

Considerations of Health Tourism in Braila

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Abstract: The author aims to highlight the conditions that lead to exploitation of the region Lake Sarat spa. Located in the eastern part of Romania, in Baragan North, the resort is located at a distance of only 5.5 km from the city of Braila. Surrounded by a park of 40 ha (30 ha and 10 ha forest green area), which provides a framework both the monumentality very picturesque, and by old, Salt Lake Resort is a true oasis of greenery with beneficial effects on the human body. Building fund has grown over the past 30 years, achieving adequate facilities for tourism and spa treatment. As shown current zoning functions, the resort is only about 50% recovered in terms of space, ie to the northeast. Otherwise, there are areas that do not fulfill the role of recreational green spaces.

Keywords: water quality; environmental factors; climate changes; Salt Lake; quality of the factors of spa

JEL Classification: Q56; L 84; L80

1. Introduction

The Lacu Sarat has a rich content in salts due to the loss of waters from the river and of the changes of volume after strong evapotranspiration and of the low rainfall. Following the analysis of the lake water over time was noted that the hydrochemistry type consistency what was left at the character of sulfated sodium with passing to chloride sodium. The physicochemical and biotic particularities led to the formation of a mineralized silt mud, this finding in greater quantities in the northern section which determined and the construction of treatment baths in this sector.

Even from climatic point of view we are witnessing to changes, of the mud properties and of the water remained the same, but had much change the water volume from the lake. It is even said that the desertification of Baragan will lead to

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the definitive disappearance of the lake. Over 70% of the Lacu Sarat surface from the Braila County disappeared in the summer of 2008.

1.1. History

To promote national tourism resort in the circuit, in 1829, local authorities have taken a number of measures, so that in 1850 the therapeutic qualities of water and sludge were known throughout the country. In 1861, the initiative of the Romanian Ministry of Finance, George Rudeanu engineer made the first studies of lake water, and in 1870 the first baths were made after medical advice, doctors Braila providing support services. Knowledge of the therapeutic qualities of water and mud of the lake, and put into service in 1872, the railway Buzau - Galati, positively influenced the establishment of the first residential settlements in the area. Interest in therapeutic mud while materialized through the implementation of construction, equipment, facilities for tourism and balneafie. Intense resort development known. Analysis are water, and bathrooms are built accommodation with a special architecture.

The first buildings were specially designed for bathrooms built in 1873 by citizens of Braila Iliescu and I. Oprea Thomas, who arranged for the barracks warm baths, with the heat source rocks girded with fire.

Until 1879, visitors were living in tents, huts or booths rudimentary reason Braila county leadership took a series of measures to systematize the area. Thus, in 1879, passed under the administration of the Ministry of lake areas, which allocated an area of 50 acres of the lake for the construction of modern buildings (at the time) and some specially equipped bathrooms.

The first works with reference to the miraculous effects of therapeutic Lake deposit, were published by John Apostolescu, in 1884 and 1889. The work was presented at the Congress of Hydrology and Climatology in Paris (1889). The work showed that Salt Lake qualities surpassing a number of similar lakes in Europe, confirming the European notoriety.

Table 3 Number of tourists in the period 1886 - 1890

	1886	1887	1888	1889	1890
Number of tourist arrived	627	855	1277	1312	1538

Source: Annals of Braila, Cap. III, pag.47

Peak period in the history of the resort spa is considered the interwar period, you know a large resort accommodation space and extension of research-intensive curative properties of therapeutic factors.

2. Characteristics of Balneary Resources of the Salt Lakes from Braila's Plain

These lakes are part of the meander lakes category, of left arm or course have formed after the movement, changing of the water course, erosion when meander portions were anatomized due to the alluvial deposits losing completely the connection with the river. This type of lakes have a rich content in salts due to the loss of connection with the waters from the river and of volume changes after strong evaporation and of low rainfalls.

Meander lakes and of left arm known in the Braila's Plain: Salt Lake Braila, Salt-Batogu, Brotacelul and the lakes on the numerous left courses in the connection area between the Buzau and Calamtui river. Brotacel lake, formed after the oscillation of Buzau course, situated near the Filipesti locality, had a surface of about 20 ha. The average depth of the lake was of 1, 2 m, length of 675 m, and wide of 252 m (Stoiu and colab., 1980) The Lake had a low salty character.

Since the 90's, after a prolonged drought and in the conditions of some precipitations under 400 mm/year, this lake has dried completely. On the margin of Brotacel Lake, located near the National Road 2B, in the period when the lake had water it was built the Halt Brotacelul with accommodation and alimentation places and a landing stage for recreation. Currently, when the lake is completely dry (and is no longer found its' filling, not even partial after the rain) its surface it was began to be used in agriculture. The landing stage was shut down, operating only Brotacelul Halt without existing and the attraction of some boat trip.

The oscillation of Calmatui river and creation on left arms and meanders allowed the formation of some lakes within this area. On the left side, on the ex left arm Batogu were formed the lakes Salt-Batogu and Bentu-Batogu. The Batogu Salt lake it was present in the early 70's as a lake with a surface of approximately 580 ha, wit with an average depth of over 0,8 m, having a salty charcter of chloro magnesian type (Popescu A., 1980). In the 80's this lake began to dry, being recorded as a swamp area, being crossed by a draining channel. Currently, this is completely dried, its surface being used in agriculture.

Bentu-Batogu Lake is situated in the noth side of Batogu locality, on the left course Batogu. The lake is quartered in an enlarged portion through abrasion of the left course and completely isolated of the water course at stream ends.

The lake has a surface of about 80 ha, with an average dept of about 0,7 m (Popescu, 1980). The lake contains salt water of the hydrochemistry chlorate sodium – magnesian type. The lake's salinity presents high variations depending on the volume of water from the lake (table nr. 4). In the works of specialty is specified that in normal climatic conditions of Braila's Plain, the lake basin of this lake is occupied by waters mainly in the east side which seems to have a bigger depth (Bentu), and in the years with higher humidity is covered and in the west side (Batogu).

In 1940, the high waters from Buzau invaded the lake Bentu-Batogu through the Buzoelelor inducing reductions of the salt contain by the increase of the water volume from the lake (Gastescu, 1971). The consequence was that the water was sweetened, the sludge from the bottom of the lake being covered with a thin layer of slits, allowing on a period of five years the development of a fish fauna. The Braila Salt Lake is located on the terrace of the Danube near the Braila city. On the origins of this lake there were issued several assumptions. Some researachers argue that its origin if of a left course of the Danube, and others say that the origin is related to the compaction depressions in loess. The depression form, almost under an arc of circle that leaves from north, right from the locality Varsatura and gets in south in past the Danube meadow at south of the Chiscani locality indicates a left course of Danube that was completely anatomies by alluviums at the two extremes. Subsequently, this resulted depression from the desolation of Danube of this small arm and complete isolation of the river waters was covered by loess deposits. The presence of compaction and suffusion phenomena allowed the emergence of depressions. These depressions were filled with water from rainfall and underground springs.

The fact that the lake is isolated from the Danube and does not show a hydrographic basin (completely lacked of tributaries) has determined the accumulation of mineral salts, and the water from rainfall and underground springs to strongly saline.

If the lake wouldn't be supplied by underground from the prelatc waters of terrace, it would exist the chance that this to completely dry. Currently, there is this danger because of some landslides of the borders and obstructions of marginal springs. The Salt Lake Braila, initially it was formed from two sectors. The southern sector is in irregular form, elongated. The northern has an almost round form and on its bank it's equipped the touristic resort.

The southern sector has temporarily water, while the northern sector due to the supply and from groundwater layer it has water all year around. In the spring and at the beginning of the summer, the lake has a large amount of water, came from rainfalls and snow melt, however, in the summer and at the beginning of the autumn, due to the high evaporation and of missing the rainfall periods, the water

level from the lake drops a lot (as we remember the southern compartment dries completely, and the northern area is circumscribed to a surface approximately (20-30 ha).

Among the two sectors of the lake it was built a road (which connects the resort Salt Lake with the nearby localities) and a railroad (built for the supply of Integrated Chemical Work from Chiscani). This intervention has blocked the connection channel between the two compartments, which was creating the possibility of balancing the hydro regime from the northern therapeutic compartment, creating the possibility as and in the prolonged drought periods this compartment to receive water from the northern section.

The lake is about 170 hectares, and its depth varies from 20 to 80 cm (Gastescu, Gruescu, 1973). Due of many variations of volume of the water from the lake are having place and very large oscillations of the degree of mineralization. The average salinity of the lake (and most common met) has values about 80g/l, but there was met and values around 50g/l and 220 g/l.

After the water analysis from the lake, over time it was observed the consistency of hydro chemical type that remained at the character of sodium sulfate with passing to sodium chloride (Gastescu, 1979). The physicochemical and biotic peculiarities led to the formation of a concentrated mineralized mud with thickness between 20 and 50 cm, this being found in large quantities of the northern sector what determined and the construction of treatment baths in this sector. This mud contains 55,1% water, 6,4% volatile substances through calcinations and 38,5% mineral substances (Florea, 1976).

From researches it has resulted that the mud volume is about 66000 m³ and considering that it has a specific gravity of 2,4 implies that in lake are found about 92000 mud tones. The evaporation is favored by the high temperature in summer and of the warm and dried winds from the Braila's plain. On the bottom of the lake it is a layer of mud that increases in thickness from edge to center. P. Petrescu managed to discover the presence of a limestone layer from 0, 5 – 1 mm, that it divided. AS a result of intense evaporation, the salt concentration increases by laying on the bottom of the lake the mirabilit ($\text{SO}_4\text{Na}_2+10\text{H}_2\text{O}$) as a thin crust that covers part the mud or is mixing in it's mass.

3. Balneary Resort Braila Salt Lake

Although it is not recognized for its holiday destinations, the Braila county hides a resort that has a history of over a century, but a legend that comes up to Tepes Voda time. Salt Lake is where almost all residents have come at least once, but it's also on of the touristic attractions from Romanian Plain. For those who are to far from the sea-cost, is the ideal place to sunbathe. The Salt Lake is a resort open in

all seasons of the year, located in the south east of Romania, on the radius of Chiscani community (Braila county), in the north-east of Romanian Plain at the altitude of 25 m, on the bank of the namesake lake, at 5 km south west of the city of Braila. The climate is steppe continental, with high annual differences of temperatures. The average annual temperature is around 11⁰C (the average in July is of 23⁰C, in January – 2,3⁰C). The annual average of rainfall is low (less than 450 mm).

Salt Lake is actually composed of two lakes, separated by a road and railway line, lakes which communicate between them through an underground channel specially arranged. The first settlements for hot baths were constructed here since 1875. The further researches and chemical analyzes of the water of the lake had shown a strong concentration of mineral salts and that the mud from here has an effective therapeutic efficiency analogue to the lakes in Sweden, Italy or Austria. Both the history of this place seems to be much older: it is said that the amazing therapeutic properties of the water and mud from here were discovered by Vlad Tepes around 1400. Here were healing the soldiers and horses wounded in battle.

The Salt Lake (1,72 km, maximum depth 1,5 m) shows significant reserves of vegetable slime and hypertonic mineral water, containing compounds of sulfur, chlorine, sodium, magnesium, bromine (mineralization 70-84 g/liter), used for the treatment of regenerative rheumatic diseases, inflammatory, gynecological, dermatological, endocrine, but and in affections of the peripheral nervous system, of posttraumatic states (after operations on muscles, tendons and articulations, after sprains and fractures) and respiratory (chronic bronchitis, laryngitis). The resort offers and facilities for warm baths in mineral waters in tubs, applications of hot mud, aeroheliotherapy and applications of cold mud followed by baths in the lake, installations for electro and hydrotherapy, gym, pool for kineto-therapy. In all these methods of treatment are used chemical compounds found in the mud of Salt Lake: sulfur, chlorine, sodium, bromine and magnesium. The resort is connected by bus and tramway lines of Braila city, where it can be gone in trips with the boat on Danube, towards the Danube Delta and Black Sea.

After the affirmation of some local inhabitants, there were years like 1872, when the lake was completely drained. During the intense evaporations, on the basin emersion to lake is deposited an appreciable crust of white salts which by far gives the impression of a soil covered with thick dust. The last period of 90's was characterized by a prolonged drought in this area of Romanian Plain and had as consequence the drastic decrease of the water levels, its surface being recorded annually in the Statistic Yearbook with only 30 – 40 ha. In the same time, in the area of dried basin were deposited solid salt crusts.

The experts say that the desertification of Baragan will lead to the final disappearance of the lake. Over 70% of the Salt Lake's surface from Braila has

disappeared in the summer of 2008. It is contradictory and also representative the affirmation of the administrator of the treatment base and of the beach from the Salt Lake resort, Ion Tanase which says that a phenomena like this it was noted in 1947, when the lake drought completely, but the situation was recovered. "The lake supplies from the underground waters and depends entirely on their status. In 1947 it has completely drought and still recovered". The local inhabitants have another explication, saying that the lake springs are blocked and that the old man that know their places and was taking care of supplying it, has died, motive for which the lake will disappear soon.

Tabel 2: Component analysis of tourism activity

Total	Hotels	Tourist Stops	Motels	Turistic vilas	City pensions	Camps for students and preschool	Tourist cabins	
NUMBER OF TOURISTS								
Total county	61.955	54.886	1.040	2.156	1.263	171	2.177	262
Braila	34.48	32.01	-	2.156	146	171	-	-
Lacu Sărat	24.97	22.87	1.040	-	-	-	1.058	-
Other cities and tourist routes	2.498	-	-	-	1.117	-	1.119	262
NUMBER OF NIGHTS								
Total county	297.7	285.055	1.788	3.801	1.263	588	4.867	318
Brăila	86.13	81.586	-	3.801	146	588	-	-
Lacu Sărat	207.9	203.469	1.788	-	-	-	2.602	-
Other cities and tourist routes	3.700	-	-	-	1.117	-	2.265	318

Source: Statistics Braila County

Tourism development has attracted the attention of government circles in Braila, which began to draw major benefits from this activity. However, tourism

promotion issue was left entirely to private initiative account without the central coordinating the efforts of institutions and companies participating in tourism development (rail and shipping companies, hotel companies, associations of propaganda, Turing-clubs etc). In recent years there have been no investments made to modernize the facilities of treatment, accommodation and food. Most sensitive to this state of affairs are foreign tourists who are accustomed to certain standards for accommodation and treatment. So many foreign tourists, especially Westerners, have abandoned the practice of health tourism in Romania to other Eastern European countries such as Hungary, Czech Republic, Slovakia, that provides much better accommodation and treatment.

The number of tourists and the number of overnight stays in tourist accommodation structures with functions of tourist accommodation on tourist destinations and types of structures

As can be seen from the above data, the county's main tourist destinations are the city of Braila (55.7% of the number of tourists and 28.9% of overnight stays) and Salt Lake tourist resort (40, 3% of the number of tourists and 69.8% of the number of overnight stays)

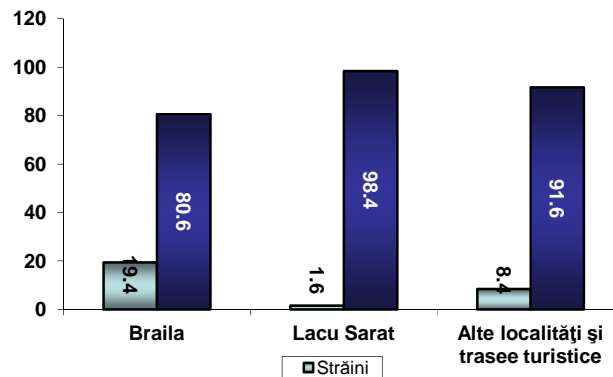


Figure 1 Structure of the tourists stay in Braila County, tourist destinations

Regarding the distribution of the destinations of foreign tourists, it differs a lot. Thus, the existence of units with a high degree of comfort, but also because the city lends itself to various forms of tourism, some with great impact on foreign tourists (business tourism, cultural tourism), the international tourists are weight Braila 19.4% of the total, as opposed to 1.6% of total for Salt Lake resort and 8.4% for other cities and tourist routes.

Given the relatively high market share that has in total health tourism in the county tourism economy, particularly interesting for this analysis is the share of tourists coming to the treatment offered by CNPAS tickets.

Tabel 3: The share of tourists comes by tickets in total tourist arrivals treatment in Braila County

	2005	2006	2007	2008	2009
Total tourists Braila County	55.473	59.334	59.207	59.169	61.955
Treatment of which the tickets (Salt Lake)	8217	7885	7959	8067	6172*
Share (%)	14,8	13,3	13,4	13,6	10,0

Source: Ministry of Labour, Social Solidarity and Family, INS

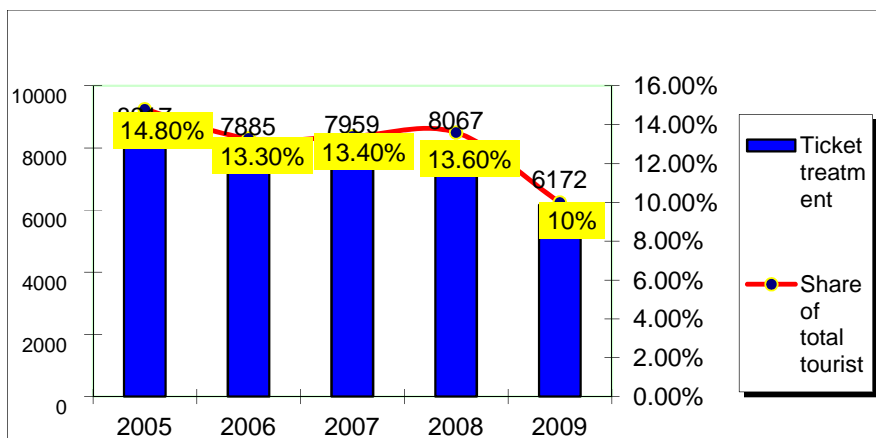


Figure 2: Tourists arriving by airline CNPAS treatment

The data above notes that the share of tourists coming to treatment tickets total number of tourists decreased continuously from 14.8% in 2005 to 10.0% in 2009, and this can only be worrying accommodation units in Salt Lake resort, which are misfits modern spa tourism.

The average length of stay is the average number of days of stay of tourists in a given area and expressed in a somewhat qualitative side of tourism.

In this case, the average length of stay in the county of Braila (2009) is higher than for the total country (4.80 days 2.95 days compared), but this is not due to quality services, but especially that 40% of the total number of tourists come for treatment,

and this form of tourism requires a greater period of stay. Thus, neither the quality of accommodation and recreational opportunities have not increased the stay, but the undeniable value of spas resources.

Table 4: Average duration of stay in the county of Braila, the tourist destinations and accommodation types

Total	Hotels	Tourist stops	Motels	Villas	City pensions	Camps for students and preschool	Bungalo w	
Total countys	4,80	5,19	1,72	1,76	1,00	3,44	2,24	1,21
Brăila	2,50	2,55	-	1,76	1,00	3,44	-	-
Lacu Sărat	8,32	8,89	1,72	-	-	-	2,46	-
Other cities and tourist routes	1,48	-	-	-	1,00	-	2,02	1,21

Source: Data from the Braila County Statistics

In tourist destinations, there is a big difference during your stay in Salt Lake tourist resort (8.32 days) and length of stay in the city of Braila (2.5 days) and in other cities and tourist routes (1.48 days).

4. Conclusions

In the current conditions of the global crisis any opportunity of expanding the touristic market, of attracting of a new segment of tourists is welcome. Especially if this it can be done on an existing infrastructure and material basis already existent. It is imposed profound study of all these natural balneary resources from the area Braila's Plain and also of the possibilities of capitalization of these in the spirit of sustainable development. Although the vast majority of lakes from Braila's Plain have therapeutic properties, the only arranged in balneary purposes is the Salt Lake Braila.

Braila Municipality Development Strategy includes the following measures needed to boost the city's cultural life during the summer and aimed at Salt Lake:

- Need to extend and upgrade structures Salt Lake tourist resort Braila, in order to attract an increased number of tourists, both domestic and abroad;

- Developing cultural and educational programs for children and young people during holidays (local government takeover of the camp children from Salt Lake and organizing holiday workshops for ceramics, theater, poetry, music, etc.).
- Encouraging the implementation of cultural events in public spaces (streets, parks, squares), concerts, popular games, dance, entertainment, theater, poetry recitals;
- Promotion of performances made by high school graduates Hariclea Darclee Art.

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