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Fuzzy Comparative Analysis of Social Capital and Rural Development Case Study the Rural of Miyandoab City

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Abstract

The improvement and changing the quality of rural residents life requires the development of some social infrastructures that makes possible the development and its process and facilitates its trend. The most important mechanism of the social dimension based on the rural development which makes the physical changes, development of facilities and welfare is the social capital. Therefore, the purpose of this reaserch is the comparative analysis of the relationship between social capital and rural development in the villages with over 1000 population of Miyandoab town ship. The research methodology is based on fuzzy approach. The Rural development has been ranked through 79 indices by TOPSIS model. To determine the social capital of the villages, the questionnaire with a sample size of 537 people were used as quota sampling. The results show that the experimental data refers to the fuzzy relationship between the two sets of social capital and rural development. The consistency criteria between these two sets is equal to 0.816. This value indicates that only 82 percent of the study rural areas have confirmed the claim that social capital is a necessary condition for rural development. Accordingly, with 95% of confidence it can said that social capital is an "always necessary" condition for rural development. The coverage index between two sets is equal to 0.75. The experiments demonstrate the importance of social capital for rural development. The present evidences indicate that 75 percent of the rural development has been covered by social capital.

Keywords: social capital, rural development, fuzzy method, Miyandoab Township

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Bio – Climatic Comfort Confine Determination for Tourism Planning Using Evans Model, Case Study: Ilam Province

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Abstract

Ilam province has a special bio – climate condition due to its expanding width ,special topographical condition and effective atmosphere masses on the areas which can attract tourism in most of time, annually. The aim of present study is to determine suitable areas in order to expand tourism in suitable times in Ilam. That monthly climate comfort for night and days was determined base on Evans comfort model. Climatic elements used in Evans model are maximum and minimum of temperature, maximum and minimum of relative humidity and wind speed. In order to analyze climate elements, the data of 2 synoptic station (Ilam , Dehloran) and 3 climatory stations (Ivan, Mehran and Dareshahr)were used during 1375-1387 . After rebuilding ,equalization and analyzing data required climatic elements were provided. Bio – climatic comfort maps were provided using GIS software. The results of this study can lead to usage of tourism planning and expanding in Ilam .

Keyword: Tourism, Ilam province, Evanz Index, GIS.

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Relative Assessment of Tectonic Activities, Upper Kangir Basin (Eyvanegharb) Using Geomorphic Indicators

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Abstract

During recent years, various researchers tried to quantify the tectonic movements and have presented several indicators as geomorphic indices. Using these indicators provides the possibility for proper analysis of the evolution situation of the drainage network and changes of the mountain front due to the tectonic activities. Kangir basin (Eyvanegharb) is located at coordinates of geographical longitude of $46^{\circ}17'$, and 11° up to east $46^{\circ}27'$, and 35° and geographical latitude $33^{\circ}41'$, and 14° up to north $33^{\circ}50'$, and 57° with an area of 122.71 square kilometers in southeast Eyvanegharb city (North of Ilam Province). The only drainage of this basin is Kangir River, which drains the total of Eyvanegharb plain.

The main purpose of this paper is the relative evaluation of status of the basin active tectonics through using and calculating geomorphic indices such as Valley floor – valley height ratio (Vf), Asymmetric factor (Af), Stream length gradient index (Sl), Drainage basin shape ratio (Bs), Percentage dissected mountain fronts (Fd), Percentage undissected escarpments (Eu), Mountain front sinuosity (Smf), and Mountain front facet (Fmf). Thus, topographic maps and geology, satellite imagery and geographical information system software in Arc GIS 10 and several field visits from landforms, has been used.

The results indicate that the Kangir watershed has a relatively active tectonic status; Based on indicators of Vf, Af, Sl, Fd, Eu, Smf and Fmf, this basin is placed at class one.

The amount of qualitative calculated indices is matched with the existing Geomorphologic evidences available in the area such as the V-shaped and deep valleys, escarpments fault, triangular surfaces, young anticline, low cut mountains front, tilt the main drainage and lack of foothills.

Keywords: Eyvanegharb, Kangir basin, tectonic, geomorphic indicators, Geomorphologic evidence.

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Review the Satisfaction Rate From the Quality of Services of the Organizations Responsible for the Rural Local Management in Ijroud County (Zanjan Province)

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Abstract

Nowadays, the effectiveness of any organization, especially the organizations responsible for rural management, depends on providing the increasing needs and requirements of people, which necessitates the effective implementation of facilities and resources and promoting the quality level of services in rural areas. Generally, identifying people's requirements and knowing their demands has a determinant role in determining priorities for management and effectiveness of administrative system. Indeed, respecting the people's role and knowing their requirements provides a proper and useful framework for selecting appropriate strategies and promotion of the quality level of the provided services. Therefore, the present study intends to identify the priorities of organizations for providing services through the evaluation and measuring the satisfaction of villagers about the provided services.

Therefore, to complete coverage of all levels and expectations of residents, the Rater model was used to determine the level of services in 59 rural settlements in Ijroud County of Zanjan province. The data were collected through the questionnaire with a sample size of 436 people and analysis of data were done by using appropriate software of SPSS. Based on " T Student " test, the satisfaction level of the considered organizations in all indices was significantly less than what expected. In ranking the indices effective on the level of satisfaction, the factors including intimate and friendship relationship of people and the authorities, responding the people's problems with courtesy and respect, the manner that authorities perform their duties and the interests and motivations of authorities in performing their duties have had the most important role in defining the people's satisfaction from the related organizations. The results obtained from multiple regressions showed that the criterion of reliability with determinant coefficient of 0.432 has had the most effect on the people's satisfaction.

Generally, for improving the condition for servicing the responsible organizations, knowing the daily requirements of people and identification of service fields for providing the requirements and needs of people is inevitable.

Key words: Satisfaction, Organization, Dimensions of service, Rater model, Ijroud County.

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Evaluating the Effect of Geomorphology in Hydrological and Chemical Characteristics of Springs in Kangir Catchment

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Abstract

Kangir catchment with a drainage area of 458 km², in Ilam province, is part of Folded Zagros structural zone. The aim of this research is to evaluate the hydrological and chemical properties of springs and their relations with geomorphologic landforms of the study area. To achieve the purpose of this study, Karstic landforms, joint system, fold symmetry index (FSI) and fold front sinuosity (FFS), hydrographs and chemical characteristics of springs were measured quantitatively. Evaluating the FSI and FFS indexes represents young folding system of the study area. Result of this study reveals that dominant direction of joints is parallel to anticline hinge, or perpendicular to topographic slope. Evaluating the hydrographs of 6 springs reveals that the rate of recession coefficient (α) in Sarab, Farzegah, Venit, Debiran, Halashi and Majin springs are very low, 0.0058, 0.0074, 0.0098, 0.0055, 0.0078 and 0.0047 respectively. The high amounts of dynamic storage volumes, electrical conductivity, total hardness, and of water compounds like cations and anions in the studied springs imply the low development of karstic voids and high contact area between water and bedrock. On general, young karstification system as well as direction of karstic joints, perpendicular to topographic slope, has resulted in long duration of all spring discharges.

Keywords: Kangir, karstification, Folded Zagros, joints, recession coefficient, dynamic storage volumes.

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Vulnerability of Sirjan Plain Due to Aquifer Over Abstraction

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Abstract

The ever-increasing pistachio gardening is considered as the main cause of overdraft and water-level decline in Sirjan plain. During the past several years, overdraft from the alluvial aquifer of this plain has led to water resource depletion, quality degradation, deepening the well, drying water resources, increase in energy consumption for water pumping, higher drought frequency, ground settlement, decrease in specific retention and drying some fields and gardens.

Continuation of this trend during the next years, the level of the plain underground water will drop more, and besides discharging a great part of water with a desirable quality and quantity, the damages will also increase. Also, salt water intrusion from the west (Salt Flat) would threaten the natural ecosystems. Problems in public hygiene and welfare, crisis in agriculture and animal husbandry, unemployment, decrease in public income and the probable unrest and economic and social crises may result. Since the highest amounts of abstraction is for agriculture, training farmers for optimum water consumption and up-grading irrigation practices seem essential. Some other options such as decrease in drilling permits, conservation of ground waters, artificial recharge, proper agricultural practices, water treatment and recycling of sewages and effluents may decrease ground water abstraction rate and abate these forecasted consequences.

Keywords: Groundwater, Over abstraction, Water table decline, Ground subsidence, Sirjan plain.

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Quantitative Analysis of Trench Erosion on the Kalgan Chayi Basin (East of Sahand)

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Abstract

In this research, it is tried to investigate the soil erosion by the indices of rainfall erosive, evaluation of the basin potential for trench erosion, morphometric of trenches and statistical analysis to suggest some required recommendations for erosion control. Also we used hydro climatic indices for studying the above said factors. Also in relation with the high development of trenches in the study basin, we did morphometric work in the 20 trenches.

With respect to steep slope of the skirts, great interfere of human (existence of 19 villages in the study basin), stormy rainfall, water way systems has caused the destruction and movement of non-resistant materials from the areas (fertilized agricultural soils)

The average annual soil erosion in Kalgan Chayi basin is 235.79 ton/ha/y(table No.1) and the total erosion in whole of the area is 5552845 ton/per year.

The index of wet soil (WS) in February and March were negative and indicates the potential of the under study area for trench erosion in these months. Hydrothermal coefficient (HTK) 1.715 in the limit of 1.25 up to 2.5 shows the potential of the area soil for creating trenches.

Comparison of the results of statistical analysis by linear power regression showed that linear regression is better than power one in trenches study.

Some suggestions:

Therefore , applying watershed management methods appropriate with the climatic and topographic conditions of the area are presented as the following:

- Creating terrace at the mild slopes and making banquette(U,V gradients) at the pendants by using Sakardent formula which is adapted with semi-arid areas(by calculating distances, gradient and amount of earth filling and earth moving)
- Applying watershed management methods of change in the slopes by dry laid masonry and establishment of weirs in the waterways and active trenches (check dam and log) which their material exist in the environment.
- Avoiding plow in the slopes (perpendicular to the contour lines) and preventing excessive and over grazing, burning bushes and trees.

Keywords: Soil erosion, Linear regression- sediment yield, Kalgan chayi basin.

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Role of the Main Elements of the Iranian Islamic City in Locating the Residence Centers, case Study: Zanjan City

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Abstract

Today, tourism industry is one of the major sources of income in the world and meanwhile is of the factors effective on the cultural exchanges between countries and as the largest service industry in the world has a very special place which through causing dramatic changes on the land feature, will change the political, economical, cultural and the manner and method of people's life.

While, the residential centers are considered as one of the main elements in development of this industry. Accordingly, the objective of this study is investigate the role of the main elements of the Islamic Iranian city on locating the residential centers. The method of this study is analytical-functional method.

In order to classify and analyze the data by the use of ANP models, the nearest neighbor, geographically weighted regression, Moran and network analysis models have been used. For data analysis, ARC/GIS and Super Decisions soft wares have been used. The results showed that 82 percent of the residential elements in the past have been located 5 minutes away from the basic elements of the city, but this rate with a dramatic change has reached to 68 percent in the recent years. This eccentricity in recent years in most of the Iranian cities, and even in the world, can be due to the repulsive factors in the center and also the attractive factors in the margin of cities, so upon the assessment of the experts, it was determined that in Zanjan, the public costs with the effect coefficient 0.38 was the most important index and the land price as the most important sub-criteria with weight 0.49 has had the most effect on locating the residential centers .

Keyword: Tourism, Residence Centers, nearest neighbor, main elements of the Islamic city