alborz Mountains, eastward to Kan River, southward to Tehran-Karaj freeway and westward to Vardavard jungles. The district 22 is adjacent to districts 5 and 21 of Tehran (figure 1).

Accordingly, the district 22 of Tehran is northward extended to extreme southern slopes of Alborz to 1800m in height. Alborz Mountains which attracted the city during recent 30 years surrounded geographical space of Tehran like a sigmoid wall and created a strict barrier against physical expansion of the city from a region with 1800m in height due to high steep and mountain bottlenecks.

The region 1 of the district 22 is extended northward to top of Hemmat highway and heights, southward to the region between Kan River, Sadra Bolivar, north side of Amir Kabir Square and Amir Kabir Bolivar to Kaj Bolivar, eastward to Kan River and Olympic Square to Olympic Village and westward to Kaj Bolivar intersecting Amir Kabir Bolivar and north of Hemmat highway (figure 2).

Research Questions: i. Whether are land-uses of the district 22, Tehran, located according to planning principles? ii. Whether land-uses are per capita distributed in relation to user population? iii. Whether are environmental sustainability criteria meet in land-use distribution of the District 22?

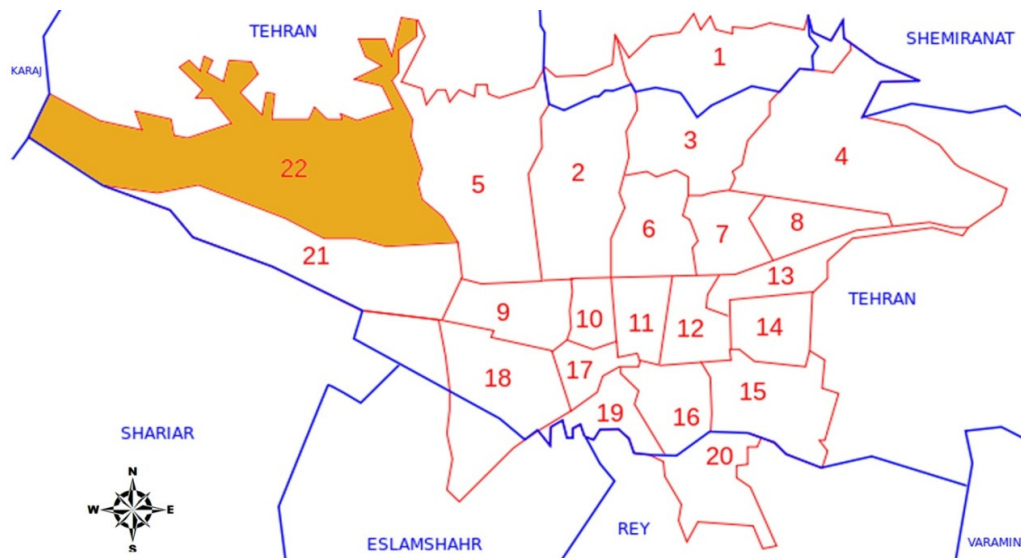


Figure-1
Location of the district 22, Tehran

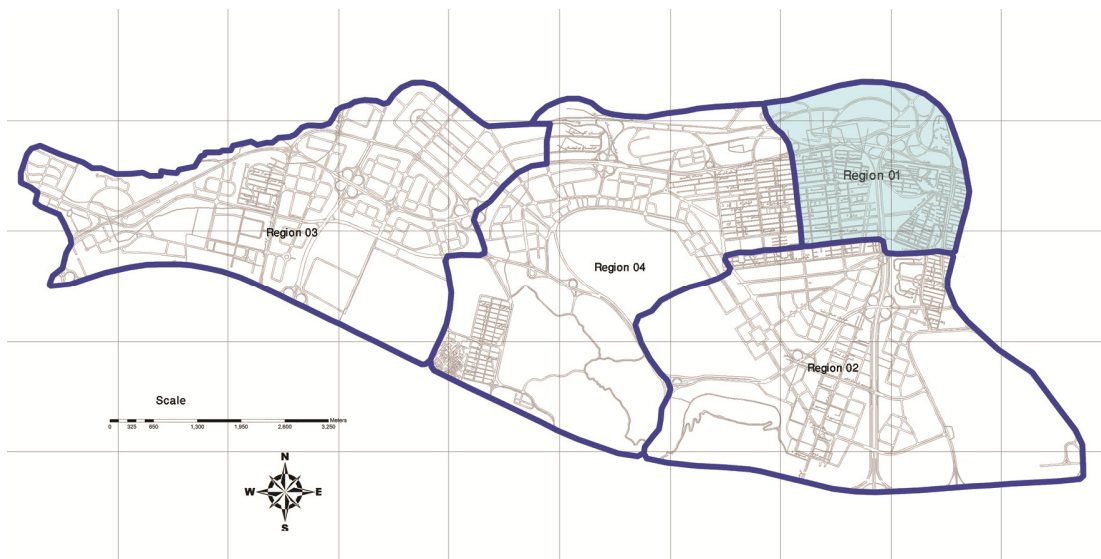


Figure-2
Locating the region 1 in the district 22, Tehran, Iran

Methodology

The current study was conducted by a qualitative method in a case study form; because, the present study evaluates the region 1 of the district 22, Tehran, in terms of locating land-uses based on planning principles and its effect on maintaining and sustainability of environment. Information required for the study were collected by observation, study, maps, land and aerial pictures, statistics, tables, conferences and internet information. Data were analyzed using Geographical Information System (GIS) to evaluate related questions. GIS is a highly capable instrument to plan and manage urban land-uses and properly

locates them by different capabilities, fast and accurate analyses and processes. The present study used GIS to examine consistency of existing land-uses.

Results and Discussion

A complementary method to analyze and evaluate different land-uses in the city along with or parallel to quantitative evaluation is qualitative analysis of land-uses which is conducted to make sure of their logical establishment and meet required proportions. Qualitative evaluation of the district 22 examines their relation to each other and to surrounding area

based on four common matrices of consistency and desirability whereby qualitative characteristics of land-uses in studied area are measured in terms of consistency and desirability in relation to other land-uses in the form of matrix tables.

Evaluating Consistency of Land-uses: To determine consistency of land-uses within the area, characteristics and requirements of the land-uses are initially specified. Then, agreements and disagreements are determined by comparing these characteristics with existing condition of the area. Clearly, those land-uses which influence each other needs to be consistent in terms of compatibility and do not disturb other land-use activities.

Neighborhood Analysis: To analyze neighborhood using spatial analyst expansion, Orid and Tin layers are usually used. It means, considered layer is initially transformed to an Orid and Tin layer by described methods and then analytic operation are conducted on the layers. Grid is a layer the smallest members of which are specified as cells. These layers are generally generated from a picture, including satellite or aerial pictures. Each cell of these layers has characteristic information²³. According to neighborhood analysis which uses Orid and Tin layers, given numerical value for considered land-uses and their consistency are rated by five consistency levels described above. According to conducted studies in the region 1 of the district 22, functional compatibility of major land-uses within the region is analyzed against each other by consistency matrix. Samples of the analysis which is based on five consistency ranges were selected directly from the portion of above land-use in total land-uses of the region. Through this evaluation method, a consistency matrix was separately developed for all major land-uses of the region 1 in order to increase accuracy of the analysis. Then by considering studied indicators of the matrix including land sizes, land slope, communicational network, installations etc. the consistency quality scored 1-5 for each land-use (table 1). This method assigned 5 to completely consistent, 4 to relatively consistent, 3 to no difference, 2 to relatively inconsistent and 1 to completely inconsistent land-uses. Accordingly, 13 consistency matrices were developed for 13 major land-uses of the region 1 and explaining land-use quality. Considering limitations and avoiding writing length, however, only results of 13 matrices are provided in the table 2. This matrix tests consistency of the region 1 land-uses against each other. Interference or consistency of land-uses is tested in adjacency of other areas in addition to consistency of each land-use based on consistency measures.

Consistency Matrix: Land-uses may have following conditions in terms of consistency: i. they may be completely consistent; that is, they may have common characteristics and their activities may be completely matched, such as two low dense house; ii. they may be relatively consistent; so that they are generally related to a class but have differences in details, such as low dense house and middle dense house; iii. no difference; that is, each has its own characteristics and their adjacency or

not may cause no particular trouble; iv. relatively inconsistent; that is, inconsistency of two land-uses is more than their consistency; v. completely inconsistent; that is, characteristics of two land-uses are not at all consistent and they are conflicting; such as a low dense residential unit and a large industrial unit). To determine consistency and inconsistency of two land-uses, different characteristics and requirements of each land-use need to be considered for conducting its ordinary activity and agreements and disagreements are to be specified by comparing these characteristics (table 1 and figure 3).

Table-1
Scores of consistency matrix

5	Fully Consistent
4	Relatively Consistent
3	Neutral
2	Relatively Consistent
1	Inconsistent

In the following, raised questions of the study are answered. First, are land-uses of the district 22 located according to planning principles? Some planning and urban design principles to achieve urban sustainability include nature-coordinated design, maintaining and restoring natural environment, spatial and temporal organization of urban areas to improve senses, aesthetics, readability, and imaginary of human beings. Obviously, coordination with nature is one of these principles. An important problem in this region is slope disregarding which not only disturbs environmental balance but also involves considerable costs (figure 4).

According to conducted studies, construction within this district is to some extent consistent with this factor. The other factor is a spatial discipline and hierarchy; this spatial discipline can be found in both space hierarchy and roads. This is met on spaces; while, Hemmat highway which passes through this area not only disturbs this discipline but also causes many environmental problems. It can be concluded that this locating considers environmental characteristics for construction; but it does not consider local integration and attachment of people to this area. This causes social and cultural disintegration.

The second question is whether land-uses per capita are distributed in relation to user population. Urban land-use planning is the backbone and core of urban planning. Through this process, urban interrelated members interact if quantitative and qualitative standards are met. These standards and measures are considered as act with judgment criterion through urban land-use planning process. Undoubtedly, population is the most important factor determining urban development. Land allocation from each urban land-use to citizens is considered as urban land-uses per capita as the most important measurable indicator for urban land-use planning. The raised question evaluates this indicator in relation to major land-uses forming the region 1 of the district 22 regarding existing population and compares it with urban standards. Results from quantitative

analysis of per capita urban land-uses for the region 1 show that most shortcomings are due to lack of health, economic, cultural, sport and public services. Therefore, the results indicate that above land-uses and population of studied area are disproportionate.

The third question is whether environmental sustainability measures are met in distributing land-uses within the district 22. Evaluation of qualitative and optimal indicators of locating such as desirability, capacity, consistency and dependence are considered as a complementary method for quantitative evaluation in relation to major urban land-uses which is usually conducted to make sure that land-uses are logically established and essential proportions are met.

These indicators cannot be easily evaluated due to qualitative characteristics. These matrices which are in fact considered as instruments to measure qualitative characteristics of land-uses are used by sub-indicators for each land-use. Results from evaluating qualitative characteristics of 13 land-uses within the region 1 of the district 22, Tehran, of which only consistency and desirability matrices are examined due to equal environmental importance show that landscape land-use is the only land-use with high consistency (figure 5) and the rest, particularly residential land-uses forming majority of the land-uses in this region, are moderately consistent. This is true for desirability. The result indicates that land-uses are mostly under moderate condition in terms of consistency and desirability. This means those measures which cause environmental sustainability has not been completely met in land-use planning.

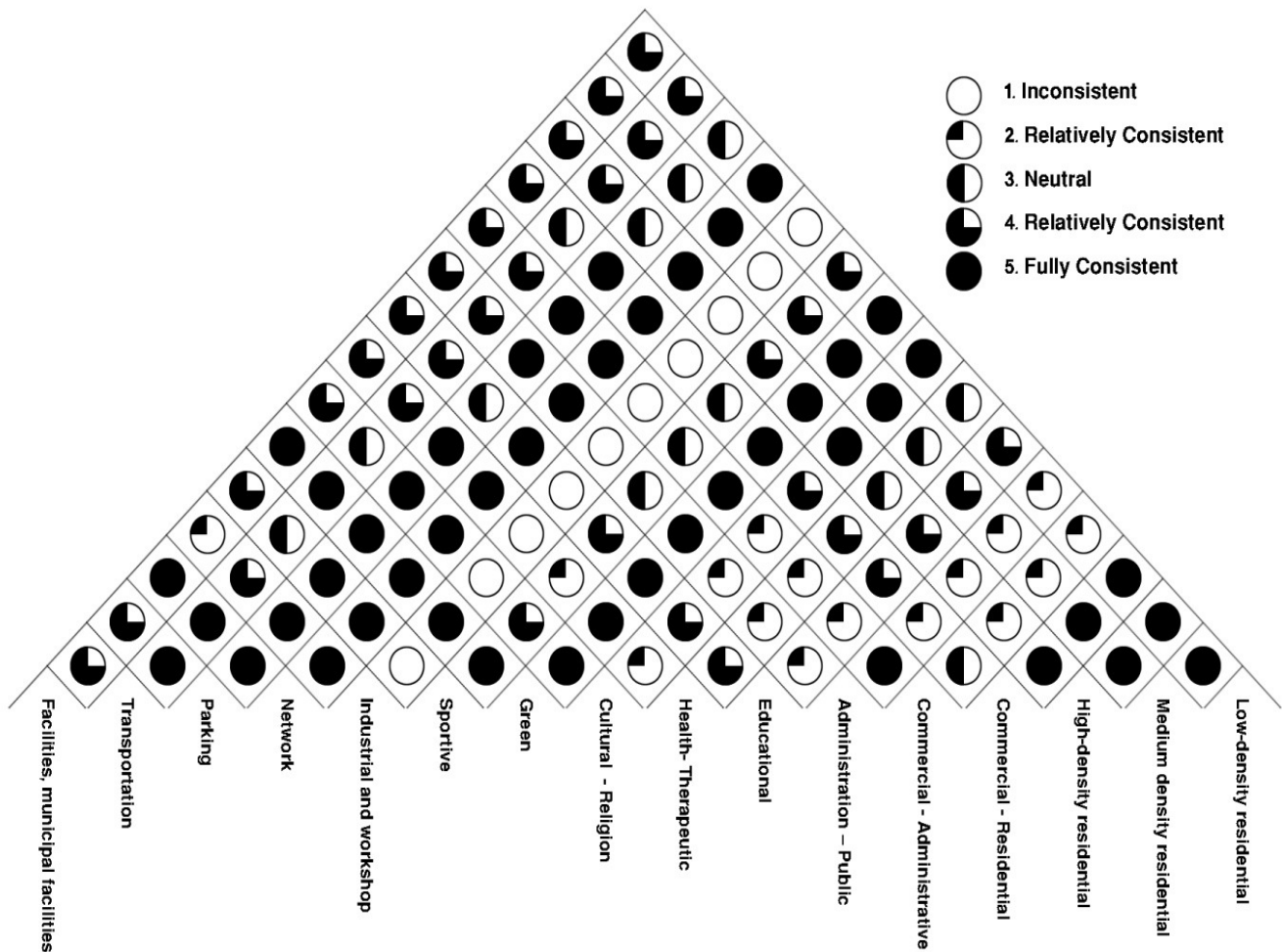


Figure-3
 Consistency matrix of urban land-uses

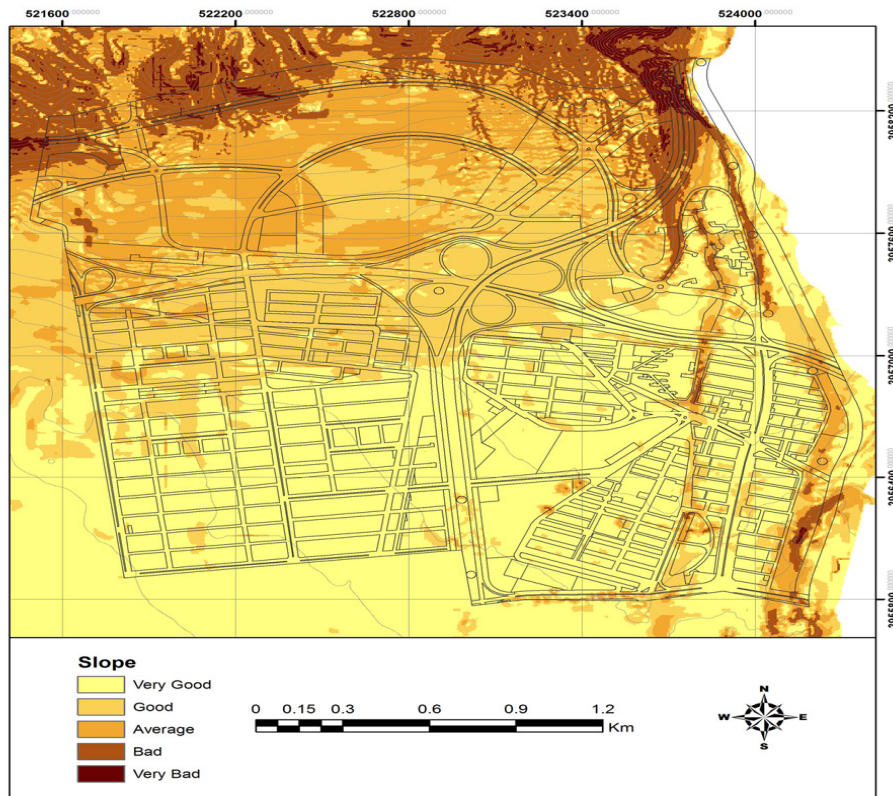


Figure-4
Slope of the studied district



Figure-5
Consistency and Desirability Matrix

Conclusion

Considering environmental planning for properly sustainable use of total facilities in the land and preventing environmental crisis is a new subject interested by state managers during recent years. Characteristics of modern urban societies caused human and environmental inconstancy (natural and artificial environment); the problem which urban planners are currently facing is how to impose urban sustainable policies and plans and represent features of this sustainability. To achieve such conditions needs to direct goals and executive plans, to modify situation of structures and managements related to managing cities. Protecting and improving urban environment is possible by environmental responsibility and guarantee through decreasing reliance on natural resources, minimizing air pollution, avoidance from earth pollution followed by energy productivity, increasing biological diversity and reusing or clearing burned lands which cause life quality improvement. Environmental problems are the most essential problems of modern cities resulted by their conflict with natural environment; for, urban development is along with dominance of buildings, industries, transportation and economic activities on natural areas. This dominance has gradually changed to dominance of the city on the nature creating extensive urban pollutions. This process results in imbalance and inconsistency of human and nature and disturbed ecosystem relations. As cities expand, features and values of natural environment are exposed to more destruction and erosion, citizens are deprived from natural attractions, and psychological and social problems are increased. Concentrating population in cities and marginal regions and disproportionate growth of services and urban infrastructures, particularly in developing countries, transformed urban regions to unhealthy and polluted places and faced them with problems such as sewage and waste disposal, providing healthy water etc.

Environmental problems are the most essential problems of modern cities resulted from their conflict by natural environment. The district 22 will be extensively used by people due to its special location, i.e. locating in the west of Tehran, as well as its wonderful environmental potentials and the landscape considered in the detailed project of Tehran. Tangible consequence of such extensive use is physical development of the region and destructing gardens and agricultural lands.

Research Recommendations: The followings are recommendations from conducted studies: i. To organize important and major polluting infrastructures including military centers and those regions which directly pour their sewage into rivers, ii. To plan changes in inconsistent and undesirable land-uses of the region for environmental sustainability, iii. To prevent environmental pollutions, it is essential to conduct constructional regulations related to establishment of constructional density and housing typology, iv. To establish integrated urban environmental management and develop detailed environmental projects, v. To improve urban

environmental quality by organizing and developing landscapes and parks, vi. To prepare urban sustainable development model by environmental approach and by participation of urban strategic managements, vii. To optimize management and recycling wastes, particularly risky wastes and constructional trash, viii. To institute environmental management unit in the municipality and prepare environmental information bank, ix. To develop essential policies for public participation as the major factor to maintain urban environment, x. To organize and process activities and transfer polluting centers out of the area, xi. To prevent converting and separating gardens and agricultural lands adjacent to smaller pieces which gradually disturb freshness and greenness of the region and to limit constructions in certain areas, xii. Considering that dominant role of the region 1 is residential, establishing public transportation systems can considerably influence on environmental conditions.

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