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Climate Preferences of Iranian Tourists for Nature-Based Tourism (NBT) in Arid Regions

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Abstract: Tourism is one of the most important economic sectors in the world and is heavily influenced by climate conditions. Insight into tourists' weather preferences within contexts of extremely arid climates is particularly useful, not only for regions and tourism destinations that currently display such characteristics, but also for regions and tourism destinations for which climate change forecasts predict radicalization in terms of their weather conditions. The objective of this study was to identify the weather preferences of Iranians in relation to nature-based tourism (NBT) in regions with extremely arid climates in Iran. To achieve this aim, the study used a survey to identify the optimal preferences with respect to temperature (maximum and minimum), rainfall, wind speed, sunshine hours, and cloud cover, as well as the thresholds past which the conditions in relation to these elements were considered intolerable. The results of this research may be useful for designing tourism climate indices and/or associated rating scales—adapted to the segment under consideration—that enable the present and future evaluation of the tourism suitability of a region's climate.

Keywords: extreme climate; stated climate preferences; nature-based tourism; Iran

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1. Introduction

Tourists' weather and climate preferences have been explored in several studies as a preliminary step for assessing the tourism suitability of the climate of a region or tourism destination [1–5]. In the scientific literature, knowledge of weather preferences has been approached from three different perspectives. Early research on tourism climatology was based on the subjective opinions of experts that were not tested empirically in reality. Alongside this initial approach, which is still in use despite its well-proven limitations [6], there are two other options: the revealed climate preference approach, and the stated climate preference approach.

Revealed climate preference research objectively determines practically synchronous statistical relationships between real tourism demand (based on the number of visitors, overnight stays, occupancy rates or density of land use observed in a certain tourism space) and climate/weather data, thereby revealing patterns of tourism behaviour in relation to the weather. This approach achieves optimal performance when focusing on the smaller scales of tourism climatology (i.e., with detailed spatial or temporal resolution) [7–9]. However, this approach was originally applied on a more generalized scale, using larger spatial and temporal resolutions (historical data sets, predominantly with monthly resolutions), which were highly prone to being affected by other conditioning factors apart from the weather [10–12].

Lastly, stated climate preference research is based on tourists' statements or declarations, generally gathered using a survey technique, with respect to their personal preferences in relation to practising a certain mode of tourism. The weather and climate preferences stated by the tourists reflect their ideal demands in terms of enjoyment, comfort and safety [13] which, in turn, are related to the three facets of the climate conceptualized by Perry [14] and De Freitas [15]: aesthetic, thermal and physical facets, respectively. The

concept of stated preference refers to the tourist's predilection or inclination for certain climate or weather conditions that enable them to enjoy the travel experience with full satisfaction [7]. As such, their stated weather preferences influence their choice of destination, the time of year they travel and their evaluation of the tourism experience, among other aspects [16–18].

Various studies [19–24] have demonstrated that both the preferences and evaluations of weather conditions are highly subjective with respect to different individuals or groups of people, depending on the influence of factors related to the tourism activity undertaken, the geographical frame of reference within which the activity takes place, and personal variables such as the place of origin, age, sex, and culture of the person surveyed, among others.

Within the field of tourism climatology, there are several contributions that have explored the differentiated weather preferences of individuals for practising various tourism modes, such as sun and beach tourism [3,25–27], urban tourism [6,28], mountain tourism [6,24,29,30] or snow tourism [31,32], among others. Insight into these stated climate preferences has been gathered through empirical research based on surveys. While these studies have focused on a range of different geographical settings and modes of tourism, to date, no specific empirical research has been conducted to identify weather preferences with respect to nature-based tourism (NBT) in regions with arid climates. It is essential to ascertain, in the greatest possible detail, the weather and climate preferences that may lead to a tourist making a particular a decision or action to determine the present and/or future tourism limitation caused by a region's climate.

In response to the indicated knowledge gaps and future research needs, this study aimed to contribute towards identifying the stated weather preferences for nature-based tourism in regions with extremely arid climates. The geographical scope of the research was Iran, a country that forms part of the Afro-Asian desert belt. The Iranian economy is highly dependent on the revenues generated by oil exports, which means that the country faces a significant financial risk due to fluctuations in oil prices, the non-renewable nature of the asset and the transition towards greener energies [33]. Tourism could help to diversify the economy but, although the number of tourists has increased in recent years, international visitors still account for a small percentage of the overall total. Within this context, some authors have highlighted the need to develop domestic tourism in response to the low level of foreign tourist arrivals [34]. Therefore, identifying the weather preferences of this segment of the Iranian tourism market is very useful for adequately evaluating the climate resource to enable effective tourism planning and management. This aspect is of particular interest in Iran, as shown by the growing number of scientific contributions focusing on the study of tourism and, especially, the evaluation of the climate resource in different regions of the country, including areas with arid climates (Table 1).

The studies conducted to date have focused on assessing the potential of Iranian climates for different modes of tourism, predominantly using tourism climate indices such as the TCI (Tourism Climate Index), the HCI (Holiday Climate Index) and the CIT (Climate Index for Tourism). In the studies listed in Table 1, the rating scales in the indices are based on the scales proposed by the original creators or, in some cases, such as in the study by Roshan et al. [35], they apply the subsequent modifications introduced by other authors whose studies were unrelated to the field of geography in Iran. However, there are only a few exceptional examples of studies that incorporate the weather sensitivity and preferences of Iranian tourists based on empirical research. One study worth highlighting in this respect is the work of Sabzevari et al. [36] focusing on the case of Chabahar, which emphasizes how the incorporation of tourism climate indices for the climate preferences of Iranian tourists enables us to illustrate more effectively the potential of the climate for leisure and recreation in the country.

Table 1. Favourable/Unfavourable weather conditions for different tourism activities.

Segment		Region	Climate Zones	Resolution	Method & Comfort Index	Favorable Variables									Sources
						T (°C)	CC %	P (mm)	V (m/s)			S (hours)			
									General	Cold Season	Hot Season	General	Cold Season	HOT SEASON	
Ecotourism	Picnic	Bushehr	Coastal and Subtropical desert climate	Daily (18:30)	PET, SET	25–10			<5.56						[37]
	Swimming					15–20			<4.17						
	Sailing					20–2			4.2–13.9						
	General	Lorestan province	Mountainous area semi-arid climate	Monthly	TCI			60–74.9		<0.8	>10.7		≥10	≥5, <6	[38]
	General	Northwestern	Mediterranean climate (Csa)	Monthly	TCI	20–27		≤14.9	<0.8		<0.8	≥10			[39]
	General	Baluchestan Region (Iran)	Dry, Semi-arid and warm temperate	Monthly	TCI	20–27		≤14.9	<0.8		<0.8	≥10			[40]
	General	West of Iran (Lorestan, Kermanshah, Hamedan, and Kurdistan provinces)	Mountainous and cold	Monthly	TCI			≤14.9	<0.8		<0.8	≥10			[41]
	General	Iran	Mostly arid or semi-arid, Mountainous, subtropical along Caspian coast	Monthly	TCI			≤14.9	<0.8		<0.8	≥10			[42]
	Cities—sightseeing and shopping	Northwest Iran	Mediterranean climate	Monthly	TCI, PET			≤14.9	<0.8		<0.8	≥10			[43]
	Urban tourism	Isfahan city	Arid and warm climate	Daily and Hourly 12–21st of July	Questionnaire, ENVI-met and PET		0		≤1.97						[44]
	General	Isfahan province	Arid, Mediterranean Climate to humid	Monthly	TCI	20–27		≤14.9	<0.8			≥10			[45]
	General	City of Isfahan and Rasht	Isfahan: Arid moderate / Rasht: Humid subtropical	Daily	HCI	20–27	20–11	0	0.28–2.5						[46]

Table 1. *Cont.*

Segment	Region	Climate Zones	Resolution	Method & Comfort Index	Favorable Variables									Sources
					T (°C)	CC %	P (mm)	V (m/s)			S (hours)			
								General	Cold Season	Hot Season	General	Cold Season	HOT SEASON	
General	City of Isfahan	Arid moderate	Daily	PMV, PET, SET										[47]
General	Isfahan province	Arid, Mediterranean Climate to humid	Daily	TCI, PMV, PET, CP										[48]
Ecotourism and agritourism	Kerman province	Arid and semiarid climates	Monthly	TCI			≤14.9	<0.8			≥10			[49]
General	Chabahar	Coastal and hot desert climate	Daily and Monthly	CIT, PMV, TCI, PPD	<30	4	≤1	1.67–2.5			9–8			[36]
Outdoor tourism	Bandar Abbas	Coastal and arid climate	Hourly and Monthly	OTCI	20–27	0–10	0–0.49	<8						[50]
General	Desert regions and Makran coasts of Iran	Dry regions to the desert	Daily	TCI	20–26	20–11	<0.5	<0.8		<0.8	≥10			[51]
				HCI	23–25			0.28–2.5						
General	Iran	Mostly arid or semi-arid, Mountainous, subtropical along Caspian coast	Monthly	TCI	20–26		≤14.9	<1.6			≥10			[35]
Sightseeing and shopping	Fars province	Arid, semi-arid, dry, Mediterranean, semi-humid, and humid	Monthly	TCI	20–27		≤14.9	<0.8			≥10			[52]
General	Ourmieh Lake	Cold and Mountainous	Monthly	PET, CTIS, CPI		<5	≤1	<8						[53]
General	Zayandeh-Rood River	Arid, Mediterranean Climate to humid	Daily	PET, CTIS		<5	≤1	<8						[54]
NBT	Isfahan province	Hyper arid and arid regions	Daily at 12 p.m.	PET, THI	20–23 in Spring & Autumn		0	<3.3			5–10 in Spring & Autumn			Present study
					24–26 in Summer						≥5 in Summer			

Table 1. *Cont.*

Segment		Region	Climate Zones	Resolution	Method & Comfort Index	Unfavorable Variables									Sources
						T (°C)	CC %	P (mm)	V (m/s)			S (hours)			
									General	Cold Season	Hot Season	General	Cold Season	Hot Season	
Ecotourism	Picnic	Bushehr	Coastal and Subtropical desert climate	Daily (18:30)	PET, SET,	<10, >25			>5.56						[37]
	Swimming					<15, >20			>4.17						
	Sailing					<2, >20			<4.17, >13.89						
	General	Lorestan province	Mountainous area semi-arid climate	Monthly	TCI			≥150		>10.7	< 0.8		<2		[38]
	General	Northwestern	Mediterranean climate (Csa)	Monthly	TCI			≥150	>10.7		> 3.4	<1			[39]
	General	Baluchestan Region (Iran)	Dry, Semi-arid and warm temperate	Monthly	TCI			≥150	>10.7		> 3.4	<1			[40]
	General	West of Iran (Lorestan, Kermanshah, Hamedan, and Kurdistan provinces)	Mountainous and cold	Monthly	TCI			≥150	>10.7		>3.4	<1			[41]
	General	Iran	Mostly arid or semi-arid, Mountainous, subtropical along Caspian coast	Monthly	TCI			≥150	>10.7		>3.4	<1			[42]
	Cities—sightseeing and shopping	Northwest Iran	the Mediterranean climate	Monthly	TCI, PET			≥150	>10.7		>3.4	<1			[43]
	Urban tourism	Isfahan city	Arid and warm climate	Daily and Hourly 12–21st of July	Questionnaire, ENVI-met and PET		>0		>1.97						[44]
	General	Isfahan province	Arid, Mediterranean Climate to humid	Monthly	TCI			≥150	>10.7		>3.4	<1			[45]
	General	City of Isfahan and Rasht	Isfahan: Arid moderate / Rasht: humid subtropical	Daily	HCI		>90	>12	>13.89						[46]
	General	City of Isfahan	Arid moderate	Daily	PMV, PET, SET										[47]

Table 1. *Cont.*

Segment	Region	Climate Zones	Resolution	Method & Comfort Index	Unfavorable Variables									Sources
					T (°C)	CC %	P (mm)	V (m/s)			S (hours)			
								General	Cold Season	Hot Season	General	Cold Season	Hot Season	
General	Isfahan province	Arid, Mediterranean Climate to humid	Daily	TCI, PMV, PET, CPI										[48]
Ecotourism and agritourism	Kerman province	Arid and semiarid climates	Monthly	TCI			≥150	> 10.7		>3.4	<1			[49]
General	Chabahar	Coastal and hot desert climate	Daily and Monthly	CIT, PMV, TCI, PPD	≥30	8	>1							[36]
Outdoor tourism	Bandar Abbas	Coastal and arid climate	Hourly and Monthly	OTCI		8	>5.5 >165	>10.7						[50]
General	Desert regions and Makran coasts of Iran	Dry regions to the desert	Daily	TCI	≥36, <−5	100	≥5	>10.7		>3.4	<1			[51]
				HCI	≥39		>12	>13.89						
General	Iran	Mostly arid or semi-arid, Mountainous, subtropical along Caspian coast	Monthly	TCI	>36, <−6		≥150	>10.7			<1			[35]
Sightseeing and shopping	Fars province	Arid, semi-arid, dry, Mediterranean, semi-humid, and humid	Monthly	TCI	≥36, <6		≥150	>10.7		>3.4	<1			[52]
General	Ourmieh Lake	Cold and Mountainous	Monthly	PET, CTIS, CPI		>5	>5	>8						[53]
General	Zayandeh-Rood River	Arid, Mediterranean Climate to humid	Daily	PET, CTIS		>5	>5	>8						[54]
NBT	Isfahan province	Hyper arid and arid regions	Daily at 12 p.m.	PET, THI	<14, >33		≥5.1	≥5.5			<5			Present study

As well as all the research using tourism climate indices, there are studies that use analytical bioclimatic indices that calculate the apparent or perceived temperature and the thermal stress to which the tourist population is exposed. Such research includes all the studies based on the analysis and interpretation of the PET (Physiological Equivalent Temperature), the SET (Standard Effective Temperature) or the PMV (Predicted Mean Vote), of which there are many in the case of Iran.

The aim of this study was to identify the stated weather preferences of Iranian tourists with respect to nature-based tourism (NBT) in regions in Iran with an extremely arid climate (Figure 1). To achieve this, we used a survey to identify the ideal temperature preferences (maximum and minimum), rainfall, wind speed, sunshine hours, and cloud cover, as well as the thresholds that determine the unfavourable (or unacceptable) conditions in relation to these elements.

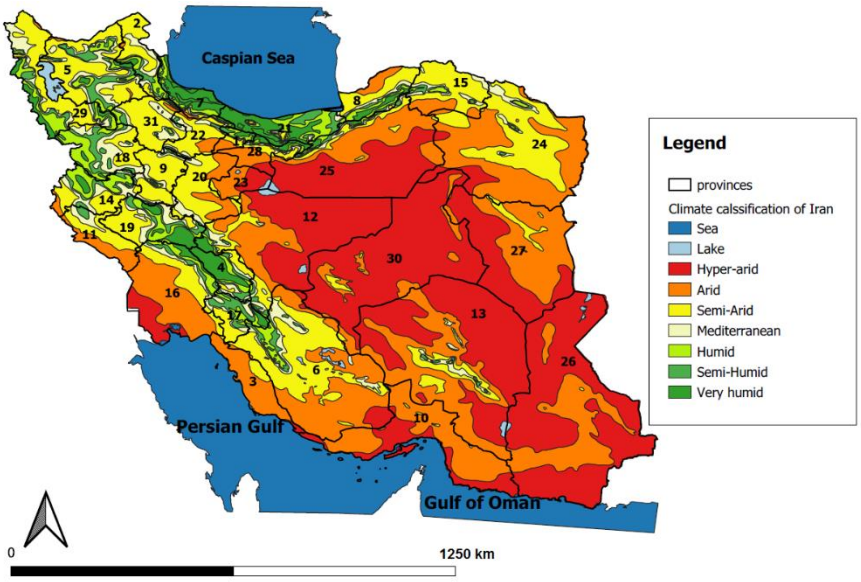

Figure 1. Climate classification of Iran.

2. Materials and Methods

Between 2020 and 2021, an online survey (e-mail and social networks such as Telegram groups, Instagram, and WhatsApp) was conducted on Iranian citizens with the aim of identifying their weather preferences with respect to partaking in nature-based tourism in the arid regions of Iran. Following the example of previous research that used this technique [6,27,55–57] and the theoretical and conceptual framework of the climate-tourism duality [14,15], a questionnaire was designed with questions that aimed to identify the respondents' ideal conditions in terms of hours of sunshine, temperature, wind speed, cloud cover, and rainfall. Moreover, other questions were included to determine the thresholds of acceptance (intolerable conditions) with respect to these variables. A total of 402 responses were collected (p = q; sample size = 402; confidence margin = 95.5%; sample error = ±5%; period = 26 January to 25 May 2021), using probabilistic sampling. Lasting 20 min, the structured questionnaire was administered in Persian. The questions were grouped into weather aspects, in line with the sequence and response options shown in the results and discussion section.

With respect to the respondents of the survey, 50% were men, 49% were women and 1% preferred not to disclose their gender. In terms of age groups, 40% of the people surveyed were between 29 and 38 years old; 38% between 18 and 28; 15% between 39 and 48; 6% between 49 and 58; and just 1% over 58 years old. The place of residence of those surveyed is shown in Table 2. Almost 95% of persons who answered this survey were living in

provinces with some parts of or total of their territories affected by semi-arid, hyper arid and arid climates.

Table 2. Residence of surveyed by province.

Residence of Surveyed by Provinces			
	Provinces	**Number of Answers per Provinces**	**Percentage of Answers per Provinces**
1	Alborz	8	1.99%
2	Ardabil	5	1.24%
3	Bushehr	3	0.75%
4	Chaharmahal and Bakhtiari	4	1.00%
5	East Azerbaijan	6	1.49%
6	Fars	15	3.73%
7	Gilan	11	2.74%
8	Golestan	2	0.50%
9	Hamadan	2	0.50%
10	Hormozgan	4	1.00%
11	Ilam	1	0.25%
12	Isfahan	82	20.40%
13	Kerman	7	1.74%
14	Kermanshah	10	2.49%
15	North Khorasan	3	0.75%
16	Khuzestan	18	4.48%
17	Kohgiluyeh and Boyer-Ahmad	2	0.50%
18	Kurdistan	5	1.24%
19	Lorestan	4	1.00%
20	Markazi	13	3.23%
21	Mazandaran	5	1.24%
22	Qazvin	5	1.24%
23	Qom	5	1.24%
24	Razavi Khorasan	9	2.24%
25	Semnan	6	1.49%
26	Sistan and baloochestan	1	0.25%
27	South Khorasan	2	0.50%
28	Tehran	147	36.57%
29	West Azerbaijan	10	2.49%
30	Yazd	6	1.49%
31	Zanjan	1	0.25%

A total of 37.8% of the people surveyed stated that they took part in nature-based tourism activities at least 3 times per year; 30.6% reported practising this mode of tourism between 4 and 6 times; 17.7% between 7 and 10 times; and 13.9% more than 11 times per year. The most common activities practised by the people surveyed within the context of nature-based tourism in arid regions in Iran included stargazing, photography, enjoying culture and local history, observing nature and wildlife, hiking and adventure activities. In terms of the most popular months for this kind of tourism in the country's arid regions, the respondents expressed a preference for May (18%), April (15%), June (11%), October and November (10%, respectively). At the other end of the scale, the least popular months were August (4%), February (4%), and January (3%).

The Iranian people surveyed clearly revealed their concern for atmospheric factors when they admitted being influenced in the short term by the weather and, in the long term, by the climate. A total of 44% of the respondents indicated that climate aspects had a large influence on their planning of nature-based tourism activities, while a further 38% stated that these aspects had a medium influence. Only 14% asserted that climate factors had a low influence and 5% no influence at all. The respondents' statements were more positive when asked about this specific and immediate aspect in terms of the current reality of the situation: the weather. A majority of 51% of the people surveyed stated that weather

conditions had a large influence on their decisions to take part in outdoor activities related to nature-based tourism, while 38% reported a medium influence, 8% a low influence and 3% no influence at all. Therefore, most of the people surveyed acknowledged the very important role of the weather with respect to planning activities related to nature-based tourism.

3. Results

The variables selected to analyse the aesthetic facet of the climate were cloud cover and sunshine. Expressed as a percentage of the maximum possible coverage, cloud cover was grouped into classes. The results show that this was the least well-defined variable in terms of the preferences of Iranian tourists with respect to taking part in nature-based tourism in arid climates. For slightly over 50% of people surveyed, the ideal level of cloud cover was in the 0–25% band for all the seasons considered (spring, summer, and autumn), with the threshold at which this factor was considered "unacceptable" also falling within this same band (Table 3).

Table 3. Synthesis results of survey: Aesthetic facet.

Facets	Question	Answer Options	Results of Responses per Season (%)		
			Spring	Summer	Autumn
Aesthetic	Ideal cloudiness (%)	0–25	52	50	56
		25–50	26	26	27
		50–75	11	9	9
		75–100	2	6	2
		All conditions are acceptable	8	9	5
	Unfavourable cloudiness (%)	0–25	41	45	38
		25–50	16	15	17
		50–75	21	18	24
		75–100	12	9	14
		All conditions are acceptable	11	12	7
	Ideal sunshine (hours)	<5	14	28	9
		5–8	39	34	38
		8–10	39	29	44
		10–12	7	6	7
		>12	1	3	1
	Unfavourable sunshine (hours)	<5	35	36	36
		5–8	26	28	30
		8–10	19	15	19
		10–12	12	9	8
		>12	8	12	6

Daily amount of sunshine (hours) has a significant influence on the sensation of enjoyment experienced by tourists, although it should be noted that this is not a limiting factor in terms of the activity related to nature-based tourism. With respect to the ideal duration of sunshine for participating in this mode of tourism in arid regions, the people surveyed stated preferences for a medium (8–10 h) and medium-low (5–8 h) number of hours of sunshine in all three seasons of the year under consideration (spring, summer, and autumn) (Table 3). In contrast, according to the preferences expressed by the people surveyed, sunshine durations at either end of the scale were unacceptable, particularly at the lower extreme (under 5 h). The studies carried out in Iran to evaluate the suitability of the climate for conducting different tourism activities (Table 1) establish a sunshine duration over 10 h per day as the ideal. This figure is proposed as the most favourable amount in the literature consulted, regardless of the mode of tourism or the climate region considered, and with no distinction between the different seasons of the year. The only exception in this respect is the study by Hassanvand et al. [38], which set the threshold

of over 5 h with respect to general tourism. In terms of the number of hours of sunshine considered unfavourable to tourism, neither does the literature on Iran agree with the empirical results of this research, with most of the studies consulted setting an hour of sunshine as the threshold under which this factor is unfavourable to tourism.

The physical facet was analysed based on and maximum wind speed. In relation to rainfall, most of the people surveyed stated that a complete lack of rain was the ideal state for taking part in nature-based tourism in arid regions (73%). The maximum limit of rainfall tolerated by most of the respondents was 5 mm/day. Levels over this threshold were considered unacceptable by most of the people surveyed (Table 4).

Table 4. Synthesis results of survey: Physical facet.

Facets	Question	Answer Options	Results of Responses per Season (%)		
			Spring	Summer	Autumn
Physical	Ideal rain	Without raining		73%	
		With raining		27%	
	Acceptable rain (mm)	1–5	39	42	40
		5–10	30	27	31
		10–15	20	20	18
		15–20	8	7	8
		>20	3	4	3
	Unacceptable rain (mm)	1–5	13	10	9
		5–10	28	32	30
		10–15	24	25	24
		15–20	15	15	17
		>20	21	18	20
	Ideal max. wind (m/s) (Beaufort scale)	(F1) <0.3 m/s	14	17	14
		(F2) 0.3–1.5 m/s	21	18	22
		(F3) 1.6–3.3 m/s	33	34	35
		(F4) 3.4–5.4 m/s	15	12	14
		(F5) 5.5–7.9 m/s	9	10	9
		(F6) 8.0–10.7 m/s	4	4	3
		(F7) 10.8–13.8 m/s	2	2	1
		(F8) 13.9–17.1 m/s	1	2	1
		(F9) 17.2–20.7 m/s	0	0	1
	Unacceptable max. wind (m/s) (Beaufort scale)	(F1) <0.3 m/s	8	7	8
		(F2) 0.3–1.5 m/s	13	12	12
		(F3) 1.6–3.3 m/s	12	12	13
		(F4) 3.4–5.4 m/s	7	8	8
		(F5) 5.5–7.9 m/s	33	33	33
		(F6) 8.0–10.7 m/s	9	7	10
		(F7) 10.8–13.8 m/s	7	7	5
		(F8) 13.9–17.1 m/s	6	7	5
		(F9) 17.2–20.7 m/s	5	6	5

The research conducted in Iran to evaluate the suitability of the climate for different tourism activities (Table 1) uses disparate acceptable values, depending on the climate region under consideration and the mode of tourism studied. Generally, a maximum rainfall of 15 mm/day has often been used in numerous studies in arid and semi-arid regions [39,40,42,45,49], although some set the threshold at 5 mm or even 1 mm/day [51,54].

The wind has a considerable effect in the sensation of enjoyment, comfort, and safety experienced by tourists. Wind may constitute a detrimental (on limited occasions) or beneficial factor for taking part in tourism activities, not only due to the direct impact of its strength or power, but also because of its potential to modify the rest of the weather parameters [58–60]. The maximum daily wind speed was evaluated by people surveyed based on the Beaufort scale, as other authors had done in previous studies [57,61,62]. The

responses of the Iranians surveyed indicated a high degree of sensitivity to this weather factor: the maximum wind speed most widely chosen as ideal was F3 on the Beaufort scale (winds between 1.6 and 3.3 m/s), while the wind speed most voted as unacceptable was F4 (winds between 3.4 and 5.4 m/s). Much of the research conducted in Iran to date (Table 1) uses more restrictive values with respect to the wind speed favourable to tourism activities. Most of the studies consulted indicate an optimal wind speed of less than 0.8 m/s. However, the wind speeds considered unfavourable are more permissive (Table 1). While the empirical studies based on the survey suggest that speeds over 5.4 m/s are not acceptable in arid climates for partaking in nature-based tourism, a large proportion of the Iranian literature set this threshold at 10.7 m/s, regardless of the regional climate and the mode of tourism under consideration.

In relation to the thermal facet, the maximum and minimum temperatures were analysed, respectively, with the minimum being considered because nature-based tourism often includes activities performed at night, such as stargazing, or activities that start in the early hours of the morning, such as hiking. The Iranian people surveyed gave different responses depending on the season with respect to the ideal threshold for the maximum daily temperatures (Table 5). The most widely voted temperature for the spring was 20–23 °C (24%), compared to 24–26 °C for the summer (18%) and 20–23 °C for the autumn (24%). The maximum temperature thresholds considered unacceptable for taking part in nature-based tourism were 30–32 °C for the spring (25%) and 27–29 °C for the autumn (24%). With respect to summer, the 33–35 °C and 36–39 °C limits for the maximum temperature received the same percentage of responses (17% in both cases). The nuances introduced by the seasonal consideration included in this empirical study represent an interesting contribution in relation to climate preferences for practising nature-based tourism in arid regions.

Table 5. Synthesis results of survey: Thermal facet.

Facets	Question	Answer Options	Results of Responses per Season (%)		
			Spring	Summer	Autumn
Thermal	Ideal Max. Temperature (°C)	8–10	4	9	5
		11–13	11	8	13
		14–16	11	8	13
		17–19	16	12	20
		20–23	24	10	24
		24–26	17	18	14
		27–29	10	15	7
		30–32	5	10	3
		33–35	1	7	1
		36–39	0	1	0
		40–42	0	0	0
		43–45	0	0	0
	Unacceptable Max. Temperature (°C)	8–10	5	5	3
		11–13	6	5	6
		14–16	6	6	11
		17–19	10	9	11
		20–23	12	8	11
		24–26	9	5	15
		27–29	7	7	24
		30–32	25	7	10
		33–35	10	17	5
		36–39	7	17	1
		40–42	1	5	1
		43–45	0	8	0

Table 5. *Cont.*

Facets	Question	Answer Options	Results of Responses per Season (%)		
			Spring	Summer	Autumn
	Ideal Min. Temperature (°C)	−4–−2	7	6	6
		−1–1	10	10	10
		2–4	13	11	14
		5–7	11	10	15
		8–10	15	7	17
		11–13	15	8	16
		14–16	21	14	15
		17–19	7	19	5
		20–22	2	14	2
	Unacceptable Min. Temperature (°C)	−4–−2	20	16	31
		−1–1	14	12	26
		2–4	31	11	21
		5–7	17	21	10
		8–10	9	19	5
		11–13	2	12	2
		14–16	3	4	1
		17–19	1	2	1
		20–22	2	2	2

With respect to the minimum temperature, the most widely voted ideal temperature for spring was 14–16 °C (21%), compared to 17–19 °C for the summer (19%) and 8–10 °C for the autumn (17%). The thresholds at which the minimum temperature were considered unacceptable for taking part in nature-based tourism were 2–4 °C for the spring (31%), 5–7 °C for the summer (21%), and −4 to −2 °C for the autumn (31%). The studies on Iran conducted to date do not establish minimum temperatures in their research to evaluate the suitability of different climates, so a comparison with the results of our empirical study is not possible.

4. Discussion and Conclusions

Insight into the climate preferences of tourists with respect to a particular mode of tourism within a specific climate context constitutes the first step towards making an adequate evaluation of a destination's climate tourism potential, thereby facilitating effective tourism planning and management [63,64]. In this way, the results of this research will serve as a basis for future studies to evaluate the potential of the arid climates of Iran for the practice of NBT.

Empirical research into stated preferences base this kind of evaluation on an examination of the weather preferences expressed by a certain segment of the demand (in this study, domestic Iranian tourists) for a particular mode of tourism (in this case, nature-based tourism) in a specific setting (in our research, arid climates). As several authors have highlighted [5,27,29,65], tourism climatology must adjust to the current hyper-segmentation of the tourism market, and this study was designed with this in mind: the results of this research may be useful for designing tourism climate indices and/or associated rating scales adapted to the segment under consideration. To date, in Iran, little research has focused on quantifying optimal and unfavourable climate preferences either at a general level or for specific segments or tourism activities. As a result, most of the studies based on the TCI (Tourism Climate Index), the HCI (Holiday Climate Index) or the CIT (Climate Index for Tourism) are still founded on preferences that are quantified based on experts' opinion or on stated and revealed preference research conducted for other segments of the tourism market and climate and geographical contexts.

Among the advantages of applying online surveys should be considered its lower cost, its ease of use, the simplification of the logistics of field work and the possibility of reaching segments of the population that are difficult to locate through personal and

telephone surveys. In any case, its rigorous application is not exempt from some weak points, among which it is worth mentioning the frequent difficulty of having an adequate sample framework, the exclusion of non-digitalized groups, the low total response rates, or the difficulties associated with the completion of the questionnaires.

The results of our research indicate that, with respect to nature-based tourism in regions with arid climates in Iran, domestic tourists display different climate preferences depending on the season of the year. This fact implies that evaluations of climate potential should seasonally adjust the rating scales for the different weather factors considered.

With respect to the aesthetic facet, our empirical research did not show a clear trend in terms of cloud cover. In contrast, our study indicated very well-defined ideals in relation to sunshine hours: the people surveyed expressed preferences for a medium (8–10 h) and medium-low (5–8 h) number of hours of sunshine in all three seasons of the year taken into consideration (spring, summer, and autumn), while sunshine durations at either end of the scale were not tolerated, particularly at the lower extreme (less than 5 h).

In relation to the physical facet, the results identified very restrictive limits in terms of both rainfall and wind speed. In the latter case, the results seem to suggest that the people surveyed considered that the drying character of the wind in arid regions enhances the risk of dehydration and over-heating, as well as the potential displacement of dust and particles in suspension that hinders tourism activities or makes them unpleasant.

Regarding the thermal facet, the empirical study revealed a high degree of stringency in terms of the ideal thresholds for maximum temperatures, especially in comparison to other leisure and recreation options. This level of requirement is no more permissive with respect to the temperature thresholds considered unacceptable for nature-based tourism activities, with the level of acceptance of high temperatures being lower than in other studies. The climate context (extremely arid climates) seems to foster a precautionary attitude, particularly in the summer. In relation to the minimum temperatures, the differences between the ideal and unacceptable temperature thresholds were greater than those recorded in the case of the maximum temperatures, indicating greater tolerance. This may be because the people surveyed considered the increase in body temperature to be due to the higher metabolic rate that occurs when performing a physical activity, as well as the possibility to adapt to low temperatures by wearing more clothes.

Research into stated climate preferences in contexts of extremely arid climates is particularly useful not only for regions and tourism destinations that currently display such characteristics, but also for regions and tourism destinations for which climate change forecasts predict radicalization in terms of their weather conditions. There are significant knowledge gaps in this respect and further progress in research in this field must respond to the hyper-segmentation of the tourism market and the diversity of geographical and tourism spaces that exist.

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