

ABSTRACTS

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The Effect of Nehbandan Fault System Movement on Geomorphology of the Nehbandan Area

East Neh and west Neh faults are surrounding two sides of Nehbandan city in east of Iran. This paper has studied recent effects of the faults movement on structural geomorphology of the studied area. Many geomorphological signatures that were resulted by recent activities of the east Neh and west Neh faults such as change of rivers and water cores route, V-shape valleys, travertine deposits, fold of Quaternary sediments, discoloration of deposits and stones will be discussed in this paper. Satellite images and field observations of the studied area show that faults trend parallel to contact zone between mountain and plain. The faults have steep incline (more than 80 to 90 degrees). The faults morphology seems as a rectilinear along the contact zone between mountain and plane. Reverse component of these faults plays main role in rising of these mountains and recent topographic landscapes of the area.

Dip direction of the faults shows these mountains are located in hanging wall of the faults. The mountains are uplifting in opposite side of the fault dip direction.

Keywords: Geomorphology, Topography, Fault, Active Tectonic, Quaternary, Nehbandan.

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Kriging Application in Climatic Element Interpolation A Case Study: Iran Precipitation in 1996.12.16

Interpolation is one of the most important techniques in climatic spatial investigation. These techniques classified based on different criteria. In this paper, it has tried to introduce Kriging interpolation and practical stages as an exact, acute and all-purpose method. Through introducing the method, we have used 1996.12.16 precipitation of 654 stations in Iran.

To interpolate the precipitation empirical semi-diffraction-record calculated and delineated in both degree and distance scales. Thus, eleven models have fitted on the empirical semi-diffraction-record. Three maps have created base on every models and three assumptions. The assumptions were no trend, linear trend and quadratic trend existence in the data. Thus, 33 maps have created. In related to cross-validation and error in estimation criteria, two maps that have less error were chosen. These maps created based on linear and quadratic semi-diffraction-record models without any trend in the data. The linear model was the best in comparison with quadratic model fitted on semi-diffraction-record.

The result of map was pointed to 7.3 mm of Iran precipitation average during 1996.12.16. The second consequence was concentration of precipitation in the southern part of Iran.

Keywords: Weighted Average, Interpolation, Kriging, Isohyets, Semi-Diffraction-Record.

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Geomorphological Analysis of Dunes Drifting Process in the East of Sistan Plain During Recent Draughts

Sistan plain that is located in east of Iran has a dry and unpleasant climate and sand storms and movement of dunes are one of the threatening factors in this area. Draught occurrence in Sistan region and subsequent decrease in vegetation, dryness of the Hamoon Lake and 120- Days wind caused windy erosion and sand storms conditions. These factors caused additional velocity of dunes movement in the region and making plentiful sandy-hills.

Kaftaregi and then 6 hills of loess (Barkhan) were chosen as samples in field calculations. The rate of movements was calculated in 3 months and adjusted in a table. The results of field investigations showed that wind in high speed are caused increasing dunes movements and damaged farming fields, villages, roads, irrigation channels, installations. After determining the rate of dunes movement, movement of them will be forecasting for further years. Satellite images and field investigations showed that water storage of Chah Nimeh which is the only drinking water source of people, would be threatened by sand storms in the future, and water storage will be in serious danger, if there isn't a way to prevent the rushing of sands. In this article, the attempt will be to survey the effect of 120-days wind in producing sand storms, and then mathematical model will be determined between geomorphic parameters. At the end, dunes drifting and damages will be forecasted by satellite images, topographical maps and field investigations.

Keywords: Dunes Drifting, Draught, Sistan Plain, Sistan 120-Days Wind, Barkhan, Desert, Geomorphic Parameters, Mathematical Model.

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Vulnerability Indicators Assessment of Urban Housing Against the Earthquake Hazard Case Study: Isfahan Housing

The topic of "urban safety" is one of the objects urban planning. Assessment urban housing against the natural environmental hazards is necessary. The purpose of this paper are: Knowing of situation Isfahan housing on earthquake hazard.

Type of research is "applied" and used deductive surveying, questionnaire, documentary, internet and other resources. The statistical community is Isfahan residences and sampling method used as probable sampling.

The results obtained from research show: 1- Vulnerability of Isfahan housing against the earthquake hazard is high. 2-The access of Isfahan housing from rescue operation centers such as; fire stations, emergent centers and police stations are very bad. 3- The percentage of Isfahan citizens that enjoying fire extinguisher, first aid box and earthquake insurance is low. 4-Advice device about housing vulnerability is one of the major factors to reduce earthquake hazard. This research can be used in "crisis management master plan " of Isfahan and related researches.

Keywords: Earthquake, Urban Safety, Urban Vulnerability, Vulnerability Indicators.

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The Analysis of Citizens, Perception Role in Tourism Development in Chabahar Case Study: Zahedan Citizens

The results of some recent studies reveal that Chabahar city has great potentiality for international and domestic tourists attractions. Additionally it has identified as a main and important tourism destination in Sistan and Balouchestan province. Despite this potentiality and situation it was not successful in tourist attraction. The marketing of tourism to any country or market segment is associated with the interests or attitudes of clients. On the other hand "The Province Tourism Comprehensive Plan" emphasises on domestic tourism development strategy. Therefore the aim of this study is to identify some of the attitude and motives of Zahedanian citizens can be effect on this strategy. The data obtained through 545 questionnaires and analysed by descriptive statistics and factor analysis. The performed analysis find 7 factors that explain more than 58 percent of total variance across all items. The results provide a more detailed picture of Zahedanian citizens attitudes about travel to Chabahar. It is also found that Chabahar can be one of the Zahedanian citizens destinations and satisfies their wishes if proper planning and proportional marketing with the interest clients and wishes, is provided.

Keywords: Tourism Destination, Tourism Product, Tourism Marketing, Chabahar.

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Climatical Regionalization on Sistan & Balouchestan Province

The Sistan & Balouchestan province is extensive, this factor has caused it variety climate. The climatical regionalization of Sistan & Balouchestan conduct with new methods of regionalization such as factor analysis, clustering and autocorrelation. For this purpose selected 20 variables of 10 stations. To investigation on climate province with factor analysis method shows that 5 factors make climate of Sistan and Balouchestan. These factors to arranged atmospheric humidity, precipitation, temperature, sunlight, wind and thunder import respectively. In the south of province such as Oman coastal humidity and cloud are important factors to determination climate. In the southern Balouchestan temperature, sunlight and thunder determined characteristic of climate of this region. Windy dusty factors are characteristic of the north - east corner. In the northern of Balouchestan precipitation and thunder are important factors to determination climate. The sunlight plays a basic role to making climate in the east part of province (Saravan). One of cluster analysis on 5 climate factors determined that exit five region climate. At the end, the province divided into three regions with autocorrelation methods.

Keywords: Regionalization of Climate, Factor Analysis, Clustering, Spatial Autocorrelation.

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The Vulnerability of Iranian Cities Against Earthquake and the Role of Neighborhood Participation in Providing Assistance for Them

The city and urban life together with convenience and welfare has provided for dwellers-inwardly and outside in origin-great many of dangers both natural and human. The earthquake is an example of natural phenomena which causes tremendous human casualties and damages in the vulnerable countries including developing especially in their cities.

Our country, because of being located on the seismically belt and having numerous faults on its structural bed with the vulnerability of the urban areas caused by population and building density of the cities with improper urban planning and...., has been harmed severely by the destructive earthquakes too. One of the most considerable measures taken in disaster after informing the people of the scope of the vulnerability of the human settlements in order to prevent and get prepared against earthquake is succor for earthquake stricken people. The experience obtained in different countries indicates that the emergency operations responds are is out of the scope of the governments and they even lack of the needed efficiencies. Therefore the most effective activities of assistance and relief at the earlier stages of the earthquake disaster afterward are the self-initiated public organizations in the scope of urban neighborhoods which promotes the urban safety and security by the due management of the disaster.

For this purpose the writers of the article have dealt with a survey of the concept of participation, the physical structure of the neighborhood in succor, natural and human elements which have specific effects in the vulnerability of Iranian cities against the earthquake before it breaks out with a survey of the theoretical viewpoints and the records of the countries in the public participation and have ultimately presented solutions for promoting the public participation and decrease in the evil consequences and deaths caused by the earthquake.

Keywords: Participation, Earthquake, Neighborhood, Succor.

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Smart Growth Strategy in Urban Development, Principles and Approaches

The rapid urban growth and low density urban expansion have caused many difficulties for most countries in the world. This phenomenon not only has affected the urbanism policy but also has affected the environmental, social and economical problems. Urban sprawl is one of the important problems in urban expansion process and has caused many undesirable results on urban environments.

This paper has provided the framework of smart growth strategy including the principles and approaches for controlling the urban sprawl and improving the urban spaces quality.

In this study, the positive and non positive results of smart growth applications in urban development have debated with use the views of green space specialists.

Keywords: Smart Growth, land Uses, Public Transportation, Urban Sprawl.

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Zonation of Late Chilblain Risk Impacts on Gardens Case Study: Mahvalat Region

Mahvalat region with about 3734 square km area is located in the center of Khorasan-Razavi province. This region is one of the major center of agriculture productions like pistachio, pomegranate and saffron.

In this paper temporal and spatial curves of spring chilblain is drawn with using the Geographical Information System (GIS) facilities. These curves are described chilblain in two thresholds; gentle chilblain (temperature between 0-1 degree) and severe chilblain (temperature below zero degree) and drawn for probability levels of 50, 75, 95, 99 percent with regard to adjacent stations and applying of correlation coefficient with elevation of the region.

By superposition of these curves with ending date of hibernation in the dominant gardens varieties, the zonation of c chilblain risk for gardens was done.

In the regions that the occurrence date of latest critical temperature is after the ending date of hibernation of trees, the region is classified as a high risk zone and vise versa.

The results of overlying maps suggested 3 zones; high risk, risk and low risk zone.

We are abled by interpreted these maps to predicting the occurrence date of chilling types and make decision a suitable methods to confront of chilling injury in the region.

Keywords: Late Chilblain, High Risk Zone, Occurrence Probability, Geographical Information System (GIS), Return Period.

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Regionalization of Landslide Hazard of Charmaleh Basin, Songor Division, Kermanshah Province

Being a branch of Caveh- Roud River, Charmaleh basin runs through the northern part of Sonqor in Kermanshah province. Passing through Kermanshah, it joins Sirvan in Kordestan and then enters Iraq borders.

This basin is a part of Sanandaj-Sirjan zone. Impenetrability of the cornerstone (igneous and metamorphic rocks), the abundance of rainfall, and the steep cause this basin delicate landslides. Nine slope maps, land use, the high altitude, litology, the stone's sensitivity to erosion, weather conditions, isotherm and isohyet, and vegetation cover are all overlaid in Geographical Information System (GIS); then through area destiny, hierarchal analysis, weight of variables, and information value, the landslide hazard maps of this basin has been provided.

Finally the hierarchal analysis map proved to have the highest correlation with the basin's landslide. Through these methods and Geographical Information System, the hazardous zones in this basin were recognized, which are presented in a complete zonation map.

Keywords: Landslide , G I S , Charmaleh, Zonation.

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Contribution Determination of Jaghargh Torrent in Peak Flood and Runoff Volume for Flood Control Prioritization

Contribution of subwatersheds in outlet flood properties is one of the essential activities in flood management projects. Application of hydrologic models for simulation of rainfall-runoff process is necessary owing to lack of hydrometric stations in all outlets of subwatersheds. In this study the HEC-HMS model version 2.2.2 applied in order to determine flood characteristics in subwatershed outlets leading to investigate watersheds contribution in peak flood and volume at a reach in Jaghargh watershed in Khorasan Razavi province. To achieve the study purpose 5 rainfall-runoff events, were used for calibration and validation of model after collecting necessary rainfall and runoff data from exciting stations. Vegetation cover, soil and land use maps were also combined in Arc view 3.3 software to get CN (Curve Number) map. The flood hydrographs resulted from rainfall events with return periods of 10, 20 and 50 years were then derived. The effect of each subwatershed on peak flood and volume was also simulated single successive subwatershed elimination technique. The results showed that 66.16% of peak flood reduction ($39.42 \text{ m}^3/\text{s}$) and 65.98% flood volume reduction (298.01 m^3) for peak flood with 20 years return period belong 4 subwatersheds located in up and midstream of Jaghargh watershed while one of the subwatershed at the vicinity of outlet got the first priority in flood production and contribution per unit area. The result of the study is helpful for drawing proper policies in flood management with critical subwatersheds management in the study area.

Keywords: Flood Modeling, HEC-HMS, Rainfall-runoff Model, Watershed Prioritization, Jaghargh Watershed, Khorasan Razavi Province, Iran