

## “Good Practices of an Underground Health Spa Operation - The Case of the “Wieliczka” Salt Mine“

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### Abstract

*Spa tourism is an important and specific form of health tourism. It is a part of the tourist market, which was extracted because of the motivation for tourism practicing. Spa tourists come to spas for therapeutic purposes and remain under medical spa supervision. Generally speaking, the spa tourism involves travelling for health and medicinal purposes.*

*In the paper, the authors discuss the health tourism built on the specific therapeutic qualities of the “Wieliczka” Salt Mine near Krakow. The spa operates underground, in the former salt mine. Apart from discussing the best spa practices involving medicinal qualities of underground microclimate (Subterraneanotherapy), some unconventional projects associated with this activity are mentioned, including construction of saline graduation tower. The Salt Mine has also a rich and diverse offer tailored to health resort visitors’ needs (packaged spa and medical services) as well as to regular tourists (underground tours in the salt mine, miners’ route, etc.), schools and enterprises (organisation of cultural events, support for school, commercial and private events). The offer promotes the “Wieliczka” Salt Mine as an important tourist and spa destination for visitors from Poland, Europe and the whole world.*

**Keywords:** health resort; health resort visitor; spa; spa tourism; tourist market; the Wieliczka Salt Mine

**Paper Type:** Scientific paper

### Introduction

The tourist market is a complex system with a broad range of target and entity-specific components. The tourist offer derives from the structure of the tourist economy which comprises some direct (related to tourism servicing) and indirect components (related to development of offers addressed to the population of tourist areas and to the incoming tourists). Insofar as entities are concerned, there are two groups of service providers operating on the tourist market: commercial service providers (entrepreneurs operating in the sector) and public ones (local government units and NGOs representing touristic destinations). Spa tourism, which falls into the health tourism category based on the criterion which is motivation to travel. The demand for such type of tourism is met by the offer of the entities operating on the broadly understood tourist market and by a specialist offer that satisfies the needs of tourists interested in spa tourism (i.e. health resort guests). However, some spa tourism may be used to create a demand to control the demand of tourists visiting health resorts for purposes other than treatment. In such case, the spa tourism offer complements their tourist needs in a spa destination.

The purpose of this paper is to discuss a particular type of spa tourism based on the unique therapeutic qualities of the

“Wieliczka” Salt Mine operating an underground spa. Apart from outlining some good practices introduced by the spa in order to benefit from the underground microclimate qualities (subterraneanotherapy), the paper also describes some associated unconventional initiatives (including erection of a saline graduation tower).

### Spa tourism on the tourist market

Health resort tourism is referred to as spa tourism, health tourism or therapeutic tourism. **Spa tourism is directly associated** with people who visit health resorts for therapeutic reasons and are supervised by qualified physicians (Dryglas, 2006). In consequence, we may conclude that spa tourism involves travelling largely motivated by health or therapeutic reasons.

The section below presents selected definitions of therapeutic and health tourism in specialist literature. According to A. Jagusiewicz, therapeutic tourism involves stays at hospitals and health resorts in connection with the treatment of some chronic diseases, rehabilitation, secondary prevention and health education (Jagusiewicz, 2001). J. Wolski defines therapeutic tourism as a relocation from one’s place of residence to a temporary lo-

cality with a therapeutic climate to improve one's physical and mental health, mostly by relaxation and prevention (Niemiec, Trzcińska, 2011). Among the main reasons behind therapeutic tourism J. Wolski listed recovering strength and the health resort lifestyle, as well as an improvement of tourist's health and active methods of relaxation. M. and R. Łazarek define therapeutic tourism as a voluntary departure from one's place of residence to recover one's physical and mental strength in a tourist locality characterized by a microclimate and availability of curative waters. Such type of tourism is usually recommended to the overworked, exhausted, stressed, but physically healthy tourists, who only want to change their environment, meet new people and use the access to biological regeneration (Łazarek, 2007).

The spa tourism market is a tourist market sector, differentiated from the sector from the perspective of tourists' motivation

i.e. a beneficial impact on tourist's health and psycho-physical condition as the main or supplementary purpose of tourist traffic. The spa tourism market is a peculiar sector combining the elements of other tourist sectors, hospitality in particular, with the involvement of the medical sector, i.e. spa therapy.

Spa tourism is an important and specific form of therapeutic tourism. The exceptional nature of spa tourism results primarily from the purpose and motivation of stays in spas and from the need to use the services offered by health spa companies. Spa tourism relies on spa treatment which is a commonly recognized medical sector and an important element of tourist economy. Spa treatment involves therapies in natural therapy facilities, where patients undergo procedures based on the use of natural materials (spa resources) including: curative waters, peloid or gases. An important element of spa treatment is the very stay in a place with local, therapeutic climate.

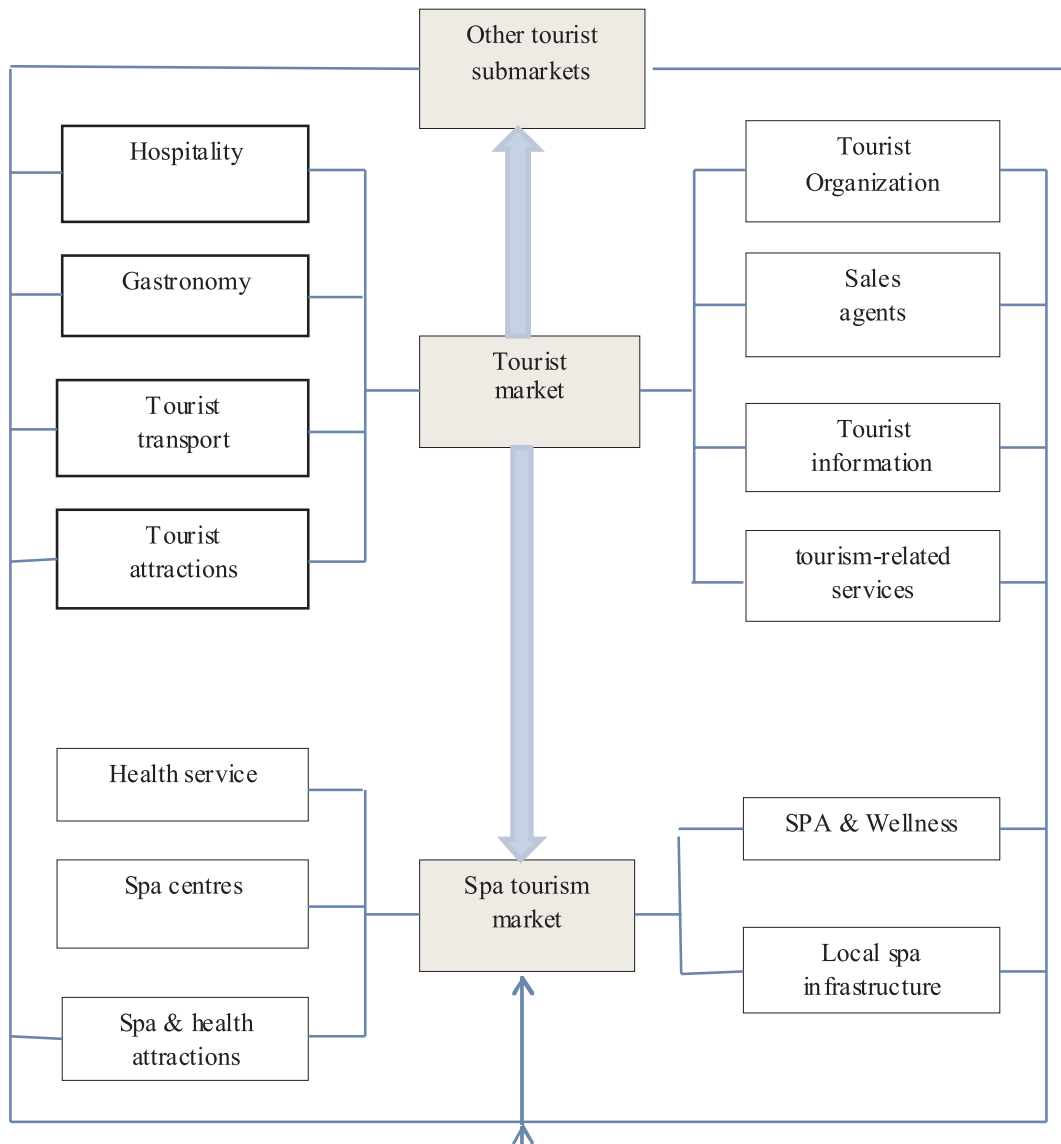


Figure 1. Spa tourism in the tourist market structure – the supply.

Source: Own study on the basis of: Panasiuk 2013, 9 – 21.

Spas offer treatment and health prevention and this is the main purpose of their operation. C. Kaspar and P. Ferlich (1999) propose to define spa tourism as all relations, activities and phenomena resulting from tourists' stays in health resorts, as well as from their travels to those destinations and returns to their place of residence. The Spa tourism market which matches this definition, coming as a part of the tourist market, has two key functions:

- treatment-rehabilitation and prevention,
- relaxation.

These functions result in a blend of spa tourism offers (both tourist and medical) and offers targeting the demand satisfied by other tourist markets, e.g. relaxation, heritage or qualified tourism. In consequence, the spa tourism originates from and is developed by combining the medical and preventive functions with the tourist function.

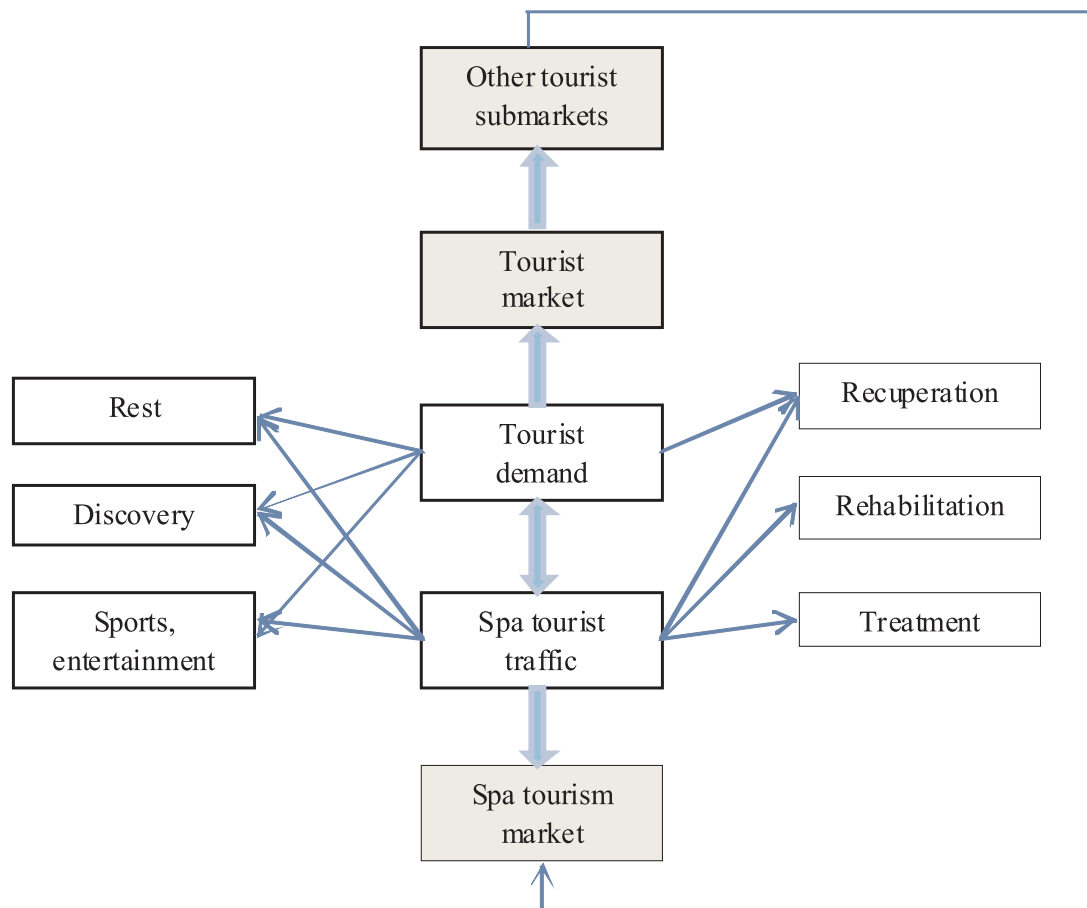


Figure 2. Spa tourism in the tourist market structure – the demand.

Source: Own study on the basis of: Panasiuk 2013, 9 – 21.

The core entities operating on the spa tourist market include:

a) on the side of demand:

- spa tourists (health resort visitors),
- other tourists (other than health resort visitors) staying at a spa, users of the spa offers as complimentary services,

b) supply-related:

- spa enterprises (spa treatment facilities such as health resort facilities, natural medicine facilities, spa & wellness centres),
- other tourist enterprises offering their services to health resort visitors and other tourists,
- enterprises offering tourism-related services to tourists, including health resort visitors, mainly to satisfy the needs of permanent residents of the health resort,

c) tourist policy-related:

- the state authorities governing the operations of spa treatment and the tourist sector in general,
- local governments in spa locations and local government associations (the Association of Polish Spa Communes),
- industry organisations of entities from the sector (“Polish Spas” Chamber of Commerce),
- tourist industry organisations.

### Health treatment services at the underground Wieliczka health spa

Very few locations worldwide use the unique mine microclimate for treatment purposes. The most famous ones are: Wieliczka and Bochnia in Poland, Zlate Hory in the Czech Republic and Berchtesgaden in Germany.

The underground health spa in Wieliczka, a satellite town of Krakow with a population 20,000 inhabitants, is run by a mine (Kopalnia Soli "Wieliczka" S.A.). Wieliczka town has not been officially recognised by the state as the health resort. While from 1971 to 2006 it was classified as a health resort i.e. a location offering health and spa treatment services based on its natural conditions or using its natural treatment resources, it was not recognized as a health resort and, formally, does not fall under the health resort laws and regulations. As in health resorts, treatment profiles were identified and determined for the health resort treatment facilities on the basis of therapeutic properties of the locally occurring natural conditions. Although currently Wieliczka does not enjoy a spa commune status there are health spa facilities operating in the local salt mine. On 4 August 2011, the Minister of Health awarded the "Wieliczka" Salt Mine therapeutic salt chambers the status of an underground sanatorium and spa, confirming that the facility can offer a spa therapy in underground mining pits of the Salt Mine in "Wessel Lake" "East Mountains Stable" and "Dragon" chambers. It was the turning point in the history of the spa, when the underground spa in Wieliczka was transformed into a full-fledged, legally recognized health resort.

The "Wieliczka" Salt Mine goes into the footsteps of Dr. Feliks Boczkowski's health resort tradition and the subterranean-therapy treatment method (the impact of specific microclimate of salt pits of Wieliczka mine on human organism) initiated by Prof. Mieczysław Skulimowski in 1950s. The spa offers rehabilitation and treatment packages (day and night fixed-term stays, single and several-day-long visits) in the underground pits of the "Wieliczka" Salt Mine at the depth of 135 m. It is the only health resort in Poland, and one of few in the world, to organize a programme for active rehabilitation of the respiratory system in the specific microclimate of salt pits.

The health resort's operation is based on its collaboration with some academic institutions, including Collegium Medicum of the Jagiellonian University and the University of Physical Education in Kraków. The cooperation is focused on research and education on the benefits of the attractive climate as well as mineral resources of the Mine and their impact on therapeutic purposes.

Since 2004, the "Wieliczka" Salt Mine Health Resort has been a holder of the International ISO 9001:2008 Certificate for its Health Care Quality Management System in the area of treating respiratory ailments and allergies in adults and children.



Photo 1. Wieliczka Salt Mine.

Source: [www.kopalnia.pl/.../prezentacja\\_ksw\\_dla\\_przewodnikow\\_2007.pps](http://www.kopalnia.pl/.../prezentacja_ksw_dla_przewodnikow_2007.pps)

The core business of the "Wieliczka" Salt Mine Spa is organising rehabilitation and therapeutic stays using the therapeutic climate of the underground mine pits (subterranean therapy) for out-patients (trips down to the Mine) and as a package product (underground rehabilitation, accommodation, board and transfer). The specific microclimate of salt pits is particularly favourable for patients suffering from chronic respiratory conditions affecting upper and lower respiratory tract and patients with allergies. Such stays (their duration varying from one to

10 days) are organized both for commercial patients and under contracts with the public healthcare provider – the National Health Fund.

Currently, the "Wieliczka" Salt Mine is implementing a program of active pulmonary rehabilitation in the underground mine pit microclimate. Rehabilitation and treatment offered in the underground facilities of the Wieliczka mine are based on sound technical assumptions and have been thoroughly analysed and assessed by national and regional consultants in

medical rehabilitation and allergology and the procedures and solutions offered by the Centre were endorsed by the decision-makers. One may analyse the unconventional nature of the Underground Rehabilitation and Treatment Centre from various perspectives. On one hand, it is the uniqueness of this pulmonary rehabilitation site, located 135 m underground in the middle of a salty labyrinth of 245 km of paths and 2,391 chambers of the "Wieliczka" Salt Mine. This place, boasting of more than 700 years of history, has been recognized in 1978 and included into the 1<sup>st</sup> UNESCO World list of cultural and natural heritage. Owing to its geographical location, different treatment methods applied to patients overlap, including: subterraneotherapy, underground climate therapy and underground terrain therapy. Furthermore, note that the centre focuses on offering rehabilitation of the respiratory system by teaching correct breathing both in the remission and acute phases of a disease (e.g. correct breathing in asthma attacks) and by eliminating dysfunctions

of the muscle-skeletal system, in particular in the chest, which result from long-term impairment of the respiratory system functions and insufficiently working respiratory muscles.

Apart from the pulmonological rehabilitation by subterraneotherapy, the Health Resort has introduced a system of out-patient health resort treatment involving a series of day and night stays at the underground treatment base in the "East Mountains Stable" chamber. Currently, the mine is negotiating a contract with the National Health Fund to deliver this service to a broader group of patients and to attract commercial clients potentially interested in the product.

Annually the "Wieliczka" Salt Mine is visited by more than 1 million 300 thousand tourists. At the same time, the number of health spa visitors is quite small at just over 1,000 people (data for 2007). However, it should be noted that the share of revenue from the sale of the health services is relatively significant (3%), table 1. and 2.

**Table 1. The sale of services offered by the "Wieliczka" Salt Mine (PLN).**

Services/ year	2005		2006		2007		2008		2009		2010		2011	
Total sale of services	39074815	100%	45921466	100%	51859710	100%	58082876	100%	63891163	100%	69641367	100%	75212677	100%
Commerce	1746559	4%	2464784	5%	2720700	5%	2883942	5%	3056979	5%	3240397	5%	3434821	5%
Catering	3316632	8%	3789750	8%	4257880	8%	4683668	8%	5105198	8%	5564666	8%	6065486	8%
Tourism	29471762	75%	34039767	74%	38254260	74%	43641523	75%	48597990	76%	53380372	77%	57915095	77%
Events	2365766	6%	3313870	7%	3356170	6%	3523979	6%	3700177	6%	3922188	6%	4157519	6%
Administration	1446725	4%	1485266	3%	1365000	3%	1405950	2%	1448129	2%	1491572	2%	1536320	2%
Health spa	727371	2%	828029	2%	1905700	4%	1943814	3%	1982690	3%	2042171	3%	2103436	3%

Source: [www.kopalnia.pl/.../prezentacja\\_ksw\\_dla\\_przewodnikow\\_2007.pps](http://www.kopalnia.pl/.../prezentacja_ksw_dla_przewodnikow_2007.pps)

**Table 2. The number of the "Wieliczka" Salt Mine visits**

The number of visitors	2005	2006	2007	2008	2009	2010	2011
The number of tourists	1 028 682	1 065 857	1 111 700	1 167 285	1 225 649	1 286 932	1 325 540
The number of events participants	32 005	33 788	35 100	36 504	38 694	41 016	43 477
The number of health resort visitors	657	864	1 065	.	.	.	.

Source: [www.kopalnia.pl/.../prezentacja\\_ksw\\_dla\\_przewodnikow\\_2007.pps](http://www.kopalnia.pl/.../prezentacja_ksw_dla_przewodnikow_2007.pps)

### Creative use of local therapeutic values by the "Wieliczka" Salt Mine

To broaden the range of therapeutic services offered to patients and, most importantly, to ensure comprehensive care to patients suffering from chronic conditions, the Spa provides medical services (complementary to underground services) in the "Salt Mill" building located on the ground on the mine area near Kinga shaft. These services include: out-patient specialist

care (pulmonology out-patient clinic with a spirometry unit), out-patient rehabilitation centre, out-patient physiotherapy centre offering a broad range of physiotherapeutic procedures (kinesiotherapy, physical therapy), diagnostic tests and health prevention programmes, as well as biological regeneration and skincare procedures. The offer of health services includes occupational medicine as well. The health resort has its own lab test collection point and a shop offering medical products.



Patients travelling to rehabilitation-therapeutic sessions at the “Wieliczka” Salt Mine have the option to use the health resort’s accommodation offer and stay in smartly furnished “Salt Mill” guest rooms adapted to the needs of persons suffering from allergy.

In addition, the Health Resort organises a day or overnight group prevention and health promotion stays to leverage its underground therapeutically sanatorium base as well as its staff’s knowledge and skills.

Note that the Health Resort runs parallel to the mine promoting itself as a major tourist attraction. The “Wieliczka” Salt Mine is visited by several thousand tourists daily (more than a million a year) with the peak of the tourist traffic in the summer. There is no doubt that the health resort may recruit its

future patients from the tourists coming to the salt mine. Also, Wieliczka is a satellite town of Kraków. The tourists coming to Kraków as well as residents of the city who are increasingly diagnosed with various allergies, may also be a pool of potential Spa patients or at least clients for the broad offer presented by the “Wieliczka” Salt Mine.

Both the tourist and therapeutic offer blend and are complementary in terms of hotel, catering and recreation facilities. The offer is dedicated to clients’ groups of different age, needs, preferences and expectations.

One of the latest investment projects of the “Wieliczka” Salt Mine supporting the operation of the “underground health” and the entire mine is the construction of the saline graduation tower in St. Kinga’s Park in Wieliczka (in the salt works area).



Photo 2. The saline graduation tower in St. Kinga’s Park in Wieliczka.

Source: <http://www.kopalnia.pl/zwiedzanie/teznia-solankowa>

The planned capacity of the saline graduation tower is 7,600 sq.m. The facility will be oval-shaped, with a 26 m high tower offering a view of St. Kinga’s Park, mining shafts and the town. The saline graduation tower will perfectly compliment the current spa offer of the mine and will be used by the health resort visitors, tourists and residents of the town and the area alike. The saline used to “produce” the aerosol in the salt graduation facility will not be fully saturated and will be sourced from the inflow of waters to the mine pits. The saline installation at the graduation facility will form a part of the current salty water treatment system, which includes the salt works as well. Certificates confirming therapeutic properties of the mineral water have been issued for the saline from two intakes located at the depth of 235 m and 255. The microclimate around the graduation tower will be used in prevention and treatment of upper respiratory tract diseases, sinusitis, pulmonary oedema,

hypertension, allergy, vegetative neurosis, hypothyroidism, migraine, dermatologic ailments, gastro-intestinal tract diseases. Natural inhalations in the saline graduation tower will favour augmentation of the patients’ immune system. Also note that, at present, the only saline graduation tower in Małopolskie region is located in the town of Rabka; however, it is considerably smaller in size when compared to the one being erected in Wieliczka.

## Conclusions

The “Wieliczka” Salt Mine has been making an excellent use of the mine’s natural and cultural resources to offer a broad range of services to tourists, health resort visitors and town residents. Without any doubt, the Wieliczka salt mine, a world-famous and unique sight is a major tourist at-

traction, generating interest in the spa and therapeutic offer of the mine. The tourist services offered by the mine (tourist and mine route sightseeing), cultural events, school, commercial and private events and, finally, the entire spa and therapy service package, are interconnected and contribute to the strengthening the mine's position as an important tourist and spa destination not only in Poland, but also in Europe and

worldwide. It is also a consequence of new daring and unique investments, such as the construction of the saline graduation tower in the vicinity of the mine. Finally, the town and commune of Wieliczka themselves begin benefiting from the interest generated by the mine, though it is popularly believed that they are slightly overshadowed by the famous tourist destination.

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