ABSTRACTS

Effects of Changing Land Use and Land Cover on the Heat Island in Urban Area of Yazd Using Remote Sensing Data

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Micro clima of the present study was performed in a region of 58,730 hectares within the cities of Yazd, Ashkzr, Zarch, Shahedyh and Hamydya by the use of Remote sensing techniques. To analyze the relationship between the land use/cover changes and heat island city of multi temporal Land sat images 4 and 7 of TM and ETM sensors related to the dates 11 September 1990 and 10 July 2002 were used. The results, through the classification of images and statistical information extracted from each class shows that the city of Yazd in recent years has had relatively fast growth, resulting in significant changes in land use that has been created. Physical expansion of Yazd city from the view point of construction building area, has caused the decrease of 1.9 percent during the vegetation period of 13 years (1990-2002). Simultaneously with the increase of construction building areas and reduction of vegetation cover ,the extent of heat island located on the downtown has increased. This study also showed that thermal characteristics of land surface and its patterns, can be found through the type and quality of land uses. Results of the relationship between NDVI and land surface temperature using correlation and regression analysis, expressing the effect of vegetation cover on reducing temperature due to the surface evaporation and transpiration .

Keywords: Remote sensing, Heat Island, Surface Temperature, Normalized Difference Vegetation Indices (NDVI) , Yazd.

Analysis of the Spatial-location Distribution of Health- Treatment Services and Their Optimal Locating (Case study: Hospital of Jahrom City)

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Jahrom city with a population of over 129,213 people, as one of the medium cities of the country, is located at Southern part of Fars Province. This city is faced with some problems in the field of optimum and desirable access to urban services, especially health care services. The access to urban services are so important issues that affect different aspects of urban affairs. The purpose of this study is to identify the current situation from the view point of spatial –location distribution of health care services and its optimum locating.

To this end, Geographical Information System (GIS), Expert choice software and Excel have been used. The required layers including proximity with compatible uses , access to communicating network, closing to fire stations , population density , distance from existing hospitals , distance from flood ways, distance from fuel stations , distance from the educational centers , land slope, closing to city center and green spaces were created in GIS . Paired comparisons were performed by Expert choice software, weight of criteria was determined and the final map was prepared by combining informative layers

Findings of this study shows that the current location of Jahrom hospitals is not compatible with the scientific criteria and necessities of this usage, and the present need of Jahrom city with respect to urban per capita is at least five hospitals.

Keywords: Hospital, Jahrom City, Optimal Location, Geographical Information System (GIS), Modeling (AHP).

Study the Interrelation of Sport and Urban Transportation Usages in Mashad City

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The interrelation between the land use and urban transportation system is considered as inseparable and also as the two integral parts of a reality. In this article, the relation of sport usages with transportation and density of urban population has been evaluated by using Hansen availability model and based on the city spatial hierarchical configuration. Then spatial distribution of different sport centers has been analyzed in relation with the hierarchy of connecting network by using network analysis model in GIS software environment for measuring the production amount and attraction rate of sport trips. The area of sport usages in Mashad city is 2409911M2(137 parts) which is 1.2 % of total land of the Mashhad city. Per capita of such uses in Mashhad is 0.95 m^2 which has a great distance with what proposed by master plan(2.91m2). Moran Coefficient indicates injustice in spatial distribution of sport centers. Also, based on Hansen index, the access of 37.04% of Mashhad population to sport centers is lower than the average level. Heterogeneous distribution of sport centers with different functions in Mashhad indicates that sport centers compared to communication network cover only 52.8 % of the city; furthermore, 31.3 % of these centers are located improperly and weakly compared with the communication network, so that regions having the highest level of traffic load (regions 1 & 2) attract the highest level (32.31%) of sport trip. In conclusion, recommendations like proportion of land use planning and transportation, proportion of sport land use hierarchy with neighboring network hierarchy will be offered.
Keywords: Land use, urban transportation, sport land use, generation & attraction trip, Mashhad.

Analysis of Beneficiaries Perception on Effects and Consequences of Tourism Development in Rural Areas (Case study: Lavasanat area)

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Tourism in rural areas has different consequences and effects. Awareness of tourism effects in rural areas will help planners to achieve sustainable development of tourism. The recognition and comparison of such effects is so important from the view point of beneficiaries. Tourism is formed in a bed named environment. Besides of such important factors, the interaction relations between the environment and the local residents, job creators and tourists have a great role in shaping the tourism and its effects.

So, in a comprehensive and systematic study, all the effects from the view of all beneficiaries shall be analyzed, because without considering all the beneficiaries, sustainable tourism development is nearly impossible. It is an issue which has received low attention in local studies. Therefore, in this research, through the study and identifying the tourism effects and consequences in rural areas of Lavasanat , it is tried to identify and analyze the understanding and perception of beneficiaries . The research methodology is descriptive – analytical one and the required documents and data were collected using the library and field study. Field method is based on the questionnaires which designed for local residents, tourists, entrepreneurs and local managers . Statistical methods were used for data analysis. Results showed that there is a significant difference between beneficiaries' perception about the effects and consequences of tourism in case study, which is due to the different perception of local inhabitants and tourists, local inhabitants and entrepreneurs, local managers and tourists, local managers and entrepreneurs.

Keywords: Rural tourism, Tourism effects, beneficiaries, lavasanat.

Evaluation of fluvial behavior of Ojan River in Geoneurotic System

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The nature of most of hydrological behaviors of rivers depends on the dominant climatic and geologic conditions of environment during the past periods. The reasons of present behavior of fluvial networks will be understood by studying paleogeomorphological evidences. Although the overall flow direction of Ojan River (Aspas plain) is from south-east to north-west, the flow direction in west and east of the study area (Namdan and Bekan plains) and totally in trellis system of Kor, unlike the overall flow direction, is from north-west to south-east. In the study of river behavior, Nerontic system of drainage, figurative Geonerons, topography and geology relations (neural networks) were used instead of hydrology and precipitation relations. The results of this study reveal that, concurrent with climatic change of the study area during Quaternary and with ice melting in the middle of plain, Ojan basin was converted in to an isolated topogeoneron and created an independent fluvial basin within Kor basin and was adjoined to Kor rivers due to the cutting of basin by Boragh gorge. Then vast alluvial fans in south of basin were established and, like a barrier, prevented the flow toward Sivand river (Zaman Beig river). At first, Basin was converted in to a Paleotopogeoneron and lost its independence due to subsequent developments and became topogeoneron.

Keywords: Ojan River, Fluvial Behavior, Aspas plain, Geonerons, Neural Networks.

The Movement Evaluation of Gourband Fault According to Morphotectonic and New Neotectonic Evidences (Eastern South of Torbat e Jam)

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The under study area is located at the north east of Iran at the vicinity of Torbat e jam city.The main faults like Golbano, Gourband, Jahan-Abad, Rasoul-Abad and Kajab are located at a short distances from Torbat e jam city. Gourband fault is the largest fault in alluvial sediments of Torbat e jam plain that has north west – south east trend. Studying the geotectonical activity of the mentioned fault regarding its proximity to the city and locating various villages in its neighboring has a great importance. In this research, the effect of recent movements of this fault on the structural geomorphology of the region has been studied. To evaluate geotectonic actions of the studied fault, morphotectonic (Smf, V, SL) has been used as the main tool. Studying neotectonic morphology indices indicate high activity of this fault. The existence of fault rises, changing route of streams and channels, 'V' shape valleys, folds of quaternary sediments and change of color in sediments at the fault zone are of the important geomorphologic indices that is observed in field surveying and in connection with the movement of Gourband fault. The movement in channels indicates the youngest movement along this fault, the direction of these channels also indicates the right direction of slip movement in the mentioned fault.

The existences of rise in neogen sediments at the location of superficial effect of fault also indicate rising and reserved component in this fault.

Keywords: Gourband fault, Morphotectonic, Torbat e jam, Geomorphology.

Review of Traditional Approach for Preparing Urban Development Plans in Iran by SWOT Model

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Despite great efforts in preparing and implementing urban development projects in Iran, these plans have not succeeded and failed to reach the goals, especially in fulfillment of service centers and raising of public per capita level. Since these plans have a high position in the urban planning system, lack of realization and success of them created undesirable and sometimes irretrievable effects in cities. Disregarding the benefits of these plans, has caused several critical studies to be performed. In this paper, by using applications model (SWOT) it is tried to review both the possibilities and limitation of the "plan preparation' and "plan execution" and ultimately provide strategies to increase the effectiveness of the urban development plans. In this model, that is a strategic tool; firstly, effective factors in planning are divided into internal and external environment agents which are strengths and weaknesses points and opportunities and threats respectively. Then, based on the primary studies; aggressive, variety, review and defensive strategies are determined and presented. Results from this study show that a fundamental change should be done in preparation and implementation of the plans. Giving significance to the people and local agencies in preparing and implementing of urban development plans is the priority of these changes.

Keywords: Urban Development plans, SWOT model, Efficiency, Fulfillment.

Monitoring Permissible Boundaries of Mines in Moteh Wildlife Refugee Based on Land use Map Derived from Satellite Images

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Study the land use and land cover changes and exploring spatial pattern trends is essential for better understanding of landscape dynamics during the time as well as land-use planning and reaching conservation goals. Determining the Land use and land cover changes in the region can help managers to perform appropriate management. Nowadays, mine is one of the current interferences in protected areas. Mines change natural landscape during processes of discovery, extraction and production. All activities of the mines are limited with permissible operation boundaries by Ministry of Industries and Mines but always consistent and accurate monitoring is necessary to limit mining activities in permissible boundaries. Such monitoring has a great importance when the under operation mines are located in the areas which are under the preservation of Environment Organization.

In this research, the monitoring objective was the permissible boundaries in the area and land use map was used as a basis for comparison. Satellite images of IRS-P6 LISS-III acquired in 2006 were used to generate land use map. After geometric and topographic correction, land use map was produced using hybrid classification method. The overall accuracy of generated map was 87%. According to the documents of Ministry of Industries and Mines and National Geosciences Database of Iran, the permissible boundaries were drawn on topographic map at a scale of 1:50000 and were digitized in polygon type layer in GIS. The result of conformity of permissible boundaries and land use map shows that mining activities in some areas were extended to out of permissible boundaries and it is required to be followed up more seriously by managing organizations specially by Department of Environment and put the new utilizations in a proper path in permissible boundaries.

Keywords: Land use map, Permissible boundaries, GIS, Satellite image.

Fuzzy Analysis of the Effective Scope and Components of ICT
Case study: Golestan province

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Assistant Professor of Geography and Urban Planning, Shahid Chamran University Information and Communication Technology (ICT) simultaneously with globalization and progress of communication technology, has made a new form of development and interactions in the urban and rural settlements. In this regard, this study has made by descriptive – analytical method to analyze the scope and effective components of this approach in Golestan Province. Effective Spheres of ICT in three domains of knowledge, attitude and skill and activity in 12 components and 48 indicators have been classified and developed . Analytical aspect of the research along the weightening and specifying the importance of the scopes, components and indices by using the views of 20 experts relevant with the study and analysis of the impressible social and economical indices are of ICT effective components. The research tool for analyzing the importance and priority of areas ,components and indicators are formed of group AHP model and a fuzzy model of group decision making (FGDM) And evaluating the impressibility of social and economical indicators from the ICT effective components of linear regression model (R-Linear). The study results show that knowledge with 0.75 weight has the highest priority and importance among the ICT influencing factors , Components of socio-political awareness with 0.17 weight has the highest priority among the research indices and awareness of the daily political and economical information of Iran and the world with weight 0.147 has the highest priority among the indices of the research . The impressible regression test results of socio-economical indices of ICT influencing components show a significant direct effect between the independent and dependent two variable.

Keywords: ICT, influencing components, fuzzy decision making, Golestan.

Study the Dust and Evaluation of its Possibility Prediction Based on Statistical Methods and ANFIS Model in Zabol University

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Dust phenomenon is one of the most harmful natural disasters that causes major environmental impacts all over the world. In Iran, Zabol region is hardly affected by this kind of environmental disaster. Current study was made with the aim of identifying time characteristics and evaluation of dust prediction possibility in Zabol Station as the most dusty station in the country. In this regard, firstly, the statistical characteristic of the data related to frequency of monthly, seasonal and annual dusty days in Zabol station with statistics data of 41 years were studied and analyzed. Time series process analysis method has been used for definition of time fluctuations of the study element and monthly classification of the dusty days was made by using statistical multivariable cluster analysis method.

Dust prediction has been done by the use of Adaptive Neuro Fuzzy Inference System (ANFIS) through allocating 70 percent of data to education and 30 percent of it to validity determination of the model. The results showed that August and July months are the dustiest months of the year during the statistical period. Based on the made cluster analysis, the months of July and August with the most dusty days have been placed in a separate cluster. The monthly, seasonal and yearly trend in this station is increasing. The prediction results of dust by ANFIS Method shows its high capability in dust prediction. Fuzzy Inference System (FIS) structure determined by four functions in arc form by hybrid training, method, predicts of dust with 93 percent reliability.

Keywords: Dust, static analysis, prediction, ANFIS method, Zabol Station.

Assessment and Preparation of the Map for the Potential and Actual Condition of Desertification by Emphasizing on Wind Erosion Using MICD Model at the South West of Hirmand Township

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Desert is a crumbling ecosystem which the capacity of natural plant production has reduced or eliminated in it. For the assessment of desertification condition and preparing the relevant maps, different models have been presented which world model FAO-UNEP can be pointed. In Iran, some regional models have been presented for evaluation of desertification condition. In this research, the developed classification method of type and severity of desertification in Iran, MICD , has been used for the assessment of the current and the inherent condition of desertification in south west of Hirmand city.For this purpose, the present working units in the region were used as the base map for valuing the factors and indices. Then, by valuing the indices and summation of their relevant scores at each working units and based on the base table, desertification was classified and then the maps of the current and inherent condition at each usages in GIS environment was prepared. The results showed that the under study region , from the view point of current condition of desertification is placed at four classes of low, medium, high and very high or severe and from the view point of potential or inherent capability is placed in three classes of low, medium and high one.

Keywords: Desertification, Current capacity, MICD model, GIS, Hirmand.

Study the Factors Effective on the Success of Rural Entrepreneurs in the Rural Areas of Ardabil Province

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Entrepreneurship as a process, system and strategy, not only creates employment for widespread community of rural areas but also through reinforcement of skills and capacity of local community will change the rural's income. The purpose of the present study was to investigate of rural entrepreneurs in the rural area of Ardabil province. The research method is a descriptive-analytical study of the survey type. The target population in the study is the entrepreneurs of rural in Ardabil Province. Using simple random sampling technique, 90 rural entrepreneurs were selected as the statistical society . The content of the questionnaire was specified after several times of review and correction by the faculty of members of the university and several expertise of administrative offices. The reliability analysis was conducted and Cronbach's alpha values for the various sections of instrument were estimated to be between 0.81 and 0.87.At the end, results showed that the most important effective factors on rural entrepreneurs success in the rural areas are six components such as (empowerment and   reinforcement of economical and legal infrastructures and information technology, reinforcement of motivation and agricultural commercialization, institutionalism and capacity increase , strengthening of social participation and accumulation of separated rural areas) that the variance and explained accumulated variance number is (88.07) via this six factors.

Keywords: Entrepreneurship, Rural Entrepreneurship, Rural Development, Ardabil Province.

Strategic planning for Development of Tourism Capabilities in Urban Areas
Case study: City of Orumieh

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Orumieh city as the provincial center, which is neighborhood with three countries and also due to having the second largest saltwater lake in the world, has a valuable natural, historical and ethno-cultural potentials in tourism field. The main goal of this study, is that by using strategic planning approach, while indicating the available potentials of orumieh city, it is tried to provide adequate and appropriate strategies and identify strategies to promote tourism for the residents' enjoyment from the tourism activity. In this article, firstly, for developing the components, 30 experts and technicians in urban affairs and tourism of Orumieh city were surveyed by using Delphi questionnaire and the list of internal and external factors required for strategic planning was prepared, then by using field surveying method, the view of three groups including tourists, host residents and authorities about tourism , deficiencies and needs, were evaluated, in form of questionnaire method. To determine the sample size of tourists and host residents, Cochran sample size formula was used and about the authorities group, due to their small population of the statistical society, all of them were surveyed. .Cronbachs' alpha statistical test for questioner of tourists' group, host residents and authorities (0/89 , 0/90, 0/74 respectively) showed that this research has satisfactory validity and reliability. At the next step, to analyze the data and provide tourism development strategies, SWOT analysis pattern was used. And to determine relative weight of the components , a combination of the opinions of the three participants have been used. The final results indicate that the acceptable strategies in tourism planning of this city at the first priority is aggressive strategy(SO), and the diversification strategy(ST) and revised strategy (WO) have the next priority in planning. Finally QSPM matrix was formed for each group of the strategies and prioritization of the strategies for the tourism development in orumieh city, have been presented in three groups.
Keywords: Strategic Planning- Tourism development - SWOT analysis – Orumieh.

Drought Forecasting in East Azarbayjan During Time Period of 2013-2022

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Based on the possible increasing trend in global drought due to the climate change, analyzing this event in every region seems essential. In this study, downscaled temperature and precipitation data were obtained from 16 AOGCM models under A1B, A2 and B1 emission scenarios for East Azarbayjan province during 2013-2022. After assessing the frequency and severity of past droughts in the studied area, temperature and precipitation scenarios were calculated for other 46 emission scenarios using Pattern Scaling method; thereafter, in order to assess the drought condition of the province during the future period, annual Standardized Precipitation Index (SPI) of the region was calculated using the median precipitation scenario of the 49 scenarios. Finally the annual SPI map of the region was produced by Kriging method. There will be extreme drought in eastern regions in 2021 and it can be considered as the driest year during the next decade, as overall, 59.375% of the province will have dry condition. It is predicted that there will be drought conditions in some regions in years 2013, 2017 and 2018, while the whole extent of province will be near normal condition in 2019. 2020 will be the wettest year of the next decade, which will be the only year with extreme wet condition. After 2020, 2014 with covering 50% of the region by wet classes will be the wettest year. In conclusion, except for the years 2013, 2017, 2018 and 2021, 6 other years will follow near normal or higher classes. By predicting drought conditions and precipitation amount of this region, it is possible to suggest strategies compatible with climatic change in this regard.
Keywords: drought, climate change, uncertainty, Pattern Scaling, SPI.