

## Geography and Territorial Spatial Arrangement

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### **Analysis The Pattern of Physical and Spatial Development by Holdern Model Case Staudy: Gonabad City**

#### **Dr. Bakhtiar Ezzatpanah**

Assistant Professor of Geography and Urban  
Planning, Marand Islamic Azad University

#### **Mohammad Ali Khaliji**

PhD Candidate of Urbanism, Young  
Researchers And Elite club, Tabriz Branch,  
Islamic Azad University

#### **Abstract**

The cities, during their life will change and develop due to different factors, but a good city is a city which its physic provides the requirements of its residents with respect to the time changes. Uncontrolled expansion and development of urban areas is the major issues and challenges for urban planners and managers at various levels. The objective of the present study is to examine the factors influencing on the emergence and formation of the spatial and physical Structure of Ghonabad city. The research method is descriptive – analytical one. And the quantitative model (Holdern), GIS tools, using indicators of physical, economic and demographic explanation have been used for the above purpose. Preliminary results show that the growth pattern of the city is formed from East to West. Ghonabad population changes in different periods, although several factors have influenced on the increase or decrease, Nevertheless, the city's population growth rate was higher than the average growth rate of urbanpopulation of the province and the country and is the indicative of areas of population growth in the city. Also according to calculations model of Holdern, 49% of Ghonabad growth has been due to the uncontrolled and sprawl growth of the city and the remaining 51 % of the city's population growth is due to the growth of the urban population.

**Keywords:** spatial structure, hierarchical, physical development, Holdern model, Gonabad.

## Geography and Territorial Spatial Arrangement

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### **Application of Network Analytic Process in locationing New Parks Case Study: District Three of Ahwaz City**

**Sahar Hassanpour**

M.Sc of Geography and urban planning ,  
Payam Nour University

**Dr. Abdalnabi Sharifi**

Profesor Assistant of Geography and urban  
planning , Payam Nour University

**Dr. Mohammad Bafghizadeh**

Profesor Assistant of of Climatology, Payam  
Nour University

#### **Abstract**

With the development of urbanization, green areas was highly regarded and was recognized as an important symbol of urban ecosystem health. Parks and green spaces plays an important role in improving the quality of life of the people living in urban areas; But the uneven distribution of parks and negligence of the desired criteria for locating parks, makes the benefits and merits of the parks not to be realized as optimum. District No. 3 of Ahwaz, due to uneven distribution and lack of observing the regulations of the parks locating, is faced with the same problem; Thus, this study was conducted with the aim of locating new parks in District 3 of Ahwaz City. To achieve the above said goal, with a practical approach and Analytical and descriptive nature, the six indicators were used which were derived from the studies and expert opinions that the required information were gathered and analyzed by studying literature, previous researches, development plans of Ahwaz. And by the Analytic Network Process and network analysis tools in Arc GIS software were analyzed. Calculations showed that 11 neighborhood of district No.3 of Ahwaz has no park. By comparing the standard per capita of parks in neighborhoods and the detailed plan approved in 1997 (13.4 m<sup>2</sup>) it was founded that 76.78% of neighborhoods in terms of having Park are placed at deprived and underdeveloped condition. Review of the performance radius of the parks showed that 53 percent of parks are in a good condition in providing services to the objective residents and the remaining 47 percent are in unfavorable condition. The findings of locating of new parks was twenty places, which the priority of their establishment was determined by the application of Super Decisions software. The results indicated that the distribution of parks is very unbalanced in district No.3 of Ahwaz City and the population density is not regarded and the principles of park locating has not been observed And for overcoming such gap, construction of a new park is required. But the construction of new parks should be based on the existing standards in order that while providing higher performance ensures the quality of life and satisfaction of Citizens.

**Keywords:** location, new parks, Analytic Network Process, Ahwaz city, New Location-Allocation.

## Geography and Territorial Spatial Arrangement

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### **An Analysis on The Spatial inequality of Tehran City and Prediction of Planning Priorities**

**Dr. Mohammad Taghi Rahnemaiee**

Associate Professor of Geography Faculty,  
Tehran University

**Dr. Ahmad Pourahmad**

Professor of Geography Faculty, Tehran  
University

**Dr. Hossein Hataminejad**

Associate Professor of Geography Faculty,  
Tehran University

**Ayoub Manouchehri Miandoab**

PhD candidate of Geography and Urban  
Planning, Tehran University

#### **Abstract**

At the present time, the main cause of the crisis of human society is rooted in social inequality and lack of justice. Today, planners, especially, geographers by the spatial or distributive justice plan, offers new strategies in the course of distribution of public interests based on the need, deserving and public benefit criteria. In this study, the city of Tehran has been studied as a case study. Since the spatial inequality in the city of Tehran is more evident than in other cities, it has been selected, the aim of the study is spatial analysis and classification of the areas of Tehran city based on the selected indicators. The method of research is descriptive – analytical one that Factor Analysis, Cluster analysis, Diagnostic analysis, Regression and Multi-criteria decision-making methods have been used. The under study indicators include 7 parts of economics, social, physical, cultural, infrastructure, security, green space and pollution. According to the results of factor analysis, the areas of Tehran city classified separately. At the next stage, the areas of Tehran city were classified by using other methods and classified in four levels of developed, upward moderate, downward moderate and underdeveloped by using Cluster analysis. Finally, diagnostic analysis has been used to select the final clustering. The results show that the northern areas of Tehran city are developed in comparison with the other areas and also the gap between the northern areas is too much than others. While southern areas are almost at the same level. Finally, with respect to the regression forecast model, the social and infrastructure sectors have been suggested as the first priority to be developed in the underdeveloped areas. Economical and cultural indicators at the second priority and physical and landscaping sectors are at the next priority. Also, security sector has been proposed at the fourth priority in developed areas.

**Keywords:** inequality, spatial, Tehran city, planning

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### **Developing Strategic Environmental Planning map Based on Land use Changes and Flood Zones Case study: Neka River**

#### **Payam Ebrahimi**

phD candidate of Water shed Science and Engineering, Tehran University

#### **Dr. karim soleymani**

Professor, Department of Watershed Management, Faculty of Natural Resources, Sari Agricultural Sciences and Natural Resources

#### **Dr. kaka shahedi**

Assistant Professor, Department of Watershed Management, Faculty of Natural Resources, Sari Agricultural Sciences and Natural Resources

#### **Abstract**

Providing the right and appropriate solution in the shortest possible time is a goal that a strategic planning follows among the risk factors. Land use changig is one of the invisible and hazardeous factors which increases the flood zone and its return period. In this study, by using Landsat satellite images ETM<sup>+</sup> 2000 and IRS-1D 2012, the percentage of land uses changing of Neka catchment area in Mazandaran province and level of flood occurance with return periods of (2, 5, 10, 25, 50, 100 and 200 years) in HEC-RAS and ENVI software environment were determined. Then the results were transferred to GIS environment and it was observed that in . the past decade, in addition to the change of land uses, the flood zone of the specified return period has also increased. The results showed that the use of agricultural lands has increased 2.27%, , unusable lands 7.31% and the urban lands 1.91 respectively. On the contrary, the forest and pasture lands has increase 10.22% and 1.27% respectively. The results of this study indicate that the HEC-RAS and HEC-GeoRAS using ARC GIS model can provide the appropriate numerical values and graphics for investigating the hydraulic characteristics of flow in rivers and for flood hazard mapping with more accuracy.

**Keywords:** Planning, Flood, Land use, Neka, HEC-RAS.

## Geography and Territorial Spatial Arrangement

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### **Investigation and Identifying The Potentials, Capabilities and Limitations of Tourism Industry in Rural Areas Case Study: Meymand Village in Kerman County**

**Dr. Yousef Ghanbari**

Associate Professor of Geography and Rural Planning, Isfahan University

**Zahra Kazemi**

M.Sc of Tourism planning, Isfahan University

**Dr. Hamid Barghi**

Associate Professor of Geography and Rural Planning, Isfahan University

**Fateme Kazemi Askari**

M.Sc of Agricultural Extension & Education, Shiraz University

#### **Abstract**

Appreance of tourism as a need and its changing in to one of the largest service industry in the world and its professionalization has created this chance that each destination can hope to benefit from the resources of tourism. This study aimed to investigate the tourism potential and capabilities of Meymand village and present strategic solutions for developing rural tourism in this area. This research is of applied type and the study method is a combination of descriptive-analytical one. The research population were two groups of tourists and expert tourists that were selected based on Cochran formula among 750 tourists of year 2013 and 35 tourist experts and 150 people were selected as the research sample. Also, all tourism experts in research area were interviewed.then a questionnaire was used for gathering data. The reliebilty of questionnaire was assessed with Cronbach's alpha, rated from 0.73 for tourists up to 0.84 for the experts. Statistical models such as factor analysis in SPSS software environment , SWOT model and Exel software were used to analyze the data. The results of factor analysis showed that infrastructure services with 14.682 percent, cultural factor with 9.934 percent, Reception Services With 7.087 percent, health services with 5.254 percent, economic factor with 4.757 percent and welfare facilities with 4.501 are the important factors in promoting tourist attrwaction. Also, the results of SWOT analysis showed this fact that Meymand village in spite of opportunitie and strenght points such as geographic location, diversity resources and natural historical and cultural attractions is faced with several threats and weaknesses points including the lack of tourism infrastructure and enough propaganda. This research is seeking to help the tourism industry of this village through presenting proper strategies. Among the strategies, the strength points with 3.222, weaknesses with 2.989, opportunities with 2.864, and threats with 2.785 scores were ranked respectively. With respect to the results of tables 4,5 and 12, the research hypothesis is confirmed, so that in Meymand Village, the internal factors can have a more important and effective role on the tourism development in comparing with the external ones.

**Keywords:** potential and limitations of tourism, rural development, Meymand Village, SWOT.

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### **A Survey on The Measurement of Citizens' Satisfaction in The Life Quality Case Study: Qaemshahr**

**Dr.Rahimberdi Annamoradnejad**

Associate professor, Dept. of Geography and urban  
planning, Mazandaran University

**Dr. Asadollah Divsalar**

Assistant professor, Dept. of Geography,  
Payamnoor University

**Saber Mirabi**

M.Sc of Geography and urban planning

#### **Abstract**

Ghaemshahr is faced with some problems from the view point of the environment quality such as, access, density and traffic, health, beauty, vitality etc. This paper investigates Ghaemshahr citizens' satisfaction regarding the quality of the living environment. In this regard, methods and related indicators of environmental quality were studied and ultimately driven by indicators based on citizens' satisfaction and to achieve the aims, HMR metod was selected. Analyzing data was performed by using statistical methods such as factor analysis, T test, multiple linear regression. The sample was selected 323 people from a population of 172,000 and questionnaires were distributed among them. The results shows that no meaningful relationship there exists between some of the Social and economic variables, such as the level of education, age and income with satisfaction of the environment quality, and, no meaningful relationship exists between the married, gender suspended and job factors with satisfaction of the environment quality. Also examining the amount of correlation between physical and environmental variables with satisfaction of environmental quality showed that between physical variables (period of time in a neighborhood) with satisfaction a meaningful relationship have existed and no meaningful relationship exist between Environmental variables (sound, smell, the pollution and garbage) with satisfaction.

**Keywords:** quality of life, urban environment, Ghaemshahr, satisfaction.

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### **Measuring The Potential of The Urban Lost Spaces with Sustainable Green Space Development Approach; Case Study; Akhound Neighborhood, Qazvin**

**Dr. Mahdi Zandieh**

PhD of Landscape architecture, London

**Pedram Hessari**

PhD candidate of Architecture, Imam Khomeini International University, Qazvin

**Saman Tobna**

M.Sc student of Urban Design, Jundi-shapur University of Technology

**Arezo Mohtasham**

M.Sc student of the Islamic architecture, Imam Reza International University

**Abstract**

Sustainable urban development can be pursued by utilizing all the elements and spaces available in the cities. There are vacant useless spaces in the cities that while are of no visual benefits, have many potential capacities. Urban lost spaces – as dynamic potential spaces in developing stability elements and sustainable development purposes having indices and potential abilities – are worth repairing and recreating. To make the transferability potential of these spaces into green space land use practical, they should be studied and influential factors in improving the design with environmental approach must be investigated to increase the environmental efficiency of these spaces. It could be said that by determining priorities and valued hierarchy, with sustainable green spaces developmental approach, efficient spaces need to be recognized based on the priorities to properly utilize the capacities and capitals. In this research, using analytic-practical approach, the ABCs of lost spaces and determining factors in their formation were first investigated against such indexes as: spaces with garbage accumulation index, destruction, abandoned, unpleasant visual, defenseless space sense, place for gangs and tramps, unplanned and without specified land use; through library and field studies. Then four places were identified with these characteristics in Akhound neighborhood through case study. Finally, based on the purpose of changing their land use to green spaces, and by using hierarchical analysis method with Expert Choice software and Qazvin Municipal Urban Affair Department experts' opinions, the potentials of transferring lost spaces in Akhound neighborhood were prioritized based on such indexes as: suitable area, population density, distance from available green space, green space use in the detailed plan, access to available communication network, and vicinity to available educational centers as well as residential centers. Based on the results, identified space number one with final weigh of 0.337 was the first priority in developing green spaces, and places number two, three, and four with the value of 0.282, 0.223, and 0.158 respectively, were in the later priorities, showing that, based on order of presentation, the priorities had less efficiency and suitability to be repaired and transferred into green spaces

**Keywords:** lost spaces, sustainable development, green spaces, Akhound neighborhood, Qazvin city, hierarchical (AHP).

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**The Study & Analysis of Oscillation Changes of Discharge & Precipitation in Mund Basin**

**Dr. Gholam Hassan Jafari**

Assistant Professor of Geomorphology, Zanjan university

**Mahdi Doostkamian**

Ph.D candidate of climatology changes, Zanjan University

**Abstract**

The aim of this study was to study the changes & Detection of discharge & precipitation circles & annual precipitation of Mund basin. For this purpose, the annual discharge and precipitation data of this basin were extracted for the stations of Baba arab, dehrum, dehrud, dejgan, hakan, karzin strait, Tangab & Hanifaghan srations during 1976-2011, then was scrutinized and analyzed by the use of trend and harmonic analysis methods in MATLAB software environment . The results showed that a 2-6 short time circle has been dominant on discharge & precipitation of Mund basin. Nevertheless, some long term cycles such as 17 & 25 year have been observed in the discharge of this river. The results of the analysis process of discharge & precipitation showed that the decrease & increase of river discharge was affected by the decrease & increase of basin precipitation in most of the stations. Nevertheless it can't be deducted definitely that discharge circles & changes of Mund basin was dependant on precipitation. Hence the effects of morphologic & geomorphologic factors of this basin can't be disregarded.

**Keywords:** Mund basin, discharge, precipitation, analyses of cycle, trend.



## Geography and Territorial Spatial Arrangement

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### **Assessment of Flood Hazard and its Zoning in Baft Plain (South East Part of Iran)**

#### **Mojgan Deghani**

M.Sc of Environmental Geology, Shahid  
Bahonar Kerman University

#### **Dr. Ahmad Abbasnejad**

Associate professor of Geology, Shahid  
Bahonar Kerman University

#### **Dr. Hossein Negaresh**

Associate Professor of Geography, Sistan and  
Baluchestan University

#### **Abstract**

Baft Plain is one of flood-prone areas with frequent damages in Iran. So, in this study in order to separate hazard zones in this plain, its hazard zoning map was prepared using geomorphological and photogeological criteria and the field visit. The base for its preparation was the interpretation of the aerial photos of 1:50000, 1:20000 and 1:40000 of the area prepared in 1956, 1988 and 1992 respectively together with the field control. In order to separate different kinds of hazard zones, we need to observe the total area as a whole as well as stereoscopically. So, a print lay down was prepared from the photos. Since specific landforms are flood-prone (such as alluvial fans, deltas and flood plains), it is possible to evaluate the intensity and kind of flooding on these landforms considering delicate topography and tonal variations using aerial photos. So, the flood hazard zoning map of this plain was prepared by interpreting aerial photos and checking the interpreted map of the field. In the presented map several hazard zones such as checked 'high flood spreading hazard' on alluvial fans, 'high flood inundation hazard of the basal parts of alluvial fans' were identified and separated. Overlay of flood hazard map with the land use map revealed the elements at risk. Hence, some parts of Baft town lie at flood spreading hazard zone and the eastern parts of this town are threatened by river flooding. Also, several residential areas and agricultural fields are at threat. The prepared map may be used for all aspects of flood hazard management such as land use change, flood alerting, search and rescue operations, hazard resistant construction as well as flood-insurance rate determination. It is suggested that occupation of high hazard areas be forbidden by applying watershed management practices, the flood hazard being abated.

**Keywords:** Flood hazard mapping, Baft Plain, Geomorphology, Aerial photograph, GIS.

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### **Assessment and Measurement of The Sustainability Condition of the Neighborhoods in The Sardasht City**

**Shirkoooh Ahmadi**

Sardasht Azad University

**Dr. Morteza Tavakoli**

Associate professor of Geograpy and Rual  
Planning, Zabol University

#### **Abstract**

Sustainable development and the subsequent neighborhood sustainable development is a concept that has been discussed in recent years in the scientific assemblies and has a close relationship with damages in social, environmental, economical and urban livelihoods, security, Participation, shape, texture and urban management. Today, most sustainable and most effective development programs are those which are based on the characteristics and needs of families and neighborhood communities. Therefore, the study, recognition and analysis of the abilitoies and capabilities of the urban neighborhoods is considered as a basic and important step in the process of developing, urban planning of urban sustainable development. Accordingly, this study is sought to evaluate the sustainability of Sardasht neighborhoods in terms of four dimensions of socio-cultural, economical, environmental and institutional physical alike. This research is a descriptive analytical one based on the documentary and library studies and field surveying. The population of this research is all Sardasht city neighborhoods, which among them 380 people were selected according to Morgan Table by simple random sampling as the statistical sample. And the data were analyzed using SPSS and GIS softwares. Results indicate that the the stability of Sardasht city neighborhoods from the view of inhabitants with the Average of (2.66), is lower than the median responses and is not desirable. The results show that between the different neighborhoods of the city, in respect of having developed indicators, there is inequality and tremendous difference. According to the research results, the biological indicator has the most stability in Sardasht city. The result of T-test shows that by comparing the mean of neighborhood's sustainability, the neighborhoods of Ashan, Sarchaveh, Farhangian and terminal have better conditions and the average of their stability is higher than the medium limit that the lowest amount of stability is in the neighborhoods of Serahe Marghan and Grda Sur.

**Keywords:** Assessment, Sustainability, a Neighborhood Sustainable, Index, Sardasht City.

## Geography and Territorial Spatial Arrangement

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### **Study and Analysis of Spatial Distribution of Hotels Toward The Tourism Attractions Case Study: Shiraz City**

#### **Dr. Mohamad Hossein Saraii**

Professor Assistant of Geographi and Urban  
Planning, Yazd University

#### **Masoud Chaharrahi**

M.Sc Student of Geography and Urban  
Planning, Yazd University

#### **Meysam Safarpour**

Ph.D. candidate of Geography and Urban  
Planning, Yazd University

#### **Abstract**

Tourism is considered as one of the greatest economical motives in the present century, up to the extent that forms more than 10% of the gross income of the countries in the world. Tourism industry in terms of making revenue and the impact on economic growth of the countries is going to become the first industry in the world. But for achieving the comparative advantages in this sector needs to create appropriate infrastructures, supplying the tourists' requirements and provision of desirable tourism facilities. Through this infrastructures, residential centers as the origin and destination of daily recreations has a great importance and has the most economical impact on tourism industry. The purpose of this study is the study and analysis of the spatial distribution of hotels toward the tourist attractions in Shiraz city. The research method is of Descriptive- analytical one and the method of collecting data is the library and field one. The analysis of data was performed in GIS environment using network analysis functions. The analyses related to the hotels' distribution and attractions is made through Multi-Distance Spatial Cluster Analysis functions and oriented distribution. The results showed that the spatial distribution of hotels toward the tourism attractions has not been made in appropriate with the tourism needs of the urban areas of Shiraz city, so that the spatial distribution of hotels and attractions have been placed as a clustered and centralized pattern in the central part of the city in Roodaki, Ahli, Tohid and Zand streets. The oriented distribution of hotels in view of the level of access and capacity are in the coverage area of oriented distribution of the attractions. The average of hotels' distance toward the tourism attractions is 2402.5. This concentration in the central part has caused some issues including lack of appropriate access to all tourism attractions, increase of traffic, limitation of urban green spaces and increase of different pollutants in the dense part of Shiraz City.

**Keywords:** spatial distribution, hotel, tourism attractions, Shiraz

## Geography and Territorial Spatial Arrangement

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### **Evaluating a Physically-Based Cloud Model for 6-hour Rainfall Prediction Using Meteorological Data and Meteosat Images in the Basin of Urmia Lake**

**Dr. Ali Akbar Rasouli**

Professor of water and meteorological group ,  
Department of Physical Geography, Tabriz  
University

**Dr. Mahdi Erfanian**

Assistant Professor, Department of Watershed  
Management Engineering, Urmia University

**Dr. Behrooz Sari Sarraf**

Professor, Department of Physical Geography,  
Tabriz University

**Khadijeh Javan**

PhD Student of Climatology, Tabriz  
University

#### **Abstract**

Rainfall is considered as one of the most important inputs of the hydrological systems that its study and measurement in several different conditions such as the prediction of atmospheric condition, designing the hydraulic structures, estimation and modeling of flood is necessary. The purpose of this study was to estimate the amount of 6 hours of rainfall in Urmia Lake basin using a physical cloud model. The inputs of this model include the high temperature of the cloud which is estimated from the infrared band of Meteosat. the pressure, temperature and dew point temperature from meteorological stations in time scale is six hours . The calibration of the model was conducted by using the observed data of 16 synoptic stations in the basin of Urmia Lake during the statistical period of 2005 to 2011 for six rain events. For comparing the estimated amount of precipitatin by the registered model and amounts in ground stations , the statistical criteria of mean error(ME), mean absolute error(MAE), root mean square error(RMSE) and absolute bias(abias) have been used. The mean of each error criteria has obtained 0.86, 1.61, 2.39 and 0.67 mm respectively. Small amount of error criteria for physical cloud model represents the relatively high performance of this model for 6 hours rainfall estimation in Urmia lake basin .

**Keywords:** Rainfall Prediction, Cloud model, Meteosat, Urmia Lake

## Geography and Territorial Spatial Arrangement

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### **Analysis The Drought of The Southern Coast of Caspian Sea During The Base and Future Period by Using Downscaling Models (LARSWG and SDSM)**

**Dr. Mohammad Hossein Nassrzadeh**

Professor Assistant and Head of climatology,  
faculty of Geographical Sciences, Kharazmi  
University

**Elham Ghasemfar**

M.Sc of Climate in environmental planning

**Masomeh Motamedi**

M.Sc student of environmental hazards , Tehran  
University

#### **Abstract**

Drought is an event which occurs in all types of climatic conditions. This phenomenon can cause severe damages to the susceptible areas. Since the drought due to its special features will change the agriculture of the Caspian sea, this phenomenon has been studied in the coastal areas of Caspian sea. The purpose of this study was to evaluate the drought during the base period of 1961-2010 and the future period of 2011-2030 by using the Standardized Precipitation Index (Z-Value) on five stations of southern coastal of Caspian sea. Daily rainfall data from five stations was obtained to calculate the monthly precipitation and the data from HADCM3 model under B1 and A2 scenario. For downscaling the HADCM3 data, two models of LARS-WG and SDSM were used. Downscaled results showed that LARS-WG model is better than SDSM for downscaling the precipitation data with less error. LARS\_WG Model simulation results has estimated that precipitation will increase for February, November and December and it will decrease for the months of August and September, on each of five stations. We Used GIS to mapping the severity of the drought. 3-month SPI- results showed the greatest frequency and severity of droughts during the observation period on Anzali and Rasht stations. During the future, Rasht and Ramsar stations will have the highest intensity of droughts. 6-Months SPI determine the higher frequency on Babolsar, Gorgan, Ramsar Station and severity on Anzali, Rasht and Ramsar have experienced the highest drought. Ramsar, Rasht and Gorgan stations will have higher drought degrees in future. 12 -months SPI results showed the highest intensity was for the Ramsar and Anzali, Ramsar, Rasht Anzali, Babolsar will reveal for future. Results indicated periods of normal SPI is more frequently than in any other period of five stations.

**Keywords:** drought, SPI, LARS-WG, SDSM, southern coastal of Caspian sea.

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### **Locating The Temporary Settlement by Using Variables' Fuzzing and Hierarchical Analysis Process in GIS Environment Case Study: Meybod City**

**Mohsen Kalantari**

M.Sc of Remote sensing and GIS, Yazd University

**Dr. Ali Sarkaregar Ardekani**

Associate professor of Remote sensing, Tehran Imam Hossein University

**Dr. Sayyed Ali Almodarresi**

Associate professor of Geomorphology, Yazd Azad University

#### **Abstract**

Given the high importance of housing for human, predictin of locations for temporary housing of the people damaged from the events is inevitable. Meybod city with its historical background and a narrow passage network is placed in a zone with relatively high degree of risk. One of the most important duties of the planners of crisis management part is serious predictions for emergency accommodation, because the affected people with no conventional housing are on the verge of serious physical, mental and psychic serious damages.with respect to the location nature of this subject and fuzzy nature of parameters and facing with a great deal of parameters for decision making, it is possible to use a combination of GIS and Fuzzy logic together with multi criteria decision making methods for making an optimum decision which leads to specifying the promising areas for temporary housing. The required statistics and information were gathered by library and field method and satellite images of the under study area were updated in the map of Meybod city. The aim of this study is the presentation of an effective, flexible, logical and strong method for locating temporary housing by using GIS. In this study, firstly the most effective parameters were selected and by using hierarchical process and Fuzzy logic, the places for temporary housing were obtained. Then, the recommended locations were compared and prioritized and the considered sites were ranked and the best one was specified among the selected options. In AHP method, six places with relative importance of " very appropriate" and total area of 347,071 square meters and six places with relative importance of " appropriate" and total area of 384,369 square meters were determined as the best locations for temporary housing. Baharan park and bare lands of the south east of the Governory stadium were selected with relative importance of " very appropriate" in Fuzzy method.

**Keywords:** locating, temporary housing, fuzzing, analytic hierarchy process (AHP), Geographical Information System( GIS).