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Lands Suitability Analysis for Urban Development in the Metropolitan Area of Tabriz; Using Analytical Hierarchy Process (AHP)

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Abstract

One of the important and intricate cases for urban planners has been deciding on appropriate locations for future expansion of cities and determination of suitable land for developing. Intricacy and superfluity of appropriate factors in determining the direction of urban growth required using GIS technology and efficient management for prevention of urban sprawl and environment destroying. The main purpose of this article is providing suitable locations for future expansion of human settlement and activities within the metropolitan area of Tabriz.

For this purpose multi-criteria evaluation methods based on Analytical Hierarchy Process (AHP) employing for producing and analysis of maps. At first, the natural and human factors have been identified (12 indicators), then 12 layers prepared and the final map of suitable land for development has been produced based on prepared layers by AHP model. Findings of research show that, the metropolitan area of Tabriz has 4665 hectares but, only 41% of its area is suitable or relatively suitable for human settlement expansion and 37/31 % includes inappropriate and unsuitable for this goals. Also; from the view point of spatial distribution , the suitable lands for further development are located mostly in central parts toward the south and non suitable lands in eastern, northern and north west part.

Key Words: Land Suitability, GIS, Multivariate analysis method, Analytical Hierarchy Process, Metropolitan Area of Tabriz

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Study the Role of Social Capital in Urban Instauration of old Contexture Case Study: Jooybar City

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Abstract

Urban instauration is one of thoughtful plans in confronting with depreciation of old contextures, which in view of merely physiced has some similar results with the other urban development plans.

On this basis, social capital with comprising values including trust, partnership and solidarity in residential areas, is a concept which has found a special importance in Urban Instauration process in the recent decades.

The purpose of this study is to investigate the relationship between social capital with the physiced interventions model and the incentive to continue the residing on one hand and the type and amount of relationship between social capital with participation increase and the rate in executing urban renewal plans, the research method is descriptive- analytical which is based on surveying strategy.

The obtained data and information were gathered through questionnaires between 143 families residing at Joybar Kord Mahale and were analyzed by chi-squared tests and Pearson correlation coefficient and chi(two sided). The obtained results showed that physiced interventions in living environments is for the promotion of social capital of the habitats which this relation with chi-squared amount of 63.056 has been confirmed at meaningful level of 99% and also the incentive for continuation of settlement will increase the social capital in the texture which this relation has been confirmed at meaningfull level of 99% by chi-squared amount of 6783.

In this direction it is recommended that the primary physical intervention models and motivation strengthening to be performed in appropriate with the local potentials and requirements. And consequently the promotion of social capital which leads to the participation increase and speed up the work in urban renovation plans.

Key words: urban instauration, social capital, old contexture, Joybar Kord Mahale.

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Synoptic Analysis of Floods in Bavanat Marvast River in Yazd

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Abstract

This study investigates the effect of synoptic analysis of Bavanat Marvast river floods in Yazd. Due to the regional aridity, there were 5 flood periods during statistical period of 9 years, i.e. 1999-2007, each one were analyzed synoptically and only the most two severe floods (6 Dec 2003 and 29 Mar 2007) were selected and analyzed. To analyze this effect, daily precipitations statistics of Marvast and nearby stations were applied to determine the intensity of instabilities and regarding the instability indices, Si, Ki, Li, TTi and Pw Shiraz station was applied. Also to analyze synoptic effects of precipitation pattern, synoptic maps of the earth surface, level of 500 hpa, omega maps, moisture and cyclonic maps at zero and 12 hours were prepared. The synoptic pattern formation and its trends in weather maps during 2 days before the flood and up to the flood's day were investigated.

The study results showed that there are two precipitation patterns in the region, that flood precipitation on 6 Dec. 2003 was due to the Mediterranean systems effects obtaining its heat and moisture from southern waters and caused severe precipitations.

The causes of the floods on March 29th 2007 was due to the appearance of Siberian high pressure system and formation of blocking system on the southern of the Caspian sea and the center of Iran. At the same time, the west instable system clashed with this system and changed its way and penetrated in to the lower latitude so that the west system got high level of humidity whenever it transited from south seas and penetrated from southwest of the country and made sever precipitations in southwest and central region of Iran.

Keywords: Flood, Synoptic, Blocking, Mediterranean System, Marvast River

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The Effect of Social and Economical Infrastructures on Direct Foreign Financing and Economical Growth in Asian Nominated Western and Eastern Countries

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Abstract

Direct foreign financing is considered as an important factor for economical growth and development, removing the gap of saving- investment, financing, transfer of technology, technical knowledge and modern managerial methods. The current research is tried to review the effect of macro-economical effects, particularly the effect of infrastructures on attracting direct foreign financing and economical growth in the Asian nominated western and eastern countries during time period of 1980-2011, therefore, dividing infrastructures in to two social and economical parts has been reviewed.

The models used in this research, with respect to the conditions of Asian nominated countries, were simultaneously estimated by 2 SLS method in a four designed equations in an equation system. The results showed that social and economical infrastructures had the greatest impact on attracting direct foreign financing and economical growth in east Asian nominated companies in comparing with the western countries. So that the effect of social and economical infrastructures' coefficients on the economical growth of the Asian eastern countries is 0.70 and 0.60 respectively, and the effect of the above coefficients on attracting direct foreign financing in the said countries is 0.19 and 0.25 respectively.

Key words: direct foreign financing, social and economical infrastructures, economical growth

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Development of a Model to Evaluate the Effects of Urban Mixed Land Uses on the Basis of the Spatial Indicators and Analysis

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Abstract

Urban Land use planning activities investigate how a land is allocated to a specific function. Over the past few decades, development of the Mixed Land Use (MLU) application has become an essential planning model in developed countries and has considered as a key component in Smart Growth and New Urbanism. MLU works perfect only when done under a carefully planned program. Geographic Information System due to its great analysis of spatial issues can help us have a better understanding of this new concept. In this study, a conceptual framework for analysis of urban MLU on the basis of the spatial indicators and analysis is introduced. Criteria of the interest are: Accessibility, Intensity, Land per Capita, Clustering and diversity. According to the conceptual model, the mentioned criteria are applied for evaluating MLU levels in horizontal dimension in the 7th regional municipality of Tehran city. Results, obtained from aggregation of various criteria, demonstrate that the model can detect effects of MLU as well as specify limits and capabilities of every district in relation to the mentioned criteria. According to the results, Shahid Ghandi, Andisheh, Kaj and Niloufar's neighborhoods as well as 3th 4th districts are in the better conditions based on the urban MLU indicators.

Key Words: Mixed Land Uses, Geographic Information System, Urban Planning, Land Use Evaluation.

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Analyzing the Effective Structures on Development of the Rural Producing Cooperatives in Khorasan Razavi Province (From the view point of Experts)

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Abstract

The main purpose of this paper is to study the effective factors on development of Rural Producing Cooperatives in Khorasan Razavi Province. For this purpose, the affective factors on the development of cooperatives were analyzed and studied in three dimensions of internal, external and structural dimension with SWOT model. In this study, the identified 34 indicators were prioritized and weighted through interview and filling questionnaire with professionals and experts of cooperatives and by Antropy technique.

In the present study, the main purpose is through applying the strategic planning process, while studying the capabilities for development of producing cooperatives it is tried to provide solutions and identify applied strategies. The final result shows that acceptable strategies for the development of cooperatives are SO strategies, while WO strategies are placed at the second priority. The SO4 strategy with a score of 1.19 is the best strategy for the development of cooperatives. This strategy is practical with supporting financial resources, infrastructure and legal framework. WO1 strategy, however, with a score 1.17 is the most effective strategy after SO4 strategy. This strategy focuses on the financial and credit problems and more effective use of human and financial resources. The results of this research indicate that the performance of cooperatives is poor. It is evident that necessary infrastructures, provided by government can reduce potential problems and increase appropriate utilization of internal and external opportunities.

Keywords: Rural Production Cooperatives, Rural Development, Khorasan Razavi Province

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Feasibility Study of Rapeseed Cultivation in Izeh County by Using Geographical Information System (GIS)

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Abstract

Identifying and determining appropriate ecological areas for appropriate bedding in regional planning, especially the agricultural sector is vital and important. Depending the economy of rural people on agriculture, potential of the study area for agriculture, suitable climatic conditions and multi seasons, appropriate soil, variable environmental conditions and determining and separation of the potentials and obstacles of the Izeh from the view point of the production percentage and efficiency of rapeseed cultivation shows the importance of this study.

The aim of this research is to study the feasibility and identify the agriculture potential and capability of Izhe area for rapeseed cultivation through studying the natural and climatic features and to study the effectiveness of all these features.

12 Layers were used including: height, slope, erosion, geology, soil, land use, land cover, climate type, mean annual temperature, mean annual precipitation, annual maximum temperature, and annual minimum temperature. To do this research, we used analytical hierarchy process(AHP) in the Geographical information system(GIS) environment, such that weighting to the applied criteria was according to relevant experts comments, scholars and the resources within and between the layers. Then, the regional territories were divided to five categories , very good, Appropriate, Average, weak and Inappropriate and its zoning map was prepared. The results showed that from 3779/39 sq km of Izeh area, the very good category of this 565/15997 sq km is 14/95 percent, the second category (Appropriate) of 963/15997 sq km is 25/48 percent of this region. Therefore, more than 40 percent of the studied area has ideal and favorable conditions for cultivation of rapeseed. The other ecological zones i.e average, Weak and Inappropriate categories have 22/49, 20/34 and 16/02 percent of this County area respectively. The final map denotes the Suitable zone with green color in central part and unsuitable zone for planting rapeseed with orange color in the main four directions.

Keywords: feasibility, rapeseed, weighting, analytical hierarchy process Geographical information system.

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**Introduction of Karst Geomorphology of Carbonate Rocks in Ahangaran Region
(Northeast of Birjand)**

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Karstification process makes specific geomorphological features and forms typically slots, channels and large dissolution cavities. In this research, Ahangaran region which is located in northeast of Birjand (Southern Khorasan Province) with low temperature and more than 200 mm of annual rainfall has been studied for the purpose of recognition of karstic features. The Lower Cretaceous limestone forms the main carbonate rock unit in this region. There are relatively numerous karstic limestone masses in Ahangaran heights which study of them can be significant in identifying of karstic forms, limestone aquifers and relation of karst and water system in this region. Ahangaran karstic system is classified in arid climate karst types which have some springs. Drinking water for villages of this region is prepared from permanent and seasonal springs. In addition to springs, karens, rain pits and dry valleys could be noted as other geomorphological forms in this area. Development of secondary porosity as a network of joint and fractures and performance of karstic processes within the carbonate rocks are the most effective factors in karstification of this region.

Keywords: karst geomorphology, carbonate karst, Ahangaran, Birjand