Effects of Social Consolidation Projects in Rural Areas

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Abstract

Integration projects in rural areas of lands have several benefits. The most important effects of consolidation plans include: economic, social and environmental aspects. The purpose of this research is to study the social effects of land consolidation projects in rural area, in Arak district. The data of this study was collected through completing questionnaires from whole households and interviewing some local experts connected to the "Ministry of Agriculture" and "Center for Consolidation Services" in Arak. The results show that in rural areas of Arak where consolidation projects were filled land consolidation has increased economic effects, as well as the water and land reduction saving the time and opportunity, social partnership, satisfaction on agricultural and social conditions.

Keywords: Land consolidation, Social effects, Questionnaires, Rural areas, Arak.

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The Possibility Compare Ecotourism Attractive Ardabil Province

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Abstract

The ecotourism is one kinds of natural Tourism. That has emphasis on interaction with nature environment for protection and education. In reality ecotourism is new orientation in tourism industry. The prospects and nature beautiful sight is be tourist attractions this kind tourism.

On the basis of estimates of existing Iran country from the perspective natural and historical tourism attractive is one of ten country of world, and from the perspective tourism variety is one of five country of world, and from the perspective manual industries verity is component two or three country of world. Ardabil province is one of regions that have ecotourism attractiveness. This province have new view, plains, leaks, ponds, many waterfall, mineral spring, mountainous, and is one of regional of ecotourism. The purpose in this research is assessment of ecotourism attractive Ardabil province with use from SWOT analysis model and the approach method is compound, documental and containing analysis, the results of the research show that this province have capacity of to be changed with one from natural tourism regional. And in this province is felling necessity of tourism development with axis of ecotourism in target of creating with sustainable development.

Keywords: Ecotourism attractiveness, Natural tourism, Swot methods, Ardabil province

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The Correction of GPS Handy Receiver Deviation Using a Fixed Receiver

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Abstract

The high cost of high accuracy GPS receivers and also lack of easy access to them has made limited the possibility of using the benefits of precision agriculture equipments in Iran. In this research, a new method in was studied to correct the deviation of low-cost non-differential receivers. For this case, two tests were performed. A fixed receiver determines the coordinates of fixed station and a mobile receiver went in route and was recording the points' coordination in different time distances. After data processing, the route point map of mobile receiver was drawn, and by comparing the fixed receiver coordinates with the reference points, the deviation was determined. Then this deviation applied on mobile receiver data. Corrected path was drawn and the path before correction and the actual route was compared. To evaluate the effect of the time and speed on the creation and interpretation of data, the test was performed in 10 days and two speeds. Results showed that using this method, deviation of GPS was reduced 46 cm or 15%. Also, difference in deviation rates in different times of the days before and after correction, were significant.

Keywords: GPS, Deviation reduction, Precision farming.

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Recognition of Spatial Patterns in Stability Structural Material of Iran States in Relation to Human Development Indexes

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Abstract

Vulnerability of cities for earthquakes argue is a topic that is urban planning experts.

This subject has variety of aspects such as stability and by instability of structural material. It's relation with humanities indexes is studied as urban planning hidden sector and the planning ignoring it will fail. Purpose of this research, is the determination of humanities indexes which affect on urban area stability and instability of structural material in Iran states.

Therefore, this research has used analytic and quantitative methods. At first, stability and instability of structural Material were calculated by SDI method. In this method Iran states were divided in to four parts including Mazandran, Ilam, Esfehan, Gilan, Markazy, Kohkilooye and Boyer Ahmad and Tehran as developing states. In the second step, by using factor analysis 90 factors are reduced to 11 effective factors. Regression model detected that first, fourth; seventh and ninth factors have the highest effects in developing material.

Keywords: Vulnerability, Humanities development, Material development, Iranian states.

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Investigation of Gezel Ozan River Pattern Changes by Fractal Geometry

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Abstract

Researchers of river Geomorphology science are seeking new ways to check River Geomorphology and its pattern changes always. Fractal geometry is one of the new methods that can be used in Geomorphology of river science. The main importance of fractal geometry is presentation of the model and mathematical description for complex shapes that in nature can provide. The goal of this research is Fractal analysis of Gezel Ozan River changes between routes of Miyaneh to Zanjan. For this purpose was used satellite images of periods 2000, 2004 Sensor ETM + and 2007 sensor IRS. For Fractal analysis the studied route was divided into three periods that each period is different in terms of morphological characteristics. For determine of fractal dimensions was used from box-counting method. The survey results showed that the first interval (interval arterial) has had the highest changes and the second range (Mid-range Mountain) has had the lowest changes and third period (mountain range) has had an intermediate case.

Keywords: River changes, Geometry pattern, Fractal geometry, Gezel Ozan River.

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Analysis of Synoptic Systems Creating Heavy Precipitation during Cold Period of Year in Khorasan Razavi and Khorasan Shomali Provinces

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Abstract

The presented study aims to investigate synoptic atmospheric conditions along with heavy precipitation in Khorasan Razavi and Khorasan Shomali provinces. The identification of temporal and spatial distribution of heavy precipitation associated with these extreme conditions is another goal of this study. The amount of precipitation greater than 20 mm was chose to distinguish heavy rainfall from others. The parameters such as sea level pressure, temperature, relative humidity, specific humidity at the level of 700 hPa and wind direction were analyzed to identify sources of heavy precipitation moisture. Geopotential height at the level of 500 hPa was considered to determine heavy precipitation synoptic patterns. Wind speed and direction at the level of 300 HPA were evaluated to track the high-speed wind (jet stream). Then, these parameters were averaged monthly to investigate the general behavior of the atmosphere status associated with heavy precipitation in the studied area. The results show that in cold period of year the foci of heavy precipitation are located in Khorasan Razavi County. Mediterranean deep trough and Red Sea were identified as synoptic pattern and the main moisture source of heavy precipitation, respectively. Subtropical jet stream also recognized along with almost all heavy precipitation cases at level of 300 hPa.

Keywords: Heavy precipitation, Synoptic patterns, Temporal-spatial distribution, The Khorasan Razavi and Khorasan shomali provinces.

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The Prioritization of Dehstans of MeshkinShahr County in tems of Agricultural Development Surfaces

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Abstract

The world experiments show that agricultural section is important from point of view food stuff supply, employment generation, currency provision and supply of the other economic sections such as industrial activities and also the role that has on the national gross production. Also capabilities and local and regional relative advantages on every rural region is different by reason of making an effect from different economic, social and environmental views including the wherewithal and condition of demography, production, geography, climate, infrastructure etc. This important result comes out in that some rural regions by reason of agricultural development having superiority in relation to other regions. Also the cognition of local and regional advantages and capabilities each rural region is the fundamental principle of rural and agricultural planning. Until capabilities, capacities and rural regions advantages are considered for the agricultural development any region had its special planning for developmental purposes. The purpose of the present study was to prioritize Meshkinshahr Dehstans in terms of agricultural development aspects. The methodological approach was a descriptive–analytical survey type. Statistical population consisted of all farmers in Meshkinshar County. The sample size was determined by using Cockran formula (n=185). The content and face validity of the instrument was specified after several reviews and correction by the faculty members of the University and several expertise of administrative offices. A pilot test was conducted to determine the reliability of questionnaires and Cronbach Alpha coefficient of 0.82 was achieved. The achieved data was analyzed by TOPSIS technique. The assumption was that the good quality of every index evenly is rising (or declining). As the matter of fact the best existence value from each index indicates positive ideals and the worst existence value from that index indicates negative ideals. Also indexes are detached from each other. At the end, the results of multi-attribute decision making methods in the base of calculated weights showed that

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Dehestans of Meshkine Shargi and Garasou were located in the first rank in view of agricultural developemnt, respectively, and Dehestans of Nogdou were positioned in the last rank. Finally, based on the results of analysis, some applied recommendations have been provided.

Keywords: Agricultural development, Rural development, TOPSIS, Meshkinshar County.

Iran's New Towns Perfomance in Attracting Population Overflow Metropolis
(Case Study: Sahand New Town)

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Abstract

Since the process of increasing urbanization and its effects, has been made more important the necessity of planned about urban development. Some of the problems about this that we face are: metropolises issues, decreasing the quality of life due to more density of population and activities, new towns strategy buildings - especially in the middle of latest centaury - Thus, this model has been used in many countries (in past decades) and also it has been started since 1357 with the aim of housing for industry workers, and after the Islamic Revolution, mainly to absorb the metropolis crowd overflow.

Now, after more than one-fourth century and beginning of attracting population process for some of new towns, the main purpose of the article is the answer to this question, that "how much this policy was successful?". And we compare the performance of Sahand new town about the absorption of Tabriz metropolis crowd overflow with prior goals that are based on documental and survey methods on sample include 350 household, production and servicing units.

Findings show that, Sahand new town was clearly retarded of contingency planning about buildings, especially population absorption and employment. But the predicted performances to attract the overflow crowd of Tabriz and provide house, some deal orientation resolved to realize the goals.

Keywords: Performance, New towns, Overflow crowd, Metropolis, Tabriz.

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The Evaluation of Potential Evapotranspiration Estimation Models and Its Spatial Distribution in the Southern Basin of Aras River

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Abstract

Accurate estimating of potential evapotranspiration is essential for many studies related to agriculture and water balance. This study was carried out with the aim of surveying models for estimating potential evapotranspiration in the southern basin of Aras river. For this purpose, the monthly data of 6 stations including mean air temperature, minimum and maximum temperature, wind speed, sunshine hours, mean and minimum relative humidity were used in the statistical period of 20 years (1986-2005).

After reconstruction missing values and controlling stations for being reference (well irrigated) or non reference, potential evapotranspiration values were computed applying 9 methods (FAO-Penman- Monteith, Blanney-Criddle, Hargreaves-Samani, Makkink, Turc, ASCE standardized method, Kimberly- Penman, Penman and Priestly-Taylor) in REF-ET software. For determining best method, calculated potential evapotranspiration values were compared with evaporation pan values by using correlation coefficient and root mean square difference. Results indicated that there was significant correlation between Blanney-Criddle and pan evaporation values. Therefore, Blanney-Criddle model was selected as the best model for the study area. Afterwards, based on the above mentioned model and also the use of interpolation technique, the potential iso-evapotranspiration map was drawn for the southern basin of the Aras River.

Keywords: Potential evapotranspiration, Blaney-Criddle method, Correlation coefficient, Root mean square difference, Southern basin of Aras River.

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Assessment of Soil Erosion Risk in Sareskandar Chay Catchment, Eastern Slope of Sahand Mountain Using USLE Model and GIS

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Abstract

Soil erosion is a serious problem, due to progressive arid condition and incorrect management on the eastern slopes of Sahand Mt. Many parameters are aggravating soil erosion in this study area and in catchment scale. Soil is under intensive water erosion as a semi arid area on the slopes of Sahand (NW of Iran).The traces of this erosion has become apparent with the shapes of surface disturbances and gullies and rills in agricultural and grazing lands. In order to investigate causes and factors of water erosion and defining risky lands, we used USLE model and GIS techniques. In this article water erosion and susceptible land erosion, were analyzed using topographic factors, landuse, and precipitation and soil type. The results of study suggested that length and gradient of slope is play important role in erosion processes. In study area, the pattern and type of erosion is defined by length. In some parts of the area where length of slope is increased, depth of gullies is also increased. In addition, when silt composition is increased, linear erosion is also aggravated. The zoning map shows that slopes toward flood plains have very high potential for water erosion

Keywords: Soil erosion, Linear erosion, Soil erosion risk zoning, USLE, Sareskandar Chay, Eastern slope Sahand Mt.

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