

## Reevaluating the water resources in tourism

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**Abstract.** Romania has an ample range of hydrographical resources: lakes, rivers, mineral waters, that can be exploited economically by tourism. The distribution of water resources that can be exploited is wide due to the fact that waters have an essential role in creating the tourism environment. They can generate various forms of tourism such as spa, recreational tourism, and a form of educational tourism for students, as training applications of school and university curricula. In favor of a good tourism management, it is appropriate to classify the areas depending on water quality and hydrologic specific of the area, but also according to the existing facilities and recreational opportunities. Curative properties of the thermal and mineral waters in Romania are not superiorly reevaluated due to the lack modern infrastructure. It is essential to value the areas of educational tourism, as well as the thematic one, especially the areas with special karst phenomena, emphasizing on implementing the concept of sustainable regional development.

**Key Words:** tourism management, water resources with curative properties, balneary tourism.

**General aspects.** Romania has an ample range of hydrographical resources: rivers, lakes, sea and underground water resources with curative properties as well. These resources are spread evenly and located on various relief forms in Romania.

All these hydrographical resources should generate various types of tourism, such as recreational, educational and curative tourism. Unfortunately, lack of infrastructure and poor promotion of tourism are reasons for which the tourism's potential in Romania is still used at low levels.

**Romania's hydrographical potential.** Romania has various hydrographical resources such as mineral waters. Usually, mineral waters from Romania contain chlorinated substances, respectively compounds of chlorine, sodium and potassium. Some mineral waters are thermal mineral waters with high temperatures. Mineral waters have an important place in tourism resources, creating one of the oldest forms of tourism – balneary tourism (Rusu 2008a).

From the theoretical point of view, Romanian mineral waters are defined according to the German education system, respectively based on the chemical composition, while in other countries mineral water is defined based on its curative properties (Baboianu et al 2008).

The use of mineral waters in Romania has a traditional history, there is evidence of using these curative waters since Roman times, thermal baths were built at Herculane. Mineral and thermal waters started to be studied scientifically in the 18th century, with focus on chemical composition and curative effect. Nowadays, the Romanian mineral waters are classified according to their chemical composition, from mineralization of 1 up to over 150 g L<sup>-1</sup> (salty waters).

The genesis of Romanian carbogaseous mineral waters is connected to the mofette aureole, the nearness of ancient and present volcanic downhill from western Oriental Carpathians and Apuseni Mountains.

Romania's thermal waters are genetically tied to the existence of thick fractures and geothermal stages.

There are various types of mineral waters in Romania: carbogaseous, bicarbonate, ferruginous, alkaline, chloride-sodic, iodized, radioactive, arsenical etc, that can be used for a large range of human conditions, either in external treatments or internal treatments.

Several mineral waters are accompanied by the so-called mofettes, carbon dioxide and sulfur-free gaseous emanations.

It is estimated that the majority of Romania's hydromineral resources is not used at present due to several reasons although it has a remarkable tourism potential!

**Therapeutic muds as tourism potential.** Muds are pelitick or peloid rocks (Greek pelos – clay), and substances that are formed in natural conditions under the influence of geological and biological natural conditions, and they are mainly used for therapeutic purposes.

These muds may be used in their natural state or processed, that is grinded and mixed with mineral or geothermal waters.

These types of muds are geographically linked to two natural areas: peat swamps and sapropelic muds from salty locations.

In Romania, there are peat swamps near Vatra Dornei, Borsec, etc and sapropelic muds near the salty lakes of Techirghiol, Amara, The Salty Lake, Ocna Sibiului, Bazna, Slănic, etc.

**Surface waters and tourism potential.** Romania has a diverse and rich network of surface waters, including the Danube and any other small or big stream.

The possibilities to use these resources are numerous: nautic sports, leisure activities, piscicultural tourism, ethnographical tourism (seas, vortexes, stamping mills).

Rivers are excellent for swimming, taking sun baths, nautical sports, fishing etc. Other rivers are good for hiking, mountain climbing or extreme nautical sports.

Waterfalls areas have a unique tourism potential. Waterfalls are breaks of different sizes in slope of rivers, due to highly advanced tectonics. Waterfalls are located in areas with hard rocks or cliffs, crystalline schists (Bâlea Waterfall), or metamorphic calcars (Horses' Waterfall from Rodnei Mountains) (Rusu 2008a).

**Lakes as recreational areas.** Lakes are an important element of geographical landscape. They have multiple geneses. There are over 3400 lakes in our country, out of which 57% are natural lakes.

The most famous lakes are the saline lakes (Ocna Sibiului), glacial lakes (Retezat Mountans), volcanic lakes (Sfânta Ana) and lakes – river banks or maritime.

The majority of the lakes is located in the Retezat Mountains, and the bank-types ones are on the Black Sea seashore (Rusu 2008b).

**Development of water resources in tourism.** Water is indispensable to humans and environment. All processes in the natural environment take place in the presence of water.

Tourism is by its nature, content and purposes a phenomenon characteristic to the modern civilization and one of the major components of economic and social life that polarizes the interest of an increasing number of countries.

The role of tourism in the national economy of different countries is extremely important due to its complexity, the amplitude of activities that need a particular infrastructure and development of services, but most of all because it implies professional training and an the promotion via tourism fairs and movies promoting a tourism area etc.

**The implementation of sustainable development concept in tourism.** At the beginning of this millennium a new concept appeared – the sustainable development. The notion may and must be implemented in tourism as well.

Sustainable tourism covers all forms and activities in the tourism industry, starting with conventional mass tourism, thematic tourism, cultural tourism, business tourism, religious tourism, sportive tourism and even urban tourism (Rusu 2008b).

The process of turning the tourism into a sustainable tourism must be coordinated at the national level and supported at local level. Sustainability for tourism implies optimum use of natural resources, including the biodiversity, the minimization of negative impact over the environment and resources, the maximization of benefits both for local community and nature conservation (Baboianu et al 2008).

As a natural consequence, the sustainability in tourism also refers to the managerial structures necessary to reach the objectives.

As any other economic activity, the impact of tourism must be considered from various aspects, respectively under economic, cultural and environment aspects. The effects may be both positive and negative. From the economic point of view, tourism should definitely bring benefits both for the business environment and local community in matters of employment and development of local resources. From the cultural traditions and customs point of view, there is the risk of altering local traditions and imposing them a commercial feature.

At the ecological level, the negative impact make appear as the depreciation of natural resources, the alteration of ecosystems, the possibility of contaminating the area by depositing wastes or discharging used waters in the environment, etc.

Creating a sustainable development policy must take into account the idea of negative impact over the community in the area and the minimization of negative effects on the environment (Rusu 2008b).

**Conclusions.** Romania has an outstanding tourism potential over a balanced divided territory. This potential must turn into a tourism offer. Romania has a complex and diverse hydrographical network, comprising rivers and streams, natural and artificial lakes, some with therapeutic properties, the Black Sea, the Danube and the Danube Delta, but also mineral and thermal-mineral waters that can and must promote tourism.

The actions of promoting tourism should take place within governmental tourism institutions, local tourism authorities and especially within the private sector.

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