

ABSTRACTS

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A Survey about Hashtgerd New City Operation in Surplus Population Attraction

This Article surveys the correspondence between Hashtgerd new city operation in surplus population of Tehran metropolis and Karaj with foregone primary aims. Thus, the past habitation main reasons of migration, approval rate and tendency for survival in Hashtgerd new city by households resident have been studied.

The researches of this survey show although Hashtgerd new city lags behind foregone programs but its role and predicted operation in surplus population attraction of Tehran metropolis and Karaj and rooms provision with low trend becoming accomplishment.

Keywords: New Cities Operation, Surplus Population, Hashtgerd, New City, Migration.

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Estimation of Snow Water Equivalent by Processing of MODIS Satellite Imageries

In mountainous area of the northwest of Iran, snowfall could be regarded as an important climatic element particularly during cold seasons. Snow cover and snow depth, in turn, could influence the other hydrological components such as: stream flow charge, ground water reservoir, flood occurrence and vegetative canopy, by means of significant interconnected reflections throughout a water basin.

The current research was accordingly introduced to provide some snow cover maps using MODIS imageries in the Agi-Chay basin which is located in the east of the Orumiyyeh Lake, with two high mountains namely: Sahand and Sabalan in the catchments. First, to design the snow cover map, different image processing algorithms were progressively applied to the same time series imageries (provided for year 2005) and available ground-based data by applying an ERDAS Imagine software. Then, using ArcGIS software some required spatial analysis such as: transforming of existing analogue topographic maps to digital format, designing of a DEM model, extracting of watershed divides and generating of Thiessen polygons have been subsequently completed. At the last stage, an overlaying operation was applied to estimate the rate of snow water equivalent (nearly about sixty nine billions m³ for year 2005) in the study area referencing to the ground observation data.

Final results reveal the importance of models which have been provided by processing of MODIS images because of its spatial and temporal resolutions and the great number of bands. By examining snowmap algorithm, it was found that this function could be regarded as a precise method in the analyzing of imageries at a regional scale. Easy calculations, simplicity, high accuracy and automated operations are the most implications of a methodology which was introduced in the current investigation.

Keywords: Agi-Chay Basin, Remote Sensing, MODIS Imageries, Snowmap Algorithm, Snow Cover Maps, Snow Water Equivalent and GIS.

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The Analysis of Effective Environmental Factors on Rural People's Knowledge and Awareness in Cooperation Sector- Case Study: Semnan Province

Studies show that classical approach of rural's extension and informatics about cooperation sector has structural difficulties because it hasn't any correspondence with geographical and environmental factors. The main question about reconstructing and representing the optimal pattern planning for informing and extending of cooperation sector, specially for rural communities is "What are the effective environmental factors to level of peasant's knowledge and awareness and what effects have on level of peasant's knowledge and awareness in cooperation sector." The presenting article investigates some of the most important and effective environmental factors on peasant's knowledge and awareness in cooperation sector, and below results attained:

The statistical analysis and testing the hypotheses demonstrate that; - There is a significant relationship with the probability of 1% between the level of knowledge and awareness of peasant's about cooperatives and the location of rural settlements i. e. plain , mountainous, Mountainside villages (sig = .000) ; - There is no a significant relationship between the level of knowledge and awareness of peasant's about cooperatives and their rural settlement type (linear and non - linear concentrated settlement) (sig = .081) ; - There is a significant relationship with the probability of 1% between the level of knowledge and awareness of peasant's about cooperatives and the rural settlement which are located near and away from the main roads (sig = .001) ; - There is a positive correlation with the probability of 1% between the amount of rural population and level of knowledge and awareness of peasant's about cooperatives (P = .201); - There is no relationship between the quality of soil and level of knowledge and awareness of peasant's about cooperatives; - There is a positive correlation with the probability of 1% between the quality of agricultural water supplies and level of knowledge and awareness of peasant's about cooperatives (P = .215); - There is no relationship between the amounts of annual precipitation of rural settlements and level of knowledge and awareness of peasant's about cooperatives. Our studies show that in providing the optimal rural extensional and informatics' planning patterns, notices to the following principles are necessary: The principles of bilateral information flow; adaptation with the geographical and environmental conditions; using the potential of the local institutes in rural extensional-informatics action plans; public coverage "to know is everyone's right"; and final principle is environmental sustainability.

Keywords: Analysis, peasant's Knowledge and Awareness, Cooperation Sector, Environmental Factors, Semnan.

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Simulation of 1997 and 2000 Cold months Precipitations by Using Regional Climate Model (RegCM3)

Regional climate models such as RegCM3 are capable to simulating different climate processes. Modeling the climate can detect differences between real climate and model-simulated climate in the area under study. Variety of simulations have been done for sensitivity investigation of the model to the physical computational processes and schemes such as radiation, convection, land use, resolution, domain size and center of domain. In this work, sensitivity of the RegCM3 has been measured to the different convective schemes including Grell, modified Kuo and Emanuel. Grell scheme itself has been divided into two different schemes of Arakawa-Schubert (AS) and Fritch-Chapel (FC). Winters (started from Decembers up to February) of 1997 and 2000 were the period of study. Model operation in producing the monthly amount of precipitation was calculated by comparing model output with observed precipitation of 151 synoptic stations of Iran and CRU reanalysis data. According to the results of this research, the regional appropriate schemes with their errors are: Kuo with -%24 error for the southeast, Kuo with %16.5 error for the northeast, Emanuel with %85 error for the central part of Iran, Kuo with %20 error for southwest, Emanuel with -%10 error for west, Grell-FC and Kuo with -%80 error for the northeast and Kuo with -%16 error for the southwest of Caspian Sea. Simulation's errors for the central and the northwestern parts of Iran have been rejected statistically because of high amount of errors. But according to mean error analysis of two years simulations, Grell schemes with approximately % 20 errors have good results for winter precipitation simulation of Iran.

Keywords: RegCM3, Convective Scheme, Winter Precipitation of Iran, Grell-FC Scheme, Kuo Scheme, Emanuel Scheme, CRU and Observed Data.

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The Logic and Scientific Method in Political Geography

In this article, it has been tried to analyse and classify the principles and concepts in the field of political geography in terms of epistemology and science philosophy.

The statements and propositions in this field are divided into two parts:

1- descriptive statements, 2- prescriptive statements, in terms of their link and the way of changing so, this enables us to know the general features of scientific knowledge and match them to the contents of political geography and explain the logic and the scientific essence of this field.

Methodology: This article is based on the suppositional-conclusive method which are the same as induction and deduction twins.

This article has also used some library sources and texts. This article is fundamental and theoretical.

Keywords: Descriptive Statements, Prescriptive Statements, Political Geography, Scientific Knowledge, Syllogistic Necessity, Other Syllogistic Necessity.

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Synoptic Analysis of Frost Days of Ardebil Province

In order to analyze the synoptic origin of frost days of Ardebil the daily temperatures of the four synoptic stations Ardebil, Pars- Abad, Khalkhal and Meshkin-Shahr of the province were obtained from the Meteorological Organization of the Islamic Republic of Iran for the 1995-2004 period. From the frost periods only three frost periods were selected. These were the earliest, the longest, and the latest frost periods. These periods were analyzed thoroughly on the daily weather maps of surface and 500 hPa.

The analysis showed that the pronounced factor in producing the synoptic frosts of the area are mainly moving western anticyclones and Siberian High. The westerly systems are the frequent factor, but the strong and widespread frost happened when a ridge from Siberian High was extended to the province. On the 500 hPa level the extension of a deep arctic through over the area brings very cold air to the region.

Key words: Synoptic Analysis of Frosts, Frosts, Pressure Patterns, Ardebil Province.

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Procedure of Conversion in Village to City and its Results in Talesh Township

During the recent half-century, one of the hurried urban-bias procedures on spatial and population structure of the country is increasing growth of the numbers of cities through changing of rural centers to small cities. On the other hand, some knowledgeable think that strengthen of urban operations, through changing of rural centers to cities, may cause to better servicing to rural centers. Although modern urban operations and increasing in population in these centers, will be leaded to this matter that in some fertile regions such as those plains beside the Caspian Sea, landscapes of rural centers and agricultural lands applications will be changed. Such a procedure in narrower limits of the Caspian coastal low-lying plains (such as Talesh Township) where population centers have been concentrated, naturally, some more important spatial and economical issues would be resulted. Narrowness and lengthwise shape of Talesh Township have been caused that numerous rural districts markets in linear arrangement have been formed in the nodules in wholesale road and basin of the rivers in the region. These markets are naturally the central location of some villages. Thus, their changing to city will cause not only important social, economical and spatial evolution in those centers, but also will affect their diffusion limits, exclusively. In order to investigation the results of this procedure, at first, through some questionnaires, we studied the effects of changing of rural districts to city in those families that are residing in these locations and also the villages in their diffusion limits, and investigated the attained results from the population, through Spearman method to evaluate the economical and social selected indexes to study the amount of their correlation with some indexes such as the amount of tendency to stay in the place of residence, providing the occupation fields, attraction of unemployed persons, improvement of agricultural status, amount of improvement of the life level and enjoyment of the related services. While, in order to evaluation of the structural and spatial effects of

the procedure of changing the villages to cities, some field and deed data such as plans, statistical data, and information from administrative and local institutes, have been used. The result of the research shows the concentration more than before of population, commercial and servicing activities at narrow bond of the wholesale road that consequently, together with connection to the places of residence around the road, rural concentration is being formed. While, perforated and diffusive structure of limits of new cities are rapidly filled by urban constructions. But through putting into operation of garden-cities model, may cause a compromise between spaces and the urban and rural operations, such a way that among preserving the agricultural lands and natural spaces, diffusive rural residences will be profited from the basic and subordinate urban services and facilities too, and at last they will reach to a structural-operational unity.

Keywords: Urbanism, Urbans, Settlement Networks, Rural Development, Urban Corridor, Rural Markets, Farmlands Use Changing, Talesh Plain.

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The Interaction of Relationship Between Golbahar New City and Surrounding Villages Case Study: Golbahar New City

New city Golbahar has constructed in the northwest of Mashhad and attracted population from 1995. By formation of this city the villages of this area, instead of relating to the other cities as Mashhad and Chenaran, have interacted and affiliated to this city in many fields. In this research, required data has been gathered by library study, interviews and questionnaires. According to studies, Golbahar, in addition to attract excess people of Mashhad has had various impacts on villages of this area which these impacts lead to establishment of rural attraction and influencing area. Since many of these impacts were uninvited, it is necessary to take into consideration the studies of comprehensive and detailed plan, available hypothesis about traditional relationships between city and villages and the transformations of these relationships.

Keywords: Globahar, New City, Mashhad, Surrounding Villages, City-Village Relationships.

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Spatio – Temporal Changes of Iran Inland Precipitation during Recent Decades

Due to importance of precipitation spatio-temporal changes have been done many study approach. Some of these approaches are relay on complex geostatistics and classical statistic technique. The result of these kind is isohyets map and their characters.

Based on monthly data of 152 synoptic and 170 climatologic stations during 1961 to 2003 spatio-temporal changes of Iran precipitation on 8012 pixel was analyzed by mixed methods of geostatistical and classical approaches.

According to the Kriging method, the isohyets map of Iran inland and the map of changes created as the value of changes. About 51.4% of the country area suffered from the changes especially in the mountain regions.

The rate of changes is 29.6 to -15.7 mm per year that happened in Koohrang and Ardabil-Khalkhal region respectively.

The relationships analysis shows the changes happened in the mountain and the western part of the country.

Keywords: Precipitation Change, Kriging Method , Trend Correlation.

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Changing the Large Village to a Small City and Their Role on the Regional Balance: Rivash - Kashmar

In this article, the process of changing villages into cities and their role in the regional balance has been inspected through the analytical - descriptive method. This research tries to answer this question: can the policy of changing the large villages to the small cities and the resulted effects be considered as an approach to reach the regional equilibrium?

In this regard, Rivash that has changed to city in 2000, has been analyzed in 2 periods before and after becoming city regarding the different variables: Population, employment, service facilities and possibilities and its effects on the studied region. The achieved result shows that this city has been fully unsuccessful in fixing and keeping the population with poor function, in expanding the functions to the suburb regions and unsuccessful penetration domain in rendering employment and facilities. That's why the studied zone in Kashmar town has the maximum rate of migratory- sending. We conclude that since after changing the cities village into Rivash city, the main investments are devoted to infrastructure and service affairs not to the basis and productive affairs, so these policies concentrate these services in these centers and these places can not play the expected role in the regional balance. At the end of the article, some proposals have been rendered to achieve to logical balanced expansion harmonious with the regional and city persistent development.

Keywords: Rivash, Small City, Large Village, Kooh Sorkh, Balance Region-Making.

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The Analysis of Spatio-Temporal Variations of Temperature in the North –West of Iran

In this paper in order to recognize the spatio-temporal variations of temperature in the north-west of Iran, 19 synoptic stations which had had the more complete time series, have been used. First temperature spatial variations on the basis of central and dispersion parameters were studied. Then by using the interpolation Thin Plate Smoothing Spline (TPSS) method which has had the least Mean Absolute Error (MAE), the iso-therm curves and Coefficient Variation (C.V) were drawn. Then according to the parametric and nonparametric methods the temporal temperature variations were studied. The results of this survey show that the north-west temperature has had the converse significant relation with the elevation. The results showed that the annual mean temperature series have increased apparently over most of the north-west. We have recognized that this is clear and significant indication for the existence of strong increasing temperature from west - east longitude. The results also showed that the annual mean temperature series have decreased apparently over west of the north - west.

Keywords: Temperature, Climate Change, Nonparametric Statistics, Man-Kendal Test, North-West of Iran.