Analysis and Investigation of the Articles in the Journal of Geography and Planning during 2010-2014 Recorded in Islamic World Science Citation Center

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Abstract

Scientific capacity is one of the key factors contributing to sustainable development in a country. The development of scientific capacity requires improvement in scientific publication and productions. This study aimed to investigate the publishing condition of the articles in the Journal of Geography and Planning during 2010-2014. The study adopted a descriptive method and survey design. The results showed that the Journal has published a number of 201 articles over the studied period. Of the published articles, 87% were co-authored by multiple writers. The co-authorship was mostly in the form of intra-institutional contribution. The mean score of collaboration degree was 0.87 while the mean score of collaboration index was shown to be 2.53, which indicates strong co-authorship relations among the Journal contributors. The highest collaboration percentage was observed between two and three authors. With 97 articles, the authors affiliated with Tabriz University published about 50% of articles in the Journal. Thus, Tabriz University was the most prolific institution.

Keywords: Journal of Geography and Planning, Scientific production, Scientometrics, Co-authorship.

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Studying the Trend of Changes in the Frequency of Days with Frost-pervasive and Semi-pervasive Conditions

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Abstract

To identify and detect the frequency variation trend of Iran's pervasive and semi-pervasive frost days in the current research, minimal daily temperature data of 663 Iranian climatology and synoptic stations were acquired from Iran Meteorology Organization during the time interval between 1962 and 2004 for October to April months. Following data acquisition, Iran's isothermal maps for each day starting from 1.1.1962 until 31.12.2004 (9116 days) were prepared using Kirging interpolation technique in order to construct the database of the county's minimal temperature. In the next step, frosts were classified in three types based on a spatial principle: pervasive frosts (simultaneous occurrence in more than 65% of Iran's surface area), semi-pervasive frosts (simultaneous occurrence in 25% - 65% of Iran's surface area), and local frosts (simultaneous occurrence in less than 25% of Iran's surface area). Then, frequency of pervasive and semi-pervasive frost days were analyzed in three scales including monthly, seasonal, and yearly using two estimation techniques of slope SENSE and linear regression.

Results indicated that frequency of pervasive frosts in Iran held a statistically significant decreasing trend in December and January months, during winter, and also, in annual basis. But, for semi-

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pervasive frost days, it was observed that variation was significant only in January having a positive trend. It signifies that number of days with semi-pervasive frost increased during the 43 years under study. Therefore, number of semi-pervasive frost occurrences increased while number of pervasive frost occurrences decreased in January. The same rule holds for other scales i.e. monthly, seasonal, and yearly basis.

Keywords: Pervasive Frost, Semi-Pervasive Frost, Sen's Slope Estimator, Linear Regression, Iran, Trend.

Compatibility Survey of Detached and Apartment Residential Complexes Patternin Sahand New Town

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Abstract

This paper surveys the compatibility of detached and apartment complexes pattern in Sahand new town. This cross-sectional research was done in 2009-2010 period. Type of sampling used in this research was simple random sampling, 124 people of residents were participated into this study. After collecting needed information, questionnaires were coded. All of gathered information for this study was analyzed by SPSS19.The results indicated that there is a difference between these variables-job (p=0.003), period of habitation (p=0.000), dimensions of accommodation (p=0.003) and satisfaction of residential flat- and precedence of detached and apartment complexes pattern (Mann-Whitney U=1406.5, p=0.024).The precedence difference between the quality of detached and apartment complexes pattern was meaningful statistically. Also the average precedence of apartment complexes was more than detached ones (15.804±87.516 to 604±90.216). Even though there wasn't any statistical difference between precedence of first aim-physical and spatial organization-in both patterns, there was meaningful difference between precedence of second aim-Plant and Equipment-in both patterns and also difference between precedence of third aim-traffic and accessibility (p=0.049) (p=0.03). So, if the main objectives are real understanding of life and considering the dweller's favorites and needs, the programmer should pay more attention to development pattern of common apartments. In addition, to develop detached complexes we should consider management, control, plant, equipment, traffic and access.

Keywords: Open Spaces, Residential Communities, Detached and Apartment Pattern, Sahand New Town.

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A Query on Identification, Classification and Synoptic Analysis of Heat Waves in Kerman Province

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Heat waves are considered as one of the important climatic hazards in the world and especially in Iran and it seems that, due to intensification of global warming, their occurrence has increased in recent years than in the past. This study has paid attention to quality and quantity evaluation and synoptic analysis of heat waves in the Kerman Province. For this purpose, At first, the daily maximum temperature data, in month of July (as the warmest month in the year) was put in a statistical period of 24-years (1986-2009) from meteorological organization, for 4 synoptic stations of Kerman, Bam, Anar and Sirjan. In order to classify heat waves, standardized temperature data and on its basis, anomalies of 0 to 0.75 as a heat wave, 0.75 to 1.5 as severe heat waves, and greater than 1.5 were determined as super heat wave. The threshold values of 43.1, 42.1 and 41.2° C were calculated for all stations, respectively as threshold of heat wave, severe heat wave, and super heat wave and its continuity were considered at least for two days. Accordingly, During Statistical period of study, it was found 7 heat waves, which were, identified within 3 severe heat waves, and 1 super heat wave. Super heat wave in July 1998, was selected For the Synoptic analysis. This three-day wave, with an average temperature of 43/11° C, has been the most severe heat wave in Kerman Province. Results of synoptic analysis of super heat wave indicated that the establishment of Ganges low pressure on the ground and the domination of subtropical high-pressure of azores in high levels and also, high thickness atmosphere on the study area caused the subsidence of warm air and excessive heating of earth's surface, and created them mentioned super heat wave.

Keywords: Heat wave, Classification of heat waves, Super heat wave, Synoptic analysis, Kerman Province.

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Climate Mapping of Guilan Province by Using Multi Variable Methods

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Abstract

Climate classification and identifying the most effective factors and elements of each area is one way of understanding identity of the climate zones. Therefore, to identify Guilan climate mapping new methods such as factor analysis and hierarchical cluster were performed. For this, we used 20 climate variables of the 16weather stations in the study area. Then, using interpolation method, a matrix with dimensions of 20×106 data was obtained. Climate mapping of the province with factor analysis showed that the climate of the province is made up of two factors. These two factors are: humid-rain–wind and temperature–cloudy factors. Results also indicated that these two factors explain 99.44 percent of the variance of the primary variables. The contribution of each factor was 64.49, 34.95 percent respectively. Finally, cluster analysis on two climatic factors identified three climatic regions in the provinces. These three regions are: moderate and humid, mountainous, semi humid and cold.

Keywords: Climate Classification, Principle Component Analysis, Cluster Analysis.

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Pathology and Seismic Zoning of Urban Fabric (Case Study: Valiasr Town of Tabriz)

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Abstract

There is a close link between the urban fabric, seismicity and seismic pathology. Urban fabric has been affected, due not only to the physical characteristics, but also through non-physical components (functional), and effects on it. This paper attempts to identify zones and levels of seismic vulnerability zones in urban fabric of Valiasr Town, Tabriz, using descriptive data and documents method. Eight indicators (distance to fault, the quality of buildings, building density, population density, building height-to-width ratio, type of land use, level of traffic service, distance from medical centers) which have been analyzes through irreversible analysis (IHWP). Results show that 54% of the town has been located in the zone of seismic vulnerability. High building density, deficiency of green and open space, high amount of building height-to-width ratio and commercial land uses are the main characteristics of urban fabric in the vulnerable zone. Model of urban fabric distribution and vulnerable zones matches with the location of main arteries (Mokhaberat, Valiasr, Shariati, Ohadi, Moalem, Foroghi, Takhti, Parvin Etesami, Aref, Zand and Javanmehr) especially sub-passages (8-10 meters) leading to these arteries and commercial land uses in the central part (Bozorg and Bazar squares). Spatial model of seismic zone has the east-west direction and center-round. This model has shaped the direction and intensity of changes in vulnerability and has created macro pattern of pathology and seismic zoning of town in two parts: The eastern half is a zone with low risk factors and vulnerability that has the most sustainable urban fabric of town. However, western half represents high and very high seismic instability and vulnerability. The central part of the town is the spatial center of seismic intensity of these areas.

Keywords: Seismic Pathology, Zoning, Urban Fabric, IHWP, Valiasr Town of Tabriz.

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An Analysis of Urban Land Use Changes in Tabriz using Land Transformation Model

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Abstract

Urban sprawl and land use changes are one of the fundamental challenges facing urban planning in recent years. Therefore, modeling these changes is considered as an important tool by planners, economists, ecologists and environmentalists. This paper is an attempt to apply the Land Transformation Model (LTM) for urban land use changes in Tabriz based on artificial neural network and a geographical information system for the in prediction of Tabriz future development. Methodology in this paper is descriptive-analytic and the data are produced from satellite images, urban land use maps and approved plans for Tabriz. For preparation of data and analysis, ERDAS imaging and ArcGIS software, and for training test, simulation and the probable prediction map, LTM software are used. Results in training process, from 1989 to 2005 shows that 21469 cells (50*50 m) were expanded in 16 years period which is according to the real developed area in the same period and this result shows optimum training network. For prediction of probability map, we used Tabriz population and land use per capita was estimated in regional plan of Tabriz, and results illustrate 22484 cells changing until 2021 for future development. The results of the model, have predicted the most developed areas in the northwestern, east and south-east aspects and continuing this process would destroy green spaces, agricultural lands surrounding the city and threaten the environment. Thus, with this expansion, 8437 ha of green spaces and periphery areas will go on the

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built area. Continued sprawl development not only will destroy urban environment in periphery areas, but it also will disrupt spaces in Tabriz and there by will increase urban development costs such as infrastructure services.

Keywords: Land transformation model, Sprawl growth, Land use changes, Urban land.

An Analysis of Abstract and Practical Knowledge about Climate Change (Case Study: Students of Mazandaran State Universities)

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Abstract

The purpose of this study is to examine students' theoretical and applied knowledge of climate change and social factors influencing it. To conduct the research, descriptive-analytical method was used and 187 students of Mazandaran state universities were selected by stratified sampling. The questionnaire was applied to collect data then data was analyzed using SPSS statistical software. Results of the study showed that the level of students' abstract and practical knowledge of climate change is high and there is relationship between environmental information sources, perceived performance and students' knowledge of climate change. The results showed no significant difference between level of knowledge and gender and place of residence of the surveyed students and students' knowledge of climate change is different to college. Overall, the results indicate that there is a requirement of environmental education and this suggests that the subject matter of climate change and policies should be included in curriculum of all university courses.

Keywords: Climate Change, Abstract and Practical Knowledge, Higher Education, Mazandaran Province.

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Analysis and Evaluation Land Use Indicators In The Babol City, with An Emphasis on Optimal Per Capita Healthy City

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Abstract

Healthy urban planning is the optimal utilization of the environment and comply with all land uses due to the density and per capita appropriateness, so that the citizens can be benefited. Considering the importance of healthy the city land uses, this paper aims to assess the situation indicators and per capita city of Bbol to the quality healthy city land. The purpose of this paper is to identify the strengths, weaknesses, opportunities and threats to their land of Bbol and compliance with of healthy per capita. This is an applied research and research methods are descriptive, analytical and comparative survey. It also identifies the strengths, weaknesses, opportunities and threats of Bbol for strategic analysis. Results obtained show that the land use per capita in Bbol is much lower and there are many deficiencies in the land of Bbol per capita. Except for residential land use, the rate applicable for the land use per capita is, less than twenty-eight percent. Some users are in a critical situation, such as in the use of facilities and equipment, utilities, health care, green space and parks, and cultural and sport land uses. In terms of the balance and harmony in the land uses, there is no balance between them. Location of land use particularly user green space and sports are not done right. Babol residents have good access to land uses.

Keywords: Urban land use indicators, Per capita, Healthy city, City of babol.

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Sensitivity Analysis of the Effective Parameters upon Daily Evaporation Using Garson Equation and Artificial Neural Network (Case Study:Tabriz city)

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Abstract

This study performs a sensitivity analysis to evaluatethe meteorological parametersthat affect daily pan evaporation rate. To this end, five meteorological parameters namely, daily mean temperature, relative humidity, sunshine hours, solar radiation, wind speed and pressure for period of 1386 to 1390 were used at the Tabriz City, Iran. At first, the pan evaporation rate was estimated using Artificial Neural Network (ANN) and the best structure of the ANN was distinguished. Then, weight matrix of selected structure of the network along with the Garson algorithm were used for sensitivity analysis of the input parameters and determine relative importance of the input parameters. The results indicated that the daily mean temperature and relative humidityare the most effective variables. However, the sunshine hours, solar radiation, wind speed and pressure have less effect on the evaporation rate at the Tabriz station.

Keywords: Garson algorithm, ANN, Sensitivity Analysis, Evaporation, Tabriz city.

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Landfill Site Selection Using Spatial Information Technologies and AHP: A Case Study of Marageh, Iran

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Abstract

Insufficient garbage hygienic burial is a sign of lack of planning and economic efficiency and a warning to environmental issues. By rapid development of urban area, place of garbage burial is considered insufficient and it affects directly the expenditure in remote and small regions. Thus by this approach the present paper aims to localize the urban garbage burial in Marageh in mathematical situation of east 46° 07′ 46″-46 ° 43′ 33″ and north 37 °00′ 52″-37 °44′ 35″. With high population, this city lacks healthy center for urban garbage disposal and this causes environmental problems. By using AHP and satellite images, field operations and sampling from case study area, different variables were evaluated in order to choose the best location for urban garbage lanfill. A map was prepared with raster format in GIS for each variable layer. All criteria were compared in pair and finally the map of suitable locations for urban garbage landfill were proposed. The results of analysis were categorized in five classified from significant to very weak, so that the region with 2972 ha of area as 1.36 percent of Marageh city is covered as the best location for hygienic disposal. Finally the field operations performed and the map was drawn in GIS showing that the favorable region liesnear the village Aghcheh Kohl, whose distance is 15 km from the city of Maragha and research priorities.

Keywords: Marageh city, Locating, Garbage, GIS & AHP.

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Assessment and Optimization of Urban Physical Growth in in Order to Maintain Vegetation and Agricultural Land (Case Study: City University)

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Abstract

Increase in urban population changes agricultural lands to residential, commercial and industrial uses. These changes have unfavorable consequences including loss of vegetation cover on the urban environment. Ambient temperature and high-quality agricultural lands have been destroyed. In In this regard one of the strategies that optimizes the physical fabric of urban and reduces environmental damage is the use of modern techniques of remote sensing which plays an effective role in the management and the improvement of urban land use. This paper aimed to evaluate and optimize physical growth of Urmia to maintain vegetation and agricultural lands developed. Therefore, changes in land use Urmia, between 1985 and 2011 were calculated. Reviews indicate a sharp decline in agricultural lands and orchards in the area. So as using AHP descriptive model we found that in order to satisfy the requirements of urban development five categories should be considered: From very suitable to very poor groups. The results showed that over 21.5ha of the area, (i.e. 5.08%) have suitable conditions for the intended purpose.

Keywords: Optimization of Urban Development, Urmia City, Environment, Models, Remote Sensing.

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Assessement and Predicting of Soil Erosion Risk at Semi-arid Mountain: Intergeration of the USLE Model and GIS Technique for Soil Conservation Planning Case Study: Sareskandarchy Catchement, Eastern Slope of Sahand Mountain

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Abstract

Soil erosion is a major environmental proplem in the world which causes economic losses and threatens the sustainable development. Many factors are responsible for erosion acceleration in catchement scale. Soil erosion by water is the result of interplay between catchement environmental factors such as soil, topography, drainage density and land use pattern and other factors. The soil erosion problem is more serious with hilly catchements which are subject to heavy rainfall, in semi arid mountains. In the study area-as a semi-arid region–which is situated on eastern slope of Sahand mountain (NW of Iran) soil erosion with water is very intensive. This area is as a major farmland and grazing land. Gullies and rills are the traces of water erosion. These phenomens are seen in many parts of study area. In order to investigatien on responsible factors to soil erosion and assessement of the risk to erosion, we used USLE model. By using this model, we studied the role of topography, land use, and soil type on soil erosion. The results suggested that slope and slope length play a major role on determining the erosion pattern. The depth of gullies is increased at parts where the length of slopes is increased. In these parts there is increased linear erosion through the increased rates of silt.

Keywords: Soil erosion, Linear erosion, Soil erosion risk Zonning, USLE, Sareskandarchy, Eastern slope, Sahand Mt.

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An Empirical Analysis of Environmental Pressures of GDP in Iran

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Abstract

Reaction between economic growth and environmental quality is a controversial issue which has been considered since the 1990s. Pressure on the environment due to economic activities not only from environmental aspects but also from the economic point of view is important. The existence of abundant energy sources in Iran cause the use of them in economic activity exceeding. This will lead to increase environmental pollution in one hand and on another hand, using too much of energy is cause a burden on the environment. In this study, we investigate the relationship between energy consumption as a proxy of environmental pressure and GDP per capita by using the Johansen & Juselius Cointegration econometric method during to 1967-2009. The results show that the correlation between environmental pressures and GDP per capita is the inverse of U shape. Therefore, the increase of per capita GDP growth recommended so is that on the Kuznets curves downward part in stands long run. Also policy makers have to take short run polices that reduce negative externalities as far as economy is at positive part of EKC.

Keywords: Environmental Kuznets Curve (EKC); Environment pressure; Johansen & Juselius Cointegration; Economic Growth.

JEL classification: Q56, Q51, C22.

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Zoning of Groundwater Pollution Potential of Marand Plain Aquifer Using from AVI and DRASTIC Methods at GIS Environment

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Abstract

Purpose of this study is zoning of Marand aquifer vulnerability mapping using DRASTIC, AVI and methods and comparing their susceptibility adopted from these methods. The DRASTIC method is a combination of seven measurable hydro-geological characteristics that are effective on transportation of contaminant into groundwater. The GODS and AVI methods combine four and have two properties respectively. The DRASTIC method results is the most complete index for assessing groundwater vulnerability, which has been estimated the vulnerability for the study area as moderate 50.4 percent, high 32.9 percent and very high16.7 percent. The GODS method results suggest three classes for the Marand aquifer vulnerability including moderate, high and very high with 43.8, 5.16 and 51.04 percent, respectively. Also the AVI method results indicate that the aquifer has a vulnerability of moderate, high and very high with 39.13, 6.5 and 54.37 percent, respectively. In all three methods, the degree of vulnerability in the East, Southeast and Northeast parts of the pain is more than the central and western parts of the pain. DRASTIC model is determined the vulnerability areas more accurately due to having more features and different weighting of the features based on their role in pollution.

Keywords: Groundwater, Vulnerability, Marand plain, DRASTIC, AVI.

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Environmental Effects of Weathering and Degradation of Rocky Cone Shape Houses in the Kandovan Village

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Abstract

Kandovan village with cone-shaped rocky houses is one of the tourist attractions in East Azerbaijan Province of Iran. Investigations show that the cone-shaped rocks are eroded and deteriorated by environmental factors. For investigation on this issue, in addition to the field word, the samples were taken from fresh and weathered parts of the rock mass of houses and we studied the effects of climate and weather factores on their physical and chemical properties using freezing-thawing, wetting-drying and X-ray diffraction testes.

Also fractures characteristics of Kandovan rock mass was measured and analyzed by using a computer program called "Dips" and three major fractures were detected in its erosion on rocky created cone-shaped houses. There is the chance of degradation of houses due to continuing erosion along them. The results of the climate data, tests and analyzes show that rock surface were damaged and eroded by environmental factors but due to lack of appropriate water and suitable temperature for chemical weathering, there are no traces of clay minerals in the rock. Area climate condition does not show significant effect on physical and chemical weathering process of the cone-shaped rocky houses and only a thin layer of them has been damaged but there is the possibility of further damage of rocks due to continuing weathering and erosion processes and lack of conservation and restoration actions.

Keywords: Freezing-thawing, Kandovan village, Physical Weathering, Wetting-drying.

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