

## The Application of GIS in Locate (Determining) the Best Tourist Times and Destinations of Fars Province

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**Abstract.** Fars Province of Iran is a vast province in terms of tourism potential, there is a lot of capabilities. Cultural Tourism in the province of historical and natural tourism poles Iran is considered to be so unfortunately it is not used. To develop tourism in the region must present times and places suitable for tourists in the area is clear. One of the most important needs of tourists aware of the climatic situation and the times are conducive to tourism. In this study using TCI tourism climate index as well as the role of GIS software distribution climate tourism is drawing all the months the province. The results of this study indicate the months in the Persian month October best time for tourism in the province, and later also the months. The worst month for tourism December, is. Spatial dispersion of central and northern provinces are better.

**Keyword:** Climate·Tourism·TCI index ·Fars Province.

### 1. Introduction

Tourism is considered to be an economic sector sensitive to weather and climate. The effect of weather and climate not only results in the appearance of tourism, but causes the demand for tourist services. In some cases, the dependence on climate qualities regarding tourism demand is seen both as the source of appearance for tourism and its limiting factor. The relationship between weather, climate, and tourism exists in different forms. The reciprocal effects of these two are very complicated, and have turned the relation of weather-climate-tourism in the research into a very complicated, controversial matter (Scott, 2005:46). The GIS software, capable of point into range data middle finding, provides the possibility to calculate tourism convenience climate index for one range and correctly analyze it based on the point data taken in stations (Perry, 2001: 4).

For the first time in 1985, Michovski calculated tourism convenience condition of 453 meteorology stations by presenting TCI method, generalizing its results within twelve months worldwide. Mazarakis (1996) has conducted researches in terms of the significance of climate on tourism in Greece, and states that achieving the information on factors such as degree, raining, duration of daily sunlight, water temperature, and other complimentary parameters like ultraviolet rays, and weather pollution play an important role in planning the vacations for the tourists. Scott (2001) found in a research that the trend of climate change in the world until 2050 and 2080 will be such that the condition of tourism convenience climate index for most regions of Canada will be better than the current condition. Perry (2001) dealt with examining the tourism climate condition in hot and dry areas and Mediterranean regions, coming to the conclusion that the worst condition in these regions is when the hot weather blows there. Using a model, Hamilton et. al. in 2005 stated that with regard to the increase in the amount of carbon dioxide and world-wide weather changes, the tourist trips are mostly headed towards higher altitudes and geographical latitudes. Mazzerikas and Farajzadeh(2009) in doing a research by means of TCI index concluded that cities of Maku, Ahar, Ardebil, Takaab, and Khoy have summer peaks, with Ardebil exhibiting the best condition for tourist attraction in summer.

### 2. Geographical Conditions of the Region – Methods and Findings

Fars province borders on the north with Isfahan province; on the east, it borders with Yazd province; on the south, with Hormozgan province; and on the west with Kohgiluyeh and Bushehr provinces. Fars climate

is cold in the north. Winters in the central regions are mild and rainy, and summers are hot and dry. In the south and south east, winters are mild and rainy; summers are very hot.

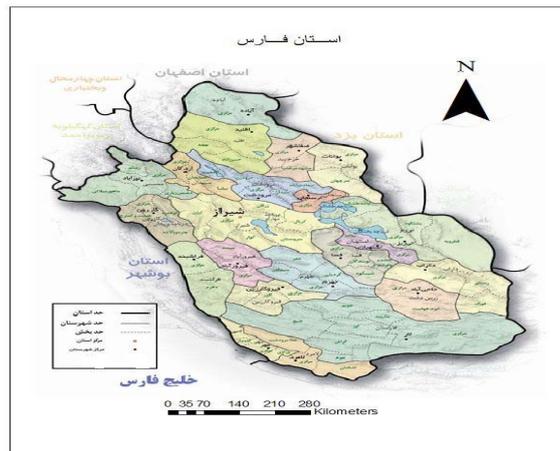


Figure1. Map of Fars Province

Using tourism climate index (TCI) (parameters used in a 30-year period (1976-2005)) via GIS software, the dispersion map for each parameter for all 12 months of the year were drawn, and with respect to GIS capabilities in combining the maps, they were integrated and the dispersion map of tourism climate (TCI) for every month in the province was drawn. Determining the tourism climate index must be as follows:

- 24- hour convenience index (CIA)
- Daily Convenience Index (CID)
- Raining Index (R)
- Sunny Hours Index (S)
- Wind Index (W)
- Calculating the Tourism Climate Index by means of the following formula:

$$TCI= 8CID + 2CIA + 4R + 4S + 2R$$

Using the Cracking model and middle finding, first, all 5 components for the whole months of the year were drawn. Then, with respect to GIS capability in integrating the maps, tourism climate index (TCI) map for all months of the year were drawn.

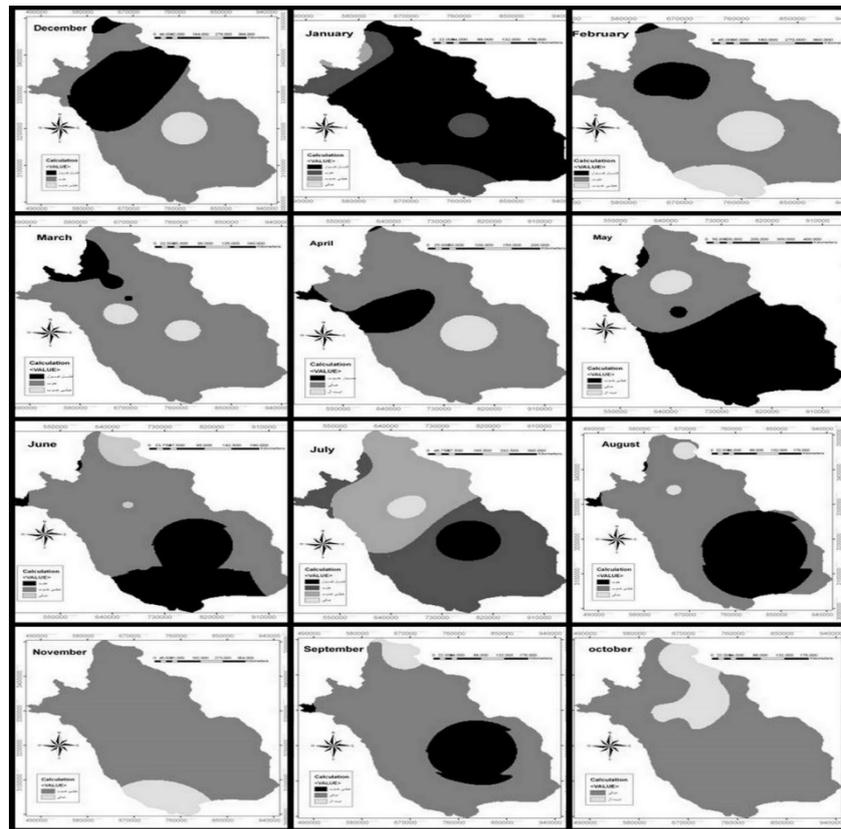


Figure2. Distribution Map of months in the Fars Region Tourism

### 3. Conclusion

Given the resulting maps by GIS software which represent the dispersion map of tourism climate index in Fars province, the limits of tourism climate index are variable from 50 to 100. January: considered to be the worst month for tourism in terms of climate, except in parts of south and northwest of the province being in good and very good condition. February: most parts of the province this month are in good climatic condition. March: A small part at the center of the province including Shiraz, Fasa, and Estahban has a very good climate. April: is one of the best months for tourism in the province. Most regions of the province this month are in the optimal climatic condition. May: Shiraz and Marvdasht have ideal climatic condition this month. June: Abadeh and Izadkhasht are in optimal condition this month. July: from the center to the north and northeast are of a very good condition. By the way, Shiraz and its suburbs have optimal condition. August: except for south and southeast of the province that are not in good condition, the rest is in good to optimal condition. September: with a decrease in heat, this is one of the good months for tourism. October: has the best condition for tourism in the province. November: the south of the province (i.e. Laamerd region) has the optimal condition this month. December: Fasa and Estahban are in a very good condition this month. The central and northern regions of the province have the best condition for tourist reception in terms of locality dispersion. In the hot seasons, the central and northern regions, and in cold seasons, the southern regions of the province are in optimal condition.

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