



## Investigating the Trend of Changes in some Climatic Elements in Chaharmahal and Bakhtiari Province

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**Abbasali Arvin<sup>1</sup>**: Assistant Professor of climatology, Department of Geography, Payame Noor University, Tehran, Iran  
**Email:** a\_arvin@pnu.ac.ir

**Abdolazime Ghangherme**: Assistant Professor of climatology, Department of Geography, Golestan University, Golestan, Iran.  
**Email:** a.ghangherme@gu.ac.ir

**Davare Hjiipoor**: Meteorological Organization of Chaharmahal and Bakhtiari Province  
**Email:** alials470@yahoo.com

**Mehran Heydari**: Meteorological Organization of Chaharmahal and Bakhtiari Province and PhD Student in Isfahan UN  
**Email:** Heidarybeni@yahoo.com

### Abstract

In this study, by using the Mann-Kendall nonparametric method and Sen's Estimator slope test, the trend of some elements including precipitation, average of maximum and minimum temperature and the number of snowy days Chaharmahal and Bakhtiari Province covers part of Zagros and Zardkohe-Bakhtiari highlands, from which three major rivers including Zayandehrud, Dez and Karun originate. in an annual and monthly scale, was evaluated in the stations of the province during a period of 30 years (1986-2015). The output was presented in the form of tables, graphs and iso-trend maps as drawn in the Arc\_GIS. The results showed that although changes in rainfall did not follow any specific trend in most months of the year, the amount of precipitation in the stations of Koohrang as the rainiest station in the Province, Lordegan and Yan-Cheshme had a decreasing trend at the significance level of 99%; also, the the number of snowy days during March showed a decreasing trend in Koohrang station. However, the average minimum and maximum temperature in most areas of the province, in both monthly and yearly scales, except for the months of November and December, had a significantly increasing trend.

**Keywords:** Chaharmahal & Bakhtiari Province, Trend, Precipitation, Temperature, Climate Change

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<sup>1</sup> . Corresponding author: a\_arvin@pnu.ac.ir

## Dynamic simulation of the Alborz Mountain in spread and thickness of sea breeze on the southern coast of the Caspian Sea

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**Mostafa Karimi**<sup>1</sup>: Assistant professor of Climatology, Faculty of geography, University of Tehran, Tehran, Iran  
**Email:** Mostafakarimi.a@ut.ac.ir

**Ghasem Azizi:** Associate professor of Climatology, Faculty of geography, University of Tehran, Tehran, Iran  
**Email:** ghazizi@ut.ac.ir

**Aliakbar Shamsipour:** Associate professor of Climatology, Faculty of geography, University of Tehran, Tehran, Iran  
**Email:** shamsipr@ut.ac.ir

**Leila Rezaei Mahdi Abadi:** Master of Student Synoptic Climatology, Faculty of geography, University of Tehran, Tehran, Iran  
**Email:** L\_rezaee@ut.ac.ir

### Abstract

In this study is simulation of role of topography in thickness and Inland penetration of sea-breeze in southern coast of the Caspian Sea. The RegCM4 as a regional scale climate model coupled with a lake model and also the reanalysis data of NCEP / NCAR used to determine of the initial conditions of the model. The model was run during the peak of sea breeze on the southern coast of the Caspian Sea (July 2002) in both conditions (with mountains) and (without mountains). the outputs indicated that in without topography condition depth of the sea breeze will increase to the current position the southern slopes of the Alborz Mountains ( latitude °35 ) but the land breeze in the area is gone. The maximum speed and changes in wind direction observed on the coast southeast and central Alborz respectively. In addition with non-topography conditions, the thickness of sea breeze in different areas significantly has increased with the highest rate on the eastern coast (longitude °53).

**Key word:** Atmospheric circulation, simulation, RegCM.4, South coast of the Caspian Sea, Sea breeze.

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<sup>1</sup> . Corresponding author: Mostafakarimi.a@ut.ac.ir

## Checking Mahabad township Mehr housing development policies in the framework of infill development from View residents

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**Yusef Bahrami**<sup>1</sup>: PhD student in Geography and Urban Planning, Young Researchers and Elite Club, Sardasht (Mahabad) Branch, Islamic Azad University, Sardasht (Mahabad), Iran

**Email:** Bahrami.2009@gmail.com

**Iraj Ghaderi Motlagh:** Ph.D Student of Geography and Urban Planning, Department of Geography, Islamic Azad University, Science and Research Branch, Tehran, Iran

**Email:** iraj.ghaderymotlagh@gmail.com

**Behruz Oftade:** M.A in Geography and Urban Planning, Department of Geography, Islamic Azad University, Ardabil Branch, Ardabil, Iran

**Email:** behrozoftade@gmail.com

**Seyyed Ali Hosseini:** Assistant Professor in Geography and Urban Planning, Department of Geography, Payamenoor University, Tehran, Iran

**Email:** hosieniali@yahoo.com

### Abstract

The present study aimed to assess the conformity of Mehr housing projects by Infill development pattern to answer this question: What is the relationship between Mehr housing project in the city of Mahabad with Infill development and with its spatial conditions of the city. The research method in present study in terms of nature is "descriptive – survey" and in terms of purpose "applied" and in terms of collecting data is "field". Statistical society is the whole members of Mahabad Mehr housing that were determined 361 persons as sample by Cochran formula. To data analysis was used the methods of descriptive statistics (frequency, percentage, mean, standard deviation) and inferential statistics (one-sample t-test). The results show that Mehr housing policies in the city of Mahabad not comply with its physical conditions. T-test results in this study showed that Infill development due to the use of the maximum of capacity available space of city, Can be considered as a suitable model and as the basis to guide Mehr housing policy in the city of Mahabad. The results of T-test about the physical factors ( $t=-1/48$ ;  $p\text{-value}>0/05$ ), socio-cultural factors ( $t=24/35$ ;  $p\text{-value}\leq 0/05$ ), economic factors ( $t=13/27$ ;  $p\text{-value}\leq 0/05$ ) and environmental factors ( $t=27/29$ ;  $p\text{-value}\leq 0/05$ ) shows that Mehr housing policies in the city of Mahabad comply with socio-cultural factors, economic factors and environmental factors but not comply with its physical conditions.

**Keywords:** Mehr housing, Infill development, Space, housing development policies, Mahabad

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<sup>1</sup>. Corresponding author: Bahrami.2009@gmail.com

## Spatial Justice of having the advantages Of Facilities and Service In Rural Settlements Villages of Province Gilan

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**Majid Yasouri**<sup>1</sup>: Professor of Geography and Rural Planning, University of Guilan, Gilan, Iran

**Email:** yasoori@um.ac.ir

**Seyyede Fatemeh Emami**: MA student in Geography and Rural Planning, University of Guilan, Gilan, Iran

**Email:** f\_emami22@yahoo.com

**Maryam Sejoudi**: MA student in Geography and Rural Planning, University of Guilan, Gilan, Iran

**Email:** msejodi1@yahoo.com

### Abstract

The above research evaluates the access and use of rural services of the villages in the province of Gilan, as examples of reducing inequalities and increasing the development. The method used in this article is applicable in terms of target, and cross-sectional in terms of identity. To do this research, morris model, indexing method, standardization and dividing by average are used. After comparing the villages of the province in terms of rural services, the obtained outcome indicates that accomplished results and ranking are in high agreement, so that in all models, villages of Saravan, Kelishami and Gol Sefid have the most access to facilities and services and mountain villages of Talesh, Shuil and Eshkevar Olia are the most deprived villages in rural facilities and services, respectively. Based on studied indicators, the distance between deprived and wealthy villages fluctuates from 2 to 10 times. This situation reflects the gross spatial inequality of having advantage of facilities and services in the villages of province Gilan.

**Keywords:** Rural Development, Inequality, Rural Services, Villages of Province Gilan

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<sup>1</sup>. Corresponding author: yasoori@um.ac.ir

## Analyzing drought with the use of NDVI index in the Qorveh and Dehgolan plains

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**Omid Mafakheri<sup>1</sup>**: PhD student Synoptic Climatology, Faculty of Geographical Sciences, Kharazmi University, Tehran, Iran. **Email:** Mafakhery63@yahoo.com  
**Shahriar Khaledi**: Associated professor of climatology, Faculty of earth science, Shahid Beheshti University, Tehran, Iran. **Email:** shahriar.khaledi6@yahoo.com  
**Ali Akbar Shamsipour**: Assistant professor of climatology, Faculty of Geography, Tehran University, Tehran, Iran. **Email:** shamsipr@ut.ac.ir  
**Mostafa Fallahi Khoshji**: PhD student climate change, Faculty of Geographical Sciences, Kharazmi University, Tehran, Iran. **Email:** fallahimostafa@yahoo.com  
**Azar kermani**: Master of Urban Climatology, Faculty of Geographical Sciences, Kharazmi University, Tehran, Iran. **Email:** Azar.kermani21@yahoo.com

### Abstract

Drought phenomenon with different goals including planning, water sources management and dealing with the problems due to water shortage has been investigated by most scholars. This research examined the relationship between drought and the normalized difference vegetation index (NDVI) in Ghorveh and Dehgolan region in Kurdistan, Iran. To determine years with meteorological drought, index of Standard Z during a 20 year period time (1387-1368) has been applied. The results of the statistical data in Ghorveh station in 2008 with total annual rainfall of 155 mm and Z index of -2.31, in 2000 with total rainfall of 253.1 and Z index of -1.5 and in 2001 with 239.5 rainfall and Z index of -1.22. Were determined as drought indices. MODIS satellite images were used to assess the ecological drought. Associated with each image to a randomly selected sample of 500 places in the software ERDAS, NDVI values were calculated for these images. satellite image processing results and Normalized Difference Vegetation Index (NDVI) indicates a low index values in the years 2000, 2001 and 2008. Were determined as ecological drought years of 2001 samples had the lowest NDVI and central parts of the area under irrigation has almost lost its vegetation.

**Key words:** Drought, Z index, MODIS, NDVI, Ghorveh & Dehgolan.

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<sup>1</sup>. Corresponding author: Mafakhery63@yahoo.com

## **Analyzes of the effects and security function social capital in sustainable rural border areas the villages of the central city of Saravan**

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**Javad Bazrafshan:** Assistant Professor of Geography and Rural Planning,  
University of Sistan and Baluchestan.

**Email:** bazafshan@gep.usb.ac.ir

**Mehrshad Tulabi Nejad<sup>1</sup>:** PhD student in Geography and Rural Planning,  
University of Sistan and Baluchestan.

**Email:** Mehrshad\_t65@yahoo.com

### **Abstract**

The objective study was to investigate the effects of social capital on sustainability security in the villages the border areas. Statistical population including the villages of the central city of Saravan are heads of households (N= 9946). 421 households (23 villages) using Cochran formula and simple random sampling were selected. For the analysis data, descriptive and inferential statistics two methods (single sample t test, Pearson correlation and path analysis) are used. Results the research findings on the impact of social capital in rural sustainable security shows that the greatest impact is related to social security. Memorizing of patterns such a way that increases language, preservation of culture and religion, reducing drug use among youth, reduce the amount of conflict is between the people and so on. the lowest impact related to later economy. findings also show that dimension politico-military security partnership, trust and of cohesion between peoples and cooperation between police forces and and border guard to increase the political participation of the people, ethnic and sectarian narrow the gap, reducing illegal traffic in neighboring countries, increased cooperation with military forces in the fight against bandits and smugglers and maintain security and order is sent.

**Key words:** Social Capital, Sustainable Security, Border Villages, Saravan City.

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<sup>1</sup> . Corresponding author: Mehrshad\_t65@yahoo.com

## Analysis the morphometric features of KabirKooch landslide

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**Hojatollah Beranvand:**<sup>1</sup> PhD Student of Geomorphology, Faculty of Geography & planning, Isfahan University - **Email:** hojat359@yahoo.com

**mojgan entezary:** Assistant professor of Geomorphology, Faculty of Geography & planning, Isfahan University- **Email:** entezary54@yahoo.com

**Abdollah Seif:** Assistant professor of Geomorphology, Faculty of Geography & Planning, Isfahan University- **Email:** abdsafe@yahoo.com

### Abstract

The KabirKooch landslide was studied as one of the immediate catastrophic events which causes falling rocks from the KabirKooch hillside and the obstruction of the Seymarreh river course and also formed a lot of geomorphological shapes in this area. This landslide was located at 5 km of the Poldokhtar city at the south between the Ilam and Lorestan province. The main purpose of this research to provide and analyze of Morphometric feature of the landslide inclusive, width of the rupture surface ( $W_r$ ), length of the displaced mass ( $L_d$ ), length of the rupture surface ( $L_r$ ), width of the displaced mass ( $W_d$ ), the depth of the rupture surface ( $D_r$ ), the depth of the displaced mass to it will be discussed ( $D_d$ ), ( $D_r/W_r$ ), ( $L_r/D_r$ ), ( $L_r/W_r$ ) and volume. For this work by using by using Global mapper11 software, to be conform the topographic area maps in the scale of 1/50000 and the digital elevation model. Arc Gis 9.3 and Surfer 10 software was used for preparing and producing new data and information. Considering the analyse of this indexes is,  $W_r$ : equal to 15/5 Km,  $L_d$ : 16/06 Km,  $W_d$ : 15.5 Km,  $D_r$ : 300 M,  $D_d$ : 300 M,  $L_r/W_r$ : 0.50,  $D_r/W_r$ : 51.67,  $L_r/D_r$ : 26.03 and volume 3908200970  $m^3$ .

**Keywords:** Landslide, KabirKooch, Catastrophic, Geomorphic Landform, Morphometry.

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<sup>1</sup>. Corresponding author: hojat359@yahoo.com



## The Analysis of Boroojerd city's Sustainability Compared with Iran Urban Centers

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**Taher parizadi**<sup>1</sup>: Assistants professor, Geography and urban planning, Faculty of Geographical sciences, kharazmi University, Tehran, Iran

**Email:** Tparizadi@yahoo.com

**Hamed ghadermazi**: Assistants professor, Geography and urban planning, kurdestan University, Kurdistan, Iran

**Payam parsar**: Master of urban planning at the Islamic Azad University of boroujerd

**Email:** Payamparsal@Gmail.com

### Abstract

Rapid urban development in social, economical, cultural, political and environmental aspects, has affected the human life in recent decades. Introducing the sustainable development as the main theme of the third millennium is the result of urban impact on the biosphere and the range of different aspects of human life too. Concentration on differences in dimensions and indicators of sustainable development in one place and having them compared to other places can use fal for planners to realize the development potential and weaknesses. In theme lines, Boroujerd city have been studied as one of the median cities in the West of Iran to assess the indicators of sustainable development. The purpose of this study is to assess indicators of sustainable urban development in Boroujerd town, compared with Iran urban centers. In this study, methodology, is cognitive in terms of objective, and is comparative- analytical in term of identity and the data collection method is documental studies. To assess the level of development, the concept of sustainable development was classified in four dimensions: social, economical, environmental, physical-institutional and 44 indicators were identified. The data were collected in the Boroujerd city and Iran urban centers. Data were analyzed with sign test in SPSS software. The result has shown that there is no difference between Boroujerd city and Iran urban centers in terms of social and physical-institutional indicators. But, economic and environmental indicators have significant differences. The economic condition is not good but the environmental condition is better. On the other hand, taking into account all indices, the sustainability of Boroujerd city, almost is same with Iran situation sustainable.

**Keywords:** urban sustainability, sustainable urban development, median city, the city of Boroujerd,

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<sup>1</sup> . Corresponding author: Tparizadi@yahoo.com

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