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# Identification and spatial distribution of precipitation probability models of Iran

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## Abstract

Identifying the characteristics of daily precipitation in water resources planning and planting patterns is important. By fitting probability models to daily precipitation be achieved some aspects of these data in abbreviated form. In this research, the data from the gridded daily precipitation of 0.25*0.25 degree longitude/latitude within time interval of 22/03/1951 –20/03/2007 (equals 20453 days) was extracted from APHRODITE precipitation database of the Middle East for Iranian territory by Grads software. To identify the fittest distribution of the days with over 0.5mm precipitation, in each pixel Kolmogorov-Smirnov Fitness Test has performed. Programming in Matlab software environment for types normal and gamma distribution functions of individual pixels have executed. The theoretical two-parameter gamma distribution and exponential have the necessary statistical goodness of fit test at Confidence interval 95%. Calculating the parameters of the fittest distribution function shows, despite the low average rainfall expected in a significant proportion of daily precipitation of low confidence and fluctuating rainfall is high. Skewness and kurtosis Parameters shows Skew and asymmetry in precipitation. On the other hand, the low value of the parameters represents the distance distribution function of normal precipitation conditions; the subject has also confirmed by the goodness of fit test statistics.

**Key words:** Probability model, Parameter distribution, APHRODITE database, precipitation, Iran

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# A comparative study of students' walking trips patterns among Mashhad districts

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## Abstract

Throughout the recent years, the number of students who walk or ride a bicycle for reaching to their schools has been reduced. While application of the mentioned methods is considerabily useful for the health of the students and the socity, continue of this trend, in addition to making the problems in social domain, would lead to increase of the traffic problems arisen from the personal vehicles traffic especially at the peak hours in the morning which is recognized in conterary to the sustainability criteria. The theoretical basis of the presented research is the theory of smart urban growth. Research hypothesis expresses that reduction of the distance from home to school, increasing the population density in the urban areas and reducing inclusion of urban areas, would result in increase of the ratio of students taking a walk or biking as a means to catch to their schools. The research was done by a descriptive - analytical method. In order to collect the documentary data via the library methods, the data from Mashhad municipality, transportation and traffic department of Mashhad, education organization of Khorasan Razavi, ministry of urban development and the other agencies were used; also the field studies were conducted by application of the questionnaires to complete and correct information and the data layers. Also, GIS software was employed for gheographical analysis. The results indicate that, in comparison with the richer central and weastern areas of Mashhad city, there is more tendency to walk to school in north, east north and east areas of the city (the deprived areas). Moreover, in the deprived areas of the city, the average length of distance that students take by walk is higher than the distance walked by the students in the richer areas. At the end, in order to increase the students' walking and cycling trips, some recommendation based on research results are presented.

**Keywords:** urban sustainability, smart urban growth, students' trips, walking, Mashhad city

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# Social Assessment of students' Knowledge about Climate Change

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## Abstract

The purpose of this review is the assessment of students' understanding of global climate change and social and educational factors affecting it. The theoretical framework of this survey is the new environmental paradigm theory. To do so, 816 students of Mazandaran University, Babol Industrial Noshirvani University , Sari University of Agricultural Sciences, Veterinary University, Amol and Babol University of Medical Sciences were selected using a disproportionate stratified sampling, and then check the validity and its reliability, the survey data were collected and analyzed .The nine hypotheses were examined. Results showed that the level of student understanding of global climate change phenomenon is low and the School of Education, Education Department, the new environmental paradigm, perceived personal performance, environmental behaviors, and information resources has had positive direct relationship with changes in knowledge of global climate. In addition, there is no relationship between gender, location and semester and global climate change. In order to promote student understanding of the process of global climate change and global warming, it is suggested that environmental cource should be undertaken in all departments.

**Keywords**: Climate Change, New Environmental Paradigm, Faculty, Higher Education Institutes' Mazandaran Unive

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# Evaluation of Mehr Housing Projects of Zanjan City

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**Abstract**
The housing is one of the main and basic needs for human being. In many countries, governments have fulfilled planning and best strategies to provide house for low income peoples. The definition and concept of housing includes whole of residential environment also a home that is lacking in facilities and infrastructure in your environment can not be defined housing In developing countries and especially in Iran, in few last decades government has been taken the construction of Mehr housing project. In this paper, the investigation of weakness and strength of Mehr housing project has been evaluated by using of document and Questionnaire approach. For this purpose, SWOT method has been used for analysis of empirical results. The main findings of this paper indicate that the Mehr housing project has been included problems such as structures, designing, land uses, shopping canters, health canters, recreation censers, public transit stations and etc. Moreover, the results of this paper reveals that residents of low income and low saving cannot pay the annually payments. These units have a shelter, no one can say that most of the housing and more residents have explained the improvements of peoples as a best policies for owner of housing.

**Kay word:** Evaluation, projects, facilities, Mehr Housing, Zanjan City

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# An Investigation of Iran and Persian Gulf Cooperation Council Relationships: A Constructivism Theory Perspective

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## Abstract

Persian Gulf is one of the unique geographical regions with outstanding characteristics in the world. It has always been recognized as an attractive place by governments in such a way that it has been exposed to competitions and combats regularly. This area includes countries that are members of Persian Gulf Cooperation Council as well as Iran and Iraq. The relationships of Iran and southern countries of Persian Gulf have been scrutinized from different aspects. The aim of this article is to consider the relationships between these countries and Islamic Republic of Iran in a constructivism theory framework. According to constructivism theory, the reality of system is not only predetermined but also has made a genesis in mutual communication of players and then indexes and the characteristics of this social stage appears within the relations. The players perform based on their own constructs, ideas and imaginations in the reciprocal communications and, in the long run, they create the reality based on a combined imagination. To investigate this issue, with regards to the special style of this approach in relation to the ontology uses to recognize and analysis of phenomena, we have chosen a particular approach in the methodology and therefore we will use a hermeneutic-approval method.

**Keywords**: constructivism, geopolitical structure, Iran, Persian Gulf Cooperation Council

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# Measurement and Prioritization of Rural Regions in term of Qulaity of life Levels, Case Study: Meshgin Shahr County

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## Abstract

The thinkers of plannig believed that the palnning must be parallel with improvement of life quality. In addition, the improvements of life quality can Bering another development bachground such as social, economical, physical development. In this relation, rural regions include needed spaces for related studies with to life quality. These studies must include the related bachground with the quality of life in the rural areas. The aim of this paper is measurement and prioritztion of rural areas in term of quality of life by using of Fuzzy Topsis Tecnique in the meshgin Shahar County. The methodological approach of this study employed an analytical –descreptive method. The study population consists of farmers living in Meshginshar County. (n185) by using Cochran formula (n=185). Content and face validity of questionnaire were discussed in the panel discussion that experts from Ardabil County agricultural Organization office and academic staff from Department ofAgriculture and Extension Education. A pilot study was conducted with 30 members. Reliability of questionnaire was estimated by calculating Cronbach's Alpha. Reliability for the overall instrumentwas estimated at 0.83. The data collectd were analyzed by way Fuzzy Topssis techniques. In the end, the results of multi –attribute decision making methods in the base of calculated weights showed that dehstans of Noghdi and Salavat lied in the first rank in view of social developemnt, respectively, and dehestans of Gharh Su lied in the last rank. Finally, based on the results analysis, some applied recommendations have been provided

**Key Words:** Life quality, Social Development, Rural Development, Fuzzy Topsis, meshginshar Couny

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# Spatial-local Suitability of Urban Green Space in Regional Scale in the Birjand City Regional Parks

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## Abstract

Due to new urban development, there is no balance of green space and open space between urban networks and natural patterns and urban networks are dominating ecological networks. Therefore, cities are in need of urban revival. Because the presence of nature in cities is a necessity for sustainable development. Hence, optimal allocation of land to urban green space usage is one of the main responsibilities of urban and regional planners. The first step is land suitability analysis (i.e. identifying the suitability of a piece of land for a special and defined usage), because an appropriate site selection is the result of a correct suitability analysis. In fact, the purpose of the present study is to provide a method for spatial-local analysis of urban green space (in regional scale) with emphasis on combination of qualitative and quantitative factors (social factors (population) and physical (local and situational), on the basis of ecological principles and using multi-criteria evaluation in GIS to select appropriate sites for creating green space. Finally, this method is used for suitability analysis and site selection of regional parks in Birjand City. Based on, in general, state of regional parks suitability is acceptable. However, there is a significant gap between the current level and ideal level.

**Keywords**: Suitability analysis, ecological principles, analytic hierarchy process (AHP)

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# Modeling the Levels of Development in Rural Regions of Central District in Boyer-Ahmad County

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## Abstract

Today, awareness about distribution of rural development is the first step in formulation of plans and programs. In this regard, modeling the levels of development is an efficient tool. Therfore, this research aims at modeling rural development in the central district of Boyer-Ahmad county. For this purpose, a descriptive-analytical method with the aid of a comparative approach was used. The statistical population of study was the villages in the county with 20 or more households (89 villages). Accordingly, 566 rural households were determined and selected as a sample using Lin sample size table. To collect data, a questionnaire was used. The Cronbach's alpha coefficient (0.561-0.955) indicated the reliability of the questionnaire. In order to model development of rural areas in the district, organism approach (structured) interms of selecting criteria was used. In addition, the Fuzzy theory was used to select criteria and 51 criteria were identified and finalized. Furthermore, Analytical Hierarchy Process (AHP) and VIKOR were used in order to determine the degree of importance of each of the criterion. Findings revealed that the VIKOR model with absolute approach was powerful and recommended. The findings showed that Sarabtaveh, Deh Bare- Aftab Olia, and Tangary villages with regard to 51 criteria by 0.635, 0.608, and 0.579 scores, respectively were developing villages and Gavbarg, Cheshmeh Tabarghoo, Tal-Gahi with 0.182, 0.201, and 0.233 scores respectively were non-developed villages. Also, there wasn't any village in level of completely undeveloped, developed and completely developed. The findings also indicated the undesirable rural development (with mean 0.387 and range from 0 to 1) in the region. Also, approximately half of villages (48.31 percent) with 32.94 percent of the population of the rural region were undeveloped villages.

**Keywords**: Modeling, Rural development, Fuzzy theory, VIKOR, Boyer-Ahmad.

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# Relationship between The climatic index (NAO) with average, maximum and minimum of monthy temperature in northwest of Iran

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## Abstract

In this study, the relationship of index oscillations of sea level pressure in North Atlantic with average, minimum and maximum of monthy temperature in northwest of Iran has been analyzed in the period from 1987 to 2005. The method used in this study is analytical statistics using correlation factors and analyzing the border polynomial trend components. Also by means of derived classified zoning map, the correlation rate of NAO Index with temperatures determined spatially. Results of this studies show that NAO phenomenon has a negative correlation with temperature in all stations. Obtained correlation factors show a weak effect to relatively modest of NAO in region's temperatures. The maximum and minimum correlation rates of NAO index observed to be with monthy average temperatures and minimum monthy temperatures respectively. The maximum correlation factor in every three, average, minimum and maximum temperature with NAO index, is related to station of Ardabil province. Pendulous model of the polynomial flow in two definite waves confirms the existence of negative correlation between NAO and temperatures in northwest of Iran.

**Keywords:** Tele-connection, NAO, Temperature, Pendulous model, Northwest of Iran.

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# Survey of Paleo hydro geomorphology transformations of Kuhdasht region

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## Abstract

The basis of analysis of functional geomorphology is on systematic approach. Systematic geomorphology is to identify geomorphologic forms, processes, and relations between them. Efficiency of this approach is very important when there are interactions between components and elements of the system. The purposes of this study is to survey Paleo hydro geomorphology of Kuhdasht plain and its old lake and recognize structure and transformation of the lake in Quaternary, in this Plain according to systematic approach. studying in the field of how changes in temperature– humidity of Kuhdasht plain during the Quaternary and its effect on forming systems is one of the fundamental issues in studies of Paleo hydro geomorphology, Knowing of such relationships represent geomorphological characteristics of the region and the way of its changes. For this purpose, the geomorphological conditions of this region, citing reasons of Morphology, sedimentology, climatic evidence, reconstruct past climates and compared with the present climate was studied. The results show that the study area cold and wet periods during the Quaternary in terms of temperature, compared to nowadays, was about 9 degrees colder and that precipitation was about 245 mm more humid than today. So, water balance in the plain was positive. This factor has caused the Kuhdasht plain was considered as a lake in the past, and eventually led to the rupture of the lake in the result of water over flow. Relationship review between the lake and Civic Societies indicates that this region is considered as a natural open system and had been a direct Interconnection between the lake and the area's herding systems.

**Keywords:** Paleo hydro geomorphology, Quaternary, Pluvial lake, climate change, Kuhdasht

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# Planning، tourism and leisure in the city of Mashhad with an emphasis on identifying patterns of leisure in urban areas

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**Abstract**

Among the most important issues in tourism planning is identifying differences in leisure activities of urban residents، This study looks at Mashhad people leisure in a geographical view، In other words، it is going to investigate what patterns of leisure exist in each area، ، what approaches should be considered towards these patterns in the planning of tourism in Mashhad? The study areas were 13 Mashhad Municipality areas، To achieve the purpose، residents' opinions of each region about their tendency toward the major leisure attractions of the city were investigated، Using ArcGIS software، preliminary results of the separated areas were saved in spatial database and their trend toward leisure attractions were determined in the form of maps، The results in this stage showed the tendency towards 10 attractions (including six religious and four natural attractions) in Mashhad، Using ANOVA analysis confirmed a significant difference between the residents' trends in each area to attractions، which showed the difference in their attitudes towards leisure in Mashhad، Then through the standardization of data obtained from the citizen' trends and displaying them on a scatter plot، leisure patterns were determined for each area of Mashhad، The results showed that there are tendencies to natural attractions in 4 areas، to religious attractions in 2 areas، a combination of both natural and religious in 4، and in 3 areas there is weak trend to the both، Correlation analysis also showed the head of household's level of education and income has a positive relationship to the natural attraction trends and a negative relationship to the religious attraction trends، On the other hand، there is a direct relationship between proximity to the natural attractions and trends toward them، but such a relationship was not found about proximity to the natural attractions،

**Keywords**: leisure، Mashhad، religious attractions، natural attractions، leisure patterns

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# Analysis of the Effects of Establishment of Germy Industrial Area on Development of adjacent rural areas

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## Abstract

Industrialization of rural areas is the best solution for development of rural zones in some state regions and has positive and negative effects on adjacent rural zones. Therefore, analyzing the effects of establishment of Germy Industrial area on adjacent villages in different aspects is the objective of this study. The present research is an applied study in the light of objective and a descriptive-analytical study in terms of nature and method. The data collected based on a combination of documentary and survey method. Population consists of manufacturing units of industrial area and villages located within 15km distance thereof. Considering the demographic factor and access to industrial area, six villages selected as samples. Data collected by questionnaire,observation and interview.The questionnaires completed by 235 guardians of rural families around the industrial area based on Cochrane formula and total five employers of active manufacturing units. To analyze the data, SPSS and one-sample t test were used. Summary of results indicated that manufacturing units of Germi Industrial Area caused economical, social and environmental changes in their adjacent villages in significance level 95%. It also had positive impacts such as reduction of immigration and poverty and increase of income and employment. However, on the other side, it had negative consequences that failed to achieve rural development as predicted in the industrialization goals.

**Keywords**: Rural Industrialization, Industrial Area, Around Villages, Rural Zones Development, Germi County

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