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Impact of Active Tectonics and Climate Change on Marvast Alluvial Fan Central Iran

Abolghasem Goorabi: Assistance Professor Geomorphology Faculty of Geography, University of Tehran
Mostafa Karimi: Assistance Professor Climatology Faculty of Geography, University of Tehran

Abstract

Active tectonics and climate changes have important role in evolution of the alluvial fans in Central Iran. Climate change coupled with neotectonics of Marvast active faults have had significant role in creation and transformation of abnormal morphological patterns on the Marvast alluvial fan. In this research, have been imployed fieldworks, different software, digital elevation model, satellite images and results generalization of paleo-climatic changes studies related to Iran and adjacent areas to determine the evolution of Marvast alluvial fan. We considered all aspects of dispersion, distribution and landforms patterns to determined the mechanism of faulting, and then the development and evolution of the Marvast alluvial fans are analyzed. Perhaps, Initial formation of the Marvast alluvial fan could be attributed to the late Pleistocene, when the basin had cold and dry climate and poor vegetation cover and thunder rainfall, therefore existed large floods associated with high frequency. Following this period, with increasing of precipitation and wet period (15-10 million years ago), there were not much vegetation in the watershed, but water flow and sediment loads are increased dramatically, therefore the Marvast fan has reached its maximum expansion (950 Km^2). With establishment of the wet period and dense vegetation in the basin, the sediment loads of the basin have been outclassed on basin water debit. These led to: the trenching of large fan, leaving the water flow from the abandonment fans (3 cone) on the hanging-wall of the Marvast fault, forming the new fan on foot-wall of fault (5-10 thousand previous year). The most important factor of changing of the Marvast fans, after conquering the dry climate conditions (since the early

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Holocene), is the active tectonic of the Marvast fault. It cased to forming a new alluvial fans in direct the Marvast fault. Although large amounts of sedimentation of dry-wet periods late Pleistocene had an important role in the Marvast alluvial fan, but available evidence suggests acceleration of the morphogenesis processes by tectonic activities. Deformation of tectonic landforms on Marvast fans, indicated displacement of about 1000 m of Pleistocene landforms, and offset the Holocene drainage systems as much as 30 meters, all of which imply an active tectonic fault Marvast, and possibly high seismic potential of faults in the future.

Keywords: Active Tectonics, Climatic changes, Central Iran, Marvast Alluvial fan

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Survey on Economic and Social Effects of Industrial Estates upon Rural Areas Case Study: Industrial Estate Khayyam Neyshabour

Khadijeh Bouzarjomehri1: Associate Professor in Geography & Rural Planning Ferdowsi University of Mashhad.
Hamid Shayan: Associate Professor in Human Geography Ferdowsi University of Mashhad
Majid Hamzehee: M.A. In Geography & Rural Planning Ferdowsi University of Mashhad

Abectract

Nowadays industrialization in many developing countries is considered as the foundation to achieve development. In addition, industrialization is considered as a process that has positive and negative effects on all aspects of human life. Especially in economic sectors its effects are quite tangible. Therefore in order to accelerate the transformation of rural life, creating industrial towns and industrial areas strategy in rural areas was taken by the planners in the past three decades. In this study, to evaluate the effects and consequences of Khayyam industrial town in the economic development of surrounding rural areas, 2 villages have been chosen. Then comparisons of economic indicators were done between two groups, village residents of industrial town and other rural workers. Results using statistical analysis (parametric and non-parametric) shows, further economic indicators such as employment rates, increase revenue and ... are significantly different from each other.

Key words: Industrial town, industrial areas, Economic and peripheral effects, Khayam industrial Town.

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Detecting changes in precipitation daily persistence's share in the Supply of Iran's Rainy Days and Precipitation Amount

Hamid Nazaripour: Assistant professor Environmental Department, Research Institute of Environmental Sciences, International Center for Sciences, High Technology & Environmental Sciences, Kerman, Iran.
Zahra Karimi: MSc student of climatology. University of Sistan and Baluchestan. Zahedan. Iran.

Abstract

In this research, to understand the changes in precipitation daily persistence's share in the supply of Iran's rainy days and precipitation amount, the annual and monthly share of 1, 2 and 3 day persistence's had been evaluated. These are, respectively, the most significant persistence's of Iran's precipitation. The possible changes in their role are the evidence of climate change of precipitation in Iran. The results of this research are based on Iran's daily rainfall network data in 1961-2004. Evaluation of the trends in the time series, by using linear regression (parametric) and Mann-Kendall and Sen's estimator tests (nonparametric), showed evidences of change in precipitation. The Annual share of 1, 2 and 3 day persistence was in the supply of Iran's rain days and precipitation respectively decreasing, increasing and increasing. No-trend aria is also increasing. One-day persistence share in the supply of rain days, decreased in May, April and March and 2-day persistence share increased in December. One-day persistence share in the supply of precipitation amount, decreased in May, April and 2-day persistence share increased in December, January and February.

Key Words: Iran, Climate Change, Precipitation, Persistence, Trend.

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Measuring and Developing Quality of Life Indexes in nomads Settlement Centers, Case Study: nomads Settlement Centers of Fars and Isfahan Provinces

Amin Dehghani: PhD student of Geography & Rural Planning, Isfahan University
Seyyed Skandar Seydaei: Assistant Professor of Geography & Rural Planning, Isfahan University
Sirous Shafaghi: Professor of Geography & Rural Planning Department, Isfahan University

Abstract

Today, developing positional planning, the extent of satisfaction from life quality in planned spaces is considered as primary goals in such a way that improving life quality may provide bases for social, economical and spatial development. The present paper aims at investigating quality of life indexes in tribal settlement centers. Research type is applied-developmental and research method is documental, analytical and survey. To complete available data, questionnaires were used. Concerning the population of studied centers, sample size was estimated 384 by Cochran Formula. To test hypotheses, T.student and Tukey Test using SPSS were employed. Findings indicate that according to model perspectives, education quality, settlement quality, physical environment quality as well as income and employment quality are evaluated lower than normal level. Furthermore, security and health quality and spatial quality are evaluated as normal. Generally speaking, from the viewpoint of quality of life dimensions, those understudy centers are categorized in three levels: 1) highest satisfaction: Dasht-e-Bokan, Golafshan and Cheshmeh Rahman, nomad's settlement centers; 2) average satisfaction: Tal-e-Ma'adan Center; and 3) lowest satisfaction: and Dasht-e-Lar Center.

Key Words: Development, Life Quality, nomads Settlement Centers, Fars, Isfahan

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Spatial pattern of droughts intensity and direction variations using trend analysis of Distributed Self-Calibrated Palmer Drought Severity Index in Iran

Mohammad reza Keshavarz: PhD student of Irrigation and Remediation, College of Agriculture, Tehran University
Majid Vazifedoust: Assistant Professor of Water Engineering, College of Agriculture, Guilan University
Ebrahim Fattahi: Associate Professor of Atmospheric Science and Meteorological Research Center
Mohammad Bagher Behyar: Assistant Professor of Atmospheric Science and Meteorological Research Center

Abstract

Drought has been always known as one of the most important threats for civilizations in Iran. Several indices based on meteorological data, satellite data and simulation model has been introduced for detection of drought extension. In this study, spatial distributions of PDSI (Palmer Drought Severity Index) patterns were derived for a 36-year-period (1975-2010) using gridded soil properties and meteorological data consists of 296 synoptic stations and more than 1500 rain gage stations with 4 km spatial resolution. The calculations were performed using an automated interface program developed in MATLAB. To see the drought pattern intensity and its direction spatially, a regression trend analysis was performed in monthly and general time steps pixel by pixel. The results indicated that during the 36-year-period more than 60 percent of the area had a downward trend (increasing droughts) and less than its 4 percent shows upward trend. The slope of trends was variable between -0.22 and 0.12.

Keywords: SC-PDSI, PDSI, DSC-PDSI, Drought routing.

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Syrian Evolution: Study and evaluation of geographical arrangement of internal forces and their external tendency

Parasto Movafaqiyan: MA Student of Political Geography of Islamic Azad University, Science and Research Department of Tehran
sayedabass ahmadi: Assistant professor Political Geography Faculty of Geography, University of Tehran
Yasser azimi: MA Student of Political Geography of Islamic Azad University, Science and Research Department of Tehran

Abstract

While duration of rise and victory in Tunisia, Libya and Egypt was short and these governments that relied on military and bureaucratic class quickly surrendered to willing of the majority of citizens, this process in Syria shows that the Syrian regime is resisting to changes. What backgrounds underlies this warfare in Syria that makes it so long? In this study by using reliable documents and academic information in a descriptive-analytic way, it has been attempted to trace, review and evaluate the role and perspective of complex alignments in different geographical parts of Syria. In this regard, in logic reasoning and conclusions stages it has been attempted to depict the alignment of these forces according to their external tendency, and describe their impacts on the long pulling of warfare in this Arab country. It seems that because of the support of the Alawite, Christians, Druze, and Yazidi populations, controlling strategic points of the border and support from the governments of Iran, Iraq, Lebanon, Russia and China, the Syrian government has the power to control the protests in short and medium terms.

Keywords: Rise Perspective, Backgrounds and Context, Tribes Geopolitics, Christians, Syria

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Symbolic war in the field values: Geopolitical competition and international sport matches

Zahra ahmadipour: Associated professor Political Geography at Tarbiat Modares University
Chamran booyeh: M.Sc student political geography at Tarbiat Modares University
Reza jonidi: PhD student political geography at Tarbiat Modares University

Abstract

Occurrence of war and geopolitical competitions are resulting from the actions of the human communities' competitions for values and gaining the material and spiritual interests. The classic war is revealed in a contrast between forces and military equipment. The war stimulus is based on the principle of innate desires for campaigning, defeating the enemy, and gaining the value. Thus, the symbolic form of war is unfolded when these desires find the favorable social bed for activism. Meanwhile, the area of sporting competition is a suitable bed for revealing the symbols and ritual of war as well as the geopolitical competitions (campaigning and defeating the enemy). So, the purpose of this essay is based on answer to this question that what is the ratio between competitive sports and the geopolitical rivals. This essay is based on this assumption that the field of international sporting competitions which intervenes with the area of geopolitical competitions in power concepts, competition, and national values is an arena of a symbolic fighting between nations and states. Thus, the states are forced to fight each other to succeed in this arena. This battle and conflict is resulting from the difference between the perception of interests and values with distinct and diverse human identities in community on one hand, and the revealing of the instinct of geopolitical competition and war (political field) in social area, on the other hand.

Keywords: War, Value, Symbol, Globalization, sporting Races, Semantic and Define Situation, Geopolitical Competitions

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Investigation of Meteorological Drought Indices performance in Assessing and Mapping of Drought in Qazvin Province

Mohamad Hossein Nasserzadeh: Assistant professor Climatology faculty of geography Kharazmi University
Esmail Ahmadi: M.Sc in Remote sensing and Geography information system

Abstract

Drought is one of the most chronic environmental phenomena that annually caused a lot of damage to human societies. In this study, the meteorological drought indices for drought assessment and mapping in Qazvin province were discussed. Indices used include CZI, MCZI, SPI, ZSI and DI. After collecting station's precipitation data in the study area, drought intensity values using meteorological drought indices on the time scale of yearly was calculated. The results show that Standardized Precipitation Index (SPI) and deciles index (DI) is in first rank , ZSI in second rank and CZI and MCZI indexes are in third and fourth rank respectively in display the sever drought. ZSI index has the most similarities in results to the Standardized Precipitation Index. Also deciles index (DI) as regards the appropriate performance in display the sever drought has some exaggeration in displaying the sever drought.

Key Words: Meteorological Drought**,** Drought Sever, annual Scale, Drought Mapping, Qazvin Province.

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Geomorphotourism and Capability Assessment of Road Geomorphosites by Using Pereira Method, Case Study: Qom-Kashan Freeway

Ebrahim Moghimi: Professor in Geomorphology at University of Tehran,
Saad Rahimi herabadi: MSc student in geomorphology, University of Tehran.
Mojtaba Hodaei Arani: MSc student in geomorphology, University of Tehran.
Mohammad Alizadeh:MSc student in Geography and Tourism Planning, University of Tehran
Hassan oroji: MSc student in Geography and Tourism Planning, University of Tehran.

Abstract

Geomorphotourism is one of the new tendencies in relation between geosciences and tourism or special landscapes of geomorphology that raise in geographical and tourism literature focusing on determine special landforms. This branch of tourism achieve potentials in order to sustainable develop by combine cultural, historical and ecological heritage. In this paper is tried to assess capability geomorphosites of road in parts Qom-Kashan freeway using surveys and Pereira method. In this method, according to field studies, realize geomorphologic value for sites in total of two scientific and additional values and management value achieve by combine use and protect values and determine final value for sites by combine this two main values. The results shows that among investigated geomorphosites,in geomorphologic value, The highest score belong to the forms of folded Tertiary and the highest score in the management sector (7/37) belonged to the cretc and talus slopes. According to achieved results, planners should be attention to stability geomorphosites because with respect to high sensitivity of these geomorphosites in relation with human systems, comprehensive planning is necessary in order to environmental management.

Key words: Geomorphotourism, Geomorphosite, Pereira Method, Tourism, Qom – Kashan Free Way.

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Application of Group Decision Making Techniques, Fuzzy Logic and GIS in Site Selection of Recycling Center

Vahed Dehghani kazemi: MSc. Student of in Environmental Planning, University of Tehran, Graduate Faculty of Environment
Hamid Reza Jafari: Associate Professor University of Tehran Graduate Faculty of Environment- Department of Environmental Planning
BahramMalek Mohammadi: Professor Assistant University of Tehran Graduate Faculty of Environment Department of Natural Disaster Management

Abstract

Since last decade, waste recycling- as an effective option for reducing the expenses of waste management and survival of natural resources- has gained striking attentions in many countries. The essence of proper management of recycling process and control of its probable negative consequences, made the organization of recycling industries unavoidable. To achieving these objectives, establishment of recycling center can be proposed as a good alternative. With respect to the importance of transportation costs in profitability of recycling industries, recycling centers are constructed in urban areas. Therefore, in order to avoid from their harmful effects the location of these facilities should be selected according to scientific bases. Accordingly, this article aims to propose an approach to combine Delphi and fuzzy-Delphi, as group decision making techniques, as well as GIS capabilities in order to determination of suitable sites for establishing recycling center in urban regions. The practical application of this approach also has been done in region nine (9) of municipality of Tehran. The criteria and their allowable distances were determined using classical Delphi technique and fuzzy Delphi, respectively. Subsequently, the results were bringing to GIS environment to determine suitable sites. Therefore, the spatial database of study area developed. Screening of suitable areas for establishment of recycling center was done using the specified allowable distances of criteria. Finally, site visits and expert judgments resulted in determination of five appropriate sites for recycling center construction.

Keyword: recycling center, fuzzy logic, Delphi, site selection, GIS

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