

## **Problem Solving the Principle of Equality in the Distribution of Urban Services Based on Judicial Procedure (Case study: Votes of Administrative Court of Justice)**

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**(Review)**

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### **Extended Abstract**

**Background and Purpose:** Today, due to the failure of the centralized government's functions in the proper management of public affairs, particularly in the cities, special attention is paid to the issue of decentralization as a suitable solution and as one of the important issues in modern public management at a large level and by shrinking the power of the central government and national policies, more accountable and inclusive governance is created through the transfer of powers and responsibilities to local units. It also increases decentralization, effectiveness in the public service sector and service distribution. Therefore, the purpose of this research is to review the votes of the Administrative Court of Justice (ACJ) with the components related to the principle of equality in the distribution of public services for the benefit of citizens to assess the approach of the Court in this area.

**Materials and Methods:** The present article is in the field of distribution of public services and urban management in the judicial procedure by referring to written documents and analysis of lawsuits issued by the branches and the General Assembly of the Court of Administrative Justice by descriptive-analytical method and field studies with a practical purpose and this type of research is to fill the legal gap in the Iranian Constitution in order not to mention the issue of equality among the principles related to local decentralization with the model of referring to the votes of the ACJ to provide better public services in society. In this regard, researchers collected information by studying over five hundred samples of votes issued by ACJ, which finally in the text of the article referred to the invoked votes in the field of civil law. The statistical population of the study shows the approach of the judges of the ACJ regarding the principle of equality with the concepts of the local decentralization system and by stratified random sampling method and examining the components related to the principle of equality, such as equality before the law, permissible discrimination, property rights of individuals and legal protection of citizens, as research data and their compliance with the votes issued by the ACJ has been analyzed.

**Findings and Discussion:** In the Constitution of the Islamic Republic of Iran, there is no mention the issue of equality among the principles related to decentralization. Of course, it cannot be denied that the Iranian Constitution in other places such as the introduction and in some of the principles of the constitution (such as the 19th, 20th, paragraphs 3, 8, 9, 14, 15 of the third principle) emphatically, although in its own way, addressed this principle and supported it. The principle of equality, which can be considered as one of the valuable norms of the constitution, in fact places all Iranians, regardless of race and language, under the rule of equal law, equal proceedings and equal public administration. On the other hand, from the perspective of the relationship between the principle of equality and decentralization issues, in order to fill legal gaps and resort to administrative jurisprudence with the existing capacities of ACJ as the most important way to overcome these obstacles and achieving the desired local decentralization system to amend the law has been examined in terms of the criteria provided by the ACJ on the principle of equality of local units. Also, in terms of subject matter, the present study, compared to other related studies,, deals in detail with the decisions issued by the ACJ in terms of the

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intersection of the principle of equality with local decentralization, and on the other hand, are used with concepts and components such as property rights of individuals, elimination of unfair discrimination, etc., which are in line with the principle of Equality as a suitable tool at the disposal of the ACJ in order to limit the local decentralization system, which led to the difference between the present study and the conducted researches.

**Conclusion:** The result of the research by examining the decisions of the ACJ is that the principle of equality was not explicitly invoked, but by considering the votes issued with concepts and components such as property rights of individuals, removing unfair discrimination, etc., which are in line with the principle of equality, it is possible to search for the traces of the said principle and the court has a positive approach towards citizens' equal use of city services and has prevented various institutions from discriminating against citizens' use of public services in local units.; Therefore, a detailed acquaintance with the limits and loopholes of the principle of equality and the concepts related to it, can provide its existential necessity for a principled decentralization and prevent the threats caused by it.

**Keywords:** Administrative Court of Justice (ACJ), Decentralization, Local center, Principle of equality.

## Urbanization of Society-Nature Relations in the Anthropocene Epoch; Towards the Political Ecology of Cyborg Cities

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(Review)

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### Extended Abstract

**Background and Purpose:** One of the main drivers in the Anthropocene epoch is the increasing expansion of urban areas, which, especially after the Industrial Revolution, has played a pivotal and very significant role in transformations of nature. The aim of this article is to answer this question that, the fundamental changes in the society-nature relations via urban dynamics in the Anthropocene epoch what effects have had on the socio-ecological processes of geographical environments and why are we still facing unsustainable, and uneven metabolisms?

**Materials and Methods:** The main presumption is that understanding the nature of problems related to society-nature relations and achieving better conditions needs more than technical, technological, and managerial instruments; because ideas and actions about the environment, population, and resources are not neutral, and they operate in the context of the diverse structures of political economy and a wide network of agents, and actors. So, this article, based on a critical analysis of the approaches in this field, tries to shift attention to the ideas and actions that are more efficient and effective in contemporary conditions. First of all, the new perspectives on the society-nature relation in the Anthropocene epoch have been reviewed. Then, two main currents of thought on the society-nature relations have been critically analyzed through urban dynamics. Finally, based on the already discussions, the idea of “Political Ecology of Cyborg Cities” has been discussed as a more realistic and effective policy approach for confronting the issues and problems of the society-nature interactions in the contemporary networked and hybrid world.

**Findings and Discussion:** The findings of this article show that over the last two decades, not only the subject of Anthropocene has gone beyond the natural sciences (such as Earth System Science, Biology, Geology) and its widespread promotion among other sciences, including philosophy, geography, history, sociology, and law via shifting to the urbanization of society-nature relations, but also represents a discursive turn from classical ecological approaches to the urban political ecology and cyborg cities. One of the implications of such a scientific and discursive turn is that the view of “nature for humankind” over the centuries has led to the continuation and reproduction of a set of ecological relationships and socio-natural metabolisms that has acted for humankind as well as nature in an unsustainable, injustice, harmful and destructive way. Hence, nowadays, the focal ecological concern is dealing with this sort of turn from previous approaches and then presenting the discourses and actions that can change our attitudes, value systems, bioethics, and trying to achieve philosophies and actions which be less destructive in the “Urban Anthropocene Epoch”.

**Conclusion:** The most important result of this research would be a new approach to hybridity of society-nature in a cyborg metabolism, which indicates conceptual and theoretical boundaries that have dominated the discourse of urban ecology over the past century, are disappearing in an “Urban Age”. Such a transformation has led us to seek more efficient ideas for understanding the complexities of today's urban world and its interactions with nature; A view that tries to put the society-nature relationship on the agenda which regard that interactions not as two separate realms but as a constructive form of urban metabolism in an intertwined network of agents and actors.

**Keywords:** Urbanization, Society-Nature, Anthropocene, Political Ecology, Cyborg Cities.

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## Spatial Analysis of Vulnerability of Urban Land uses Against Floods (Case study: Raaz City, Northern Khorasan province)

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### Extended Abstract

**Background and objective:** Floods are considered as one of the most important hazards causing a lot of damage to urban areas. Due to its increasing frequency in recent years, urban flooding is one of the most threatening natural hazards in urban areas around the world. To prevent floods and reduce the consequences, city managers should warn the residents of high-risk areas by predicting the features of rainfall such as peak intensity, arrival time, and duration, along with taking emergency measures while predicting floods. Since urban flood risk mapping has a decisive role in urban management and planning, especially in reducing flood damage, it is necessary for city planners and urban planners, geologists, and geographers to examine the causes and factors related to these events for the purpose of dealing with such natural disasters in urban areas and predicting the necessary solutions to reduce their effects. The present study aims to analyze vulnerable urban areas spatially against floods in the city under study, and provide solutions to reduce vulnerability while determining the areas at risk.

**Materials and Methods:** In this descriptive and analytical study, library studies and questionnaire were used for collecting the related information. The statistical population included the experts related to urban planning and natural resources, water and sewage, environment, as well as other official institutions related to Raaz city. To avoid bias, the experts' opinions were considered for determining and weighing the criteria. Finally, 40 people were selected based on a purposive sampling method. GIS software and AHP hierarchical analysis were used for data analysis. After determining the weights and calculating the reliability rate of the indicators and its confirmation coefficient, vulnerable areas were prioritized by using GIS software and the output was a map was recognized in three layers including high priority (high vulnerability), low priority (medium vulnerability) and non-priority (vulnerability) low) areas.

**Findings and Discussion:** To evaluate the vulnerable areas caused by floods in Raaz city, the variables used in this study were classified into two groups. First, the aggravating elements are the elements which increase the vulnerability of land uses against floods including the slope of the land and waterway network. Second, there are elements at risk, which are divided into basic, vital, and spatial elements. Basic elements are those which are directly exposed to flood risk. Due to the fact that flooding the bridges during heavy rains is one of the most common problems of urban runoff, urban bridges are one of the basic elements at the risk of flooding. In this research, the effective variables in vulnerability such as land use, distance from the bridge, population density, slope and density of the waterway network were considered for determining the overall weight, their prioritization based on the relationships in the 5x5 matrix to compare the variables two by two and determine the preference. The findings indicated that residential and cultural uses were built at zero distance from the river in Raaz city without observing the privacy of the river. In addition, educational, industrial, agricultural, and religious uses were built at a distance of 13 and 15 meters from the river. The use of AHP hierarchical analysis model and GIS software of the extent and areas vulnerable to floods in Raaz city showed that residential, cultural, religious, medical uses have the highest percentage of vulnerability to urban floods.

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**Conclusion:** Based on the results, 33% of the area in Raaz city is exposed to high vulnerability due to floods, the most of which is related to residential use due to the small size of the city and the lack of other uses. This vulnerability is mostly related to the slope of the land, low quality of the buildings, and lack of observing the privacy of the river as the most important reason for the vulnerability of residential use.

**Keywords:** Vulnerability, Hierarchical analysis, Urban flood, Raaz city, Natural hazards.

## Structural-Interpretive Modeling of Effective Factors on Realization Ecological City (Case study: Bojnourd City)

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### Extended Abstract

**Background and purpose:** Eco city is a city on the bases of the principles of environment friendly living, eliminating carbon waste, producing energy from renewable sources, creating an environment in the city, stimulating economic growth, reducing poverty, organizing city for higher population densities, greater efficiency and improve health. According to Register's view, the construction of Eco-city is based on the principles that human settlements can be environmentally sustainable and livable, as well as intensive, supportive of urban life, compatible with the ecological zone and ecological improvement. Thus, reducing energy consumption, promoting biological communities, health and social justice, prioritizing non-motorized transportation and helping the economy in these cities are considered. Among the issues, especially in the developments of the last decade of Bojnourd city that should be paid more attention these days due to rapid urban development, attracting a significant population of immigrants seeking the development of urban and even metropolitan services and facilities, creating disorder and inability to expand the city. The growth of the city's population, the increase in dependence and the use of private cars due to the inefficiency of public transport, the significant volume of congestion and urban traffic, the spread of various environmental pollutants such as air pollution, noise pollution and in some cases even visual pollution. The necessity and importance of paying attention to the city of Bojnourd from the perspective of the ecological city approach is due to the fact that with the continuation of this situation, the city of Bojnourd distances itself from its context and capabilities to become an ecological city and these problems intensify; In this case, planning and dealing with it will require more time and money. Therefore, by using new and world-renowned approaches in the field of sustainable urban development, this development can be made more balanced and the various dimensions of the city in the field of growth and development can be coordinated and integrated with each other. The purpose of this study is to present a structural-interpretive model based on the ecological city approach.

**Materials and Methods:** Interpretive-structural modeling is an effective and efficient method for topics in which qualitative variables at different levels of importance, interact with each other and can use this method to discover the relationships and dependencies between qualitative variables, analyzed and drawn. Numerous methods such as Delphi, nominal group method, focus groups and brainstorming, are formal methods for generating ideas and reaching consensus among experts. This research has been done in two steps: The first is the Delphi technique, which was carried out in order to identify the indigenous components of the ecological city in Bojnourd. We first discussed with the panel of experts about the general issues of Bojnourd city, the contexts and obstacles to the realization of the ecological city approach, and as a result, 16 components were obtained in 5 main categories. The second step is the process of structural-interpretive modeling, in order to implement this technique, the internal relations of the factors were identified and finally their leveling was done.

**Findings and Discussion:** A list of components mentioned by experts during the Delphi interview

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was compiled, and according to their context, they included 16 components in five environmental, economic, managerial, social, and physical contexts. After determining the relationships and levels of variables in the structural-interpretive model, the components are located at 4 levels. Components at the upper levels of the model are less effective, and as you approach the lower levels, the effectiveness of the components increases. At the lowest level of this model is the "citizenship culture and lifestyle" component. Accordingly, the model of achieving an ecological city in Bojnourd is a four-level model whose foundation begins with the culture and lifestyle of citizens, and in planning towards this goal, this component should be the focus.

**Conclusion:** The relationship between the city and the environment has hidden layers in the political, socioeconomic and even cultural contexts. Following the emergence of environmental issues in cities, the ecological attitude towards cities has expanded, in which natural capital must be preserved in a way that does not face unfavorable conditions and environmental degradation. The aim of this study was to identify the effective components on the realization of ecological city in Bojnourd in order to achieve sustainable urban development, using new methods in the field of qualitative research using Delphi interview and structural-interpretive model (ISM). According to this model, the components were classified into four levels, and component 12, i.e. "citizenship culture and lifestyle", has the most impact at the lowest level of this model. Finally, according to the analysis of penetration power and the degree of dependence in the form of MICMAC analysis, the components were located in zone two and zone three. The "job opportunities tailored to indigenous cultural and biological contexts" component is the only component of district 2, with high impact and low penetration power. The other components are located in area three, and any changes in these components will affect the other components and the feasibility system of the ecological city.

**Keywords:** Bojnourd, Eco- city, Sustainable Development, Structural-interpretive, Modeling.

## Public Open Spaces Sustainability in Informal Settlements Toward Urban Regeneration on the Basis of Inhabits Preferences (Case study: Hesar Neighborhood, Karaj city)

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### Extended Abstract

**Background and Purpose:** In recent years, attention to the informal settlements and converting the decline cycle covers are changed into a serious and central subject and organizations and scientific communities are led to struggle along with the regeneration and organization of these urban textures. In the present approach, public space quality upgrading of these neighbors has a special position because the indexes reduction of public spaces quality is one of the biggest dilemmas. This research assesses the relationship between improvement of public space sustainability criteria and the Neighborhood Urban Regeneration plan in the context of informal settlements, offering a theoretical model composed of the indexes and criteria to obtain the sustainable public open spaces in the case study.

**Materials and Methods:** The present study is a descriptive-analytical survey. In the first part of the research, researchers use library tools to study documents and theoretical foundations to explore and identify environmental quality indicators and then extract desired behavioral patterns in open spaces. The method of evaluating the questions of the questionnaire was based on a 5-point Likert scale method designed based on Cochran's formula. 368 people from a population of 9012 people in the neighborhood were selected as a statistical sample. About 60% of the respondents are men and the rest are women. The results indicate that their significant relationship between criteria and indicators located in the model of measuring public open spaces with dependent variables of environmental sustainability ( $p\_value < 0.05$ ).

**Findings and Discussion:** Public open spaces in inefficient informal neighborhoods give people the chance to socialize with other groups and connect to the city at the top of tensions and bottlenecks in the Living environment. This study has shown that the indicators of "comfort, convenience and sociability", "interior and exterior accessibility of spaces", "beauty and landscape of spaces" and "ability to perform activities" are the items that should be the focus of public space sustainability programs Occupy informal settlements and low-income urban neighborhoods. The results also showed that in the sample of research, increasing the ability to carry out activities, the amount of internal and external access to spaces, the sociability of spaces, and ultimately improving the beauty and landscape quality of public open spaces in the upper fence neighborhood, respectively the public open spaces of the neighborhood are from the perspective of its residents. Therefore, paying attention to providing superior qualities of public spaces based on needs assessment and preferences of space users is an important issue that experts shouldn't neglect.

**Conclusion:** The results of statistical studies indicate that the public open spaces of the neighborhood suffer from low levels of environmental quality and according to statistical analysis of neighborhood residents, the level of user stability and activity, accessibility, comfort and sociability, and finally the landscape spaces. The Public opening should be a priority on the agenda of Karaj city management to organize these spaces. Also, creating mixing and usefulness

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in uses, functional compatibility, enhance comfort and convenience in The behavioral hangouts, strengthen environmental safety and organize the mental landscape, one of the most important strategies are for taking future measures to organize public open spaces in the Hesar bala neighborhood.

**Keywords:** Environmental Sustainability, Hesar Neighborhood, Informal settlement, Public Open Space, Karaj.

## Development of Renewable Energies Based on GreenMetric Index (Comparive study: Guilan and Szeged Hungary Universities)

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### Extended Abstract

**Background and Purpose:** The Green Metric ranking system is based on three environmental, economic and social indices. The purpose of this ranking system is to examine how universities deal with issues based on the sustainable development model. As a result, many universities are working to implement programs in line with the goals of sustainable development with the aim of reducing environmental impacts. On the other hand, the use of renewable energy such as solar energy as an important source to replace fossil fuels based on sustainable development goals has always been the focus of university ranking systems. In this regard, the present study compares the ranking and performance of the University of Guilan and the Hungarian University of Szeged in the use and development of renewable energy based on the Green Metric ranking system.

**Materials and Methods:** This paper was done by descriptive method and document analysis. To collect data and compare the position of Guilan and Szeged universities in the ranking system of the world's greenest universities, the statistical information available in Green Metric has been used. As well as, by referring to the website of University of Guilan and University of Szeged, the performance of these universities in the field of green management and especially the use of renewable energy was investigated. Then, the theoretical foundations and the history of research in the field of using renewable energies in universities were examined. Finally, after analysis and evaluations, conclusions were drawn.

**Findings and Discussion:** The results showed that the University of Szeged has achieved 1141.85 points and installed 2754 pieces of solar panels and plans to install another 2040 pieces of solar panels in its 42 buildings. In terms of energy consumption, to be introduced as the greenest university in Hungary. Therefore, the installation of solar panels on the roof of buildings based on the standard angle has reduced the proportion of sunlight and, as a result, reduced energy consumption in cooling in this university. In addition, by implementing the unique technology of using sewage heat for cooling and heating, more than 300 tons of carbon dioxide emissions have been reduced annually at the University of Szeged. According to the results, despite its short and 4-year presence in the Green Metric ranking, University of Guilan has been able to take the 198th rank of the greenest universities in the world by adopting a special approach in the field of renewable energy management. Installing a solar lighting system on the bus station, installing flashing traffic lights using solar panels, and building a photovoltaic power plant with a production capacity of 100 kw are among these measures. As well, in University of Guilan, greenhouse gas production has decreased by 112,500 kg, equivalent to not using 215 tons of coal per year. Furthermore, the construction of a photovoltaic power plant in University of Guilan made it possible to prevent the loss of energy while providing part of the energy needed by this university.

**Conclusion:** Although the university of guilan with the construction of a photovoltaic power plant with a capacity of 100 kW has been able to provide part of its energy needs, but, university of szeged as the greenest university in Hungary and a pioneer in the use of renewable energy with

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planning and investment, has been able to install 2754 pieces of solar panels in 24 main buildings of the university to be an effective member of the international green metric network. In this regard, it is suggested that in order to achieve sustainable development in universities, guidelines for the use of renewable energy should be developed and implemented according to the capacity of universities. According to the results of this study, the use of solar energy and the construction of photovoltaic power plants can reduce the effect of ecological footprint and reduce dependence on fossil fuel sources in universities.

**Keywords:** Energy, Sustainability, Development, University, GreenMetric, Photovoltaic.

## **Factors Affecting on Environmental Behavior in the lived Experience of Environmental Activists (Case study: The Association Rescuers and Supporters of Gahrroud Ashtrankoh, Durood)**

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### **Extended Abstract**

**Background and Purpose:** Challenges and environmental threats such as air pollution, water, soil, extinction of biological species, etc., which have been created by the economic growth of countries since the two industrial revolutions, have faced serious challenges to the survival of human society. Although environmental behavior has been one of the effective factors in preventing problems, but so far environmental research has not paid enough attention to the complexities of people's behavior towards the environment and theoretical frameworks in this regard have not reached a precise explanation. The present study is different from the researches in this respect.

**Materials and Methods:** The present study looks for the factors affecting environmental behavior in the lived experience of environmental actors and in this regard uses the qualitative method of grounded theory. In this type of method, the goal is to achieve a theory about the subject of research and because it is important to study the depth of the phenomenon in a particular group of society and knowing the depth of the phenomenon is more important than the scope of the field. Using this method allows the researcher not to rely on the framework of the previous theory and to understand the theory that is derived from real experiences from a particular situation. Accordingly, this research lacks theoretical literature and researchers are trying to base their theory on this research. The statistical population of this study is the members of "People's Association of Rescuers and Supporters of Doroud City". After informing in cyberspace to conduct research and announce the readiness of 25 members in order to collect data, a semi-structured interview was conducted with them. In this study, two methods of purposeful sampling (selection from specific individuals or groups that are different from ordinary people in particular; here, environmental activism is considered) and theoretical sampling have been used. Data were analyzed using the proposed "Strauss and Corbin" method, which includes axial and selective open coding. From all the data obtained from the interview, first the initial codes were obtained and then the comparison was started to determine the similarities and differences and the similar codes became a general and abstract category, and finally the selective coding of several main categories was obtained.

**Findings and Discussion:** The results showed that the five main categories of "environmental socialization", "environmental attitude", "structural policy", "cyberspace" and "economic problems" were indicative of the impact on the environmental behavior of actors and among all categories, "Environmental socialization" became the most important category.

**Conclusion:** The findings can be effective in encouraging or preventing positive environmental behavior in individuals. Also, paying attention to the discovered categories in the field of structural policies, as well as paying more attention to humanities research on environmental protection, will be effective and considering them as a positive step. Also, considering the influence of individuals, especially the leaders of thought and reference groups, through the media

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in cyberspace and the official media in the field of environmental protection, it was suggested to produce content in this field.

**Keywords:** Behavior, Civil organization, Culture, Attitude, Environment.

## Spatial Analysis of Social-Economic Inequality in Urban Regions (Case study: Tabriz Metropolis)

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### Extended Abstract

**Background and Purpose:** One of the most important inequalities is spatial inequality which indicates a situation in spatial units and geographical areas in terms of having development indicators at different levels. The crises in human societies is often rooted in social and economic inequalities. The paying attention to spatial inequality and identifying the factors affecting its creation as one of the bases of regional planning to create balance in the regions and reduce inequality between them has been a priority in the policies of many countries. The metropolis of Tabriz, like most major cities in the country, is the bedrock of spatial inequalities in the dimensions of social and economic indicators, etc. Therefore, it is necessary to investigate the present study with the aim of identifying the factors affecting these spatial inequalities, using social and economic indicators in the metropolis of Tabriz for the years 1996, 2006, 2016.

**Materials and Methods:** The research method is descriptive-analytical-comparative in terms of data collection method and applied in terms of purpose. The study has been done in forms of documentary and survey. The source of citation of the indicators and quantities used is data and information of statistical blocks in official census's reports of Tabriz metropolis in 1375, 1385 and 1395; and GIS maps are collected from the Statistics Center of Iran. The samples of the research are all statistical blocks for the above-mentioned years, which after theoretical studies, 26 social and economic indicators have been prepared, Spatial Statistics Tools, Hotspot Analysis in Arc GIS software have been used to investigate the situation of inequality and to recognize the spatial pattern of inequality; Indexing is done in Excel software and the information is called to Arc GIS to analyze and draw the map. Also, to analyze and determine the type of distribution pattern or distribution of inequality in the blocks of Tabriz metropolitan area in three consecutive periods 75, 85 and 95, the Moran spatial autocorrelation model was used and the results in two types of outputs. Numerically and graphically displayed.

**Findings and Discussion:** In the present paper, hot spot analysis is performed separately for each of the social and economic sub-indices in the GIS environment. Then, the layers obtained from these indicators were combined and hot spot analysis was performed on these combined data. Cold and hot spot analysis has been performed for statistical periods of 75, 85 and 95 years. The purpose of this study is to analyze the spatial inequality in the city of Tabriz in the period 1375-1385 and 2016. According to the results of the analysis, the number and percentage of blocks with three levels (low, medium and high) has been determined. The results show that in 1996, the blocks that have integrated integration indicators (social and economic) are deprived of an average of 3566 blocks out of a total of 9777 urban blocks, which is equivalent to 36%. Blocks with average indices 19 percent and also blocks of high indices 49% which have the highest number of blocks in the city. In the last statistical period, which is related to the year 1995, according to the results of the analysis, low-rise blocks equivalent to 35%, are concentrated in the outskirts of the city and are related to integrated villages in the city and suburbs. And are tin settlements. Medium blocks with 15% that are concentrated both in the center and on the outskirts of the city, as well as blocks with 51% of the total 11963 blocks in 1995, which included the highest number of blocks. As expected, they are located in the city center and the eastern part of the city. The results of data analysis in all three statistical periods showed that the pattern of distribution of

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spatial inequality in the metropolis of Tabriz follows the cluster model. Deprived clusters are located in the margins and medium clusters in the margins of the center and sometimes in the margins. The situation indicates the existence of class distance in socioeconomic indicators in the years 1375-1385 and 2016.

**Conclusion:** The comparison and analysis of development indicators in the city shows that there is no homogeneity and distributive justice in the geographical distribution of development resources. Parts of the regions are in the center of capitalist and centralized development due to the regional situation and the voluntary decisions of the governments in the development process, and other parts of these regions have been temporarily excluded from this process for various reasons. Experiences of unbalanced growth in the metropolis of Tabriz show that achieving rapid development in the long run not only requires comprehensive attention to economic, social, physical, agricultural, environmental development and improving the situation of deprived areas, but also requires the application of socioeconomic efficiency. It should be determined the minimum targets related to the income of developed and underdeveloped areas and the interregional balance to advance the goals of sustainable development.

**Keywords:** Socioeconomic, Spatial analysis, Tabriz, Urban districts, Inequality.

## Explanation of Land use Evolutions in order to Urban Sustainable Development of Kashan city (1370 - 1400)

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### Extended Abstract

**Background and Purpose:** Land use planning as the heart of the urban planning process plays an essential role in sustainable development. In today's urban planning, user planning is one of the basic axes of urban planning and one of the levers of sustainable urban development. In the past few decades, the city of Kashan has faced the growth and development of several cities and industrial towns. This issue has caused extensive changes in the urban lands of Kashan and surrounding areas. In this study, the trend of land use change in Kashan in the last few decades has been studied. The purpose of this study is quantitative evaluation of land use in Kashan in order to achieve sustainable development.

**Materials and Methods:** The method of this research is descriptive-analytical. Data gathering method is documentary and field method; the tools used for analysis in this study are also Envi 5, Idrisi Selva, and Arc Gis10.1 software. In this research, RS data and Landsat satellite imagery, TM sensor in 1991, Landsat ETM + sensor in 2011, Landsat 8 in 2021 have been used in order to analyze the urban. First, in the pre-processing stage, atmospheric and radiometric corrections were applied to the images. In this research, we use the supervised classification method for classification. In this classification, we have used a series of educational examples for classification. Three classes of land use include man-made land, barren land and vegetation. Then, using the vector machine method, the land use map was prepared and compared for these three periods. To evaluate the accuracy and correctness of the classified mappings, an error matrix was formed and based on that, the overall accuracy and kappa coefficient were calculated. Satellite images were processed and analyzed in ENVI 5.3 software environment, and Google Earth, IDRISI and ArcGIS 10.8 software were used for data analysis. To analyze the changes, the Crosstab function was used in the Idrisi Selva software.

**Findings and Discussion:** The changes in land use and the increased pressure caused by the physical development of the city on the natural environment have caused the destruction of the ecosystems of Kashan region during 30 years. This land use change has brought the greatest destruction and pressure to the ecosystem of agricultural lands, gardens and barren lands. The results of the comparison of land use maps in the study periods show the change in the level of all land uses. Man-made uses have continued to grow during the 30-year period of research, and on the other hand, the area of barren land and land with vegetation has decreased. These changes have caused, the area of this land use has increased from 2562 hectares in 1370 to 4689 hectares in 1400 and has seen a growth of nearly 18 percent. On the other hand, the area of land with vegetation has increased from 3892 hectares in 1370 to 2733 hectares in 1400, and about 10 percent of the area of this land has decreased. Another effect of development is the decreasing trend of barren land area in the study area. It has decreased from the area of 5722 hectares in 1370 to 4754 hectares in 1400.

**Conclusion:** Random urban growth leads to urban development and land use changes. Changes in land use in urban areas typically reflect the economic development and population growth. Kashan city has also had a lot of physical development in recent years. The results of the research

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show that the area of man-made land has increased from 2562 hectares in 1370 to 3419 hectares in 1390 and 4689 hectares in 1400. that this urban development has been to the detriment of other land uses, especially barren land and land with vegetation, so that the area of land with vegetation has decreased from 3892 hectares in 1370 to 2733 hectares in 1400. One of the most important negative consequences of such changes in the land use pattern is the reduction of ecological and biological power and the disturbance of the environmental balance and sustainable development in the city's surroundings.

**Keywords:** Explanation, Sustainable development, City, Kashan, Land use.

## Investigating Effective Spatial Structures in Neighborhood Sustainability Based on Urban Planning Science (Case Study: Gomishan City)

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(Original)

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### Extended Abstract

**Background and Purpose:** The purpose of this study is to investigate the factors affecting the sustainability of Gomishan urban areas. Understanding the situation of urban areas plays an important role in achieving sustainable urban development. Neighborhood is one of the important elements of the urban body and the balance of social life in cities depends on maintaining the neighborhood. Nearly three decades after the introduction of sustainable development, the focus on social sustainability in terms of both economic and environmental dimensions has been very low, but in recent years, the literature related to this dimension of sustainable development has expanded. Studies show that they are the best scale for assessing and measuring the social sustainability of urban neighborhoods, but the important point is the multiplicity and diversity of indicators at different levels and scales with intertwined causal relationships. Thus, today, the creative development approach, which nurtures and nurtures local talents in innovative ways, has attracted much attention at various levels of decision-making.

**Materials and Methods:** The statistical population of the study included people over 18 years old living in Gomishan in 1400, from which 210 people were selected by available sampling. The sample size was based on Morgan sampling method, which was 20 questionnaires for each urban area. In order to access them, a sample has been assigned to them from the systematically classified method according to the neighborhoods and the population of the neighborhoods. In order to analyze the data obtained from field operations from one-sample t-test to measure the state of stability, from analysis of variance to compare urban textures in the form of SPSS software and from multi-criteria decision models (Electr, Topsis, Copeland and ViKor) have been used to rank urban areas.

**Findings and Discussion:** The results of one-sample t-test showed that the stability of the neighborhood is undesirable and one-way analysis of variance indicates that there is a large difference between Gomishan urban areas in terms of level of stability, so that Gomishan urban areas in The two categories were unstable and relatively stable. Finally, multi-criteria decision-making models showed that the share of economic sustainability and physical sustainability (infrastructure development and facilities) as sustainable urban dimensions is higher than the other two indicators (social and environmental sustainability) as well as vitality components and Participation is in a bad situation and this situation is different in different parts of Gomishan city.

**Conclusion:** The results showed that most areas of Gomishan city are in an unstable situation in terms of economic dimensions. The results showed that most areas of Gomishan city are unsustainable in terms of environment. It is suggested that green spaces for sports and leisure be expanded and the sewage network of neighborhoods, which is one of the main threats, be completed and maintained. Considering that the areas of Gomishan city are also in an unstable condition in terms of physical dimension, it is recommended: to avoid creating dry and lifeless environments, rough and rugged buildings inside the neighborhood, and to create mixed uses in order to increase access and reduce travel costs. Urban neighborhoods Continuation of the current trend is a major challenge in achieving sustainable urban development. The results show that most

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variables and dimensions of research are in a moderate state of stability, among the variables, dynamics and adaptability, access and services, identity, security and health, vitality, spatial affiliation, social capital, participation, employment and contaminants are in moderate to high stability. Among the dimensions of research, the social dimension has a relatively good situation and the institutional and environmental dimensions are in a state of instability, and in general, the stability of Gomishan neighborhoods and urban contexts is at a moderate level.

**Keyword:** Planning, Sustainability, Development, City, Gomishan.

## The Role of City Diplomacy in International Relations of Cities (Case study: Urban management system of Tehran)

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(Original)

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### Extended Abstract

**Background and purpose:** In the studies conducted so far regarding city diplomacy research, issues such as (Is the increase in the number of sister cities in Tehran in relation to the foreign policy of governments based in the Islamic Republic of Iran consistent or not?), (The role and function of cities as new actors in international relations) is examined. None of the present studies has explored the relationship between the role of city diplomacy and the international relations of cities. The main difference between this study and other studies is that indicators of success or failure of the urban management system are explained, and the role of each is stated. This research is of practical type, and the purpose is to what extent Tehran Municipality, as the most important and influential local executive body, has been effective in advancing this important issue.

**Materials and Methods:** The required information and data have been collected in two general ways under the headings of library and field. First, in the indirect data collection method, the answers obtained through the questionnaire with SPSS software were entered from the sources to analyze the research data. Then, using descriptive statistics and inferential statistics, a picture of the current situation in the studied communities is drawn. In the next step, with the method of collecting direct information through a questionnaire, the required data from the statistical population is adopted. In the present study, the statistical population includes people who work in the municipality of Tehran or have some connection with the Tehran municipality.

**Findings and Discussion:** Findings obtained from the first to third plans of Tehran Municipality have been such that in the first plan to promote the role of city diplomacy at different levels and in the second plan without considering and evaluating the upgrade and infrastructure and its development in the third plan to increase memberships and formation Discourses are discussed. According to the annual reports of Tehran Municipality regarding the performance of this institution, planning and consultations and holding more meetings with neighboring and underdeveloped countries have been done, and there is no special organization and committee in the municipality for urban diplomacy. Furthermore, according to the "one-sample t" test, the geopolitical isolation index has had the greatest impact on the failure of Tehran Municipality in influencing the role of urban diplomacy on international relations, and also our second index as the ability of urban management in the category Next and finally, the geopolitical weight index has had the least impact on the failure of Tehran Municipality in the mentioned field.

**Conclusion:** The results obtained from Tehran Municipality's first to third programs in strengthening the indicators and developing the international infrastructure and discourse axes for membership and stabilization of international cooperation have not been successful. Also, the reports of this local executive body indicate that communication and consultations were mostly with neighboring and underdeveloped countries. The considered indicators each with the results obtained in the index (urban management ability) of lack of concern and sufficient expertise and lack of relevance of employees' field of study, for annual planning and goal setting, and the index (geopolitical weight) according to Measuring the national power of countries, shows that this

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institution still tends to communicate with cities that have a lower weight than Tehran, and the results obtained, respectively, indicators of geopolitical isolation, urban management capacity and geopolitical weight of the country are factors affecting municipal failure. Tehran is in the field of urban diplomacy.

**Keyword:** Tehran, Sustainable Development, Diplomacy, Geopolitics, City, Relations.

## Feasibility Study of Turning the Street into a Sustainable Sidewalk (Case Study: Center of Chamestan, Mazandaran)

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(Original)

Received: 22/06/2021 Accepted: 01/11/2021

### Extended Abstract

**Background and Purpose:** Today's cities face many problems due to over-reliance on passenger transport. The increase of cars in the city, tearing the urban fabric and creating many problems such as congestion, traffic, air pollution, reduced safety and security and damage to the city is done only by car. Paying attention to sidewalks increases communication and social interactions, improves the quality of urban space, boosts shopping centers, reduces environmental pollution, reduces traffic and accidents, respects pedestrian identity, and increases pedestrian safety and security. Therefore, addressing the issue of sidewalks and paying attention to its characteristics such as vitality, flexibility, safety, accessibility, continuity, etc. are of special importance in sustainable urban development.

**Materials and Methods:** The method of the present study is descriptive-analytical. In this research, both documentary and field methods have been used. In the documentary method, mostly scientific books, scientific-research journals, Latin sources, sites and related institutions and organs have been used in order to collect information and the history and meaning of this title. In the field method, in order to study the implementation of this project in terms of sidewalks in the central part of the city, field visits to the study area and the distribution of questionnaires have been used. The statistical society includes residents, employees and pedestrians in the area of Ayatollah Khamenei Street. The sample size of the statistical population was obtained by Cochran's formula, which is 370 samples due to the unknown population of the statistical society. In this study, random sampling method was used. Also, t-test and Friedman test were used to analyze the data to determine the ability to convert the street into a sidewalk.

**Findings and Discussion:** A questionnaire was used to evaluate the feasibility of converting the street into a sidewalk in the central part of Chamestan. Questionnaire questions from research participants in socio-economic, physical-functional, access and traffic, and design and urban furniture. According to the results, the average scores of the respondents regarding the effect of organizing and paving Ayatollah Khamenei Street on increasing their satisfaction, as well as the property and rental prices of this street are higher than average compared to other streets in the city. The average scores of the respondents about the historical and cultural identity of the street, the appropriateness of the connection with the street and the ability to provide emergency services to this street are moderate. The average scores obtained for other items are below average. In order to prioritize the effectiveness of each of the factors affecting walking, Friedman test was used. The results indicate that from the respondents' point of view, access and traffic, socio-economic, physical-functional, and urban design and furniture have the greatest impact on walking, respectively. A one-sample t-test was used to evaluate the condition of urban furniture. According to the results, the condition of urban furniture on Khamenei Street is at an unfavorable level. The results obtained in the study of the goals of those who refer to the desired street show that the average scores related to the status of visiting for fun and appointments with friends is lower than average. Based on this, it is concluded that people go to the streets less for the above cases. But the average score for shopping and being on the road is higher than average. Also, using a private car and visiting on foot is at a high level. The average score for taxi and bicycle

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use is below average. The average scores of the respondents about stopping on the side of the street are higher than average and stopping in the surrounding alleys is low. The use of public parking is also moderate.

**Conclusion:** The results of examining the condition of Khamenei Street show that street in terms of socio-economic, physical-functional, access and traffic is in a moderate condition and it has desirability and quality required for walking. Among the four components studied; the social and economic component is the strength of pedestrianization in this street, which shows the historical, cultural and commercial identity of the street and can attract different age groups. However, the average scores obtained from the design and urban furniture component indicate that this route is at an unfavorable level, which is in fact the main weakness of the street for pedestrian construction. In this regard, complementary measures and planning should be considered, such as: street flooring, proper lighting and lighting, green cover and tree planting, etc. The physical and functional dimensions of the street are also in a state of disarray that must be addressed, including: order and fit between the buildings on the street, the desirability of the color and appearance of the buildings on this street, providing parking, strengthening public transportation, and various activities, the results show that the strongest role of this street is to "cross it", which in case of closure, it is necessary to define a suitable alternative route to prevent serious disruption of the city's communication system. Therefore, strengthening and supporting "Salamat Street", which has a similar role and is located in the eastern part of the city, can be suggested as an alternative route. In general, it can be said that the gradual implementation of the streets of the city center of Chamestan is a good solution for better access and prosperity of civic life and stability of the functions of the central part of the city. An experience that has been successful in many countries around the world and in the cities of Iran and has many positive results.

**Keywords:** Feasibility Study, Central Part, Pedestrian route, Street, Chamestan.

**Referees of this No.**

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### Guide for Authors

The Biannual Journal of Sustainable Development of the Geographical Environment publishes scientific findings with the aim of promoting, developing, upgrading and demand-oriented researches in the field of geographic sciences and related knowledges. It is published twice a year in Persian language and abstracts are also published in English. For information on the subject areas of acceptance of articles in these two quarterly journals, refer to its website: <https://egsdejournal.sbu.ac.ir>.

Also, authors and researchers are requested to pay attention to the following points before submitting the article in order to avoid delays in the refereeing and timely publication of the articles:

- The article must be the result of valid scientific research in one of the subjects of natural, human and environmental geography, with a sustainable development approach.
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Keyword: It should indicate important words as single word for searching (maximum 5 words).

**Extended abstract:** After the judging process, if the article is accepted, it is mandatory to prepare an extended abstract in Farsi and English in the following format:

Each extended abstract should be between 500 and 600 words, arranged in 4 paragraphs including: background and purpose (20%); materials and methods (50%); findings and discussion (20%) and

conclusion (10%).

In addition, the full manuscript should include the following structural components:

**- Introduction**

It is devoted to explanation of the problem, the importance and necessity of the subject (with reference to new sources), the goals and questions of the research.

**- Literature Review and Background**

This section is comprehensive and includes the existing world literature on the subject of research and a brief statement of them. In addition, the existing scientific boundaries should be included and at the end, the specific innovation of the current research should be presented compared to previous researches.

**- Materials and Methods**

This part of the article includes the scope and territory of the research; research method and its steps (research method, statistical population, sampling method, sample size and its determination method, data collection tools and their validation); Introduction of variables and indicators; The application of methods and techniques is assigned.

**- Findings**

Detailed and detailed presentation of important findings should be done in accordance with scientific principles and by using the necessary tables and diagrams.

**- Discussion and conclusion**

It includes the presentation and analysis of the results and the significance of the research findings in comparison with other similar research findings, emphasizing the discrepancies and their causes, explaining the generalizability and scientific application of the findings, and providing the necessary guidelines for continuing the research related to the topic, conclusions, and possible recommendations and suggestions. .

**- Acknowledgement**

Thanks and appreciation to the organization providing the data or any kind of facility in the progress of the present study is done in this section. If the financial expenses of the research or the preparation of the article were provided by an institution, the name of the institution should be included at the end of the article in the acknowledgment section. It is not customary for the authors of an article to thank each other.

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The English equivalent of the methods, terms, names and models mentioned in the text of the article, with numbering in the text, should be written in this section.

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How to write references inside the text and at the end of the article:

The sources cited in the text should be written at the end of the article; But in two different ways:

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- **Supplementary file** (tables, graphs and maps): tables, figures and graphs, in addition to being presented in the text, it is necessary to upload them in a separate file in the original Word format (and not photos), with high quality, on the publication's website. and be sent The figures and diagrams of the article must be original and of good quality. The main file of the figures (under Excel, Word and with 600 dpi accuracy) should be provided.

The photos must be clear, legible, scaled and of suitable and desirable quality (300 to 500 dpi) in one of the formats gif, jpg, tif. The size of fonts, especially in the case of curves (Legend) should be chosen in such a way that it is readable after reducing the scale of the figure for printing.

The information in the tables should not be given in the form of figures or diagrams in the article. The number and title should be mentioned above the table. In case of obtaining tables and figures from other sources, mentioning the source under the tables and figures is mandatory.

Tables must be drawn and adjusted in an open manner without surrounding lines (refer to the sample on the publication's website).

Each column of the table must have its own title and unit, if all the figures in the table have the same unit, the unit can be mentioned in the title of the table.

In decimal tables, Persian numbers should be written with / and English numbers should be written with dots. For example, 6/13 or 6.13

Additional explanations of the title and text of the table should be presented as subtitles.

#### - **Writing fomula**

Formulas should be written mathematically and with abbreviations and under each formula all abbreviations or variables should be introduced. The word relation is used to name the formulas and they are numbered in order of appearance in the text of the article. It is necessary to have all the relationship numbers

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All Figures (charts, diagrams, line drawings, web pages/screenshots, and photographic images) should be submitted in electronic form. All Figures should be of high quality, legible and numbered consecutively with arabic numerals. Graphics may be supplied in colour to facilitate their appearance on the online database.

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Do not submit tables and graphs as photograph. Place explanatory matters in footnotes, not in the heading. Do not use internal horizontal and vertical rules. Tables should be called out in the text and should have a clear and rational structure and consecutive numerical order. All tables should be numbered (1, 2, 3, etc.). Give enough information in subtitles so that each table is understandable without reference to the text. For each table, please supply a table caption (title) explaining the components of the table. Identify any previously published material by giving the original source in the form of a reference at the end of the table caption. Tables should be with the captions placed above in limited numbers.

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- Single-spaced text throughout.

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Submitted manuscripts are reviewed by two or more experts. Reviewers are required to treat manuscripts as confidential. Peer reviewers will be asked to recommend whether a manuscript should be accepted, revised or rejected. They should also alert the editors of any issues relating to author misconduct such as plagiarism and unethical behavior. If a consensus is not reached, a third opinion may be sought. Authors are requested to identify five reviewers who are well qualified to referee the work and would not have a conflict of interest. Authors may also exclude specific individuals from reviewing their manuscript. Manuscripts will be returned without outside review if the Reviewing Editor and the Senior Editor deem that the paper is of insufficient general interest for the broad readership of The Journal of Sustainable Development & Geographic Environment, or that the scientific quality is such that it is unlikely to receive favorable reviews. Editorial rejection allows authors to submit their papers elsewhere without further delay.



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