

## ASPECTS REGARDING THE SKI AREAS OF THE CENTRAL DEVELOPMENT REGION

**George-Bogdan TOFAN\***

“Babeş-Bolyai” University, Faculty of Geography, Cluj-Napoca,  
5-7 Clinicilor Street, 400006, Romania, email: bogdan\_tofan2000@yahoo.com

**Bogdan-Nicolae PĂCURAR**

Cluj County Council, Urbanism and Territorial Planning Department,  
Cluj-Napoca, Romania, e-mail: pacurarbogdan@yahoo.com

**Abstract:** The study at hand will try to create a pertinent analysis regarding the current state of the ski areas from the six counties that make up the Central Region, taking into account basic morphometric indicators (height difference, slope, slope exposition), climatic parameters that influence winter sports (temperature, precipitations, number of snow days, number of days with snow cover, snow cover thickness, nebulosity and number of days with clear skies in winter, and climate types, characteristic for the areas taken into account), vegetation and land usage. We can also add the favourabilities and restrictions of the man-made environment, represented by access infrastructure, ski infrastructure (artificial snow, night illumination, sport equipment rental shops, ski safety and mountain rescue centers, ski schools and sport clubs, food serving establishments and après-ski), lodging etc. All these parameters combined and their actions are extremely important for the existence and viability of ski areas.

**Key words:** mountain resorts, ski area, Poiana Braşov, cable transport.

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### INTRODUCTION

Mountain areas have diverse natural conditions, creating multiple possibilities for the capitalization, of touristic potential, as well as of the arrangement, and creation of communication routes and transport means necessary for touristic resorts.

Thus, the references contained a series of concepts, solutions and models regarding the specificity of natural and economic conditions, touristic features, and with the changes that emerge in touristic demand.

Within the Central Region there are three types of localisations: *peripheral localisation* (at city outskirts), close to mountain areas, with favourable conditions for winter sports (Borsec, Topliţa, Miercurea Ciuc, Tuşnad, Covasna, Braşov, Sovata); *linear localisation*, following natural passageways that penetrate the mountains, creating resorts on road axes (Predeal, Izvorul Mureş, Harghita Băi, Mădăraş, Valea Rece, Sânmartin, Homorod, Bucin, Comandău, Şugaş Băi, Păltiniş, Gârda de Sus, Arieşeni); *terminal localisation*, found in alpine regions (Şureanu, Bâlea Lac) (Erdeli & Gheorghilaş, 2006).

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\* Corresponding author

Some mountains, through slope configuration, elevation (800-1 000 m), offer the possibility of establishing ski slopes and cable transport systems, from the 900-1 000 m lower level to the higher level, over 2 000 m, which enables a capitalisation of the ski area from the summit to the valley (in winter) and the other way around in spring.

For slope building, only mountain sides that face north, are stripped of forests, have altitudes of around 1 000- 2 000 m, are avalanche free, with lengths of 1-3 km and elevation difference of 500-1 000 m are used. The northern exposure of ski slopes is mandatory up to 1 600-1 800 m, the alpine emptiness being the least favourable as it is affected by blizzards and fogs, which means that ski areas must be situated between 800-1 800 m.

These slopes, with a more or less winding path, going over sectors with variable declivity must be 20-30 m wide. Besides the favourability of the morphodynamic parameters, climate also plays a special role, through snow cover and air temperature, which means that winter sports tourism is limited by short time under climatic conditions with solid precipitations (Ciangă, 1997).

In the Central Region, winter sports season lasts three to four months (especially from January till March), which may be extended at over peste 2 000 m to four-five months (December-April), proving that this region has the most favourable conditions for such sports.

Slope homologation must comply with ISF requirements (*International Ski Federation*), and with the national bodies responsible for such processes (Ministry of Tourism).

Likewise, it is imperative for these slopes to be marked with special billboards, to insure a correct tourist information. In normal conditions, a ski domain is “*coupled*” with a *winter sports resort*, with accommodations units and sports facilities for winter, while those locations without such complex facilities are just ski and winter tourism centres de (Erdeli & Gheorghilaş, 2006).

The length of homologated slopes is proportional to the rank of the winter sports resort, ranging from a couple hundred meters to several kilometers (Drumul Roşu - 5 km).

Romania does not have major complex facilities, like in the cases of Italy, France, Switzerland, where ski domains exceed 1 000 km (Cortina d’ Ampezzo with 1 260 km, Alta Badia with 1 348 km, thus making it the largest in the world, Chamonix with 1 022 km, Courchevel with 1 247 km, and Verbier with 1 046 km).

## **OBJECTIVES AND METHODOLOGY**

The aim of this study is to synthetically present the ski areas of the Central Region, detailing each of the six counties that make up the region (Harghita, Covasna, Mureş, Braşov, Sibiu, Alba). The presentation is based on several bibliographical references (Epuran, 1958, Matei, 1982, Barabaş & Ganea, 1995, Bâră, 1983, Ciangă, 1997, 2006, 2007, Cârstocea, 1998, Grigoraş, 2002, Ţigu, 2001, Ionescu, 2004, Gingulescu, 2010, Szabó, Popescu, 2011, Tofan, 2012, 2013), as well as on the authors’ field research and on several websites ([www.romaniaturistica.ro](http://www.romaniaturistica.ro), [www.skivirus.com](http://www.skivirus.com), [www.skiresorts.com](http://www.skiresorts.com), [www.schiuri.ro](http://www.schiuri.ro), [www.arenaplatos.ro](http://www.arenaplatos.ro)).

This research led to a series of interpretations and interpolations, which emphasize the advantages and disadvantages of these ski areas, on one hand, and the opportunities and threats they might come across on the other.

In addition to the text, a series of tables were created, which punctuate the main characteristics of a ski slope (difficulty level, length, starting and final altitude, average slope, level difference, average width, surface area, transport capacity of ski lift, degree of endowment, etc).

## **THE HISTORY OF SKIING IN THE CENTRAL REGION**

The emergence of skiing in Romania is described in a document edited by the Italian Alexander Gawina in the „*Sarmatiae Europae description*” (Sarmatic Europe

Chronicles), printed in 1578 in Krakow, where the author mentions skiing in the chapter dedicated to the description of the Wooded Carpathians and in the chapter about the inhabitants of Ceremeşului, a region that encompasses the northern part of our country.

In Bihorului Mountains, the locals used „*primitive skis*” to use in winter, when the snow cover was too deep.

The next documents that mention skiing date back to 1837, when the „*Societatea Karpatică Transilvană*” (S.K.V) was established, promoted by Nicolae Grigorescu, Altfed Bernth and Dimitrie Grecescu, a society that created, in the last decade of the 19th century, the resort of Păltiniş (Szabó, 2010).

In 1893, the first Romanian touristic association with known activity was created („*Societatea Karpatică Sinaia*”), dealing among others with skiing. The most numerous documents regarding skiing are from magazines edited in Transilvania, where associations and societies had winter sports among their activities.

In „*Hercules*” magazine, in 1893, there was an article on „*feet sled*” exercised in many places in Transilvania (especially around Cluj, Bihor and Sibiu), due to higher living standards and numerous associations, which led to the creation of several ski slopes, that held yearly skiing competitions.

Since 1900, we have had reliable information from centers like Braşov, Cluj, Sibiu or the ones in Prahova valley. Quite interesting is the fact that this sport first emerged in Transilvania, as skiing penetrated more directly from Austria and Germany, while in Sinaia, skiing penetrated from Bucharest, whose elite frequently visited Swiss ski resorts (Matei, 1982).

On 3rd November 1905, the Braşov ski association was born, set up by the Germans „*Kronstadter ski-vereinigung*” (K.S.V), which, in its first year, had 54 members.

With the help of this society, the first lodge was built in 1907 in Poiana Postăvarului, with crude facilities, while in 1913, the first ski jumping hill was constructed, and the first ski jump competition was organised.

In 1921, a large trampoline was inaugurated in Poiana Braşov. In 1939 the first international competition was organised on Carp Valley - „*The International Downhill Competition*”, with skiers from Germany, Austria, France, Poland, Yugoslavia and England.

Poiana Braşov sees the organisation in 1951 of the „*World University Games*”, when the first modern sports hotel was established and the first aerial tramway in the country, with a length of 2150 m.

After the Second World War, new ski areas begin to emerge and develop, in different parts of the country like Maramureş, Harghita, Cindrel, Parâng, Muntele Mare, where alpine ski slopes, bob sled and sled tracks, skating rings and cable transport systems were constructed, with the aim of mountain tourism development and increase of competitiveness on the international market.

Since 2003, winter sports in Romania have been under the tutelage of the „*Super-ski in Carpathians*” national programme, approved by Government’s Decision no. 526/2003, which eventually changed its name in 2006 to „*Ski in Romania*” (according to Law no. 418/2006, art. 5).

### **AREAS WITH SKIING POTENTIAL**

In order to set up slopes, a wide range of possibilities are available, but a major role is played by the terrain’s configuration and also by the investor’s financial capacity, or the social-economic potential of the region.

In Romania, most ski areas have not been properly set up, which leads to congestion in terms of lodging and cable transport, while ski lifts are not sufficient thus affecting the quality of the touristic act. Ski areas and their infrastructure are the main concerns in the creation of a touristic product in that involves the creation of ski, sled, bobsled slopes, cable transport systems and ski school organisation.

**Table 1.** The ski areas of Harghita County  
(Data source: <http://www.romaniaturistica.ro>, 2013)

No.	Slope features											
	Name	Difficulty level	Length (m)	Altitude at departure	Altitude at arrival	Average slope% Level	differenve e/m	Average width/m	Surface area/ha	Load capacity/hour	Ski canons	Night illumination
1.	<b>“Speranța” Borsec Ski Complex</b>											
	Prichindel	E	814	1072	936	17	139	30	2.4	720	No	No
	Speranța	A	680	1072	936	21	142	30	3.4	720	Yes	Yes
	Verofeny	D	726	1072	936	31	141	30	2.1	720	No	No
	<b>TOTAL</b>		<b>2220</b>						<b>7.9</b>			
2.	<b>Toplița Ski Complex</b>											
	Măgheruș	A	460	-	-	23	125	60	-	670	Yes	Yes
	Bradul	E	1200	-	-	11	125	60	-	670	Yes	Yes
	<b>TOTAL</b>		<b>1660</b>									
3.	<b>Izvorul Mureșului</b>											
	Gréces	E	620	900	800	17	100	55	3.4	450	No	No
4.	<b>Harghita Băi Complex</b>											
	Miklós	D	450	1375	1300	32	75	50	2.2	600	No	Yes
	Kossuth	D	630	1423	1248	32	175	80	5	600	No	No
	Kossuth 2	A	800	1350	1255	21	95	50	4	600	No	No
	Kossuth 3	E	1000	1350	1255	17	95	45	4.5	650	No	No
	Csipike	A	380	1322	1275	18	47	60	2.3	120	No	Yes
	Ózon	E	300	1300	1200	17	100	70	2.1	600	No	Yes
	Tofalvi	E	200	1300	1280	16	20	40	0.8	65	No	No
	<b>TOTAL</b>		<b>3760</b>						<b>20.9</b>			
5.	<b>Mădăraș Complex</b>											
	Kicsi Mihály	U	160	1624	1564	16	60	30	0.5	160	No	No
	Nagy Mihály	R	800	1679	1473	39	206	40	3.2	160	No	No
	Sugó	U	140	1624	1564	15	60	50	0.7	160	No	No
	Zarug	M	600	-	-	-	-	-	-	160	No	No
	Vargyas	M	1500	-	-	-	-	-	-	160	No	No
	<b>TOTAL</b>		<b>3200</b>									
6.	<b>Valea Rece</b>											
	Csángó	E	450	1152	1100	18	52	60	2.7	360	No	Yes
7.	<b>Sânmartin</b>											
	Elöd	E	310	-	-	22	66	-	-	-	No	No
8.	<b>Merești</b>											
	Berci	E	400	-	-	10	273	-	-	-	No	No
9.	<b>Homorod</b>											
	Lobogó	E	400	800	740	18	60	40	1.6	1200	Yes	Yes
10.	<b>Praid</b>											
	Ski Bogdan	E	800	1250	1107	18	143	20	1.5	720	No	No
11.	<b>Bucin</b>											
	Havas-Bucsin	E	1149	1360	1200	14	160	40	4.5	720	No	No
12.	<b>Complexul Miercurea-Ciuc</b>											
	Șumuleu	A	350	870	790	28	143	-	-	-	No	No
	Tolvajos	E	500	-	-	10	81	-	-	-	No	No
	<b>TOTAL</b>		<b>850</b>									
	<b>Băile Tușnad</b>											
	Băile Tușnad	A	500	750	670	22	100	40	2	600	Yes	Yes
	<b>Ciumani</b>											
	Veresvirag	E	1447	1129	838	19	291	150	21.7	650	Yes	Yes
	<b>TOTAL HARGHITA</b>		<b>17776</b>									

E= easy; A = average difficulty; D = difficult – lack of data

The 79 slopes have cable transport systems such as: ski lift with monopost traction devices, ski lift with two or four seats, baby ski lifts, dual-post ski lifts, aerial tramways and ski gondolas.

As elevation gap, ski slopes are found between 661 m (Covasna) and 2 200 m (Bâlea Lac), departure altitude, and 590 m (Șugaș Băi) and 1750 m (Șureanu), arrival altitude. In order to present a real picture of ski areas, a series of mathematical relations were created and used, such as: *slope optimal capacity*, reflecting the skier load of a slope at a given time; *ski slope flow related to the declivity that determines the skiers' speed (people/hour/m slope width)*; *the simultaneity index (number of skiers at a given time on a ski slope)*; *climbing time by rope way/cable car/ski lift /babyskilift*; *time of descent (on skis)*, and so on (Ciangă & Dezsí, 2007).

### **The ski areas of Harghita County**

Harghita County has an impressive number of ski slopes (28), in 12 localities (Borsec, Toplița, Izvorul Mureșului, Mădăraș, Lunca de Jos (Valea Rece), Sânmartin, Merești, Vlăhița (Homorod), Praid, Miercurea Ciuc, Tușnad and Ciumani), placing it at number three in the top of counties with the most ski slope kilometers, 17.7 km to be more precise, out of which only 21 slopes are certified (16.6% of the total number of slopes).

According to the data found in table 1, the situation regarding difficulty level is the following: 16 slopes are easy, eight are of average difficulty and only four are difficult. Most ski slopes are under 1 km in length, with the exception of those from Bradul (Toplița), Kossuth 3 (Harghita Băi), Vargyas (Mădăraș), Havas-Bucsin (Bucin) and Veresvirag (Ciumani).

Ski touring can be exercised between Harghita Băi and Harghita Mădăraș, while in Miercurea Ciuc such a slope has been constructed.

Before 1990, Sovata also had two ski touring tracks, where competitions were being held, but they were gradually abandoned. In order to correctly visualize the share and the degree of involvement of winter sports, a correlation is employed - *slope length (meters) for every accommodation in the resort*. The area at hand registers a low average, only 2.1 m/bed, the highest value being found at Harghita Băi Ski Complex (3.3 m/bed).

### **The ski areas of Brașov County**

Brașov County is one of the most diverse areas in terms of touristic offer, which, in the last two decades, has continuously adapted and developed, in order to meet market expectations.

The existence of a favourable natural environment enabled winter sports to develop, the county being first in terms of ski slope length (29.4 km), with 23 slopes situated in Poiana Brașov, Predeal, Bran, Moieciu de Jos and Drăguș.

In 2011, in Poiana Brașov, the largest ski area in the country was inaugurated, with a total length of 15.7 km, covering 41 ha, and offering eight ski slopes of different difficulty levels (three easy slopes, two average slopes and two for advanced skiers). The longest ski slope is also found here (Drumul Roșu, 5330 m), plus the most difficult (Kazel, 800 m).

Slope difficulty level has been preserved, but suffered some slight alterations through slope corrections, by creating detours of more difficult areas, which will enable the skiers to cross from one slope to another, and by increasing the number of connection slopes between the main tracks.

In Poiana Brașov, there is also a famous ski and snowboard school under the name „Ana Hotels”, with vast experience, employing only qualified trainers.

Alongside Poiana Brașov, Predeal is also a true ski area, with 12 slopes (12 km) of all difficulty levels, the best known being the slopes Cocoșul (2 250 m) and Clăbucet (2 100 m).

2 km from the resort, on Râșnoavei Valley there is a biathlon and ski center, which is also used for national competitions of such sort.

**Table 2.** The ski areas of Brasov County  
(Data source: <http://www.romaniaturistica.ro>, 2013)

No.	Slope features											
	Name	Difficulty level	Length (m)	Altitude at departure	Altitude at arrival	Average slope%	Level difference/m	Average width/m	Surface area/ha	Load capacity/hour	Ski canons	Night illumination
1.	<b>Poiana Braşov Complex</b>											
	Bradul	E	500	1115	1035	17	80	60	3	900	Yes	Yes
	Lupului	D	2620	1710	945	21	775	45	7.3	1800	No	No
	Sulinar	A	2820	1690	1050	22	640	45	8.2	1800	No	No
	Kanzel	D	800	1765	1655	17	110	20	1	900	No	No
	Ruia	E	540	1690	1495	20	195	45	2.4	2400	No	No
	Drumul Roşu	A	5330	1690	1050	22	640	20	10.5	1800	No	No
	Stadion	E	325	1040	1005	18	32	35	1.1	900	No	No
	Subteleferic	D	2860	1690	1050	22	640	25	7.5	720	No	No
	<b>TOTAL</b>		<b>15795</b>						<b>41</b>			
2.	<b>Bran</b>											
	Zănoaga	A	650	1160	1000	23	160	30	1.9	400	Yes	Yes
3.	<b>Moieciu</b>											
	Cheile Grădiştei	E	470	860	800	16	60	40	1.8	300	No	Yes
4.	<b>Drăguş</b>											
	Moşul Drăguşului	VE	500	850	800	9.5	200	40	2	170	Yes	Yes
5.	<b>Predeal Complex</b>											
	Clăbucet Plecare	A	2100	1490	1100	20	390	55	11.5	2300	Yes	No
	Clăbucet Sosire	E	800	1200	1040	18	160	50	4	2000	Yes	Yes
	Clăbucet Şcoală	VE	200	1080	1050	7	30	45	0.9	150	No	No
	Clăbucet Variant	A	790	1200	1040	20	160	60	4.7	2000	Yes	No
	Cioplea	E	200				20				No	No
	Cocoşul	A	2250	1016	850	21	166	150	7.8	200	Yes	Yes
	Gârbova	E	900	-	-	-	180	-	-	-	No	No
	Orizont	E	100	-	-	-	30	-	-	-	No	No
	Polistoaca	E	2500	-	-	-	90	-	-	-	No	No
	Subteleferic	D	1200	1450	1100	31	350	80	9.6	2000	Yes	No
	Subteleferic Variantă (lower station)	VE	670	1190	1145	7	45	50	3.3	2000	Yes	No
	Trei Brazi	E	300	-	-	-	50	-	-	-	No	No
	<b>TOTAL</b>		<b>12010</b>									
	<b>TOTAL BRAŞOV</b>		<b>29425</b>									

E= easy; A = average difficulty; D = difficult; VE= very easy; – lack of data

This area has a very good cable transport network, with two aerial tramways that connect the bottom of Tâmpa with its peak, in the City of Braşov, and two other tramways, one in Poiana Braşov - Kanzel and one in Capra Neagră, which ascends Postăvarul Mountain. Additionally, there are gondola lifts and six ski lifts in Poiana Braşov and Predeal.

Less expansive and less known are the ski areas of Bran, Moieciu de Jos and Drăguş, acting as alternatives for the congestion found in the better known resorts.

### The ski areas of Sibiu County

Sibiu County has nine ski slopes, with a total length of 18.8 km, managed by local town halls as well as by private companies. In Făgăraş Massif, in the Bălea-Capra-Doamnei Area, plans have been made for a very large ski area, roughly 32 km (Popescu, 2011).

Bălea Lac resort, set in an unique environment for our country, is the ideal place for those that love extreme skiing.

**Table 3.** The ski areas of Sibiu County  
(Data source: <http://www.romaniaturistica.ro>, 2013)

No.	Slope features											
	Name	Difficulty level	Length (m)	Altitude at departure	Altitude at arrival	Average slope%	Level difference/m	Average width/m	Surface area/ha	Load capacity/hour	Ski canons	Night illumination
1.	<b>Gura Răului</b>											
	Trecătoarea Lupului	E	512	700	615	14	85	40	2.5	450	Yes	Yes
2.	<b>Bălea Lac</b>											
	Curba de nivel-Pilon 2	A	14000	2200	1700	28	500	150	21	70	No	Yes
3.	<b>Arena Păltiniş</b>											
	Platos	A	520	1380	1305	17	75	30	1.5	1200	Yes	Yes
	Panorama Sibiului	E	700	1390	1290	14	100	40	3	1200	No	Yes
	Poiana Poplăcii	E	600	1390	1290	16	100	50	3	1200	Yes	Yes
	Arena	E	240	1340	1305	14	35	30	0.7	500	Yes	Yes
	Soarelui	E	640	1380	1305	12	75	50	3.2	1200	Yes	No
	Onceşti I	A	1150	1450	1209	22	241	50	5.7	360	No	Yes
	Onceşti II	VE	450	1450	1250	9	200	60	2.7	360	No	No
	<b>TOTAL</b>		<b>4300</b>						<b>19.8</b>			
	<b>TOTAL SIBIU</b>		<b>18812</b>						<b>43.3</b>			

E= easy; A = average difficulty; D = difficult; VE= very easy; – lack of data

This area only has natural slopes, enabling descents on tracks more than 10 km long, cable transport being made by aerial tramways, connecting it with Bălea Cascadă (Gingulescu, 2011).

30 km from Sibiu, on Poiana Poplăcii Plateau, at an altitude of 1400 m, in Cindrel Mountains, we find Arena Plateau ski and recreational area, which offers five slopes to winter sport enthusiasts (length of 2700 m), with four ski lifts, with a capacity of 500-1 200 people/hour, ski canons, illumination system, rental shop, snowboard and ski school.

### The ski areas of Alba, Covasna and Mureş counties

In Alba County, the ski slopes have a combined length of 16.3 km, with slopes situated in the Arieşeni and Gârda de Sus area, in Apuseni Mountains, and in Şureanu area from Sebeşului Mountains, the latter being the most complex, situated at altitudes between 1 650-1 900 m.

The plan is to make this investment a springboard for a touristic resort, that would rival similar destinations from Western Europe.

The total slope length from this complex is 10 km, with an average to low difficulty.

**Table 4. The ski areas of Alba County**  
(Data source: <http://www.romaniaturistica.ro>, 2013)

No.	Slope features											
	Name	Difficulty level	Length (m)	Altitude at departure	Altitude at arrival	Average slope%	Level difference/m	Average width/m	Surface area/ha	Load capacity/hour	Ski canons	Night illumination
1.	<b>„Şureanu” ski area</b>											
	Auşel 1	E	1650	2010	1650	15	360	30	4.9	1200	No	No
	Auşel 2	E	1430	2010	1650	13	360	30	4.3	1200	No	No
	Curmătura 1	VE	1700	1825	1650	8	175	55	9.3	700	No	No
	Curmătura 2	A	650	1825	1650	21	175	50	3.2	700	No	No
	Curmătura 3	A	650	1825	1650	21	175	50	3.2	700	No	No
	Curmătura 4	E	830	1825	1650	15	175	55	4.4	700	No	No
	Şureanu 1	E	600	1825	1750	15	75	50	3	700	No	No
	Şureanu 2	A	1200	1900	1650	23	250	60	7.2	700	No	No
	Şureanu 3	D	1350	1900	1750	33	150	50	6	700	No	No
	<b>TOTAL</b>		<b>10060</b>						<b>45.5</b>			
2.	<b>„Gheţarul” ski area (Gârda de Sus)</b>											
	Gheţarul 1	D	1100	1050	700	31,8	350	54	5.9	1202	Yes	Yes
	Gheţarul 2	A	1600	1050	700	21,8	350	20	3.2	1202	Yes	Yes
	Gheţarul 3	E	2200	1050	700	15,9	350	15	3.3	1202	Yes	Yes
	<b>TOTAL</b>		<b>4900</b>						<b>12.4</b>			
3.	<b>Arieşeni</b>											
	Vârtop 1	A	1000	1380	1150	30	230	120	12	800	No	Yes
	Vârtop 2	A	430	1250	1150	24	100	40	1.7	640	No	Yes
	<b>TOTAL</b>		<b>1430</b>						<b>13.7</b>			
	<b>TOTAL ALBA</b>		<b>16390</b>						<b>71.6</b>			

E= easy; A = average difficulty; D = difficult; VE= very easy; – lack of data

The main problem that plagues this area is the lack of accommodation units, the closest lodges being situated 5 km from the ski area, in Luncile Prigoanei, and in Oaşa area, 20 km away.

We also mention the „Gheţarul” ski area from Gârda de Sus, considered as an alternative, to decrease tourist „pressure” on the Arieşeni area.

The fewest ski areas can be found in Covasna County (four ski slopes 1.5 km long) and in Mureş County (two ski slopes, with a length of just 1.3 km). Even though these areas are more modest, such as the one in Sovata and Covasna, they contribute to the spatial expansion of winter tourism and to the satisfaction of an ever increasing demand.



**Table 5. The ski areas of Covasna and Mureş counties**(Data source: <http://www.romaniaturistica.ro>, 2013)

No.	Slope features											
	Name	Difficulty level	Length (m)	Altitude at departure	Altitude at arrival	Average slope%	Level difference/m	Average width/m	Surface area/ha	Load capacity/hour	Ski canons	Night illumination
1.	<b>Covasna</b>											
	Covasna	E	400	661	624	13	37	35	1	900	Yes	Yes
2.	<b>Comandău</b>											
	Comandău	E	300	1100	700	18	400	100	3	600	No	No
3.	<b>Șugaș Băi</b>											
	Șugaș Băi Veche	A	560	740	590	30	150	75	4.2	360	No	Yes
	Șugaș Băi Nouă	A	250	750	685	23	65	60	1.5	360	No	Yes
	<b>TOTAL</b>	<b>1510</b>	<b>810</b>						<b>5.4</b>			
	<b>TOTAL COVASNA</b>	<b>1510</b>							<b>19.4</b>			
4.	<b>Sovata</b>											
	Aluniș	A	1100	1200	900	28	300	40	4.4	400	No	No
	Aluniș beginners	VE	200	1250	1210	10	40	50	1	360	No	No
	<b>TOTAL MUREȘ</b>	<b>1300</b>							<b>5.4</b>			

E= easy; A = average difficulty; D = difficult; VE= very easy; – lack of data

## CONCLUSIONS

By adding the total length of the existing ski slopes from the Central Region, we ended up with a total of 85.2 km (55.8% of the country's total ski slopes length), in 2012, the surface of the ski areas being 319.4 ha.

Comparing this length to the total number of existing slopes, which is 79 (51.3% of the total number of slopes at national level), out of which only 54 are certified (41.5% of the total number of certified slopes), we observe the same trend found at national level, that the average slope length is under one kilometer, a very modest indicator when compared to resorts from Austria or France. Another major problem is the very low number of artificial snow machines, only 22 slopes being equipped with such machines, due to lack of water.

In the analysed area, there are six slopes that appear in the top ten longest ski slopes in Romania (Drumul Roșu 5 330 m, Lupului 2 620 m, Sulinar 2 820 m, Subteleferic 2 860 m, all found in Poiana Brașov, the only resort of international renown, and Cocoșul 2 250 m, and Clăbucet 2 100 m, in Predeal).

Among the counties that make up the Central Region, Harghita County stands out with 28 ski slopes and Brașov with 23 slopes, while the least endowed being Covasna (four slopes) and Mureș (two slopes). With the help of the tables above, we can also create a slope hierarchy, using the difficulty level criterium: five ski slopes with very low difficulty, 38 slopes with low difficulty, 26 of average difficulty, and 10 with high difficulty.

In regards to the length of the ski slopes from the 29 resorts situated in the Central Region, out of 85.2 km, each resort has an average of 3 km, a modest value compared to

the ski areas from the Alps, with an average of 398.6 km slopes / resort. Italy and France excel in this matter, having higher averages than normal (732 km/resort in Italy, and 504.8 km ski slopes for the French Alpine resorts).

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