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Study on the Locative-spatial pattern of factors affecting institutionalization of public participation in rural areas of Ja'far Abad District, Qom Township

Aliakbar Anabestani: Associate prof, Geography and Rural Planning, Ferdowsi university of Mashhad

Reza Khosrovbaygi: Ph.D candidate in Geography and Rural Planning, Ferdowsi University of Mashhad

Aliakbar Taghilu: Assistant Prof, Geography and Rural Planning, Urmia University

Aboulfazl Zarei: MSc in Geography and Rural Planning, Ferdowsi University of Mashhad

Abstract

Participation, as a purposeful social interaction, is influenced by spatial elements that appear in a society as resources and social, cultural, economic and administrative capital. This study, uses a systematic approach, in the form of a descriptive-analytical correlation, tries to identify local-spatial pattern of factors effective in the institutionalization of public participation of 20 rural settlements in Ja'far Abad District in Qom Township. Data were collected from the questionnaires filled out by a sample size of 355 people, and analyzed using appropriate tests in the SPSS software package. Results show that the local-spatial elements effective in participation that appear in the society as social, cultural, economic and administrative capital have emerged as a serious gap in the rural areas, and if any of them were effective, they were based on internal potential of such settlements built without governmental management guidelines. And depicted as an incomplete and partial image of public participation. Based on student t-test, the level of participation in most of the indexes, especially items reflecting official participation in organized institutions was less than expected. In ranking the local-spatial factors effective in public participation, indexes like social relations among people, tribal differences in a village, asking after people, mutual respect among people, dispute over agricultural issues, following others' advice, trusting one another among the people, etc., with regard to size had the largest role in explaining the level of participation, which reflects the informal and typical nature of spatial elements affecting rural participation. The results of multiple regression showed that social capital with a coefficient of determination of 0.743 had the greatest effect on the participation in rural areas.

Keywords: social capital, cultural capital, economic capital, managerial capital, Ja'far Abad District

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The role of North Sea - Caspian upper atmospheric teleconnection pattern (NCP) in temporal variability's of rainfall in Sothern coastal of Caspian Sea

Yousef Ghavidel rahimi: Assistance Professor, Department of Physical Geography, Tarbiat Modares University, Tehran, Iran.
Dariuosh Hatami Zarneh: MSc student in Climatology, department of Physical Geography, Tarbiat Modares University, Tehran, Iran.
Mohammad Rezaei: MSc student in Climatology, department of Physical Geography, Tarbiat Modares University, Tehran, Iran.

Abstract

The North Sea -Caspian upper atmospheric teleconnection pattern (NCP) is one of very important teleconnection patterns of 500 hecto-pascal level. This teleconnection pattern has important role in implications on the regional climate of Eastern Mediterranean. So far, the role of said pattern on the rainfall fluctuations of southern shores of Caspian Sea has not been studied. Accordingly, in this study the relationship between the patterns of North Sea – Caspian index with Caspian Sea rainfall fluctuations in a long period of 55 years (1955-2010) has been studied. The data used in this study include Monthly rainfall data from five synoptic stations on the southern coast of the Caspian Sea, Data of pattern of North Sea – Caspian index and Re- analyzed Geopotential height data. Results, Show an increase of precipitation in positive phase of the North Sea – Caspian and decrease of precipitation in the negative phase. In the time point of view, correlation coefficients calculated show significant relationship between the rainfall stations and pattern of North Sea – Caspian in April to September. Most of the monthly correlations between stations with 0/555 were calculated in December. Analysis of seasonal Correlation also showed the more influence of rainfall in fall and winter with 0/396 and 0/392 significant correlation coefficients respectively. Gorgan station as Easternmost station in the south Caspian Sea, showed worse correlation with pattern of North Sea – Caspian, and Rainfall Except for February, did not show Correlation with pattern of the North Sea – Caspian in all months and seasons, this is Probably due to the distance of Gorgan station from action center of Caspian sea. Analysis of Atmospheric patterns in level of 500 hPa in positive and negative phase show establishment of a deep trough over the Mediterranean and Placement of Southern shores of the Caspian sea in the East Trough provides Cyclonic condition that Cause transfer of Moisture of north sea , the Mediterranean , Black Sea and the Atlantic Ocean to Iran. However, in negative phase of the study area located below the ridge axis led to barotropic atmosphere with weak zonal wind and Due to the warm and dry air blowing of Africa, rainfall is low in Iran.

Key words: Precipitation, teleconnection pattern of the North Sea – Caspian, Correlation analysis, Southern coast of the Caspian Sea

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Analysis of Spatial patterns of crime in Region Seventeen of Tehran Municipality

Sajjad Ahmadi: PhD student in Geography and Urban Planning, University of Kharazmi
Faranak Sifoldini: Professor in Urban and regional, Planning, Department of Geography, University of Tehran
Mohsen Kalantary: Associated Prof in Geography and Urban Planning, University of Tehran

Abstract
In analyzing delinquency event, besides, considering, who the delinquents are, what their motives are and who the victims are, it is important to consider in which locations and at what times, delinquent behaviors occur the most. In fact, location and time have impact on delinquency rate and on creating motives to act. Spatial analysis of delinquency in cities helps to determine the pattern of delinquency behavior, and locations with the highest rate of delinquency. Considering the patterns and the locations of delinquent behaviors, spaces can be converted to be resistant to delinquency and abnormal behaviors. Current research used descriptive-analytic research to analyze the distribution of delinquent behaviors and drug smuggling, considering their location of occurrence in region 17, in Tehran city. Statistical and graphic methods, GIS and SPSS were used, on the basis of nearest neighbor indicator. The distribution of delinquencies related to drug smuggling and rubbery, show cluster pattern. Particular areas of region 17, are the Clusters of delinquency behaviors. Result of Pearson correlation analysis shows that there is a significant positive significant correlation between population density and drug smuggling and rubbery rate.

Keywords: crime, Spatial Analysis, clustered, region 17

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Survey and Analysis of Walking Capability of Pedestrian Ways in Isfahan

Ahmad Shahivandi: Assistant professor of Urban Planning, Art University of Isfahan
Mahmoud Ghalehnoee: Assistant professor of Urban design, Art University of Isfahan

Abstract

Pedestrian ways as an integral part of the urban transportation system complete the origin-destination trajectory. Due to the problems created by motorized transportation within the city, pedestrian movement could reduce fuel consumption, air pollution, congestion problems and costs associated with families. This could also improve physical and mental health of citizens and the quality urban spaces would be created. The objective of this study is to assess the walking capability of pedestrian ways in the city of Isfahan. The method of survey has been used in order to choose a Cochrane statistical sample of 400 participants, using different criteria to assess the qualitative and quantitative aspects of pedestrian ways. To analyze our database, the assessment model of TOPSIS has been used and classification of subjects is down by cluster analysis. The results showed a very large differences between the pedestrian ways of the city in terms of 54 criteria considered in the study. Ostandari and Chahar-Bagh had greater capability of walking than the other axes, and Ghaemieh was the worse.

Key words: Urban transportation, Pedestrian capability, Pedestrian, TOPSIS, Isfahan

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Modeling of the Relationship between Annual and Seasonal Precipitation and Geo-Climate Factors in Kurdistan Province

Peyman Mahmoudi: Physical geography department, Environmental planning and geography faculty, Sistan and Baluchistan University
Bohlol Alijani: Professor of climatology and director of the Centre of Excellence for the Spatial Analysis of the Environmental Hazards, kharazmi University, Tehran, Iran

Abstract

To model the relationship between three Geo-Climate factors of altitude, latitude and longitude and annual and seasonal precipitation in and Kurdistan Province, monthly data from 83 synoptic, climatology and pluviometer stations for a period of 30 years (1985-2008) were used. Statistical defects of stations in 30 years were completed with the most consistent station based on regression model. Model of choice for establishing this relationship was multiple-regression model using stepwise method of variables. Validity of models was also evaluated by testing four hypotheses of linearity of the relationship, lack of correlation of model errors; normality of remnants and constancy of variance of the remaining were evaluated. The results of implementation of this model on the annual and seasonal precipitation indicated the different combinations of each of these three variables on the spatial distribution of seasonal and annual precipitation. So that, the combination of the two variables of longitude and latitude, respectively justifies 69, 66 and 46% of spatial variability of autumn precipitation, annual precipitation and spring precipitation. The combination of the two variables of longitude and latitude explains about 63% of spatial variability of summer precipitation and combination of the three variables of longitude, latitude and altitude explains 47% of precipitation spatial variability in the winter.

Keywords: Geo-Climate, Precipitation, multiple-regression, Kurdistan

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Factors influencing the presence or absence of the main factors forming the deprivation trap in rural communities Shirvan & Chardavool Township in Ilam

Alireza Jamshidi: Ph.D. Student, Department of Geography and Rural Planning, University of Isfahan
Sayed Eskandar Saidaei: Assistant Professor, Department of Geography and Rural Planning, University of Isfahan
Masomeh Jamshidi: Ph.D. Student, Department of Geography and Rural Planning, University of Isfahan
Alireza Gholami:Ph.D. Student, Department of Geography and Rural Planning, University of Isfahan
Davood Jamini: Ph.D. Student, Department of Geography and Rural Planning, University of Isfahan

Abstract

The purpose of this article is factors affecting the presence or absence of the main factors forming the deprivation trap in rural communities Shirvan and Chardavool Township. The study used a descriptive and analytical that has been conducted the survey method. Research required information were obtained through face to face interviews and questionnaires in the crop year of 2010-2011. The statistical population are all households residing in the villages of Shirvan and Chrdavool Township which are employed in agricultural sector (crops or livestock, or both together) (N=8099). Using the formula of Cochran, 200 households were selected as sample through the sampling multi-stage stratified sampling. Cronbach's alpha coefficients and KMO coefficient in the main part of the data collected showed that research tools have the high potential to collect information. In this study, a path analysis model is used to explain the causal factors in the presence or absence of the main factors forming the trap of deprivation in rural communities. Based on the results there are Significant positive relationship between some variables constituent factors of deprivation trap in rural communities in Shirvan and Chardavool Township including variables of damage and residence remoteness from the service centers on vulnerability factor, variables of meeting with the religious and political elite of the township and the education level on the isolation factor, variables such as the cost used in the agricultural sector and total household income on the poverty factor, and productivity of production and manpower variables on physical weakness.

Keywords: Deprivation Trap, Rural Areas, Rural Development, Path Analysis, Shirvan and Chrdavool Twonship.

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Performance Comparison of multi-index decision-making (TOPSIS - AHP) for suitable site selection cultivation planting of Pistachio in Mokhtaran plain of Birjand in GIS environment

Mahmoud Fallsolyman: Assistant of professor geography and rural planning, Birjand University.
Mohammad Hajipour: PhD student of geography and rural planning, Kharazmi University.
Hojat-allah Sadeghi: M.A of geography and rural planning, MS of Rural South Khorasan Office.

Abstract

Regarding great resistance against thirsty and salt, pistachio as one of the most productive agricultural products has a great role in economic and social conditions of yeomen who work in dry and semi-dry areas. Mokhtaran plain in south Khorasan is one of the areas that has focused on planting this product. This research has tried not only to division areas capable of producing pistachio with multi criteria decision making approaches (TOPSIS and AHP) in GIS, but find and represent the best approach among those two approaches. This research is practical and description-analysis, and has used one of the two mentioned approaches nominating for areas capable of planting, after collecting and preparing different information. Results have shown that according to AHP approach, 469 KM^2 of Mokhtaran plain has no limitation, and 568 KM^2 of it has a little limitation, and other three parts: 694, 467, and 288 KM^2have great limitation for planting pistachio. However, according to TOPSIS approach, 263 KM^2 of Birjand`s Mokhtaran plain has no limitation for planting pistachio, 97 KM^2 has little limitation, 486 KM^2 has average conditions, and 651, and 989 KM^2 has great and extreme limitations. Comparison of these two approaches showed that according to existing state of planting pistachio and areas that has division according to natural conditions, AHP approach is more suitable and accurate for this production.

Keywords: agriculture extension, multi criteria decision making approach, geographical information system, pistachio, Mokhtaran plain.

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Investigation of Drinking Water Quality Obtained from Groundwater on Human Diseases in Recent Decade in Mashhad Plain

Alireza Entezari: Assistant professor of climatology, Hakim Sabzevari University.
Elahe Akbari: MSc in RS and GIS, Hakim Sabzevari University.
Fatemeh Mayvaneh: M.A in Climatology, Hakim Sabzevari University.

Abstract

Nowadays, with progressive growing rate of population in the most parts of the world, groundwater resources play a very significant role for supplying drinking water .whereas this has been associated with the occurrence of some diseases and difficulties. This study has been done to determine the quality of groundwater resources in Mashhad plain in terms of drinking capability as well as its effect on health factors. To determine how the distribution of groundwater quality is, the data gathered from 60 wells in this plain over the last decade has been assessed from the point of view of such parameters as total dissolve solid, total hardness, chlorine, sodium and sulfate. The mentioned parameters have been compared and zoned based on international standards and Schuler classification in geographic information systems through the inverse distance weighting and weighting linear combination. Then the relationship between deaths of cardiovascular and kidney diseases with these parameters was determined by the Pearson correlation coefficient and at the end were analyzed. The evaluation results of the groundwater quality changes in last decade indicate a descending trend and unfavorable situation, especially in the southern parts. In addition, there is a significant relationship between death rate due to cardiovascular diseases and chlorine parameter ($p < 0.05$). With continuation of the negative changes trend in groundwater quality, probability of these of these diseases would be increased in future. Therefore, in order to prevent advancing of brine and reducing the quality of ground waters as well as to prevent endangering the health of the plains residents, serious efforts should be done in addition to preventing the leakage of domestic and industrial wastewater and reducing ground waters indiscriminate extraction.

Keywords: groundwater, Zoning, GIS, disease, Mashhad plain

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Change detection of Mighan desert basin using ETM+, TM, MSS images and climate data in the period of 1973 to 2011

Parviz Zeaiean Firouzabadi: Associate Professor RS and GIS faculty of geography sciences Kharazmi University, Tehran.
Hamid Reza Talkhabi: M.A Student of Geography and urban planning of Kharazmi University.
Leila Hosseinjani: M.A Graduate Student of Climate in environmental planning of Kharazmi University.

Abstract

In recent years, threat of desertification or desert growth has been one of the most important issues on a local and global scale. This could be the results of climate change and poor environmental management .The remote sensing technology with its ability to produce high spatial and spectral resolution satellite images is known to be an effective tool for the detection and evaluation of changes. The present study with uses climate data and Landsat Satellite ETM+, TM, MSS images for the years 1973, 1985, 2000 and 2011 to analyze the trend of climate and desert changes. To obtain the climate change, climate parameters and magnitude of changes, band subtraction method and fuzzy logic were used. Satellite images were classified using Maximum Likelihood Classifier (MLC) in ARC GIS10 software. Results showed that in consequence of climate changes (reduced rainfall and increased temperature) the magnitude of fuzzy changes were equal to 0.84843, 0.92983 and 0.92795 for the periods of 1973-1985,2000-1985, and 2000-2011 respectively. The area of desert has increased15.9, 8.6, and 9.9 square kilometers respectively during these three periods and during 38 years desert area has reached from123.8 to158.4 square kilometers which shows an average annual growth rate of 0.9052 km^2 and that correlation between the reduced rainfall and increased deserts -0.998.

Keywords: Detection of Fuzzy changes, Satellite Images, The process of climate change, Desert expansion, Meghan Basin.

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Assessing the rate of neighborhood identity with an Emphasis on the role of Public institutions in the region 7 of Tehran.

Rahman Jahani Doulat Abad: Ph.D student of Geography and Urban Planning, Kharazmi University.
Ali Shamai: Associate Professor of Geography and Urban Planning Department of kharazmi University.
Ismail Jahani Doulat Abad: Ph.D of Sociology, Tehran University

Abstract

Revitalize a neighborhood identity and social belonging in order to optimal management and improve the quality of life citizens have always been emphasised by urban experts and researchers. In this regard, creation a neighborhood management structure in order to provide a collaborative space, through the formation Public institutions particularly neighborhood councils can be seen as a move in this direction. Accordingly, the present study has discussed the rate of neighborhood's identity in the region 7 of Tehran and the role of public institutions particularly councils to enhance the of identity. This method of research is descriptive - analysis and survey. Used data from a questionnaire has been collected among 500 residents to 15 years of the region 7 of Tehran. Multi-stage cluster sampling method was used in this study.The research results show that Sense of belonging and sensitivity to the neighborhood does not seem very strong and reliable among citizens of the region. One of the most important reasons for this issue is lack of interaction between citizens and public institutions in the region. Expectations of the region citizens of public institutions are significant about the strengthening of in neighborhood identifying elements. It Shows sensitivity to the neighborhood and the potential for identity formation there are among the citizens of the region 7 of Tehran and if their expectations are to be effectively fulfilled in this respect, the situation will be more favorable to the neighborhood.

Keywords: Identity- Neighborhood identity- Public institutions- Neighborhood councils- Region 7 of Tehran.

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Zoning dust phenomena in west Iran The period from 1990 to 2009

Dariush Yarahmadi; Assistant professor of Climatology Lorestan University
Asadollah Khoshkish; PhD Student of climatology Lorestan University

Abstract

Western half part of Iran is located in the proximity of the country's major deserts. The desert dust influences continually the western half of Iran, and Creates devastating effects in this part of the country. Spatial pattern recognition of this dust helps in planning and prediction of the detailed, prevention and mitigation of their effects. The aim of this study is Spatial Analysis of dust phenomenon in the West part of Iran in the timeframe from 1990 to 2009. To do this, daily data of dust and horizontal visual of 23 synoptic stations in the western half of Iran achieved from Meteorological Organization's, and this monthly and annual data have been analyzed. Then the zoning map has drawn for the entire period and year 2009in GIS software. The results showed that the dust input during selective time reach to maximumin the Khuzestan province and also results shows that by moving from south to north and from West to East, reduced the amount of dust.Weather station of Dezful with 1861 days and weather station of Khoy with 42 days, have respectively the highest and lowest of dusty days in during the period. Also analysis zoning map of year 2009 shows, the dust spatial pattern has changed markedly in recent years (2008 and 2009) and in the Western part of Iran another maximum dustycenter (Kermanshah Province) has been created.

Keywords: Zoning, Dust phenomenon, Geographical Information System, West Iran

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The Determination of Convective Precipitation Contribution in Tabriz City Based on Instability Indices

Jafar Masoompour: Assistant prof, Dept. of Geography, Razi University, Kermanshah, Iran
Morteza Miri: Ph.d student of Climatology, Tehran University, Tehran, Iran
Hasan Zolfaghari: Associate prof, Dept. of Geography, Razi University, Kermanshah, Iran
Dariush Yarahmadi: Assistant prof, Dept. of Geography, Lorestan University, Khorramabad, Iran

Abstract

The ascending mechanisms of the rainfall in different regions follow different patterns. Thus, understanding these patterns can amplify the level of environmental planning. The main objective of this research is the study of the spatial and temporal characteristics of the rainfall over five millimeters and the determination of convective precipitation contribution in Tabriz city based on upper air data. In this regard, hourly precipitation data of the station in Tabriz during a twenty-six-year period (2005-1980) collected from the Meteorology Organization with the rainfall data choice of more than 5 mm, and their temporal-spatial frequency was examined. With the selection of samples (precipitation of more than 5 mm), Skew-T diagrams of precipitation days were analyzed with instability indices such as CAPE, LI, TT, SI and KI. Annual precipitation data processing in the station in Tabriz showed that in the last decades, precipitation occurrence of more than 5 mm was more. Also, this precipitation has occurred frequently. In a seasonal scale, the maximum event of this precipitation (more than 5 mm) recorded in spring and the least in summer. Reviewed monthly, the maximum precipitation event of more than 5 mm occurred in May and April. Skew-T diagrams and calculation of instability indices showed that the role of convection factor, as the main cause of this type of precipitation, in heat duration precipitation is negligible. The convection factor is the main factor when the convection rate has sufficient intensity and the convection provides necessary instability for precipitation. In general, the convection factor has had the most important roles in the occurrence of precipitation in months of June and May. In total, after reviewing 96 samples of precipitation during warm period, we recognized that the convection factor frequently influences this area only in 20 percentage of the precipitation.

Key Words: Convection, Instability, CAPE Index, Skew-T diagram, Tabriz

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