

Study of Effect of Dust on the Next Phenomenon Qeshm Island Tourism

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Abstract— Qeshm is the largest island in the Persian Gulf, South of Iran. Considering the geographical position, Qeshm can attract international tourists, especially in cold seasons is. But in recent year's phenomena of dust and a major obstacle to the increase in tourism has become involved. A dust with high temperatures and humidity, including the most important obstacles in attracting tourists is the island.

The results of this study indicate that in recent years the number of dust days in Qeshm has increased and the dust, especially in the spring as the biggest problem in attracting tourists has become the Qeshm.

Index Terms— International Tourism, Qeshm Island, Dust

I. INTRODUCTION

ONE of the most important information needed for tourists is the destination climatic conditions and most of the tourists take the climatic considerations the most important item. Among all of the climatic elements, temperature has the most effect on human's body and the calmness feeling. But, there are many other climatic elements which affect on temperature and as a result on human's body. Air humidity, sunshine, air flow and windflow are the most significant of these elements. Comfort indices are tables and diagrams which indicate the simultaneous cumulative effect of all the effective factors on comfort feeling at the same time. Thermal indices could be used for assessment of tourism conditions and notify tourists from the destination climatic conditions; also, the tourism climatic potential of various regions could be specified. Tourism comfort climate index is an index which indicates the climatic elements effect on tourism systematically. This index utilizes the climatic elements such as temperature, rainfall, humidity, sunshine and the wind.

In 2001, Perry et al studied and surveyed the climate effects on international tourism through a research. They came to this conclusion that different and specific climatic conditions of urban, coastal, mountainous, etc. regions have various influences on tourism attraction which they should be considered seriously [1].

In 2001, Daniel Scott & Geoff McBoyle in a research found out that until 2050 and 2080 (anno domini years) according to the climatic variations procedure in the world, the tourism comfort climate index condition of the most regions of Canada

will be better than nowadays conditions [2].

In 2007, Jacqueline et al came to this conclusion that in the future years in Britain and Ireland, tourism attraction will have a gentle movement toward the North; and in Germany cause of warming up the weather and development of more favorable conditions in interior regions in comparison with coastal areas, tourist attraction flow will be toward the south [3].

In a study, Farajzade (2009) categorized the tourism climate in Gillan province by the usage of TCI index. They concluded that May and July months in Gillan contain the best climatic conditions, while January and December have the worst one for tourist's presence [4].

In a research, Ziaei and Bakhtiari (2009) by surveying the tourism comfort climate index in Kish Island came to this conclusion that the island has a winter like situation for tourism comfort; and March, December, January and February are the months which consist of the best conditions for tourist attraction [5].

Shayan (2009) studied and surveyed the tourism comfort climate index in Kish Island and came to this conclusion that January, February, March, October, November and December have the best conditions for tourist attraction; while June, July, August and September are not suitable months for tourist arrival [6].

In 2009, Matzarakis and Farajzadeh in a research in northwest of Iran, by the usage of TCI index concluded that Makoo, Ahar, Ardebil, Takab, Khoy, Oroomieh and Sarab cities have a summer like situation and each of them, at least in one month of the summer contains a score above 80 according to the great climatic condition; Makoo, Ardebil and Takab cities contain a score above 90 and an ideal situation; in addition, Ardebil has the best conditions for tourist attraction in summer [7].

II. METHODOLOGY

In this research with statistical survey of the tourism comfort climate condition in Qeshm Island and according to the synoptic station data of this Island, during 1996 and 2005, the monthly procedure of TCI index of the Island was provided; then, by reforming of irradiance coefficient and entrance of dust phenomenon influence, condition of the index was monitored and reformed; in addition according to the number of dusty days procedure in this Island, the future condition will be surveyed and analyzed.

In this case, TCI model and then the reformed models have

been used; then, Results have been analyzed according to table 1.

TABLE I: STATUS OF TOURISM CLIMATE INDEX

TCI Range	Rank	Status
90-100	9	Ideal
80-90	8	Excellent
70-80	7	Very Good
60-70	6	Good
50-60	5	Acceptable
40-50	4	Marginal
30-40	3	Unfavorable
20-30	2	Very Unfavorable
10-20	1	Extreme Unfavorable
0-10	0	Impossible

III. DISCUSSION

According to TCI index and by the usage of seven climatic parameters including monthly average of temperature, monthly maximum average of temperature, monthly average of relative humidity, monthly minimum average of relative humidity, monthly precipitation average, average of sunny hours, and monthly average of wind speed, in January to May and October to December months, Qeshm Island consists of appropriate and acceptable to great conditions for the tourist presence. On the other hand, in June to September months, there are no appropriate climatic conditions for the presence of the tourist (figure 1).

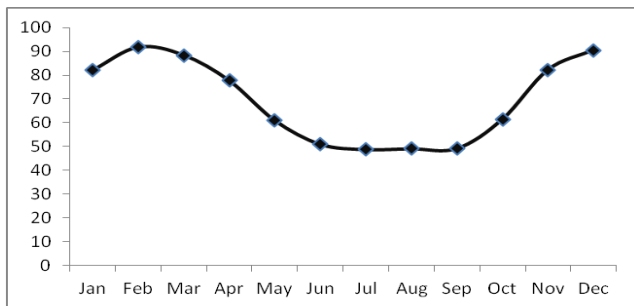


Fig. 1. Qeshm monthly TCI.

After the above mentioned surveys, by reforming of irradiance coefficient and sunshine degree reduction in warm months of the year, the reformed comfort climate diagram was traced (figure 2).

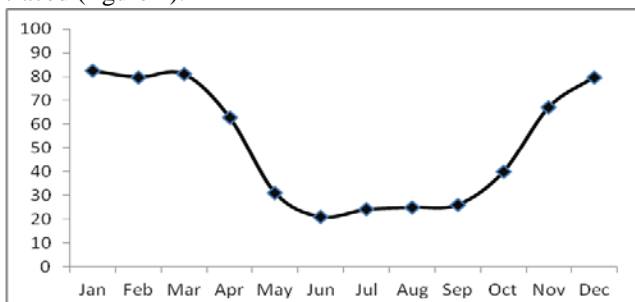


Fig. 2. Qeshm monthly TCI with Score improved radiation.

Therefore, it is observable that January to April and November to December months have suitable climatic conditions for tourist presence, but other months of the year do not. On the other hand, overbearing heat besides the high humidity, acute sunshine, and warm wind flow lead to the climatic comfort degree reduction of Qeshm Island; so, the tourist presence in this Island from May to October months will be difficult.

In recent years, dust phenomenon has led to the TCI index degree reduction in Qeshm Island. According to figure 3, the average number of dusty days in this Island has varied from about 3 days in January to about 16 days in May and averagely in March to September months, each month has contained more than 10 dusty days.

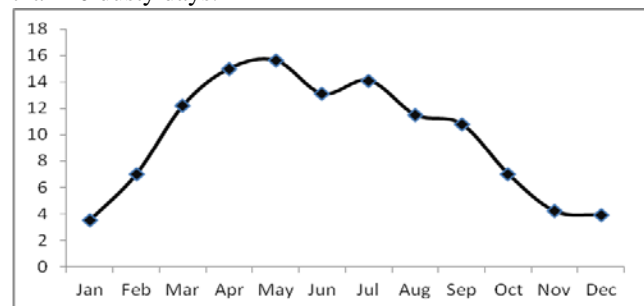


Fig. 3. Monthly dust day in Qeshm Island.

Therefore, by entering of dust negative influence in TCI model of Qeshm Island and according to figure 4, only 3 months of the year which are January, February, and December contain the appropriate conditions for tourist arrival and two months of March and November have rather desirable conditions; but, the other seven months of the year are not suitable for tourist presence.

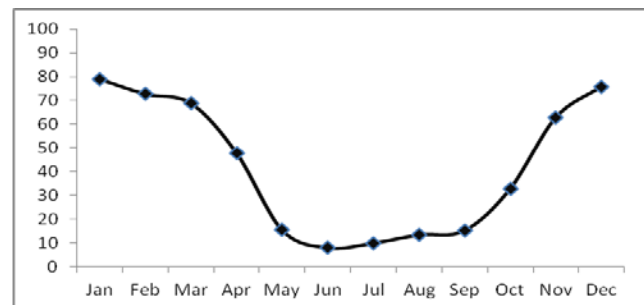


Fig. 4. Qeshm monthly TCI with Score improved dust.

By surveying the variation procedure of dusty days number in Qeshm Island (figure 5), it seems that in recent years, the number of dusty days in the Island have been increasing and during these years, this procedure has been continuing; so, the number of dusty days in the island have reached above 150 days. Continuation of this process can lead to more problems for the Island; therefore, this fact should be studied and surveyed.

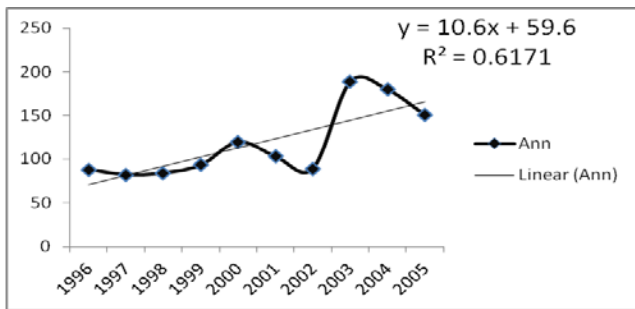


Fig. 5. Annual dust trend in Qeshm Island.

IV. CONCLUSION

Qeshm Island is among the tourism and strategic regions of Iran. According to its specific location and also the existence of trading open region, this Island has been considered and been the focus of local and international tourists in recent years; in addition, in winter and Norouz days (New Year days) specifically it has encountered a lot of enthusiasm.

By surveying the tourist comfort climate of Qeshm Island and the effect of irradiance coefficient in warm months of the year, and also entrance of dusty days influence into this model, it is obvious that there are desirable climate conditions for the tourist presence in the Island just in 3 months of the year; in addition, there are acceptable conditions in the other two months of the year. But, during the seven months- from April to October- the weather condition is not appropriate for the tourist's presence. In recent years, an increase in the number of dusty days of the Island has led to the decrease of the above mentioned index.

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