

PROSPECTION AND HUMAN FACILITIES RELATED TO TOURISM OF WATER RESOURCES IN SĂLAJ COUNTY

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Abstract. Salaj county has a rich and diversified tourism potential induced by the water resources. This is related to the presence of mineral waters mainly sulfurous and thermal, which have been known and used since the previous century, the spectacular landscapes created by some peculiarities of the river valley and also to the presence of a few lakes. The tourism potential is not fully capitalized even though there are some spas where the healing properties of the mineral waters are used, while others have been turned into ruins and destroyed. The tourism potential of running waters is given by the presence of some spectacular valley sectors (gorges, canyons). Lakes attract the tourists especially for their fishing resources.

Key words: water resources, mineral springs, sulfurous waters, thermal waters, spas, gorges, canyon, lakes, fishing

1. INTRODUCTION

Salaj county, situated in the North-Western part of Romania, with an area of 3850 sqkm overlaps the bonding area between Eastern Carpathians and Apuseni Mountains, known in the geographical literature as the Somes Platform. The mountains occupy a quite restraint area, in the South-Western part and are represented by the two northern branches of the Apuseni Mountains, Meses, respectively Plopis Mountains. From the hydrological point of view the county develops in the hydrographic basins of Somes, Crasna, Barcau, Almas, Agrij and Salaj Rivers.

In literature there are several classification criteria of the tourism potential induced by the water resources, the widest spread and the one also used in our study being that according to the main types of water resources: underground waters and surface waters

2. DATABASE AND METHODS

The data used in this research have been obtained from various sources, directly from some institutions like Salaj County Council, the Mairies of the localities where the touristic objectives are situated, the companies which hold various touristic facilities in the interest areas, Salaj County Statistics Institute, or

indirectly from bibliographical sources or dedicated internet sites. The methods used in this research are diversified among which the land-observation method, bibliographical method and statistical and data processing methods are worth mentioning.

3. RESULTS AND DISCUSSION

3.1 Tourism potential of water resources

The land observations and research, the data provided by the dedicated institutions or by the bibliographical sources reveal the fact that among the water resources of the county, the underground waters have the greatest tourism potential, due to the presence of numerous mineral and thermal springs, followed by the high potential of surface waters (fig. 1).

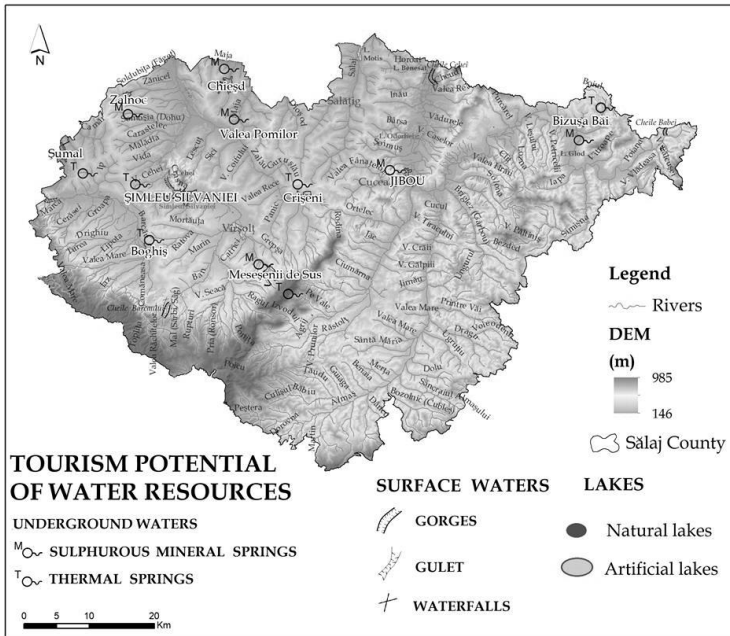


Fig. 1 Tourism potential of water resources in Sălaj County

3.1.1 Tourism potential of underground waters

From this point of view the most important aspect is given by the qualitative characteristics of underground waters. Underground waters may contain a series of healing elements such as: iron, iodine, sulfur, radioactive substances, bromine or free gases such as carbon dioxide or nitrogen. Underground waters can

be classified according to the mineralisation degree: oligomineral (with a mineralisation of 0,5 gr/l) which can be cold or warm and mineral, used both in internal and external cure. Mineral waters fall into several categories: carbonated, bicarbonate carbonated, bicarbonate simple, ferrous, sulfurous, sulfated, chlorine, iodine.

According to water temperature springs can be classified as cold and hot (thermal). According to the temperature span there are hypothermal springs (20 – 25 °C), isothermal (36 – 37 °C), mesothermal (38 – 42 °C) and hyperthermal springs (over 45 °C).

The mineral waters that are the widest spread in Salaj County are the sulfurous ones. They are used in the internal cure for healing gastro-intestinal and hepatobiliary disorders and in the external cure for healing rheumatic, gynaecological and skin disorders.

Sulfurous mineral springs appear in various localities across Salaj county.

Bizuşa is situated in the north-eastern part of the county at an altitude of 240 m, in Somes Valley, next to Ileanda, on the road DN 1C which connects the towns of Dej and Baia Mare. There are here deep aquifers with low mineralised water. The mineralisation is given by the presence of gray clay, lignite, sandstone, chinks and pyrites. The water is slightly sulfurous, sulfated, very slightly chlorine, contains calcium sodium and magnesium. There are 4 springs, three with cold water and one with semi-thermal water at a temperature of 19 °C. The content of H₂S is 0,7 mg/l in the probes and 4,2 mg/l in springs.

At Jibou the mineral water source is a natural spring collected in a concrete basin built directly on a natural emergence. The water is sulfurous, chlorine, sulfated, contains sodium, calcium, magnesium.

In Zalnoc village, Bobota commune, situated in the north eastern part of the county there are 4 high discharge springs with sulfurous water. The healing water is collected from 2 wells and has the following characteristics: Ferrous, sulfated, bicarbonate, contains calcium, magnesium, aluminum and is recommended for the disorders of the urinary tract and of the kidneys as well as in hepatobiliary disorders especially for recovering after hepatitis. As an external cure it is recommended to those suffering from arthritis and rheumatism.

In Zauan, situated in Ip commune, there are also mineral springs with sulfurous water, appreciated in the interwar period not only for curing rheumatic but also gynecological disorders.

At Valea Pomilor, Samsud commune there are sulfurous mineral waters, used for rheumatic disorders.

At Chiesd the water is sulfurous, bi carbonated, contains calcium and magnesium and it is used especially in the internal cure.

At Mesesenii de Sus (Mesesenii de Jos commune) there are springs with sulphurous cold water which can be used for the treatment of rheumatic disorders as well as a drilling with thermal water at a temperature of 42°C.

An important tourism potential is given by the presence of thermal waters (hypo and meso- thermal) identified on the territory of various localities.

Boghis is situated on the County Road DJ 191D, 45 km far from Zalau and 15 km from Simleu Silvaniei. There are 3 drills of mineral waters (sulfurous, bi carbonated, with sodium, iodine, chlorine) which are also thermal having a temperature of 42°C.

At Criseni, near Zalau a spring with thermal water with a temperature of 25°C was identified.

Thermal waters, used in curing rheumatic disorders, disorders of the peripheral nervous system and of the digestive tract have also been noticed at Simleu Silvaniei and Sumal.

3.1.2 Tourism potential of surface waters

In Salaj county running waters have in the first place a tourism potential of the landscape type, the river valleys, in certain morphological and petrograpyical conditions gain a spectacular aspect in some places.

Babei Gorges, on Poiana River, situated at the border with Maramures County, between the villages Poiana Blenchii and Baba, have a length of 1,2 – 1.3 km and a height of the walls of 80-100 m. Here we can also find the Bulbuc karstic spring. Its tributary, only 1 km long, Valceaua Dracului, crosses a canyon like area, were the walls are 3 m close. There are also 2 waterfalls in the area, with heights of 3,5 respectively 3m.

Barcau Gorges develop between the villages Tusa and Sag, at the contact between Meses and Plopis Mounains. Here we can also find Tusa – Barcau Natural Reservation, situated in the area of the springs of Barcau. The reservation includes a forest sector, a meadow as well as two intermitent springs called Izbucul Mare and Izbucul Mic with an impressive water discharge. Barcău, the most important tributary of Crișul Repede springs under Plopisului Mountains, in a karstic area (Ponorul Negrenilor). The most important spring is the grand karstic spring which supplies Toplița rivulet. The waters gathered on the karstic plateau burst out here in several branches giving birth to several waterfalls. Afterwards they disappear among the stones and burst out again with a higher discharge leading to a 10 m high waterfall.

On river Barcau e can also find the epigenetic and antecedent gullet at Marca while on river Crasna there is a similar type of gullet between the villages of Cehei and Uileacul Simleului.

Ticau Gorges represent the last gullet of Somesului, situate between the villages of Benesat and Ticau on the left and Cheud and Chelinta on the right. They are 4 km long and are impressive by their beauty. The area is used mainly as a picnic spot and a relaxing space.

Another worth mentioning attractive element related to running waters is the waterfalls on Treznea rivulet. Treznea rivulet with its tiny tributaries springs out

of Meses Mountains, close to Osoiu Peak (874 m). On Treznea rivulet we can find 9 water falls, or even 14 according to different sources. The waterfalls are especially attractive for fresh-air walking lovers.

Salaj County is very poor in natural lakes but the recent period shows an increasing number of the artificial ones.

The greatest lake in the county is Varsolt reservoir on river Crasna, situated on the territory of the homonymous commune. It was finished in 1979, with the purpose of the water supply of Zalau and Simleu Silvaniei, abating of flash floods on river Crasna and recreative fishing. The reservoir has a surface of 652 ha and it is of great interest for amateur fishermen. The lake is rich in fish, one can find here various species such as: carp, perch, tench, flat-fish, crucian, luce and fitophagus. It is also a point of attraction for passionate bird watchers.

The reservoir in Sălași village was built in 1982 on Mineu river. It was designed to abate the flash floods and for the water supply of the nearby villages. It has a surface of 70 ha and it is proper for fishing as it has been populated with carp and perch.

Benesat Pond appeared around 1980 as a result of the extraction of ballast and has a maximum depth of 3 m. It is situated 50 m far from Somes River and has a surface of 8 ha. Besides the abundance in fish (carp, crucian, catfish, perch and luce) which attracts numerous fishermen Benesat Pond represents an auspicious habitat for water birds as we can notice some very interesting species.

The only natural lake is Cehei Pond, a protected area of national interest, having been declared natural reservation for vegetation and fauna is situated in the administrative territory of Șimleu Silvaniei. The natural area is represented by the hydrological area developed on an old branch of river Crasna (alluvial deposits over older layers of clays and marnes) with specific vegetation and a rich fauna of invertebrates, vertebrates (reptiles, amphibians) and birds.

3.2 Human facilities of water resources related with tourism

In order to capitalize the tourism potential of water resources several forms of tourism facilities were built (Fig. 6).

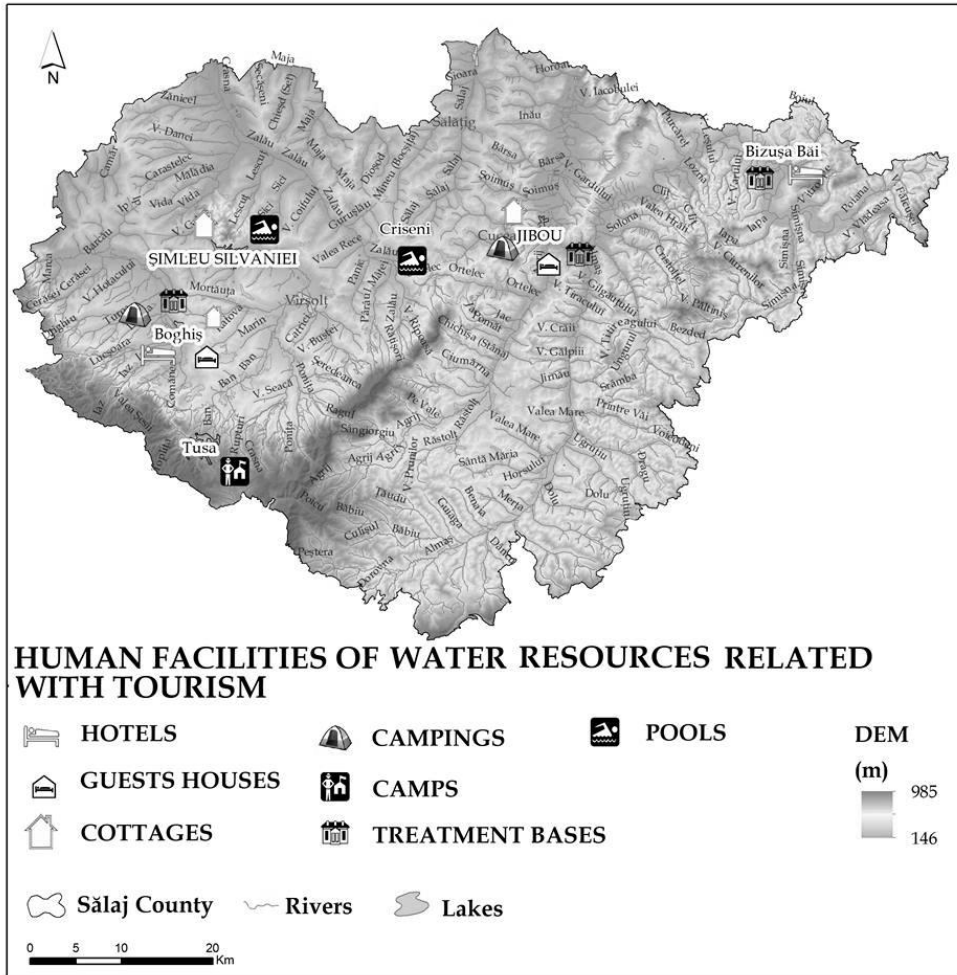


Fig. 2 Human facilities of water resources related with tourism

At Bizusa there is a spa established since 1932. Among the facilities we mention a hotel with 110 accommodation places, a restaurant, a park for relaxing, as well as a treatment base which unfortunately lacks permanent specialized staff. The disorders that may be cured at Bizusa are those of the musculo-skeletal apparatus, gynecological, of the digestive tract and of the peripheral nervous system.

Jibou Spa is a seasonal micro-spa, mainly of local interest. Even if the mineral waters have been known since 1906, the arrangement of the spa started only in the 60s, followed by a strong decay after 1990 and the closure in 2000. Its rearrangement started in 2004. The waters from Jibou are recommended both in the

internal and external cures as they are supposed to heal hepato-biliary and gastrointestinal disorders, nutrition disorders, obesity, skin disorders, rheumatism and disorders of the peripheric nerves. The treatment base of the Jibou Spa includes: Cabins with 2 or 3 bathtubs for the mineral water cure, facilities for sun therapy and mud baths and a swimming pool. Accommodation can be done in the guesthouse inside the complex, in cottages or in the camping for tents. The complex also includes a restaurant where tourists can serve the meals.

At Boghis Spa the first drills were made in 1971, when the first pool was also built. It was followed by other two in 1976, when the first inside pool and the bath tubes for treatment were also finished. The spa is open the whole year. The treatment base, opened in 2009, has 3 medical offices with rooms for kinetotherapy, physical therapy and massage, a room with a bathing pool, a room with a pool for water kinetotherapy, and a room with 2 bath tubes for water therapy. Due to the properties of the mineral waters Boghis Spa is recommended for curing rheumatic disorders, gynecological disorders, nutrition and skin disorders. The spa also has 4 out-door pools and one indoor pool which can be used for relaxing during the summer. The accommodation can be done in the hotel inside the complex, in bungalows and during summer in a camping, as well as in one of the many guesthouses in the area. The healing properties of the mineral waters are also capitalized inside the hotel where we can find an indoor pool and 13 cabins with bath tubes.

Zalnoc Spa had various owners and were open until 1939. After the seizure of the private properties, it was reopened in 1975 and was known as „The 9th of May Spa”. The Spa had a room with bath tubes, a room with a pool, showers and a medical office. Nowadays the spa is closed and in an advanced degradation status.

At Zauan-Bai, in the interwar period there was arranged a park and an inn with a terrace. After the Second World War, together with the seizure of the private properties the spa degraded and the nearby buildings crumbled. Today the old spa is completely ruined.

At Criseni, near Zalau there is a pool with thermal water used for the treatment of rheumatic disorders.

In Tusa village there is the Youth Recreation Center called „Barcau Springs”, also known as Tusa Camp. It has 44 accommodation places and a canteen.

Lately in the county have been arranged several ponds for catch and release fishing which attract many tourists who are passionate about this sport: Odorhei Pond, Glod Pond, Motis Pond, “Fishing Camping” Pond, near Simleul Silvaniei. Some of these places have cottages for accommodation or places where you can set a tent.

Table 1 Human facilities of water resources related with tourism in Sălaj County

| Location | Accommodation | No of places | Meal serving | Other facilities |
|---------------------|----------------------|-------------------|--------------------------|--|
| Bizusa | Hotel | 110 | Canteen | Modern treatment base Park |
| Jibou | Guest house | | A la carte restaurant | Treatment base with tubes for mineral water cure, sun therapy, mud-baths, swimming pool |
| | Cottages | | | |
| | Camping | | | |
| Boghis | Bungalows | 128 | A la carte restaurant | 4 outdoor pools 1 indoor pool Treatment base for physical, kineto and water therapy, massage |
| | Apartments | | Self serving terrace | |
| | Camping | 25 | Snack bar | |
| | Local guesthouses | | | |
| Tusa | Camp | 44 | Canteen | Playground for children, pavilion, bowling |
| Simleu Silvaniei | Fishing camping | 8 cottage s | Dining room Barbeque | 5 fishing ponds |
| Simleu Silvaniei | - | - | - | Pool |
| Criseni | - | - | - | Thermal water pool |
| Zalnoc | - | - | - | Degradated treatment base |
| Zauan | - | - | - | Degradated treatment base |

4. CONCLUSIONS

Salaj county has a high tourism potential due in the first place to the presence of numerous mineral water sources with healing properties and secondly to some peculiar landscape elements induced by the hydrological network. Unfortunately this high potential is not fully capitalized. It is to be appreciated the recent efforts of rehabilitation of some popular spas such as Bizusa, Boghis or Jibou, but in spite of all efforts they are only of local interest, or at most for the nearby counties. On the other some, some spas that were known even abroad for the healing properties of their waters are today completely ruined (Zauan, Zalnoc). I think that their rehabilitation and reinsertion in the touristic circuit would be extremely beneficial for the tourism in Salaj County. Also, some extremely beautiful places (Barcau Springs, the waterfalls on Trezneva river) are almost

unknown or very hard-to-reach because of the lack of advertising, bad condition of roads or the lack of hallmarks on the tourist routes. A more intense advertising of these places, even organizing certain events or specific tournaments together with better roads and easy ways of access would be a great help for the development of the tourism in the county.

REFERENCES

1. Bătiñaș, R.H, Sorocovschi V, (2012), *Resurse de apă. Potențial și valorificare turistică*, Editura Presa Universitară Clujeană, Cluj-Napoca
2. Berlescu, Elena, (1997) Mica enciclopedie de balneoclimatologie a României, Editura ALL, București
3. Ciangă, N, Dezsi S (2007) Amenajare Turistică, Editura Presa Universitară Clujeană, Cluj-Napoca
4. Cocean, P, Dezsi, S, (2009) Geografia Turismului, Editura Presa Universitară Clujeană, Cluj-Napoca
5. Conțiu, H (2012), Bazele geografice ale fenomenului turistic, Editura Presa Universitară Clujeană, Cluj-Napoca
6. Morariu, T., Sorocovschi, V. (1972), Județul Sălaj, Editura Academiei RSR, București
7. Sorocovschi, V, (2002) Hidrologia uscatului, Editura Presa Universitară Clujeană, Cluj-Napoca
8. www.balti.ro/salaj
9. www.benesatulturistic.ro
10. www.boghisbai.ro
11. www.caietesilvane.ro
12. www.defileul-lapusului.ro/cheile-babei
13. www.infoghidromania.com/baile-boghis.html
14. www.pensiuneaeden.ro
15. <https://peterlengyel.wordpress.com>
16. www.salajulpursisimplu.ro
17. www.tbrcm.ro/statiunea-de-tratament-balnear-bizusa.php
18. www.tratamentbalnear.ro
19. www.turismzalau.ro
20. <https://turism.bzi.ro>
21. www.turism4you.ro
22. www.vidalis.ro/boghis.php
23. www.welcometoromania.ro
24. www.wikipedia.org



Fig. 3 Babei Gorges (photo source www.defileul-lapusului.ro/cheile-babei)

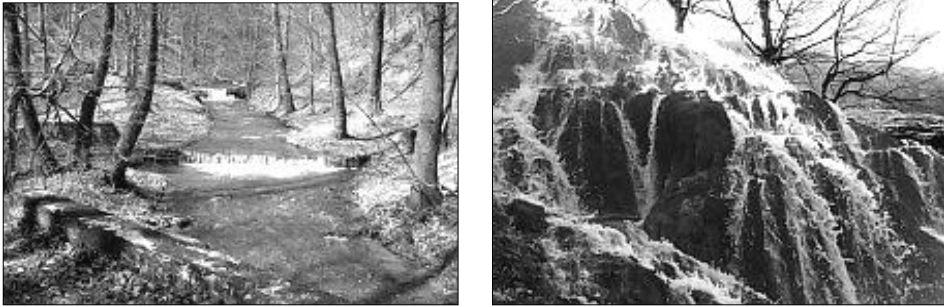


Fig. 4 Barcau Gorges (photo source www.welcometoromania.ro/Tusa_Rezervatia_Izvoarele_Barcaului)



Fig. 5 Ticau Gorges (photo source www.salajulpursisimplu.ro/provocarea-ticaului)



Fig. 6 The waterfalls on Treznea rivulet (photo source www.welcometoromania.ro/Treznea_Cascade)



Fig. 7 Bizusa Spa (photo sources www.99tour.ro and www.salaj.transilvania-localitati.ro/comune/ileanda/bizusa/)



Fig. 8 Jibou Spa (photo source www.pensiunea-eden.ro)



Fig. 9 Boghis Spa (photo source www.locuridinromania.ro/judetul-salaj/comuna-boghis/baile-boghis and www.flap.ro/detalii/baile-boghis)



Fig. 10 Zalnoc Spa (photo source www.sportusalajan.ro)