

***Estimation of amount of Peak Discharge and the Introduction of
Flooding Model in Razavar Watershed***

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Abstract

This study was done to identify effective factors on flooding in Razavar basin in the north of Kermanshah province by using SCS model. For flood estimating, primarily Razavar watershed was divided to sub-watersheds with stream orders of 5, 6, and 7 then effective factors such as area, slope, CN, lag time, time of concentration, density of rainfall, land use, slope, geology, and vegetation were studied and the peak flood discharge was estimated by SMADA software. Peak flow estimation by SCS method showed maximum of 100 years return period peak discharge of Razavar watershed with 8 stream order was 691.85 m³/s and the minimum of 100 years return period was related to sub-watershed number of 10 with 5 stream order about 28.9 m³/s. For determining the most effective factor in the flood basin and to predict the amount of discharge and present a suitable discharge model as a dependent and others as independent variables we introduced these values and analyzed them by SPSS software. Simple regression, multiple and logarithmic, forward and step by step models were applied for the basin. It should be noted that the models presented with a confidence level of 0.01 percent were acceptable. The results show that the area, lag time, and CN are the most effective factors in flooding.

Keywords: Razavar Watershed, Effective factors on flooding, SCS method, Flooding model, Stream order.

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Assessment of Rural Tourism through SWOT (Case Study: Rurals of Maragheh Central District)

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Abstract

Maragheh township has located on Southeast of East Azerbaijan province. It has high potential for the rural tourism. The development of rural tourism can reduce migration, increase income, improve substructure and protect environment in study region. This study tries to introduce rural attractives, difficulties and challenges of rural tourism on the central portion of Maragheh township by SWOT model. The method of this study is research and analytic based. The results show that strong point of rural tourism in central district of Maragheh township is a natural attraction with weight of 1105 (m=4.42). Lack of tourism facilities establishment etc, with weight of 1103 (m=4.41) is weakness point of rural tourism in this region. The protection by the government is the opportunity of tourism and the increase of social crimes is a threat to tourism in this region.

Keywords: Assessment Capabilities, Rural Tourism, SWOT model, Maragheh Township, Rurals of Central District.

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Efficiency Evaluation of the Regional Network of Milk Production and Collection in the Central District of Hashrood Township Using GIS

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Abstract

Spatial linkages in regional field form different networks and cause reciprocal interactions between rural settlement and the urban centers. These networks use complementary and various capabilities of different urban centers to form reciprocal interactions and convey the surplus of agricultural production to the urban points and markets. The milk collection centers and the milk production units create linkages between rural centers and the dairy industries. This forms the milk production and collection networks and connects the agricultural areas to urban industries. This research aims to use descriptive analysis methods for evaluating the efficiency of these milk production and collection regional networks. For this mean, data have been collected by documentary and field study. For examining the current situation, locating new stations, and optimizing and reforming the network, potential model and transportation model have been applied by considering decision support system and using GIS and GAMS software.

The results of this research show that the network at the current situation faces some problems such as lack of collecting stations, low capacity of some stations for receiving the produced milk, lack of cover age fall villages in the network limits, low quality and long time access from the producing units to stations. Thus, according to the volume of the production and the capacity of the existing stations, for reducing the costs and following the standard rule of maximum distance between milking location and the nearest collection stations and decreasing its negative results, new station was located and the

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necessary changes were applied to the current conditions of the network through the change of flow transfer arcs to nodes.

Keywords: Reogenal network, Transportation model, Economic potential, Milk production, Hashtrood Towns.

***Assessment of Sustainable Ecotourism Development in the
Kermanshah city***

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Abstract

Ecotourism or nature tourism is one of the branches of tourism that is based on natural attractions. Ecotourism industry includes strategies to identify areas of prone nature and the planning for these areas to attract ecotourists and create the infrastructure facilities for them. City of Kermanshah is among regions with interesting scenery which enjoys rich cultural and historical attractions in the field of tourism. This study tries to evaluate the challenges and opportunities of nature tourism of this city using SWOT strategic model and to present appropriate strategies to achieve sustainable ecotourism for the region. It is a descriptive-analytical study and data collection is done using library, survey and documentary methods. The results of this study indicate that pristine nature and high ecotourism capabilities with a score of 0.45 and varied climate with a score of 0.32 are among the most important strengths. Lack of proper introduction of the region attractions with a score of 0.32 is the most important weakness. Job creation with score of 0.36 and visits management with a score of 0.28 are the most important opportunities and Lack of organized and studied programs with a score of 0.40 are the most important threats to the sustainable development in ecotourism of the area.

Keywords: Development, Sustainable Ecotourism, Opportunities, Kermanshah.

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Probing the Relationship between Urban Primacy and Economic Development: A Cross-country Analysis

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Abstract

According to a prevalent belief since the 1960s, patterns of national spatial systems have been thought to be dynamically transmuted appropriate to the levels of national economic growth and development until a rather balanced and efficient hierarchy of city-sizes is realized. This evolutionary process can be divided into two significant phases backed by the theories of “neoclassical economic equilibrium” and “polarized development”. That is, at the initial phase of development, economic growth essentially leads to resources and population concentration in a few core cities entitled “primate cities.” After that, in the second phase of development, sufficient degree of economic expansion would lead to gradual reduction of “urban primacy” through dispersion of growth factors and population throughout the nation. In view of economic principles, the aforementioned dispersive process would inevitably come to pass as a result of emerged diseconomies arising out of excessive agglomeration, congestion, and negative externalities within the primate cities. Based on this “nonlinear (inverted U-shape) model” and the “negative unidirectional relationship” suggested by some researchers, numerous time-series and cross-country studies using various indexes have investigated the existence and behavior of the mentioned interrelation. But upshot of these researches is contradictory and inconclusive until now. We aim at elucidating and probing into this disputation. So, for controlling the distortions caused by the diversity of primacy and development indexes employed in previous studies, we use 8 primacy indexes and 3 development indexes of 67 countries in the year 2000. Our statistical tests with varied (unidirectional and nonlinear) mathematical functions reveal

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that, aggregately, there is not any significant “cross-country” relationship between urban primacy and economic development.

Keywords: Urban System, Urban Primacy, Economic development, Cross-Country Research, Polarized Development, Center-Periphery Model, Neoclassical Equilibrium.

A Survey of Climatic Changes of Namak Lake Basin in the Late Quaternary

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Abstract

Two important characteristics, alternate climatic fluctuations and human being appearance, distinguish Quaternary from other geology periods. These climatic changes have shown increase and decrease of glacial scope in high latitudes, but there are different and opposite theories about climatic situation of low latitudes in Iran during glacial periods. In this study the climate of the last glacial era of Namak Lake basin, located in North central Iran was investigated by using the past geomorphic evidence and statistic analyzes. Present temperature and rainfall of this basin was studied and its related displacements were plotted. Glacial cirques and lake terraces as geomorphic evidences were also studied. Regarding the snowline in different points of basin, the temperature and rainfall of the basin in Wurm glacial period was rebuilt by Wright method and the changes related to the present time was studied. Morphogenetic plans of the basin in two periods were prepared by using annual rainfall and temperature and Politer method. Results show %48 (180 mm) increase in annual rain and a 5.6°C decrease in Wurm glacial era comparable to present. Reviewing geomorphic evidence out of climatic changes including Namak Lake terraces, travertine mines, pediment vast and human civilization have proven the results.

Keywords: Quaternary, Holocene, Morphoclimatic, Climate, Namak Lake basin, Cirque.

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Optimal Locations of Temporary Housing Sites Using a Fuzzy Analytic Hierarchy Process (FAHP), the Case Study of Region 16 of Tehran

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Abstract

Temporary housing is considered as one of the most common ways to provide housing for homeless people that providing shelter after disaster, immediately after providing emergency shelter and pre-reconstruction is forwarded. Although this method of was residence considered at a specific time period and it will lose its original function during the time, but the process of location is very important. The main goal of the paper is the location of temporary housing in region 16 of Tehran. The theoretical foundations of temporary housing and habitat were initially studied and then some 24 index for examining of temporary housing sites was identified. Significance coefficient of each the 24 indicators have been considered using Fuzzy Analytic Hierarchy Process (FAHP), and then the overlapping layers data have been identified and the coefficients in the GIS software environment were applied. The results of findings show that among the indicators studied; five indicators including ownership, the time use of space as temporary housing, adjacency to the passageways and road networks, adjacency to gas networks and the present land use were the most important variables, and three indicators including adjacent to passageways and road networks boundary, being away from sound pollution and waste collection centers had the lowest importance in the process of selecting locations for habitation for homeless people. In addition, the Beesat and Farvardin parks have been identified as the most appropriate locations for establishing the temporary housing sites according to the method and the selected indicators.

Keywords: Temporary Housing, Fuzzy Analytic Hierarchy Process (FAHP), Location, Geographic Information System (GIS), Region 16 of Tehran.

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Synoptic Analysis of Effective Factors on Dust Frequency in West of Iran

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Abstract

The effective synoptic systems on dust events was investigated in the west of Iran based on observed dusty days at 50 meteorological stations using principal component analysis (PCA) and geographical information system (GIS). Results showed that the first 5 components explained 69.11% of spatial variability of dust event variance. For detecting of affective synoptic systems, the computed correlation coefficient of stations with each component (Rotated Component Matrix) was transferred to the GIS environment, and synoptic patterns that affected spatial variability of dust events were simulated through Kriging interpolation method. It was shown that Azores high pressure system has the most effective role in frequency of days with dust in the west of Iran through the creation of surface thermal low pressures.

Keywords: Number of Dusty days, PCA, Synoptic Systems, West of Iran.

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***The Role of Classical Development on Forming and Expansion of
Informal Settlement (Case Study: Khoy)***

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Abstract

Informal settlements were formed as the shadow cities after the industrial revolution and the geographical redistribution of population in Europe. Informal settlements were slowly appeared after industrialization and modernization process as a main characteristic of almost many cities of developing countries. However, this phenomenon acted as an attenuating phenomenon in European countries and over the time and in the context of the location they were solved in the heart of the cities. Therefore, this phenomenon is now confined to the cities of the developing countries. Even the cities in developing countries like our country are also feature this phenomenon. Khoy middle city is not an exception of this rule. This research is classified as an explanatory analytical survey. Like most survey researches, this study focuses on a limited sample and the sampling method is the probable classification technique. In other words, all informal settlements in Khoy city are classified into four geographical categories amongst which four districts were randomly selected. The main purpose of this research was identifying the relationship between development and the increase of residents' numbers in informal settlements and for this the hypothesis of study was that there was a significant relationship between urban and rural development and the increase of residents' numbers in informal settlements in Khoy. The results indicated that in contrast to the

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expectations of many researches in this area, the number of residents in informal settlements would increase with increasing level of urban and rural development.

Keywords: Development, Migration, Urban informal settlement, Khoy.

***The Determination of Probable Subsidence Areas of Ardebil Plain
by the Use of GIS***

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Abstract

Ardebil plain, an area of approximately 1097.23 km² in geographic coordinates of 38° 5' to 38° 27' north latitude and 48° 9' to 48° 37' eastern longitude, is a valley plain. During recent years, groundwater has been stuck with eye drops. This article reviews the changes occurred in the volume of water aquifer and the rate of decline in groundwater in the plain out of the data from wells by using the software ArcGIS, piezometers maps and drop zone in the area under study. Graphical maps showed that the highest rate of water loss has occurred in the southeastern region. The zoning plan was provided, and it showed that 14% of the drop zone area was in the high plains, 29.73% in the high zone, and 26.6% in the intermediate zone, 17.38% in the low zone and 12/29% of the drop zone are low. The results indicate that the aquifer is in a critical condition in Ardebil. To explore the possible future subsidence, affecting layers included: precipitation, slope, hydrology, lithology, geomorphology, soil, vegetation and human factors extracted from maps and combining layers in GIS. map projections drop of water method were developed in the future using underground Co-Kriging point. The results showed that it is most likely that in the future Ardebil method subsidence would occur due to excessive removal of groundwater resources in the south east will and human activity in the west plains subsidence are the second risky factor.

Keywords: Ardebil Plain, Subsidence, Isopizic Map, Zoning drops, Arc GIS.

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