

THE BALNEARY RESOURCES OF THE WESTERN HILLS: BETWEEN NOW AND THE PERSPECTIVE

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Résumé: Les ressources balnéaire dans les Collines de l'Ouest entre présent et perspective. Les eaux minérales et thermales représentent les principaux facteurs du développement du tourisme balnéaire dans les Collines de l'Ouest. Les sources très chaudes avec des températures comprises entre 25 et 80 degrés Celsius et les sources minérales sont les facteurs thérapeutiques de cette région. Les stations balnéaires offrent aux touristes plusieurs possibilités de traitements utiles pour se soigner ou pour protéger leur organisme.

Mots-clés : eaux thermales, eaux minérales, tourisme balnéaire

The Western Hills have a number of mineral and thermal waters (springs, wells and drillings), all of which represent the main natural agent of treatment. Thermal waters are represented by the main thermomineral surfaces Tășnad – Beltiug – Marghita, Boghiș – Șimleul Silvaniei – Crișeni, Răbăgani – Beiuș and the more isolated surfaces Aleșd and Cărand, respectively. Mineral springs are further divided into several surfaces: Dealurile Oașului (Oașului Hills), Dealurile Silvaniei, Depresiunea Beiuș (Beiuș Depression), Depresiunea Crișului Alb, Dealurile Lipovei and Dealurile Silagiului.

1. Physico-Chemical Characteristics of (Thermo-)Mineral Waters – The Basis for Developing Balneary Nucleus

Even if the Western Hills, especially in their Northern part, hold important resources of **thermal springs**, few of them are actually being exploited for balneary purposes. The resorts of local interest developed in the Western Hills area on the basis of thermal waters are: Băile Tușnad, Băile Boghiș, Buzușa, Sarcău. In some locations these resources are used in swimming places (Beltiug, Crișeni Șimleul Silvaniei, Marghita, Balc, Sânicolau de Munte, Aleșd, Beiuș, Cărand), while in other places, these thermomineral resources have remained, in the best case, in the state of a closed drilling (Șumal, Chiribiș) or they are wasted all over the ground (Răbăgani, Greoni).

Some geographical surfaces of the Western Hills area have some thermal waters of high thermic values. Therefore, one can find in this area several hidromineral deposits that feature temperatures of 21⁰C (Cărand), 25⁰C (Ciclova Montană), 30⁰C (Aleșd), between 42⁰ – 43⁰ C (Băile Boghiș), 64⁰C (Marghita), 65⁰C (Sânicolau de Munte), 72⁰C (Băile Tășnad), 80⁰C (Sânicolau Mare), 85⁰C (Beiuș); they are all included in the hiperthermal waters category, most of them being used in curing through balneary elements due to the thermic aspect, while their chemical structure falls in the background.

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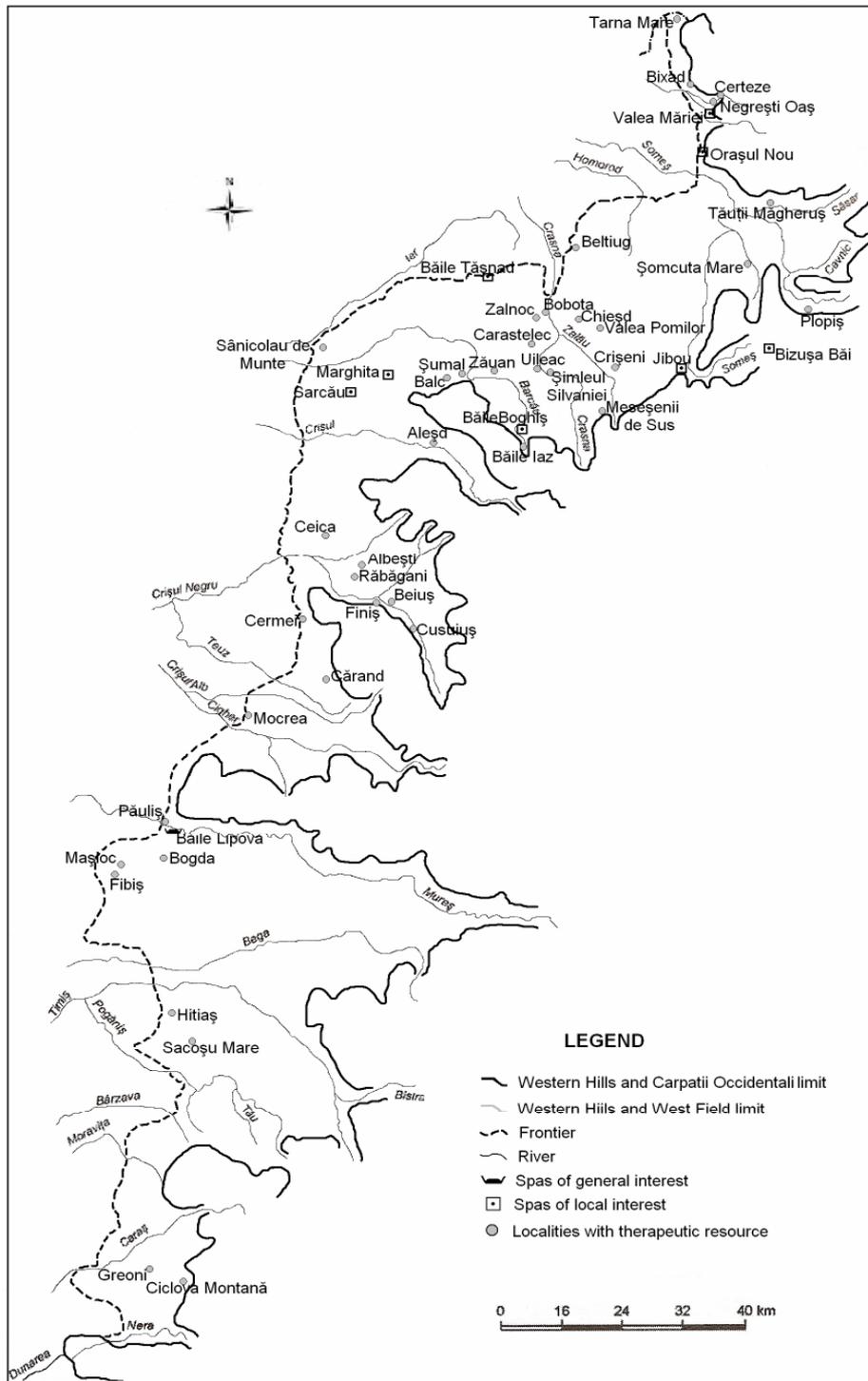


Fig. 1 The repartition of balneary and climatic spas and localities with balneary factors from Western Hill

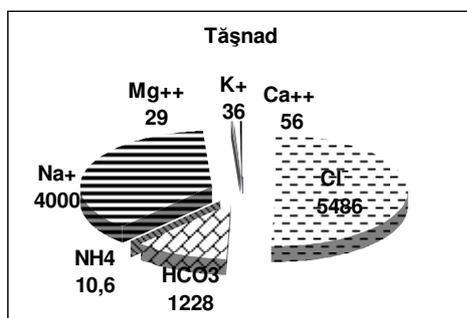


Fig. 2 The chemical composition of the thermal waters from Tășnad Spa

The sulphurous water of *Boghiș*, a bicarbonate-sodic, hiperthermal water of about 42⁰ - 43⁰ C is indicated for curing disorders of the locomotor system and of the peripheral nervous system. In the same way, it can be used for treating vertebral lumbar-sciatica, arthrosis, arthritides, and so on. As for the internal cure, the sulphurous water of Boghiș is best for treating digestive syndroms of deplorable neurotic composition.

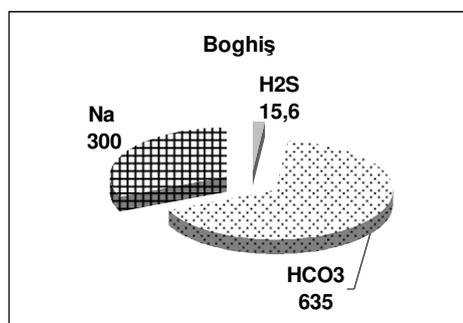


Fig. 3 The chemical composition of the thermal waters from Boghiș Spa

The bicarbonate, ferruginous, chloridic, sodic thermo-mineral water is actually being exploited at *Sarcău* inside a 4-pool-swimming place. This place is a positive example for the development of balneary tourism. Local authorities have made everything that depended on them in order to ensure they took advantage of a natural wealth - the geothermal water. An investor has built in a very short period of time several buildings that already house some elegant full-service rooms and cottages, has restored the structure of outdoor pools, is intensely working to fit up and fit out the treatment area, the medical consulting rooms, the indoor swimming pool as well as to build a hotel and several villas. They are also doing some outdoor arrangements as of now: alleys, planting some flower beds, some shrubs and trees in order to ensure a relaxing environment following the thermal bathing needed for the silence and complete rest of the guests.

Besides the local balneary swimming places, in the Western Hills area there are also a number of places where thermal waters are constantly being improved through drillings and empirically rendered valuable inside thermal spas (Balc, Marghita, Beltiug, Crișeni, Șimleul Silvaniei, Sânicolau de Munte, Aleșd, Beiuș, Cărand) or are being improved through drillings, but are not rendered valuable (Șumal, Greoni).

Marghita - seasonal balneary - climatic town of local interest, is placed about 60 km away from Oradea, at an altitude of 130 m. It has some bicarbonate, chloridic, sodic, hypotonic, hiperthermal mineral water (64⁰ C). Treatment opportunities are represented by air-heliotherapy, thermal baths in tubs and pools. Thermal waters are recommended in the treatment of different diseases of the locomotor system, in pre-puberal stages for children with hyperactive temper and minor genital functional in women.

Băile Tășnad has some chloro-sodic, bromoiodide, hiperthermal springs 72⁰ C, Q = 1500 m³/day, recommended for treating prearthrosis symptoms, degenerative and abarticlar rheumatism, posttraumatic disorders; diseases of the peripheral nervous system or gynecopathies. Cure opportunities: outdoor baths, massage. *Băile Tășnad* are the only ones that have an information spot for tourists.

In the town of *Aleşd* there are thermal waters of about 30⁰ C being exploited, bicarbonate, sulphate, sodic waters with a mineralization of 416,25 mg/l, to which a relaxing hill climate is added. Treatment opportunities are represented by baths in outdoor swimming pools.

Balc – is a place full of bromidic, iodine, chloridic, sodic, hypotonic, hyperthermal mineral waters with a high concentration of nitrogen and metabolic acid compounds. These waters are recommended for treating: degenerative rheumatism, articular rheumatism, musculo-articular disorders following traumas, peripheral neurologic diseases, gynecologic disorders. Treatment opportunities include baths in outdoor swimming pools.

Thermal waters (deposit waters) in *Balc* were used inside the swimming place belonging to *Parcul Castelului* until 2005, when this swimming place was closed out of economic reasons. The treatment facility was built up in 1998, but it is still to be open for use.

Sânicolaul de Munte is a balneary-factor place situated about 47 km away from *Oradea* and it has 70⁰ C bicarbonate, hyperthermal thermal waters, offering several treatment opportunities such as air-heliotherapy, thermal water baths in outdoor swimming pools.

In *Beiuş* there are some bicarbonate, sulphate, sodic thermal waters of 85⁰ C being exploited inside the swimming place.

Thermal waters in the Western Hills area can also be found in *Răbăgani*, (oligomineral thermal waters), *Cărand*, some oligomineral thermal water can be found in *Româneşti*, as well as at the limit of *Aninei Mountains* in *Cioclova Montană* and *Greoni*.

Mineral waters have been exploited for a long time in the area, in the traditional resort of *Lipova*. Besides this, one can observe the presence of mineral waters in several surfaces that include *Tarna Mare*, *Bixad*, *Negreşti Oaş*, *Certeze*, *Valea Măriei*, *Oraşul Nou*, *Bobota*, *Zăuan*, *Chieşd*, *Valea Pomilor*, *Carastelec*, *Zăuan*, *Uileacul Şimleului*, *Jibou*, *Bizuşa*, *Ceica*, *Albeşti*, *Cusuiuş*, *Cermei*, *Mocrea*, *Păuliş*, *Maşloc*, *Fibiş*, *Bogda*, *Hitiaş*, *Sacoşu Mare*.

The presence of mineral waters in the area and especially of carbonated waters is related to the basaltic eruptions on the major tectonic line on the approximate direction comprising *Păuliş – Luncareţ – Vârşeţ*.

Lipova is a permanent balneoclimatic resort of general interest that consists of carbonated, ferruginous, bicarbonated, calcic, sodic, magnesian, hypotonic mineral waters. The hydromineral deposits are morphologically placed in the waterside of the *Şistarovăţ* brook, a left-side affluent of *Mureş*, at the contact point between *Campia de Vest* and *Lipovei Hills*.

The very first local springs, placed right next to the actual F11 source, are considered to have been discovered around 1818 by shepherds. Following some private initiative, supported by the administrative and medical authorities of the time, a balneary establishment was built, having three bathing huts for bathing. The arrangement of a park started in 1819 and then a paved access way was built, as well as a ninepins field, a shooting ground, a restaurant and several housing buildings. After all the buildings were destroyed by a fire in 1848, reconstruction was set in place by contractor *Athanazie Missits* in 1853.

Spring collecting work, begun in 1854, did not manage to find concentrated mineral water spots, so that the water exploited came to lose some of its quality. The geological investigation of the deposits only began during our century, elaborated works still being very reduced in number (*Radu Pascu*, *Iuliu Laglen*). Documents from 1926-1927 speak of the existence of four mineral water sources (springs 1, 2, 3 and 4), while other four wells were performed between 1927-1930.

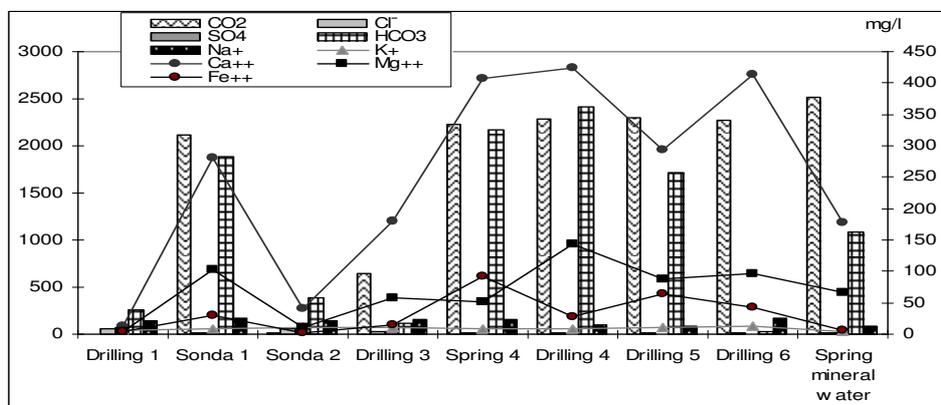


Fig. 5 The chemical composition of the mineral waters from Lipova Spa

The mineralized water complex is open through F9 bis, F11, F12 and S4 drillings. As of now, F9 bis drilling utters through pumping at 2 l/s, F11 drilling at 1,2 l/s through pumping, while F12 and S14 sources function as pump places of flow up to 1,2 l/s, used for domestic consumption. Mineral water is turned valuable in the following manner: 184,3 mc/day (about 16-hour-bottling) for S.C.LIPOMIN Lipova and S.C.APEMIN Băile Lipova; 69 mc/day for balneary activity (source: ApeMin Lipova).

Mineral waters have a positive effect for treating cardiovascular disorders (arterial hypertension, infarct consequences, old infarct consequences; ischaemic cardiopathy, compensated mitral insufficiency, acrocyanosis), digestive system disorders (chronic gastritis of low acidity, functional disorders of the colon), hepatic-biliary disorders (chronic calculus gall, post-cholecystectomy conditions, biliary dyskinesia associated with persistent chronic hepatitis), disorders of the respiratory system, chronic gynecological disorders, affections of the locomotor system, disorders of the circulatory system, kidney and urinary tract diseases (rare renal colics, post-urinary infections conditions) and associated diseases.

Besides the well-known resort of Lipova, one ought to mention other resorts of local interest where mineral waters are being used in external and internal treatment as well as for bottling.

In the outskirts of Vama Turcului there is *Valea Măriei* with its carbonated, bicarbonated, chlorurate, sodic, sulphate, isotonic and hypotonic mineral waters, considered to be a reserve balneary facility.

At Valea Măriei the housing facility is currently being renovated, but the essential natural resource, i.e. mineral water, is not used, all of the existing equipment being neglected.

The sulphurous, sulphate, sodic, calcic, magnesian, isotonic mineral water as well as the sapropelic mud from *Jibou* are indicated for treating disorders in an incipient stage or affections that are compensated through medicinal, orthopedic treatment for preventing any recurrences or worse evolutions of: diseases of the locomotor system of degenerative and inflammatory rheumatic nature, located in the spine and limb joints – cervical, dorsal, simple lumbar spondylosis, without neurological complications; coxarthrosis in incipient stages; gonarthrosis; arthroses in upper and lower limbs; compensated multiple arthroses, following medicinal treatment; scapulohumeral periartthritis.

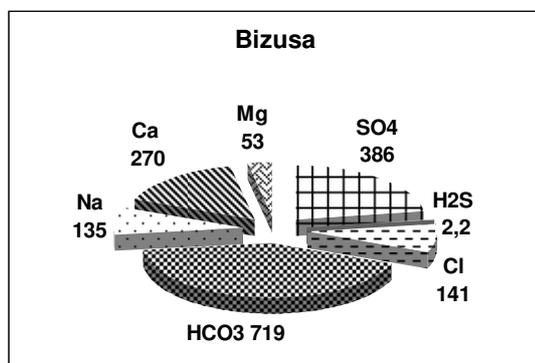


Fig. 7 The chemical composition of the mineral waters from Bizușa Spa

The poorly-sulphurous water in *Bizușa Băi*, a sulphate, very poorly chlorurate, calcic, sodic and hypotonic water also cures inflammatory rheumatic disorders; degenerative rheumatic disorders – cervical, dorsal and lumbar spondylosis, arthroses and multiple arthroses; abarticlar rheumatic disorders (tendinoses, tendomioses, tendoperiostoses, periartthritis); hepato-biliary diseases; kidney and urinary tract infections; peripheral nervous system disorders; gynecological disorders.

Orașul Nou has three springs of bicarbonate, chlorurate, sodic, oligomineral, carbonated, isotonic mineral waters.

In this small town, mineral waters are also being exploited through a drilling in two springs: Băile Ardeleanului and Băile Nadoș.

In the past, throughout *Orașul Nou* Vii two resorts/spas existed (Băile Ardeleanului and Băile Nadoș). Nowadays there are five tubs open for use in Băile Ardeleanului.

Bixad- is a seasonal balneoclimate resort of local interest, placed at the altitude of 180 m. It has carbonated, chlorurate, sodic mineral waters as well as sulphurous, bicarbonated, calcic, magnesian, sodic mineral water, together with a hill area creating a sedative environment. Treatment opportunities include springs best suited for internal cure. Mineral waters treat disorders in an incipient stage or compensated by medicinal treatment, for preventing any recurrences or worse evolutions towards more advanced stages of: chronic gastrites of low acidity, featuring moderate digestive disorders, functional disorders of the colon, biliary dyskinesia.

Bicarbonated, chlorurate, sodic, poorly sulphurous, carbonated, hypotonic mineral waters can also be found in *Negrești Oaș* and *Certeze*, while oligomineral springs are available in *Plopiș*. Bicarbonated, calcic, sulphate, magnesian waters can be found in *Tauții – Măgheruș* and *Șomcuta Mare*.

The *Bobota* spring is a ferruginous, sulphate, bicarbonated, calcic, magnesian and hypotonic water. It can be used in treating hepato-biliary disorders, in kidney and bile duct disorders, and so on.

The vitriolic water of *Carastelec* - an extremely ferruginous, sulphate and magnesian water - can be used both as an external cure and internal treatment for diluted ingestion or in very reduced dosage.

The water from *Chieșd* - a sulphurous, bicarbonate, calcic, magnesian and hypotonic water – can also be used for treating hepato-biliary, gastric and renal disorders.

The water from *Zalnoc* – a ferruginous, sulphate, bicarbonate, calcic and hypotonic water – is recommended for diuresis cures in renal and hepato-biliary disorders, the same way as the waters from *Zăuan*, *Valea Pomilor* and *Meseșenii de Sus* do. In all the above mentioned resorts there were some spas that used mineral water for treating different disorders, but they are closed for the moment because of the retrocession process, while others, such as the spa in *Zăuan*, have been completely shut off.

Natives from *Uileacul Șimleului* empirically use the oligomineral water for baths, but also for watering animals and for doing the laundry.

Mocrea has some springs of ferruginous, chlorurate, bicarbonated, mixed waters and also some poorly arranged sulphurous, carbonated waters. Other resorts that have mineral waters include: *Ceicai* – bicarbonated waters, *Cermei* – oligomineral waters, *Păuliș* – ferruginous, bicarbonated mineral waters, *Bogda*, *Fibiș* and *Mașloc* have springs of oligomineral waters of a total mineralization of 717,7 g⁰/₁₀₀.

2. The Perspectives for Developing Balneary Tourism Through Hidromineral Resources

Considered, at least theoretically and most recently, to be among the priority fields of the economy, tourism is an alternative for any place. One of the branches of tourism that might help in developing, with good perspectives, the Western Hills area based on some exceptional potential, is balneary tourism.

The areas that have balneary facilities will be able to take advantage of an important contribution of capital coming from the European Union, through Structural Funds whose purpose is to finance some programs for development which, even if not entirely centered around tourism, also have a priority direction that regards this economic activity. The tie between the lasting development and the touristic-purposed arrangements that especially include balneary tourism, is becoming more and more important and these features can also be applied from the ecological perspective.

After having confronted an alarming reduction of demand due to the inadequate offer as it faced the new global requirements and changes, balneary tourism has registered a relaunch of its offer as a result of its evolution towards becoming a healthcare tourism.

This evolution of balneary tourism towards becoming a healthcare tourism can be regarded as an improvement of its content, as well as a response to the demand expressed by healthy or apparently healthy individuals that request cure spas either because of the worsening of their physical, mental and moral condition or because of the stress, the obesity and pollution, but also because of the mutations appeared at a mental level, materialized in the need to have a physical and mental shape as good as possible, in the need to preserve and maintain it all the way to the elderly ages as well as due to the reconsideration of natural therapy means.

The evolution of the balneary tourism towards a healthcare tourism will determine the reorganization of balneary resorts or the setting up of some new resorts where the dominant feature will be the facilities designed for healthy people who demand such a place for moving away from exhaustion and stress and for regaining the best physical and mental fitness, taking a rest, entertainment, having at their disposal complete medical assistance and all the facilities needed for an appropriate stay. Consequently, many balneary resorts will specialize in preventing these unfavourable aspects for human life and will be transformed into „healthcare fortresses”. As for the setting up of new resorts, one must highlight here the so-called *proximity resorts* that are placed near an important destination/city, its offer being especially structured on recovery products or loisir/pastime.

On the other hand, there have been some team programs that include medical professionals. Thus, there are different antiobesity, antistress, wellness programs that are highly successful to the younger generation of human beings or to the individuals gaining a medium income, too, individuals who can attract as many social categories as possible in this touristic field.

Also, a so-called *ludic side of the offer* has been developed in many of the balneary resorts as a result of the will to offer a product that would be addressed to the entire family; it would be represented by the aquatic amusement that contains various forms to manifest itself.

By giving up the classical approach to the use of the infrastructure and the organization of touristic activity, initially devoted almost exclusively to elderly people, by shifting the focus towards another social category - the one of the active population - balneary tourism in the Western part of the country might become much more efficient. Shifting focus towards the maintenance of the health of the active population, for preventing diseases, reducing health insurance expenses and for developing the maintenance field is one of the solutions offered by balneary tourism. Romanians should have some shorter, but more often holidays in order to be relieved from the daily stress and to efficiently maintain their state of health.

The development of balneary tourism is highly important also from the point of view of the profit, as the average duration of a stay is greater than in other forms of tourism, it supposes treatment and maintenance, and this leads to a much higher income.

I believe that in a very short period of time these shortcomings will disappear and balneoclimateric resorts in the Western Hills area will be among the important European destinations that will attract significant tourist flows.

Conclusions

The special value of the balneary touristic potential in the Western Hills area, supported by the diversity, the volume and the therapy value of mineral substances on one hand and the tendencies expressed on the international touristic market following the development of healthcare tourism on the other hand, all offer the possibility that, under the circumstances of an adequate strategy, balneary tourism would become one of the strong points of the Romanian tourism that would give it the chance for the relaunch on the international touristic market.

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