Statistical Analysis of Temporal Oscillations of Total Ozone Rate in Esfahan Atmosphere

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Abstract

Ozone is a very small part of earth atmosphere, but its presence is nevertheless vital to human well-being. Most ozone resides in the upper part of the atmosphere. This region called the stratosphere is more than 10 kilometers above earth's surface. About 90 percent atmospheric ozone is contained in the ozone layer or ozonosphere which shields every living thing from ultraviolet light from the sun. Total ozone is all the ozone in the atmosphere. Total ozone values often report in Dobson units. Typical values vary between 200 to 500 Dobson over the globe. Total ozone varies strongly with spatial (latitude) and temporal over the planet. This paper with using different statistical as regression analysis, variance analysis and Student-Newman-Keuls (SNK) methods tried to discover the relationship between total ozone and time variation in monthly, seasonal and annual time scale in Isfahan ozone metric station. Analysis of variance shows significant different between time series means $p<0.01$. The best series agreement with the among of ozone is seasonal series so that average of among of ozone shows a significant in each season with S.N.K test but monthly and yearly mean of ozone don't show significant difference in all of months and years . Spring has the maximum of seasonal mean of ozone and fall has the minimum of it. Results of study on trend indicate a no significant trend in the annual mean in the time series.

Keywords: Ozone، Temporal change in ozone, Trend Analysis, Isfahan, Iran.

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Synoptic and Dynamic Analysis of Heavy Rainfall Events in the Southern Coastal Caspian Sea In Comparison With Iran Case Study (1381/9/15-1381/9/20)

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Abstract

This research, one of the most covering rainfall times (from1381/8/6 to 1381/10/5) in Iran study and then synoptic and dynamic analysis of it's the heaviest rainfall cluster (from 1381/9/15 to 1381/9/20) explain using environmental to circulation pattern method. In this time more than 60% of Iran stations experienced rainfall and also, the number of heavy rainfall events were recorded in the southern coastal Caspian see. After drawing of Isorain maps in studied days, rain maximum points and its gravity centers calculated. Then, pressure surface patterns, geopotential, humidity advection, front, jet stream and Q-vector maps were drawn in different levels. Analysis of pressure of see level maps showed that pressure gradient reinforcement between Black see high pressure and Mediterranean low pressure and between Black see high pressure and the eastern north of Caspian sea low pressure are effective to produce these heavy rainfalls in west, southern west of Iran and the southern coastal Caspian sea. Maps geopotential showed that there are two main patterns in this studied time, as role of the eastern north of Caspian Sea trough (part of long through of Mediterranean) is very important. Analysis of humidity advection maps showed that Mediterranean sea and Red sea in upper levels and Persian Golf and Oman sea in lower levels are sources of humidity for heavy rainfalls, as them role in different days aren't alike. However, heavy rainfall events in the southern coastal Caspian sea were provided via Mediterranean sea in 500(ha) level, Mediterranean sea and Red sea in 600 and 700 (ha) levels and all of main sources of humidity (Black sea, Mediterranean sea, Persian Golf, Red sea and Caspian sea). Polar front, north of Red sea-north of Persian Golf front and composition of subtropical jet stream and polar front jet steam in the east of Iraq can be from reasons of producing

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and strengthening of vertical movements. Also, analysis of Q-vector maps with point of convergence regions shows the important role Caspian sea, Mediterranean sea, Black sea, Persian Golf and Oman sea to producing of raising movements in different levels and times and its follow to forming of heavy rainfall events in the southern coastal Caspian sea and Iran.

Keywords: Synoptic and dynamic analysis, Heavy and covering rainfall events, Gravity rainfall centers, The southern coastal Caspian Sea

The Relative Vulnerability Analytical Hierarchy Process of Structural and Non-structural Construction in Urban Natural Disasters Crisis (Sample Case: Isfahan's Hospitals)

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Abstract

One of the issues involved the more world large cities is the issue of natural disasters. Regarding the nature of being unexpected most of the natural occurrences and the necessity of a quick and accurate decisions-making, operation and theoretical and basic concepts have generated a knowledge called “crisis management”. To identify the urban crisis management and vulnerability of the centers related to the crisis of a city against natural disasters, its need to study the main factors effective in urban crisis management vulnerability. One of the effective factors in urban crisis management vulnerability is the structural and non-structural construction of organization related to the crisis management including the hospitals of the city. Health care and remedial centers especially the hospitals are such as the important places encountered with serious hazards and damages with a high rate of injuries and losses during the occurrence of natural events and accidents. Therefore, studying this issue in these centers seems to be very important.

The aim of this article is to rank the hospitals of Esfahan’s urban zones from the view of structural and non-structural construction and to achieve the structural and non-structural priorities of the city hospitals in order of their importance in increasing the vulnerability regarding to the studying indices. The survey method is “descriptive-analytic” in which the quantitative models have been applied. For a hierarchy analysis about the crisis management of Isfahan's hospitals, 41 variables at 9 basic factors in 25 hospitals were studied using the

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analytical hierarchy process (A. H. P). The results obtained from A.H.P. show different indices in which the factors of framework; type, building age and the number of beds with the importance rate of 11.959, 21.12 and 22.65 are in the first orders, respectively.

In fact, these factors cause the increase of vulnerability in the hospitals of the city if no enough attention is paid to when constructing and equipping. Moreover, the hospital of zones 1 and 3 hare the highest rates of vulnerability among the hospital of the city. Hence, the presence of difference in the rate of hospitals vulnerability at different zones of Esfahan is validated from the viewpoint of the structural and non-structural construction (the survey hypothesis).

Keywords: Analytical hierarchy process (A.H.P), Natural disasters, Vulnerability, Urban crisis management, Esfahan hospitals.

Evaluating and Analysis of Destination Image Effect in Development of Tourism Industry (Case Study: Tabriz Mega City)

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Abstract

During the few recent decades one of important subjects that connected studies of tourism and has been in the center of researcher's attention, and an image of tourist from a tourism destination. Most results of these researches indicated that mental image of tourists from a destination influences decision making to travel, their behavior during trip and intended renewed trips to that destination. Despite importance of this concept in development of tourism industry, with the exception of a few cases (e.g, in the case of foreign tourists), destination image subject has not been explored in Iran. The main purpose of this research is the examination and analysis of image of interior tourists before and after travel to Tabriz. Methodology of this research is surveying. Required information was gathered using questionnaires and then analyzed with statistical methods by SPSS software. The findings of this study show that travel to Tabriz city has had positive effect on tourist's image from this city. There has been also positive correlation between tourists image after travel to Tabriz and their tendency to renewed travel to this city. The important point relative to sources is that tourists obtain information of travel by traditional methods (through friends and family members) before traveling to this city.

Keywords: Tabriz, Tourism, Tourism destination image.

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Analysis of the Spatial Disterbutation of Travel Agencies in Mashhad Metropolitan

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Abstract

Travel agencies have an important role in the development of the tourism. Now the important parts of the development of tourism are related to travel agencies activities. Due to this, in our country so far, few studies have been done in this regard. Mashhad metropolitan, with 20 million pilgrims in each year is a sample. There are 222 travel agencies. Factors affecting the travel agencies distribution were done by the spatial distribution models, such as center median, standard distance, Moran index of spatial autocorrelation and regression. Results show that: Level development zone, near the railway station, bus terminal and the holy shrine are important factor in distribution of travel agencies. Coefficient calculated for these variables are set equal to 0.78 (R2 = 0.78).

Keywords: Travel agency, Mashhad metropolitan, Tourist& Pligrim, Spatial analysis.

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Analysis of the Role of Enablement of Residents in Physical-Environmental Improvements of Informal Settlements, Case Study: East Kale Eydgah, Sabzevar City

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Abstract

Informal settlements are one of the main aspects of urbanization in Iran so that, such a phenomenon exists not only in big cities but also medium and small cities. Sabzevar is one of the most important cities of the country involved in this field due to the presence of about one eighth the populations residing in informal settlements; which is highly needed comprehensive approach. Hence this study is to seek to measure whether the enabling of local communities in East kal e eydgah - as the main core of the city's informal settlements-physical improvements of this location is possible or not?

The research methodology is analytical-descriptive. The method of data gathering is based on the combination of librarian, documentary and survey studies. Data gathering tool is a questionnaire. The method of sampling is simple random and sample size is 150 households. The Pearson correlation and linear regression through SPSS software has been used for the analysis the Results of findings. In this study, each of the dimensions of economic, social and institutional enabling including, meaning, competence, self-determination, influence and trust has been discussed as independent variables, and variable of willingness to participation in physical improvements is considered as the dependent variable. The results of findings show that there is a significant relationship between the levels of enabling of residents and their willingness to participation in physical-environmental improvements. R^2 was determined for social enabling, 4 percent, economic enabling 2.9 percent and institutional enabling 4.4 percent. On the whole, it can be said that institutional enabling is much more

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effective than social and economic ones for increasing participation of residents in physical improvement programs.

Keywords: Informal Settlements, Enabling, Physical-Environmental Improvements, East Kale Eydgah, Sabzevar City.

Tourism History-cultural spaces and Its Close Services Analyses in Tabriz City Using GIS Techniques

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Abstract

Tourism subjects is entered to scientific discuss at the recent time. Cultural tourism is formed the major part of these dicuss, visit and recognize of historical-cultural places, artificial fashionables, native music and beautiful landscapes are belong and pertain to "heritage".

This article is results of study on cultural places of Tabriz city, The article is axis discussion about dispersal history- cultural places and its close services like (hotels, inns, ...) with use "overlay analyses". Perhaps is simplest shape in **Arc GIS** overlay analyses that can product new information in this analyses obvolute different layers with phenomenon species in GIS environment and new maps with new information. In hence utilized pro respond to under question.

1- Where Tabriz city stand cultural- history places;

2- Whether is suitable its close services like (hotel, inn, …) in this places pro travelers and visits.

Keywords: Tourism, Historical-Cultural, Places, Tourism, Services, Access network.

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The Assessment of Time–Area and Clark Instantaneous Unit Hydrograph Models in Estimating Flood Discharge in Bazoft Karoon

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Abstract

One of the main objectives in hydrology is rainfall–runoff forecasting systems for determination of flood hydrograph in outlet of a watershed. Flood discharge could be estimated using rainfall-runoff models, which explain hydrological phenomena for un-gauged watersheds. The aim of this study was to investigate the consistency, accuracy and reliability of time–area and Clark Instantaneous unit hydrograph models in estimating the shape, peak discharge, time to peak, time base and volume hydrograph of flood resulting from a rainfall with certain intensity and duration. For this purpose the topographic map of Bazoft watershed digitized by using R2V package, the digital elevation model (DEM) and isochronal prepared with the ILWIS software. Finally, the flood hydrographs were estimated by Clark and Time-Aria models for six selected storm events. The computed hydrographs then compared with those obtained by measured data. The results show that the Clark model gives a better estimation of outlet hydrograph in comparison with time-area model.

Keywords: Instantaneous Unit Hydrograph, Clark Model, Time-Area Model, Flood Estimating

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Analysis of Drought, Wetness Year and Forecasting of Climate Parameters, Precipitation and Temperature Using Stochastic Methods in Shiraz City

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Abstract

Stochastic models have been used as one technique to generate scenarios of future climate change. Temperature and precipitation are among the main indicators in climate study. The purposes of this study is analysis of the status of climatic parameters of monthly precipitation and mean monthly temperature, years of drought and years of wetness due to precipitation deficiency, simulation and forecasting using stochastic methods. In this study, the 21 year data on the precipitation and mean monthly temperature at shiraz synoptic station are used and based on ARIMA model, the autocorrelation and partial autocorrelation methods, evaluation of all possible models regarding their invariability, examination of parameters and types of model, the suitable models for prediction of monthly precipitation: ARIMA (0 0 0)(2 1 0) 12 and for forecasting of the mean monthly temperature: ARIMA (2 1 0)(2 1 0) 12 were obtained. After validation and evaluation of the model, the forecasting for the agriculture years 2008-09 and 2009-10 were made. In view of the forecasting made, despite of a continuing drought, it is likely that the precipitation will improve. As regards the mean monthly temperature, the trend of increasing temperature, especially in recent years, has continued and the findings of the forecasting show an increase in temperature along with a narrowing of the range of variations.

Keywords: Precipitation, Temperature, Stochastic Methods, ARIMA.

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The Analyses of Informal Settlement and Determination of Effectiveness Coefficient for Each Parameter by Route Analysis Model (Case study: Shater Abbad Kermansha)

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Abstract

On of the problems related to the Metro police are the informal settlement the shortage of the land for making structures in high cost against the fast rate of population rise an highly, the increasing rate of the application for house in city caused to law access of popular larger of people and middle ones to the land and house market and it increased the non suitable structure making in informal suburbs of the city. The Shater Abad in Kermanshah unfavorable structure making and is including the non suitable spatial texture, high density, unfavorable city environment, are some problems containing the Shater Abad in this study the social, economic and physical variables in appearance informal settlement in Shater Abad and effects have been investigated, the results of this research is representing the appearance of Shater Abad, analyzing the regression technique the effectiveness coefficient related to each parameters character according to obtained results from the (R.A.M) demonstrated which two series of parameters including the primary possession immigration reason, being or not immigration and before occupation and factors after the immigration, including the person job, possession document, settlement reason, permission for making (establishment), and income, have the most effectiveness. In general, with computing the coefficient of element effects and different variables and contrasting them from each other characterized that these to factors was 57.5 % and 42.5% affective in the appearance of Shatter Abad so, if the planners and policy makers are solving the problems initiated from the informal settlement in cities they should research their roots in the effective factor before immigrating and in rural, the problems related to the informal settlement in cities.

Keywords: Informal settlement, Route analysis, Model, Sattar Abad, Kermanhah.

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