

# Climate favourability for tourism in the basin of the Suceava River

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**ABSTRACT:** The main characteristics of the climatic elements along with the other physical-geographic elements in the Suceava river basin (relief, hydrographic network, biogeographical aspects) determine the main directions of tourism development in the area and influence the territorial distribution of different types and forms of tourism within the studied area. The analysis of the observation data taken from the meteorological stations within the studied area, the selection of the representative climatic parameters from the tourism perspective were the basis for drawing up the climate favourableness scale for tourism for Suceava's hydrographical basin. This instrument allowed, on the basis of quantitative and qualitative analysis of specific climatic tourism parameters, a series of assessments on the climatic-tourist potential of the space of favourability for practicing certain types and forms of tourism.

**KEY WORDS:** climatic elements, climate favourability, climatic potential, tourism activities.

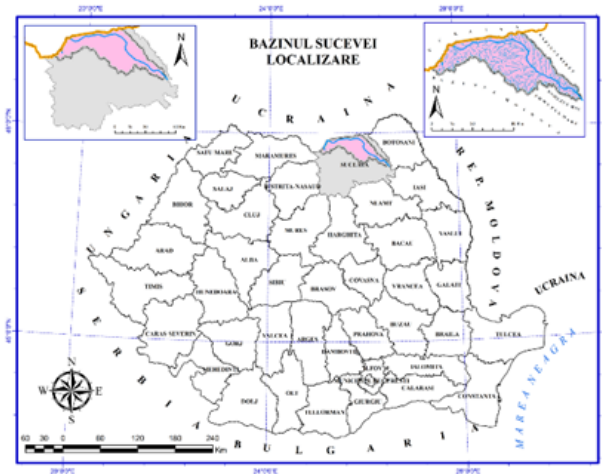
## 1. Introduction

### 1.1. Study area

The studied area is the Suceava river basin, the part located on the Romanian territory, namely 2,298 km<sup>2</sup>, fully enclosed in Suceava County. The basin is located in the north-eastern part of Romania, at the border with Ukraine, with an elongated shape, being disposed approximately in the direction of NV-SE (Fig.1).

In the northern sector, the Suceava catchment area overlaps the northern part of the Obcinea of Bucovina (Feredeiu and Obcina Mare) extending to the west up to the higher axis of the Great Obcina to the beginning of Sucevița, then Obcina Cacica, Ciungi Piedmont Hill, Teișor Hill, Tătărași, Plăvălari, Știrbăț to Roșcani-Liteni (Răduianu, 2009, p.6), to the east extends over the Rădăuți Depression and the Dragomirna Plateau.

Geographically, the Suceava Basin overlaps the following subunits: Obcina Brodina, the northern part of Obcina Feredeui, the northern half and eastern slope of Obcina Mare and the Suceava Plateau west of the Siret valley. As a result, the course of the Suceava River crosses three different structural and lithological areas: the area of the flysch, the cut Miocene and the monocline platform.



**Figure 1** The position of the hydrographic basin of the Suceava River in Romania and Suceava County.

Thus, within the Suceava River Basin one can highlight two areas with physical-geographic and climatic characteristics, differentiated: the upper basin of the Suceava River, superimposed on the mountain area of Brodina Obcini and the northern and north-eastern parts of Obcina Mare, in Suceava valleys (from the springs to the exit of the mountain area) and its tributaries Sadău, Brodina, Putna, Voitinel and the middle and lower basin of Suceava, centered on the middle and lower course of the Suceava River, to the exit of the mountain area until it flows into the Siret which overlaps the western part of Suceava Plateau (Cocerhan, Lăzărescu, 2011).

## 1.2. General considerations on the favourability of practicing tourism in the studied area

The favourability for the development of various tourist activities is determined in the hydrographic basin of the Suceava River by several factors: the varied natural environment in which the dominant note is given by the medium altitude of the mountains, the plateaus that are imposed by the extensive interfluvial structural plateaus and depressions in the mountain-plateau contact area; the presence of the broad valleys of Suceava and its tributaries, where large human settlements with a polarizing role have developed for the whole area and which are registered as important tourist centres in the national and even European tourist network; climate with warm summers, long autumns with a high frequency of clear weather and cold winters with thick snow; the specificity of the forest vegetation in the mountainous area of Suceava's upper basin; the unique historical cultural heritage and the unique ethnographic background, the existence of unique anthropic objectives (churches, monasteries); wide accessibility provided by the valley corridors and the existing communication infrastructure infra-structure, which ensures easy circulation in the area and connects localities with one another, generating real axes facilitating tourist connections (Cocerhan, 2012).

Restrictions for practicing tourism are given by: the lack of spectacularity of geology and relief that do not require unique elements; location in an area with a cool and humid climate; the flow increases of the Suceava River, accompanied by overflows in some years (e.g. in 2008).

Besides the other physical-geographic elements of the Suceava river basin (relief, hydrographic network, biogeographical aspects), the main features of the climatic elements determine the main directions of tourism development in the area and influence the territorial distribution of different types of tourism and forms of tourism within the studied area.

The climate of the plateau and mountain units in the Suceava basin is part of the general temperate continental climate specific to the northern part of our country, where the general circulation of the air masses is dominant from the west and northwest of Europe and the Scandinavian-Baltic influences determine specific climatic peculiarities with a strongly influences the practice of tourism (Mihăilă, Tănasă, 2007 a, b).

Although westwards the Carpathian Mountains constitute an orographic barrier to the masses of wet ocean air, the wide opening to the north, where the hillsides allow the access of cold air (polar or arctic), makes the climate in the Suceava basin less favourable for the development of tourist activities, as a whole, with the specific types of tourism (summer - hiking, winter - winter sports) being favoured. Differentiation can also be made on the sectors of the studied area, the eastern part, mainly mountainous, is favourable to the development of mountain tourism in general, of winter sports, provided the infrastructure is developed for the proper development of tourist activities. In the hilly area of Suceava's middle and lower course, other types of tourism that are less affected by the more or less favourable climatic conditions may develop (Cocerhan, Lazarescu, 2011).

## 2. Methods

To highlight the climatic-tourist favourability of Suceava's hydrographic basin, we started from the analysis of some climatic reference data collected from Suceava and Rădăuți meteorological stations located in the studied area, but also data that were used as comparison elements from the stations Câmpulung Moldovenesc and Rarău, situated outside the area, but in climatic and similar relief. Thereafter, we selected indicators that can highlight the climatic potential of a territory and can have a great influence on the degree of climate favourability for tourism. For the most eloquent analysis, eight evaluation indicators were chosen, the most characteristic for the hillside areas in our country (Table no. 1). The methodology of elaboration of the climate-tourism favourability scale was applied by the specific algorithms of transformation of the reference data into specific units of measurement and subsequently in common units, which allowed the hierarchy of the climatic parameters analyzed after a given score. Thus, the scale of climatic favourability for tourism (annual and seasonal) (Voicu, 2011) was instrumental in qualitative and quantitative analysis of the main climate-specific parameters of this territory, which directly and indirectly influence the human and tourism activities in area and their correlation with the possibility of practicing some types and forms of tourism.

## 3. Results

The Climate Favourability Scale has come to the attention of several researchers in the field and aims at analysing various indicators that can highlight the climatic potential of a territory. We note the studies made by Elena Teodoreanu et al., 1984, Ciangă N., 1998, Rădulescu A., Elena Niculescu, 2002, Ciulache S., Nicoleta Ionac, 2002 and others. The results of research on climatic indicators have highlighted that temperature, air humidity and wind are the most important factor in the classification of favourable environmental conditions for tourism. Environmental conditions can have a stimulating, sedative (indifferent) or restrictive role for tourism activities and tourism forms taking place in Suceava's hydrographical basin, and therefore the knowledge of climatic indicators

is necessary because "climatic conditions resize the tourist potential of a regions" (Ciulache, Ionac, 1995).

The Climate Favourability Scale provides useful information for various areas of tourism activity: forecasting, organization, consulting. For example, tourists who plan a stay take into account the times when climatic conditions are optimal, acceptable, tolerable or unacceptable (Teodoreanu, 2002). This analytics tool allows travel practitioners to choose a tourist destination but also favours other applications: provides information on the duration of optimal tourist facilities, helps in choosing the place and holiday period, provides information on alternative activities, provides climate data for ad campaigns to attract tourists (Cocerhan, Năstase, 2011).

In the literature, the perceptions of climatic components are physical (rain), physiological (air temperature) and psychological (clear sky). Most specialists consider the thermal component to be the most important (Voicu, 2011).

Consequently, the nature of the relationship between the atmospheric environment and the enjoyable leisure / leisure activities can be considered as depending on the atmospheric conditions of the site.

**Table 1** Criteria for assessing the annual and summer climate benefits for tourism in the Suceava basin.

Meteorologi cal station	Criteria																Criteria mean $\Sigma(1-8):10$	Percentage Favourability (%)		
	1		2		3		4		5		6		7		8					
	Air temp		Air temp above 20°		Sunshine duration		Nebulosity		Relative moisture		Average rainfall		Atmospheric calm		Wind speed		year	summer	year	summer
Suceava	4	1	3	2	4	2	3	2	2	2	2	3	1	1	2	1	2.63	1.75	34.25	56.25
Rădăuți	4	2	3	2	4	2	3	2	2	2	2	3	1	1	2	1	2.63	1.87	34.25	53.25
Câmpulung Moldovenesc	4	4	4	2	4	3	3	2	3	2	3	4	1	1	2	1	3.00	2.37	25.00	40.75
Rarău	4	4	4	2	4	3	3	2	3	3	4	4	2	2	3	2	3.38	2.75	15.50	31.25

Legend of the table no. 1

<b>c.f.f.</b>	v. favourable cond	<b>c.s.f.</b>	Sufficient cond.
<b>c.m.f.</b>	Average fav. cond	<b>c.m.p.f.</b>	Less favourable cond.

<b>c.f.f.</b>	1	very favourable conditions
<b>c.m.f.</b>	2	Average favourable conditions
<b>c.s.f.</b>	3	Sufficient conditions
<b>c.m.p.f.</b>	4	Less favourable conditions

**Table 2** Scale of the summer climatic favourability for tourism in the Suceava Hydrographic Basin (Suceava and Rădăuți: 1961-2010; C-lung Moldovenesc and Rarău: 1961-2000).

Nr. crt.	Specific climatic parameter (influence factor)	Transforming specific units into units of measure (points)	The scale of favourability expressed in specific units of measure (pts.)	Favourability scale expressed in common units of measure (pts.)	The scale of favourability expressed qualitatively
1	The average temperature of the air (TOC)	The average temperature of the air x 2	>18	>36	<b>c.f.f.</b>
			18-17	36-34	<b>c.m.f.</b>
			17-16	34-32	<b>c.s.f.</b>
			<16	<32	<b>c.m.p.f.</b>
			Suceava	36.0	18.0
Rădăuți	35.2	17.6	35.2	<b>c.m.f.</b>	
C-lung Moldovenesc	31.6	15.8	31.6	<b>c.m.p.f.</b>	
Rarău	21.8	10.9	21.8	<b>c.m.p.f.</b>	
2	The average number of days with average temperatures of 20 °C	Average number of days with average temperatures of 20 °C:	>20	>10	<b>c.f.f.</b>
			20-10	10-5	<b>c.m.f.</b>
			10-0	5-0	<b>c.s.f.</b>
			<0	<0	<b>c.m.p.f.</b>
			Suceava	9.0	18.0

	<b>Rădăuți</b>	<b>8.8</b>	<b>17.6</b>	<b>8.8</b>	<i>c.m.f.</i>
	<b>C-lung Moldovenesc</b>	<b>7.9</b>	<b>15.8</b>	<b>7.9</b>	<i>c.m.f.</i>
	<b>Rarău</b>	<b>5.5</b>	<b>10.9</b>	<b>5.5</b>	<i>c.m.f.</i>
<b>3</b>	The average of the duration of the sunshine (hours)	(The average time of the Sunshine duration -600): 10	>800	>20	<i>c.f.f.</i>
			800-700	20-10	<i>c.m.f.</i>
			700-600	10-0	<i>c.s.f.</i>
			<600	0	<i>c.m.p.f.</i>
	<b>Suceava</b>	<b>12.3</b>	<b>722.6</b>	<b>12.3</b>	<i>c.m.f.</i>
<b>Rădăuți</b>	<b>12.6</b>	<b>726.0</b>	<b>12.6</b>	<i>c.m.f.</i>	
<b>C-lung Moldovenesc</b>	<b>8.0</b>	<b>680.1</b>	<b>8.0</b>	<i>c.s.f.</i>	
<b>Rarău</b>	<b>2.5</b>	<b>625.2</b>	<b>2.5</b>	<i>c.s.f.</i>	
<b>4</b>	The average of nebulosity (tenths)	10 - the average of the nebulosity	<5	>5	<i>c.f.f.</i>
			5-6	5-4	<i>c.m.f.</i>
			6-7	4-3	<i>c.s.f.</i>
			>7	<3	<i>c.m.p.f.</i>
	<b>Suceava</b>	<b>4.5</b>	<b>5.5</b>	<b>4.5</b>	<i>c.m.f.</i>
<b>Rădăuți</b>	<b>4.7</b>	<b>5.3</b>	<b>4.7</b>	<i>c.m.f.</i>	
<b>C-lung Moldovenesc</b>	<b>4.1</b>	<b>5.9</b>	<b>4.1</b>	<i>c.m.f.</i>	
<b>Rarău</b>	<b>4.3</b>	<b>5.7</b>	<b>4.3</b>	<i>c.m.f.</i>	
<b>5</b>	Seasonal average relative air humidity (%)	100 - the average relative humidity of the air: 1	<70	>3	<i>c.f.f.</i>
			70-80	3-2	<i>c.m.f.</i>
			80-90	2-1	<i>c.s.f.</i>
			>90	1	<i>c.m.p.f.</i>
	<b>Suceava</b>	<b>2.5</b>	<b>75.4</b>	<b>2.5</b>	<i>c.m.f.</i>
<b>Rădăuți</b>	<b>2.2</b>	<b>78.3</b>	<b>2.2</b>	<i>c.m.f.</i>	
<b>C-lung Moldovenesc</b>	<b>2.1</b>	<b>79.2</b>	<b>2.1</b>	<i>c.m.f.</i>	
<b>Rarău</b>	<b>1.7</b>	<b>82.8</b>	<b>1.7</b>	<i>c.s.f.</i>	
<b>6</b>	The average rainfall (mm)	350 - the average of precipitation amounts: 10	<200	>15	<i>c.f.f.</i>
			200-250	15-10	<i>c.m.f.</i>
			250-300	10-5	<i>c.s.f.</i>
			>300	<5	<i>c.m.p.f.</i>
	<b>Suceava</b>	<b>7.2</b>	<b>277.6</b>	<b>7.2</b>	<i>c.s.f.</i>
<b>Rădăuți</b>	<b>6.1</b>	<b>288.8</b>	<b>6.1</b>	<i>c.s.f.</i>	
<b>C-lung Moldovenesc</b>	<b>2.4</b>	<b>325.6</b>	<b>2.4</b>	<i>c.m.p.f.</i>	
<b>Rarău</b>	<b>0.1</b>	<b>348.9</b>	<b>0.1</b>	<i>c.m.p.f.</i>	
<b>7</b>	Seasonal average frequency of atmospheric calm (%)	The average of the atmospheric calm frequency: 10	>30	>3	<i>c.f.f.</i>
			30-20	3-2	<i>c.m.f.</i>
			20-10	2-1	<i>c.s.f.</i>
			<10	<1	<i>c.m.p.f.</i>
	<b>Suceava</b>	<b>3.0</b>	<b>29.9</b>	<b>3.0</b>	<i>c.f.f.</i>
<b>Rădăuți</b>	<b>3.2</b>	<b>31.6</b>	<b>3.2</b>	<i>c.f.f.</i>	
<b>C-lung Moldovenesc</b>	<b>4.5</b>	<b>45.2</b>	<b>4.5</b>	<i>c.f.f.</i>	
<b>Rarău</b>	<b>2.1</b>	<b>20.5</b>	<b>2.1</b>	<i>c.m.f.</i>	
<b>8</b>	Average wind speed average (m / s)	0 - average wind speed (m / s)	<3	>7	<i>c.f.f.</i>
			3-4	7-6	<i>c.m.f.</i>
			4-5	6-5	<i>c.s.f.</i>
			>5	<5	<i>c.m.p.f.</i>
	<b>Suceava</b>	<b>7.4</b>	<b>2.6</b>	<b>7.4</b>	<i>c.f.f.</i>
<b>Rădăuți</b>	<b>7.4</b>	<b>2.6</b>	<b>7.4</b>	<i>c.f.f.</i>	
<b>C-lung Moldovenesc</b>	<b>7.5</b>	<b>2.5</b>	<b>7.5</b>	<i>c.f.f.</i>	
<b>Rarău</b>	<b>5.1</b>	<b>4.9</b>	<b>5.1</b>	<i>c.s.f.</i>	
	The degree of summer climate favourability for tourism in the Suceava River Basin		>99		<i>c.f.f.</i>
			99-73		<i>c.m.f.</i>
			73-47		<i>c.s.f.</i>
			<47		<i>c.m.p.f.</i>
	<b>Suceava</b>		<b>81.9</b>	<i>c.m.f.</i>	
<b>Rădăuți</b>		<b>80.2</b>	<i>c.m.f.</i>		
<b>C-lung Moldovenesc</b>		<b>68.1</b>	<i>c.s.f.</i>		
<b>Rarău</b>		<b>43.1</b>	<i>c.m.p.f.</i>		

**List of conventional signs:**

c.f.f.	1	Very favourable conditions
c.m.f.	2	Average favourable conditions
c.s.f.	3	Sufficient favourable conditions
c.m.p.f.	4	Less favourable conditions

The analysis of the summer climate favourableness scale for tourism (Table 2) shows higher values of 4% to 20% of the degree of favourability of summer conditions for the development of tourist activities. The degree of climatic favourability for tourism in the summer season increases from the west of the basin to its eastern part. For the eastern part of the basin ((starting from the confluence of Suceava with Siret, Suceava, Rădăuți, Cacica, Solca, Marginea, Sucevița, Putna) this fact is well emphasized by the values of the climatic parameters analysed which indicate very favourable conditions for the air temperature, sunshine duration, relative humidity and wind speed, and favourable weather conditions for temperatures above 20°C, cloudiness, atmospheric calm (Cocerhan, 2013), poor weather conditions occur in rainfall, especially in the west of the territory, in the Suceava Springs and in the area of the highest heights, where there is a more intense circulation of the western air masses.

**Table 3** Stage of annual climate favourability for tourism in the Suceava Hydrological Basin (Suceava and Rădăuți: 1961-2010; C-lung Moldovenesc and Rarău: 1961-2000).

Nr. crt.	Specific climatic parameter (influence factor)	Transforming specific units into units of measure (points)	The scale of favourability expressed in specific units of measure	Favourability scale expressed in common units of measure (pct.)	The scale of favourability expressed qualitatively
1	The average temperature of the air (TOC)	The average temperature of the air x 2	>10	>20	c.f.f.
			10-9	20-18	c.m.f.
			9-8	18-16	c.s.f.
			<8	<16	c.m.p.f.
			Suceava	15.8	7.9
Rădăuți	15.0	7.5	15.0	c.m.p.f.	
C-lung Moldovenesc	12.6	6.3	12.6	c.m.p.f.	
Rarău	4.6	2.3	4.6	c.m.p.f.	
2	The average number of days with average temperatures of 20 °C	Average number of days with average temperatures of 20 °C:	>70	>23	c.f.f.
			70-45	23-15	c.m.f.
			45-20	15-7	c.s.f.
			<20	<7	c.m.p.f.
			Suceava	9	27
Rădăuți	8	24	7	c.s.f.	
C-lung Moldovenesc	2	6	2	c.m.p.f.	
Rarău	0	0	0	c.m.p.f.	
3	The average of the duration of the sunshine (hours)	(The average time of the Sunshine duration - 1800): 20	>2.200	>20	c.f.f.
			2.200-2.100	20-15	c.m.f.
			2.100-2.000	15-10	c.s.f.
			<2.000	<10	c.m.p.f.
			Suceava	5.5	1909,5
Rădăuți	5.6	1912,6	5.6	c.m.p.f.	
C-lung Moldovenesc	-0.5	1790,2	-0.5	c.m.p.f.	
Rarău	-7.7	1645,7	-7.7	c.m.p.f.	
4	The average of nebulosity (tenths)	10 - the average of the nebulosity	<5	>5	c.f.f.
			5-6	5-4	c.m.f.
			6-7	4-3	c.s.f.
			>7	<3	c.m.p.f.
			Suceava	3.8	6.2

	Rădăuți	3.9	6.1	3.9	c.s.f.
	C-lung Moldovenesc	3.4	6.6	3.4	c.s.f.
	Rarău	3.5	6.5	3.5	c.s.f.
5	Seasonal average relative air humidity (%)	100 - the average relative humidity of the air: 10	<70	>3	c.f.f.
			70-80	3-2	c.m.f.
			80-90	2-1	c.s.f.
			>90	1	c.m.p.f.
	Suceava	2.1	79.1	2.1	c.m.f.
	Rădăuți	2.0	80.2	2.0	c.m.f.
	C-lung Moldovenesc	1.9	81.3	1.9	c.s.f.
	Rarău	1.4	86.3	1.4	c.s.f.
6	The average rainfall (mm)	1500 - the average of precipitation amounts: 100	<600	>9	c.f.f.
			600-700	9-8	c.m.f.
			700-800	8-7	c.s.f.
			>800	<7	c.m.p.f.
	Suceava	8.8	620.1	8.8	c.m.f.
	Rădăuți	8.7	634.8	8.7	c.m.f.
	C-lung Moldovenesc	7.8	724.4	7.8	c.s.f.
	Rarău	5.9	907.3	5.9	c.m.p.f.
7	Seasonal average frequency of atmospheric calm (%)	The average of the atmospheric calm frequency: 10	>30	>3	c.f.f.
			30-20	3-2	c.m.f.
			20-10	2-1	c.s.f.
			<10	<1	c.m.p.f.
	Suceava	3.3	32.5	3.3	c.f.f.
	Rădăuți	3.4	34.2	3.4	c.f.f.
	C-lung Moldovenesc	5.2	52.3	5.2	c.f.f.
	Rarău	2.4	24.2	2.4	c.m.f.
8	Average wind speed average (m / s)	10 - average wind speed (m / s)	<2	>8	c.f.f.
			2-4	8-6	c.m.f.
			4-6	6-4	c.s.f.
			>6	<4	c.m.p.f.
	Suceava	7.1	2.9	7.1	c.m.f.
	Rădăuți	7.2	2.8	7.2	c.m.f.
	C-lung Moldovenesc	7.1	2.9	7.1	c.m.f.
	Rarău	4.1	5.9	4.1	c.s.f.
	The degree of summer climate favourability for tourism in the Suceava River Basin			>91	c.f.f.
				91-70	c.m.f.
				70-49	c.s.f.
				<49	c.m.p.f.
	Suceava			47.3	c.m.p.f.
	Rădăuți			46.5	c.m.p.f.
C-lung Moldovenesc			37.7	c.m.p.f.	
Rarău			14.2	c.m.p.f.	
<b>Legend:</b>					
		c.f.f.	1	Very favourable conditions	
		c.m.f.	2	Average favourable cond.	
		c.s.f.	3	Sufficient favourable cond.	
		c.m.p.f.	4	Less favourable conditions	

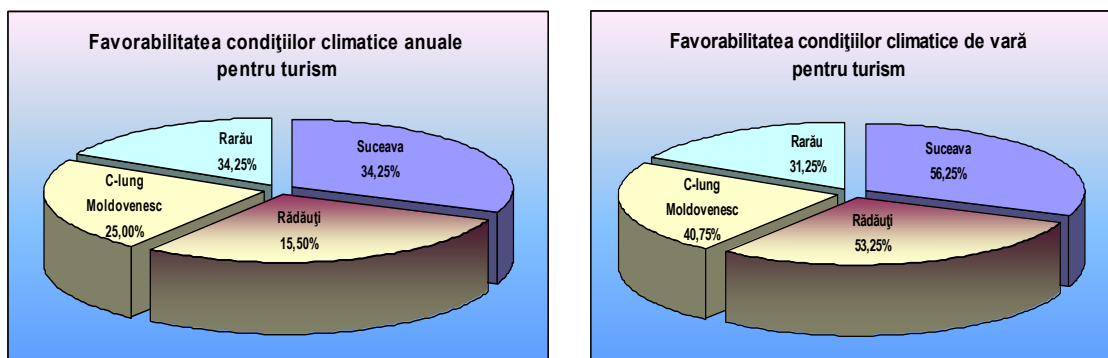
The annual Climate Favourability Scale (Table 3) highlights the very favourable nature of tourism for atmospheric calm, a favourable environment for the parameters: relative air humidity, average precipitation, wind speed, slightly restrictive for periods with more pronounced cloudiness. They are also differentiated, depending on the layout of the relief, the wooded areas or the large valleys of the large rivers. It is also noted, as in the case of the scale of summer favourability, a higher

degree of climate favourability for tourism in the plateau area and in the immediate vicinity of the mountain (Obcina Mare).

From the analysis of the two scales, it is noted that on the whole, the climatic favourability of the territory fits between favourable medium conditions, especially in the summer, and the least favourable, if the annual analysis is to be considered. However, there are differentiations, both on categories of indicators and on the two scales envisaged in the analysis (Cocerhan, 2013).

The analysis of the annual climate and the summer season favourable (Figure 2) highlights the slightly restrictive or restrictive nature of tourism for most of the climatic parameters taken into account, except relative nebulosity and relative humidity, as well as atmospheric calm and wind speed, are included in the category of favourable environmental conditions (nebulosity, duration of sunshine, intensity of wind) and very favourable (atmospheric calm days). An important role in this differentiation is the arrangement of the relief, the high degree of afforestation (especially in the higher course), the orientation of the peaks, the climate influences, etc.

There is a higher degree of climate favourability for tourism in Suceava's middle and lower course (Rădăuți and Suceava, with the same value, 34,3%) and lower in the upper course area, where the lower temperatures, precipitation and the periods with nebulosity more pronounced determines a degree of favourability less appropriate to the development of tourism activities throughout the year (Cocerhan, 2011).



**Figure 2** The annual and seasonal climate favourability scale for tourism in the Suceava River Basin.

From the analysis of the summer climate favourableness scale for tourism (Table no. 2), higher values of 15% to 22% of the degree of favourability of the summer conditions for the tourist activities are shown, especially regarding the temperature, the duration of the sunshine, atmospheric calm and wind speed (Cocerhan, Tănasă, 2011).

The largest increases are of course in the eastern part (Suceava - 56.3%, Rădăuți - 53.2%) of the study area, where the milder climate in the depression areas and relief, with lower altitudes, from Suceava's corridor, contributes to the dynamism of tourism and tourist activities during the warm season (an attractive role is played by the rich tourist anthropic heritage). Moreover, the analysis of the parameters taken into account shows very favourable conditions for the average annual air temperature, atmospheric calm, wind speed and favourable conditions for air temperatures above 20°C, the duration of sunshine, nebulosity, relative humidity (Table no. 1). Slightly favourable conditions are recorded in the precipitations, especially in the western part of the country, where there is a more intense movement of the cold air masses from Northern Europe (Tănasă, 2011).

It should be noted that weather conditions at Suceava and Rădăuți meteorological stations are favourable for all climatic parameters analysed for the summer season, except for the average



annual rainfall, where conditions are less favourable for tourism. The data recorded at the other stations as benchmarks are of less importance, as they are outside the studied territory and, at the same time, the most important tourist attractions are located in the middle and lower Suceava (Cocerhan, 2013).

Although westwards the Carpathian Mountains constitute an orographic barrier to the masses of wet ocean air, the wide opening to the north, where the hillsides allow the access of cold air (polar or arctic), makes the climate in the Suceava basin less favourable for the development of tourist activities, as a whole, with the specific types of tourism (summer - hiking, winter - winter sports) being favoured. Differentiation can also be made on the sectors of the studied area, the eastern part, mainly mountainous, is favourable to the development of mountain tourism in general, of winter sports, provided the infrastructure is developed for the proper development of tourist activities. In the hilly area of Suceava's middle and lower course, other types of tourism that are less affected by more or less favourable climatic conditions may develop (Cocerhan, Spânu., 2011).

#### 4. Conclusions

Applying this method of work reveals that in the Suceava basin are favourable conditions for practicing tourism all year round but with higher intensity during the summer. Climate-tourism conditions range from very favourable, favourable environment in the eastern basin to the least favourable in the western territory. The more obvious differences when analysing annual climatic parameters are generated mainly by the higher western relief (Obcina Mare) and the hill in the middle and lower basin of the Suceava River, as well as by the depression basins with a milder climate, which moderates the manifestation of weather elements throughout the year (Cocerhan, 2013).

On the whole, climate favourability reaches values that place the studied area in the category of favourable medium conditions towards the very favourable ones, differentiating by category of indicators, but also on the two scales approached.

In conclusion, by applying this method of work, it can be appreciated that in the area of the Suceava river basin the climatic conditions allow tourism to be practiced throughout the year, but with a higher intensity in the summer. Climate-tourism conditions are favourable on almost the whole area studied, with distinctions, especially between the western mountain (with higher relief, under the influence of cold and wet air, oceanic) and the hilly east down and small depression basins with a sheltered climate with exposure to the hottest and drier continental air masses of Euro-Asian origin).

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